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LEARN, UNLEARN, RELEARN — THE NEW WAY OF LEARNING IS CALLED MEDIA AND INFORMATION LITERACY

Abstract

Media and information literacy is a key competency in the 21st century knowledge societies. It is much more than just knowing to use the digital technology. The media and information literate person knows how to learn, how knowledge is organized, and how to find, select, evaluate, organize and use information. The Institute of Library and Information Science at the University of Pécs made an online survey in 2014 about information competencies of university students all over Hungary. The aim of the survey was to get information about students' information searching strategies, favourite resources, information seeking, selection and evaluation methods, and to base a new information literacy strategy. The results of this survey, compared with other surveys, show that during their studies students get a lot of assignments for which they need to find relevant information and literature, and analyzing them articulate a personal view about the problem. The biggest challenge for the new generation is the evaluation and selection of information. They don't know how to make considered decisions, and very often they don't even feel why this is important. That's why it is crucial to develop special, professional information literacy competencies of students more efficiently. There is a special emphasis to be placed on the role of libraries, since they are the institutions that play a major role in the acquisition and development of information literacy. At the same time, this situation poses a serious challenge for libraries that they need to prepare for. There are international programs and projects that can help libraries in this endeavour.

Introduction

"The new education must teach the individual how to classify and reclassify information, how to evaluate its veracity, how to change categories when necessary, how to move from the concrete to the abstract and back, how to look at problems from a new direction—how to teach himself. Tomorrow's illiterate will not be the man who can't read; he will be the man who has not learned how to learn." (Toffler, 1970, p. 211).

This statement of Alvin Toffler is a very good motto, if we are thinking about the future of learning. He said this in 1970, 52 years ago, and it is still valid, or even more valid than ever. Living in a world of manipulation and fake news, where information is the main energy, but achieving and understanding it needs special skills, where new generations sometimes know more than their parents, we need this quotation to understand the future of learning.

Theoretical foundations

Since the mid-20th century technology, economics and culture and their effect on each other have been rapidly changing. People need to adapt continuously to the changing environments, equipment, conditions and opportunities. The question is how this is to be done - how to face constant challenges, and what skills, abilities and competencies are needed to be able to progress in the information society and the digital world.

As we go deeper and deeper into the information society, we find always new ways to the information. Media, new media, Internet, web 2.0 (even web 3.0), social media etc. are totally transforming our habits of getting new information. Young people get the latest news not from the newspapers, but from Facebook, Insta, Tiktok, blogs and comments, the main ways of opinion forming are the forums, where one can be involved in discussions with not known people. The most important sources of information are not the books and the media, but the people. If a young person wants to learn how to do something, he/she looks for a YouTube video instead of reading some guidelines.

Parents and teachers like to blame young generations because they do not read. We must go deeper in this question: What are the reading habits of the new generations? Do they really read less, or only in a different way? If we are honest, we have to confess ourselves: Our children are reading a lot, maybe more than we, but they read different things on a different way than we are used to. They read messages, Facebook, Twitter, Insta, homepages, computer games etc. They get an enormous amount of information in a very short time. The problem is that they don't know what to do with this information. It is our task to teach them how to select and evaluate the information, how to find the really important points, how to find the value. It is something very different than just to teach them how to read. This is a new way of learning, this is media and information literacy.

The concept of media and information literacy

The notion of literacy is going through a significant paradigm shift in knowledge-based societies. It includes knowing the basics of the national culture, being well-informed, behaviour standards, digital competences and also the skills of applying knowledge learned. Educated people have extensive knowledge because they have accessed a lot of information – they have formed their knowledge by selecting, organising and integrating all this information. They are able to mobilize and use the information they learned. Thus literacy is not only about being well-educated and well-read but also includes the skill of being able to select from the wealth of information and manage it. The current interpretation of literacy places emphasis on the ability to navigate in the information environment of the 21st century. According to Toffler the illiterate of the 21st century will not be those who cannot read or write, but those who cannot learn, unlearn and relearn (Toffler, 1970).

The meaning of the term literacy is constantly changing in different cultures. In English culture it has a strong and stable meaning, but for example in Eastern and Central Europe the term has a controversial life (Varga, 2013). In most European countries people don't like to mix the traditional literacies and cultures with the modern digital competencies.

There are strong debates around the terms: literacy, competency, information, digital etc. (Koltay & Varga, 2013).

Information literacy is not a new topic, especially in the field of library and information science, but in Eastern-European countries it is not really manifest in public education and higher education programs. Education policy makers are dealing only with the problems of digital literacy, and do not want to take into consideration, that it is necessary to have much broader information competencies in order to survive in the 21st century. "Finding and using information is exponentially more complex than it was a generation ago as the information landscape has shifted from one of scarcity of resources to abundance and overload." (Head, 2013, p. 473.)

One of the main challenges of current day education is to teach students to succeed in a world reliant on information and technology. Today's students find it much easier to use modern technology and devices than their parents. They do not only acquire knowledge from their teachers and textbooks but also from a wide range of information sources. However, it is still our task to teach them how to think, assess and select. One of the most important goals of upper-secondary education is to encourage students to think, plan and work in a purposeful way, make informed choices and assess information critically. It also aims at preparing them for 21st century workplaces and successful higher education studies. Fast-changing information and technical environments require increasingly more advanced skills in terms of navigation, assessment and information usage – and teachers and textbooks have a key role in supporting students with developing these skills (Partnership for 21st century skills, 2019).

No matter how the technical devices of information transmission and opportunities for accessing information are changing, effective learning and work continues to be based on a high level of reading literacy. Research shows that while there have been profound changes in the field of digital information in the past 20 years, requirements related to understanding basic information at workplaces have not changed (Catts, 2012). However, work processes have undergone considerable changes: there are more and more jobs where employees do not only execute tasks but also participate in producing knowledge. Therefore in order to succeed in the labour market one needs complex information literacy skills.

Media and information literacy is obviously the basic skill of the 21st century. It includes the competences and knowledge required for finding one's way in knowledge-based society, selecting information responsibly and competently and create new one. It includes skills that are important in all areas of life such as learning, research, manufacturing and leisure (realising the need for information, search for information, selecting, interpreting, critical thinking, the creative usage of new information etc.). These specific 21st century skills should be treated both in a uniform and differentiated way. According to the Alexandria Proclamation adopted by UNESCO in 2005, media and information literacy is essential for achieving one's personal, social, occupational and educational goals. These skills are necessary for lifelong learning and becoming an efficient member of knowledge-based society (Beacons, 2005).

The Information for All Programme (IFAP) of UNESCO regards media and information literacy as a human right (UNESCO, n.d.). Along with problem solving and communication skills, it is used as an element of an integrated set of skills, vital for efficient operation in all areas of life. If handled separately from other adult competences, it sheds light on a specific dimension to complex skills and makes it possible to differentiate between the efficient usage of information as well as accessing and acquiring information. The global project of OECD on the assessment of social progress reveals that complex information literacy enables people to terminate dependency from information brokers (experts selling selected information) and become real "knowledge accumulators". This competence provides one with knowledge and attitude that protect someone from the negative, harmful effects of information.

There is no widespread agreement on the definition. Some think that certain elements of this complex skill set are also included in other categories (e.g. information search skill, reading comprehension skill, problem solving, creativity etc.) and thus do not deem it necessary to create a new term. Others think that it is digital literacy that differentiates media and information literacy from general literacy and therefore it should be addressed separately. Essentially, addressing, teaching and developing these skills, knowledge and literacy elements together, in a unified system are qualitatively different from addressing them one by one. It is not only about knowledge and skills but also attitudes and approaches. Not only the idea of digital literacy must find its place among information literacy, computer literacy, ICT literacy, e-literacy, network literacy, and media literacy, but it must also be matched against terms which avoid the "literacy" idea, such as informacy and information fluency. Indeed, in some cases, mention of information or anything similar is avoided—particularly in workplace settings—as in "basic skills," "Internet savvy," or "smart working. (Robinson et al., 2005)

In Hungary, the digital pillars of information society have not been adequately considered as a complex entity, the structured foundation and the development of information literacy have not been achieved. One reason for this is that the concept of information literacy still has not taken root. It is neither part of education policy, nor of normative documents in regard to public, higher and adult education. The complex foundation and the development of information literacy are not prioritized within the goals of public and higher education; therefore, information literacy has not had a chance to take a hold in educational practices. The first task is the complex interpretation of the concept of information literacy, which will allow for the term to become more prevalent, and it would also facilitate implementing it in practice (Egervári, 2014).

Media and information literacy may be considered an umbrella term or a threshold term. As an umbrella term, it includes all literacies needed by today's individuals: traditional literacy, digital literacy, library literacy, internet usage, critical thinking, media literacy, information ethics etc. According to another approach, it can be interpreted as a threshold term, mastering which gives access to acquiring knowledge. By mastering complex information literacy (as a threshold term), learners understand that information has value attached to it, science is a dialogue, research is asking questions, authority depends

on context, producing information is a process and information search requires strategic thinking (The Association of College and Research Libraries, 2015).

Media and information literacy is built on several literacies but it is not identical to them. It is often confused with digital literacy or media literacy.

- Computer/digital literacy: a set of skills and knowledge essential for understanding information and communication technologies, including the knowledge of hardware, software, systems, networks, the Internet and other ICT elements.
- Media literacy: a set of skills and knowledge essential for understanding the channels and forms data, information and knowledge can take, how they are produced, stored, transmitted and presented (e.g. the press, radio, TV, CD-ROM, DVD, mobile phones, PDF, JPEG etc.).

However, media and information literacy is a more complex term. It is a set of skills enabling people to realize their need for information, to search for, assess and efficiently use information, including of course the usage of digital technology and media. These competences are increasingly important in fast-changing technical environments and exponentially increasing information sources.

Metaliteracy and transliteracy are new terms emerging in literature. The first focuses on skills information users use for actively producing and sharing contents on social media and online community platforms – that is, they are active participants of knowledge-based society, not only as consumers but also as producers of information. Transliteracy implies that media and information literacy also involves transition between various information platforms and formats i.e. the continuous modification and transformation of information. These tendencies indicate that the complexity of the term requires a multi-perspective approach (Karvalics, 2012).

Considering skills and competences, a media and information literate person is able to:
- define his/her need for information,
- obtain the necessary information efficiently and effectively,
- critically assess the information and its sources,
- integrate the selected information into his/her knowledge base,
- efficiently use the information for achieving specific goals,
- understand economic, social and legal issues related to information usage and use information lawfully and ethically.

The above skills and activities do not develop linearly, one after the other, but are interconnected. It is possible that someone obtains information, realises its usefulness and uses it but only later acknowledges the value of the information source.

According to constructivist learning theory, learners are to find out the solutions to problems by using information; they are to arrive at new conclusions through active research and thinking – and this is more important than memorising facts and data presented in the classroom. Such pedagogical approach enables students to become competent learners. Thus media and information literacy has to be based on source-based learn-

ing, independent exploration and problem-based learning. It requires pedagogical sophistication, giving opportunities to students to experience as many learning styles as possible.

Media and information literacy should be integrated in the curricula and textbooks of all school subjects and courses, in the work of school and university libraries as well as the management of educational institutions. During classes, lectures or debates, teachers should encourage students to explore the unknown, support them in fulfilling their need for information and monitor their progress. Librarians should assess and select sources needed for curricula and educational programmes, manage collections and information access points and also provide training on library usage. Strategies requiring students to actively participate in formulating questions, finding answers and communicating results should be in place. In a learner-centred learning environment asking questions is the basis for everything, there is emphasis on problem-solving and critical thinking is an essential element of the process – and this kind of learning environment requires media and information literacy.

Media and information literacy is defined as a set of competencies that empowers citizens to access, retrieve, understand, evaluate and use, to create as well as share information and media content in all formats, using various tools, in a critical, ethical and effective way, in order to participate and engage in personal, professional and societal activities. For creating the sufficient media and information literacy environment several activities are needed at national level:

- The existence of mandatory courses about media and information literacy in the official curriculum, particularly in secondary school and in the teacher training curriculum;
- The existence of training programs to specialize teachers for teaching media and information literacy;
- Specific programs specialized in media and information literacy studies.

All these requirements are synthetised in the five laws of information literacy launched by UNESCO in 2018:
- "Law One: Information, communication, libraries, media, technology, the Internet as well as other forms of information providers are for use in critical civic engagement and sustainable development. They are equal in stature and none is more relevant than the other or should be ever treated as such.
- Law Two: Every citizen is a creator of information/knowledge and has a message. They must be empowered to access new information/knowledge and to express themselves. MIL is for all – women and men equally – and a nexus of human rights.
- Law Three: Information, knowledge, and messages are not always value neutral, or always independent of biases. Any conceptualization, use and application of MIL should make this truth transparent and understandable to all citizens.
- Law Four: Every citizen wants to know and understand new information, knowledge and messages as well as to communicate, even if she/he is not aware,

admits or expresses that he/she does. Her/his rights must however never be compromised.

- Law Five: Media and information literacy is not acquired at once. It is a lived and dynamic experience and process. It is complete when it includes knowledge, skills and attitudes, when it covers access, evaluation/assessment, use, production and communication of information, media and technology content." (UNESCO, 2018)

Information literacy competences of Hungarian students

In Hungary 5 higher education institutions are offering BA and MA programs in library and information science. Library and Information Science (LIS) schools in Hungary work with the same core curriculum, which is supplemented by different specializations. All of these institutions use state of the art curricula, which include a substantial number of ICT modules. Hungarian LIS students are well trained in digital literacy and can attend high quality courses on reference work.

A specialization in media and information literacy is offered in the LIS BA program at the University of Pécs. This program emphasizes the importance of a critical approach towards information and information resources, and teaches strategies of information retrieval, legal and ethical questions of the use of information. These courses' aim is to develop students' consciousness of information literacy, and to prepare them for teaching the competencies of information literacy in schools and libraries. They learn the basic terminology and components of media and information literacy, critical thinking, teaching methods, project management, as well as some school library issues. Many of these students choose a topic for their theses from the field of information literacy, so there are high quality works on these topics. Several students surveyed information literacy skills of fellow students, who study at different faculties of the university. The results of these surveys form the basis of a recent research project, which aims at revealing the current situation and is directed towards outlining a new information literacy strategy for the country (Egervári, Sipos & Varga, 2014).

A nationwide survey was made in 2014 about information competencies of university students in Hungary. We wanted to know how students get information for their studies, what are their main resources, information seeking methods, how they select and evaluate information. We got 2599 answers; our survey is not representative but significant. The respondents came for all over the country, they are students of different universities and colleges (Sipos, Varga & Egervári, 2015).

The questionnaire consisted of 64 questions. In the introductory part we asked about basic demographic issues: age, gender, living conditions, professional status, university studies, monthly income etc. We wanted to know what kind of ICT devices they have, how big is their home library, what are they doing in their free time. The main questions asked about information seeking habits of the students: where do they get the most important information from, how do they select, how much time and money do they spend on information gathering, what do they use the internet resources for etc. We also asked about their library use habits. We wanted to know how they decide if a resource is reliable or not, what type of information resources do they trust and why. One of the most interesting

questions was about what are the main difficulties for the students during a research project.

During their studies, students have a number of assignments that require competent literature searching and analysis. They like these assignments, and they do not feel any difficulty related to them. They also acquire substantial experience in making presentations and have many opportunities to apply up to date digital technologies.

At the same time the results show that there are big problems with the knowledge and competencies of our students. Only 1/3 of them apply information literacy competencies (e.g. search strategies) in their work. They have quite weak knowledge about professional information resources (databases), their main information resource is the internet, and the main information retrieval tool is Google. The complex competencies of information literacy are not known for them, and very often they ignore planning before an information solving problem.

The most frequently used resources for learning are the classroom materials, notes and textbooks. Printed books are still quite popular learning resources, but journal articles are less frequently used.
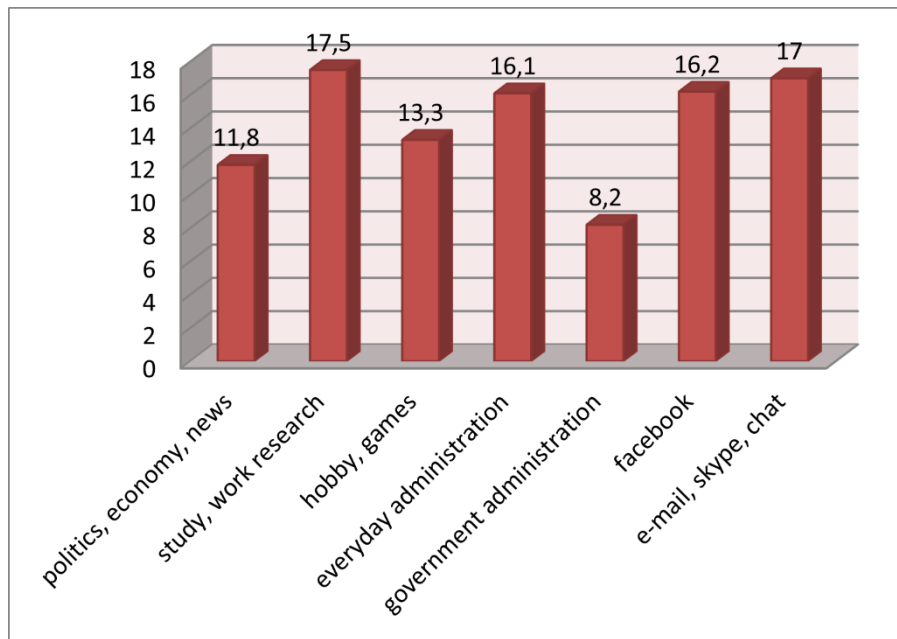
Figure 1: What resources are used for the studies? (N=2599)
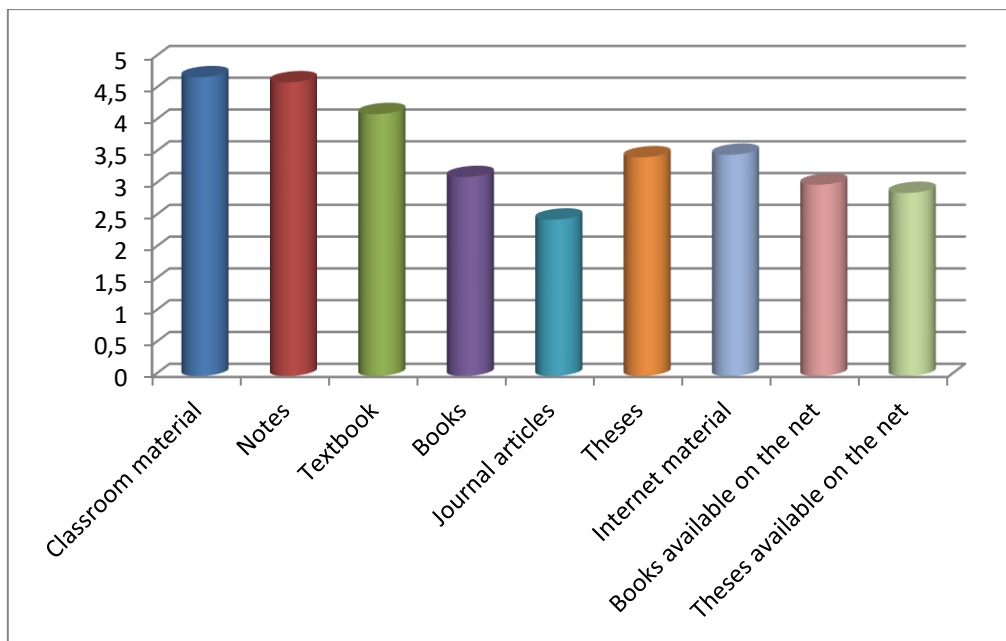
Source: Egervári, Sipos & Varga, 2014, p.161

Students use the Internet mainly for social relations and learning, and less for getting political or economical informations.

Figure 2: The aims of Internet usage (N=2599)

Source: Egervári, Sipos & Varga, 2014, p.162

Majority of the students doesn't apply search strategies, they don't use more than one search option. A lot of respondents said, they do not use operators at all. It means that they like very simple search methods. Students know that the hits need to be evaluated, but many of them still are satisfied with the first 10 hits. It shows that our students are not much concerned about the quality of their searches.

Figure 3: Search strategies (N=2599)
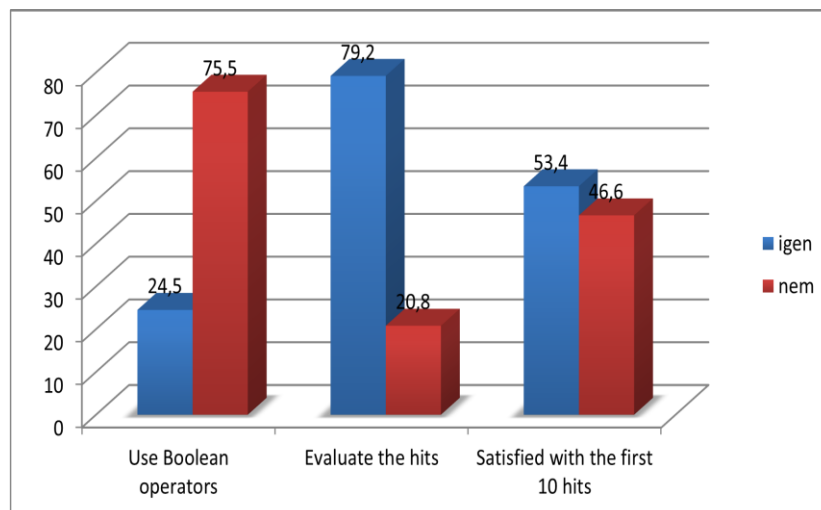
Source Egervári, Sipos & Varga, 2014, p.163

Students have no bigger difficulties in defining a search question. However, about 20% of the respondents said they have problems with identifying relevant hits. It is difficult for 40% to determine, whether a web site is credible or not. It is also hard for them to convert the collected material into new information. This means that, despite the fact that they

have opportunities for carrying out independent research, some very basic competencies that would enable them to accomplish these assignments in an efficient way, are missing.

Figure 4: Difficulties in a research process (N=2599)
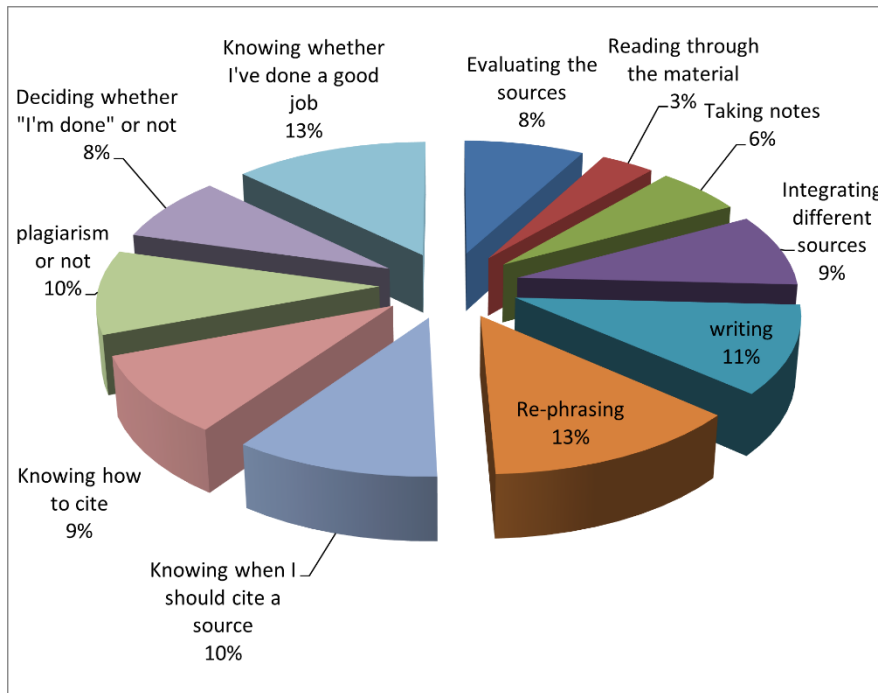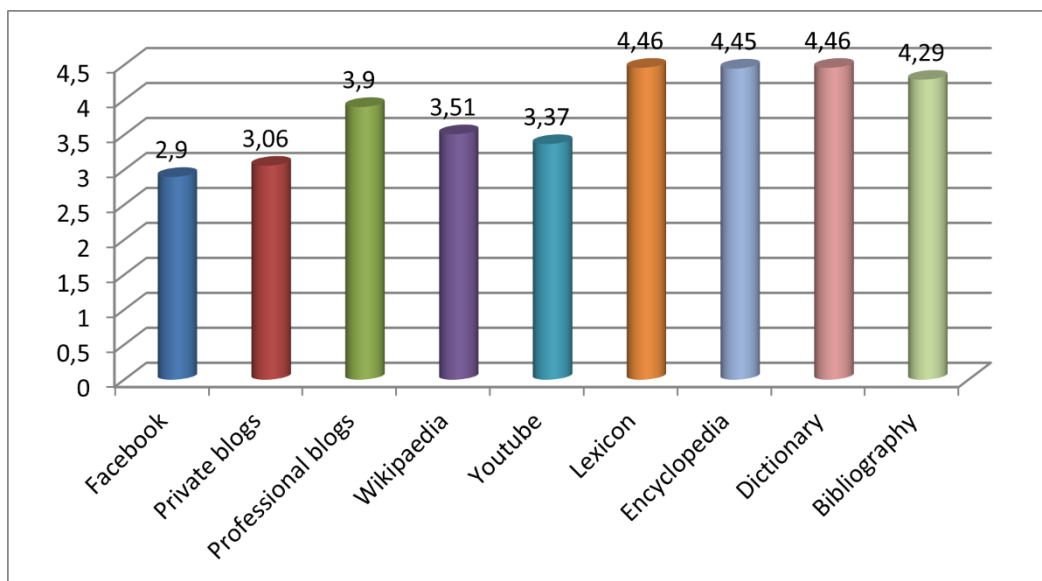

Source: Egervári, Sipos & Varga, 2014, p.163

For information seeking the majority of the students uses internet search engines, mainly Google. Library catalogues, encyclopaedias and lexicons are less frequently used. At the same time our students trust traditional information resources much more than the modern, digital resources. Hungarian students rarely consult government sites, and unfortunately they do not like to use research databases in order to solve study assign-ments.
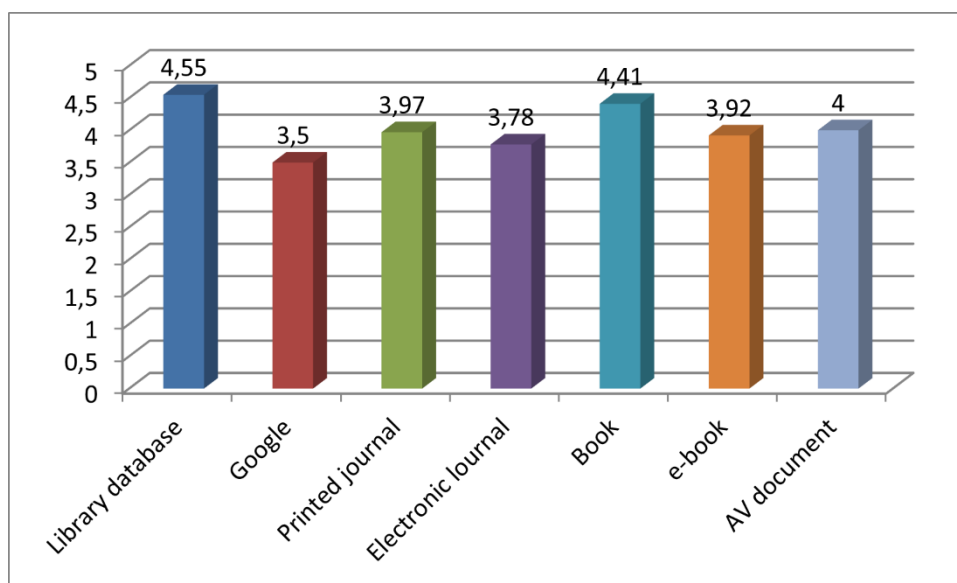
Figure 5: Used resources (N=2599)
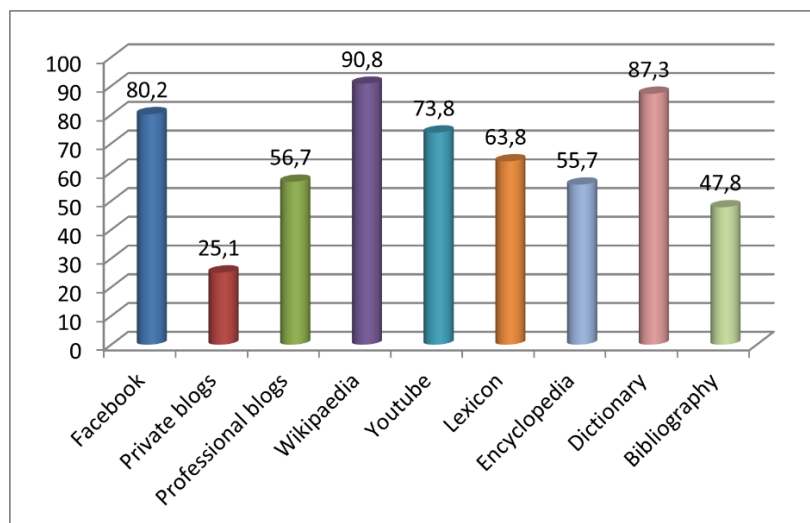
Source: Egervári, Sipos & Varga, 2014, p.164

Figure 6: Trusted resources (N=2599)

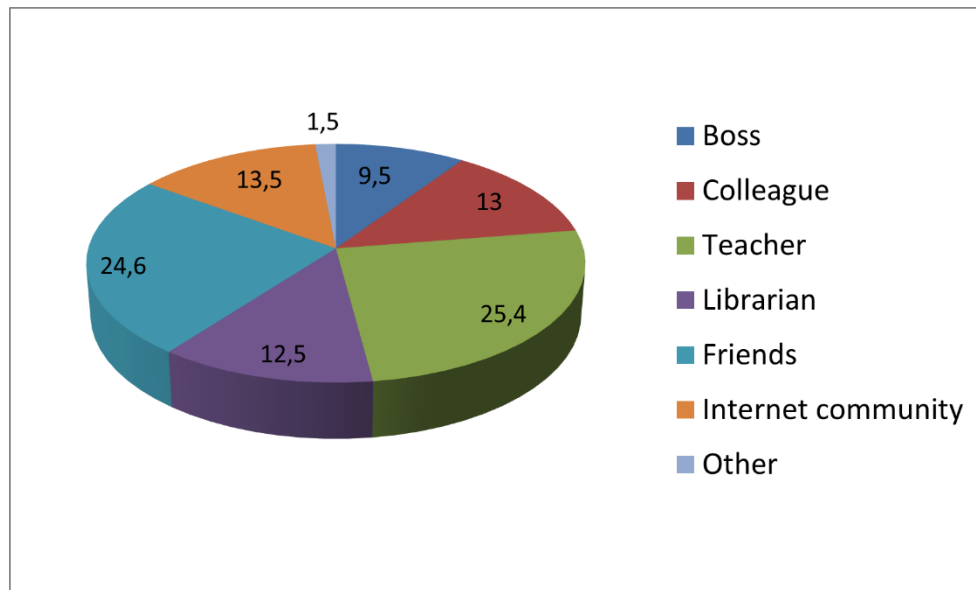*Source: Egervári, Sipos & Varga, 2014, p.164*

Fig. 7: Authenticity of the resources (N=2599)

Source: Egervári, Sipos & Varga, 2014, p.165

When help is needed, students like to turn to their teachers or fellows and friends. Librarians are not so frequently asked as they were expected

Figure 8: Whom do you ask help from facing an information seeking problem? (N=2599)

Source: Egervári, Sipos & Varga, 2014, p.165

In the selection process freshness and reliability are major issues, the publisher or the existence of a bibliography is not important for them. Unfortunately, Hungarian students still have difficulties in using foreign languages, so one of the most important aspects is that the resource should be in Hungarian.

The results of this survey, compared with other surveys about students' information gathering methods (McKiel & Dooley, 2013; Head, 2013), give some hints about information literacy in Hungary. Students all over the world like to choose the easiest ways to get information. Higher education institutions try to force students towards deep and reliable research methods, so they have to face several information seeking assignments. However, unfortunately Hungarian students are not well trained in gathering and selecting relevant information. In other words, their information literacy skills are limited.

Development of information literacy competencies

21st century competencies, such as media and information literacy, need to be established and continually developed. The foundation and the development of these competencies are tasks for public and higher education and cultural institutions, while other entities participating in individual learning and socializing processes also have a role to play.

The main problem is abundance, namely the phenomenon that the user is faced with organizing and interpreting an impossibly enormous amount of information. It is crucial for young people to acquire the skills for learning individually and managing information as early as possible. This means that they should learn to rank the immense amount of data and documents in order of importance, and to be able to differentiate between the essential and the irrelevant as well as between what is current and what is out-of-date information. Students should be able to select that kind of information they need to acquire out of all the important elements of information available; they need to know where

to find it in books and on the Internet, and how this information can be searched, organized and ethically used. This kind of knowledge is essential for creating an up-to-date literacy and knowledge. Not only public schools should take on establishing the foundations of information literacy, but institutions of higher education, vocational training and others within or outside the education system should be responsible for improving specific competencies.

The necessity of the institutional development of new competencies was recognized early on in the United States and in Western Europe, along with the appearance of the individual competency elements. Hungary has been struggling with the fact that it is lagging seriously behind in this field. While teachers, educators, trainers and tutors at different levels of education are often failing to attend to the foundation and development of new skills including information literacy, youngsters in many cases are acquiring these skills in an autodidactic way. For them the new competencies and their elements are not organized into a coherent pattern; on the contrary, they are clustered together extremely haphazard and unstructured, and, therefore, they lack the sequence of succession; they do not improve and do not support each other. These negative phenomena are also aggravated by people sensing they lack the skills appropriate to their needs, as they are not even aware of what skills they are supposed to have. Thus, the existence or lack of the different competency elements induces big differences in the spread of knowledge within the citizenry of the information society (Varga & Egervári, 2015). This has a significant impact on individuals' socialization, competitiveness and quality of life.

The foundation of information literacy would doubtless be a task for public education. However, neither the Act on National Public Education, nor the National Core Curriculum includes any indication of the importance and indispensability of information literacy in education. The role for higher education, adult education and vocational training would be to improve and intensify the information literacy skills already acquired in the public education system, as well as to provide specific professional training. Nevertheless, adult education providers operating outside the education system, who are in key positions in knowledge-based societies, still have an undefined place and role in the foundation and development of information literacy all over the world.

Teacher training and librarian training in higher education needs to receive much more focus, since training educators of information literacy is a crucial area for supporting the acquisition of information literacy competencies. These educators need to acquire special training in didactics and methodology during their time spent in higher education, and later during the professional development courses required of them every seven years. In order to support the widespread acquisition of information literacy, adult education should also be drawn into the framework, as digital immigrants often feel themselves outsiders in the 21st century (Sipos, 2014).

Information literacy can be acquired in two locations: within the school system and outside it. Of the two, education outside the school system finds itself in a more uncertain position, as the law mandates only public libraries to aid library users in acquiring information literacy. The law does not, however, indicate the opportunities and methods to be

used for the fulfilment of this mandate, nor does it provide programs and quality standards. It does not offer guidelines for establishing priorities, and there is no indication that it is going to do so. So far, the subsequent legislation based on the statute has not been published either. In consequence, a lack of know-how and principles may result in institutions ignoring the task.

The role of the libraries

Librarians in academic, public and school libraries have been playing a significant role in defining the content and levels of information literacy and in developing the methodology for acquiring this competency. The coordination and cooperation with various types of educational institutions and libraries is also essential. It is crucial to create a multi-segmented system of principles involving schools and libraries, in which the elements and levels of knowledge, as well as the educational tasks performed by these institutions are clearly defined.

Besides the school system, libraries stand alone in providing support for the acquisition of information literacy, which was written into Hungarian legislation in the autumn of 2012 (1997. évi CXL. törvény). At the same time, though, public libraries do not have programs for establishing and developing information literacy, and in most cases, they are lacking in the necessary human resources and expertise, which may mean that with only limited success will public libraries be able to provide the services they are mandated to offer.

Public libraries need to be in a position to provide special programs and courses for adults who are eager to learn. They are the only ones who have taken up the task of educating the public in digital and information literacy. While this task has been delegated by legislation, libraries could also in practice become fundamental institutions within the information society, defining directions for development and implementing pilot projects which would provide opportunities for everyone to acquire and develop their information literacy.

Conclusions

The shortcomings and problems of research in information literacy in Hungary may lead to serious consequences. As information literacy is not considered a key competency, educational institutions are not addressing it as belonging to the core group of basic skills, and thus they do not spend resources on establishing and developing it. That is why it is crucial to place more focus on studying the Hungarian aspects of such theoretical questions and the methodology of teaching 21st century competencies (Varga, 2013).

There is an immediate need for a system of educational principles for information literacy, for curricula supporting the acquisition of sub-skills, and for these curricula to be integrated into the public education system. We have to provide an opportunity for students to acquire, practice and improve sub-skills of information literacy in a structured system. In addition, curricula provide special content and tasks relevant to each subject area. The intermediate-level information literacy acquired in public education can then be further developed and made specific within institutions of higher education (Karvalics,

2012). That is why close cooperation between educators and librarians in higher education is essential, which can only be effective if educators provide specific tasks and projects for students that require regular use of library resources and services.

Educational institutions as well as libraries are lacking in precise definitions of the roles and tasks, which would be essential for the complex development of this competency. What is needed is the availability of and access to the latest technology and the most modern infrastructure, along with a re-evaluated role and precise task definition for institutions of public and higher education and for libraries, as these are the places where establishing and developing 21st century competencies will need to be especially prioritized.

There is a special emphasis to be placed on the role of libraries, since they are the institutions that play a major role in the acquisition and development of information literacy. At the same time, this situation poses a serious challenge for libraries that they need to prepare for. There are international programs and projects that can help libraries in this endeavour.

All this could serve as a foundation for further research, pedagogical programs, and educational concepts, which in turn could contribute to the institutionalized foundation and development of information literacy. Media and information literacy as an attitude plays an important role for members of the information society acquiring other 21st century skills and competencies, which in turn result in life-long learning and the mitigation of the secondary digital divide.

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