INFORMATION LITERACY IN COMMUNITY DEVELOPMENT

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Abstract
The purpose of this paper is to describe the information literacy of people as essential competencies required for the generation of social capital and use of social capital in sharing and obtaining information, which in its turn, is considered to be an important resource in the community's development.
The paper analyses the terms: social capital, information literacy and their mutual influence, as well as describes the research where informational literacy of the population of Latvia, its levels and the determined groups of knowledge and skills, which need to be improved in order to contribute to the generation and use of the social capital, through various methods (population surveys, focus group discussions, information literacy knowledge assessment questionnaires and performing practical tasks) were assessed. The research is based on the UNESCO Media and Information Literacy (MIL) Competency Matrix and UNESCO MIL Assessment Framework. The main conclusions of research are the following: information literacy is an important competence for developing social capital; but based on the completed research there are skills of information literacy – processing of information, critical assessment of information resources, legally correct use of information sources, as well as effective use of information technologies – which should be improved.
The research was conducted within the framework of the European Social Fund project 'Development of Innovative Diagnostic Instruments for Regional Growth' (No.2013/0057/1DP/1.1.1.2.0/13/APIA/VIAA/065).
Key words: social capital, information literacy, competencies of information literacy, assessment of information literacy, levels of information literacy.

Introduction

Community development depends on resources accessible to it and optimally used by it. Among several resources, like economic capital, starting from 1990 both in theoretical literature and empirical research social capital is recognized as important resource in community development (Daugavietis, 2014). Social capital is given an important role in the functioning of the society as a whole. So, for example, based on (Grootaert, 1998) the idea that 'social capital is the glue that holds societies together and without which there can be no economic growth or human well-being', the UK performs the social capital assessment in the country, measuring different kinds of connections between people (for example, by such indicators as numbers and ties of actors in personal relationship networks; the frequency of contacts with others; feeling lonely; receiving social support from other people etc.) (Siegler, 2015).

Based on the ideas of different social capital theories, Huvila I. et al. asserts that 'social capital is in the structures of relationships between people' (Huvila et al., 2010). To define shortly what social capital is, Siegler Veronique writes that 'social capital represents social connections and all the benefits they generate' (Siegler, 2015).

To map the benefits and outcomes of social capital both for the individual and for local community and society, it is divided in three dimensions: 1) structural dimension; 2) relational dimension; 3) content dimension (Huvila et al., 2010). The *structural dimension* is defined by network structures and the nature of network ties which provide information flows and can give benefits for an individual. The *relational dimension* includes trust, identity and roles of actors (individuals) connected in social networks. Trust is an important element to share and exchange information with somebody else. *Content dimension* includes shared meanings and collective knowledge. One of the main benefits of social capital is information exchange and possibility to get the necessary knowledge which is closely related to the concept of information literacy.

Information literacy as a concept was first presented by Paul G. Zurkowski in 1974 (Zurkowski, 1974) and still is at the stage of development. In 2013 UNESCO defined 'information literacy' 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' (UNESCO, 2013). It is accepted that 'information literacy competencies can both foster lifelong learning practices and generate social capital' (Stevens et al., 2006).

Interaction between social capital and information literacy could be bilateral: 1) social capital could be used as a source for information access; 2) information literacy could be used to affect generation of social capital. If we use social capital for information access, then knowledge about information sources (especially other people as information sources), search tools, quality criteria of information sources, as well as

skills of how to create new information and share it depends on individual information literacy level. If we are information literate enough about the possibilities to create social networks in digital environment, we can participate more successfully in the generation and use of social capital.

The purpose of this paper is to describe the information literacy of people as essential competencies required for the generation of social capital and use of social capital in sharing and obtaining information which, in its turn, is considered to be an important resource in the community's development. Therefore the main tasks are the following: 1) how to measure levels of information literacy; 2) to understand what is the level of information literacy in the local community (for economically active adult population); 3) what knowledge and skills are necessary to be improved.

The study described in this paper was based on the implementation methodology of the UNESCO Media and Information Literacy (MIL) Competency Matrix in assessment of adult information literacy and UNESCO MIL Assessment Framework (UNESCO, 2013). The study was carried out within the framework of the European Social Fund project 'Development of Innovative Diagnostic Instruments for Regional Growth' (No.2013/0057/1DP/1.1.1.2.0/13/APIA/VIAA/065).

The MIL Competency Matrix consists of three components. Component 1 is *Access*. It 'includes the ability to recognize the need for information, media content and knowledge, and to be able to identify useful information and media content from all sources and formats'. Component 2 is *Evaluation.* It 'is defined as ability to understand, critically analyse and evaluate information, media content, the work and functions of media and information institutions'. Component 3 is *Creation.* It 'defines the ability to master the production know-how of information, media content and new knowledge, and effectively communicate with others' (UNESCO, 2013).

The performance criteria for assessment of information literacy competence levels is based on the UNESCO MIL Assessment Framework (UNESCO, 2013): the 1st information literacy level (basic) indicates that a respondent has basic skills and knowledge, 'but significant improvements are needed for effective application'. The 2nd level (intermediate) indicates that 'a respondent has a good level of knowledge and skills, but there are gaps in certain areas'. The 3rd level (advanced) indicates that 'a respondent has a very good level of knowledge and skills'. Additionally, in this study, a zero level was introduced, projecting that there are people who do not possess the knowledge and skills needed for the basic level. The zero level indicates that an individual's information literacy is so low that it can become a serious constraint for obtaining and sharing information, and it can be a barrier for both use and generation of social capital.

Materials and Methods

There were several data collection methods chosen in order to perform as thorough study of the population's levels of information literacy as possible. In the beginning of the research from August 19, 2014 to October 2, 2014 a survey of the resident population of Latvia (between the ages of 18 and 74, size of sample achieved – 1004 respondents) (survey conductor - the Research Centre SKDS) consisting of seven questions related to self-assessment of the skills of information search, assessment and use, was conducted. It was possible to respond to every question, assessing their skills using a 4-point grading scale from "I know it very well" to "I don't understand it at all".

In order to determine the levels of information literacy and study needs, there was a pilot study conducted in two residential areas in Kekava County – Kekava Parish and the town Balozi, in April 2014. There were three data collection methods used in every field study – focus group interviews, questionnaires and performing a practical task, applying the think aloud method (Holma et al., 2014).

Focus group interviews were organised in the local public libraries and among the questions discussed were: the daily information needs of people, problems encountered during the process of information search and use, and their education needs. The total number of people, who took part in both discussions, representing various groups of occupation, was 23 persons (average age – 43 years). The data of focus group discussions were encoded and analysed using the software programme NVivo.

Before the discussions commenced, their participants answered to the questionnaire questions, where they provided information about themselves and assessed their computer literacy. According to the questionnaires there were four participants selected to perform a practical task.

After the discussions all participants filled in some knowledge questionnaires, consisting of 23 different closed-ended questions on various daily situations related to the aspects of information search, assessment and use. The questions were grouped into three sections according to the MIL matrix (Access, Evaluation, Creation). Depending on the selected answers, there was a corresponding level of information literacy given (from zero to three). This questionnaire was disseminated in local libraries and kindergartens. A total of 98 respondents took part in the survey.

In order to study how the information related to dealing with a particular daily problem situation is

searched, assessed and processed, there were four participants selected from each group after filling in their knowledge questionnaires (considering their level of education, age, occupation and self-assessment of computer literacy), who took part in completing a practical task. The think aloud method was applied, permitting to record both the process and respondent's thoughts. The screenshot recording software BB Flash Back Express was used in order to record the course of completing the practical tasks given (screenshots) and to record the 'thinking loud' – comments.

The practical tasks given were related to dealing with various daily life situations, such as, searching for a job, dealing with health related issues, making online purchases, preparing a culture programme for the relatives visiting from Australia or planning a business trip. All records were transcribed and encoded according to the MIL information literacy matrix, assessing and assigning a level of information literacy at each stage of three.

Results and Discussion

The results of population surveys will be analysed in more detail in this paper. The detailed results of focus group discussions, knowledge questionnaires and think aloud tasks are described in the publication in Communications in Computer and Information Science (Holma et al., 2014).

Having analysed the data obtained through the use of all four methods, it was possible to conclude that the questionnaire data showed, as it could be expected, that the respondents had assessed their information skills in quite a positive way.

According to the questionnaire data of the population of Latvia, the skill of using various information search tools and selecting the most suitable sources (see Fig 1) was assessed in the most optimistic way (72.4% and 78.4%, respectively, assessed their skills as very good or rather good). Comparing the answers to these questions in various groups of people, people at the age of 25 to 34 assessed their skills higher (93% indicated that they can use various tools of searching for information very well or rather can do it). At the age group between 55 and 74, only 38% consider their skills as very good or rather good.

Much more critically people have assessed their skills of evaluating the sources of information (65.3% answered that they can do it very well or rather can do it). The lowest assessment of these skills is in the age group from 55 to 74 years – 39% of population stated that they cannot assess the sources of information at all, but the lowest assessment was for the skills of using sources of information without breaching copyright (only slightly more than a half of all respondents indicated that they can do it very well or rather can do it).

Comparing the way people with different levels of education assess their information usage skills, it can be concluded that the respondents with university (higher) education rate their skills much higher, for example, 48% people with basic education, 67% respondents with secondary education, but 89% with higher university education rated their skills of using various information tools as very good or good. A similar picture can be drawn with the assessment skills of the obtained information. 36% respondents with basic education, 56% with secondary education, but 82% with higher university education rated their knowledge as good or very good.

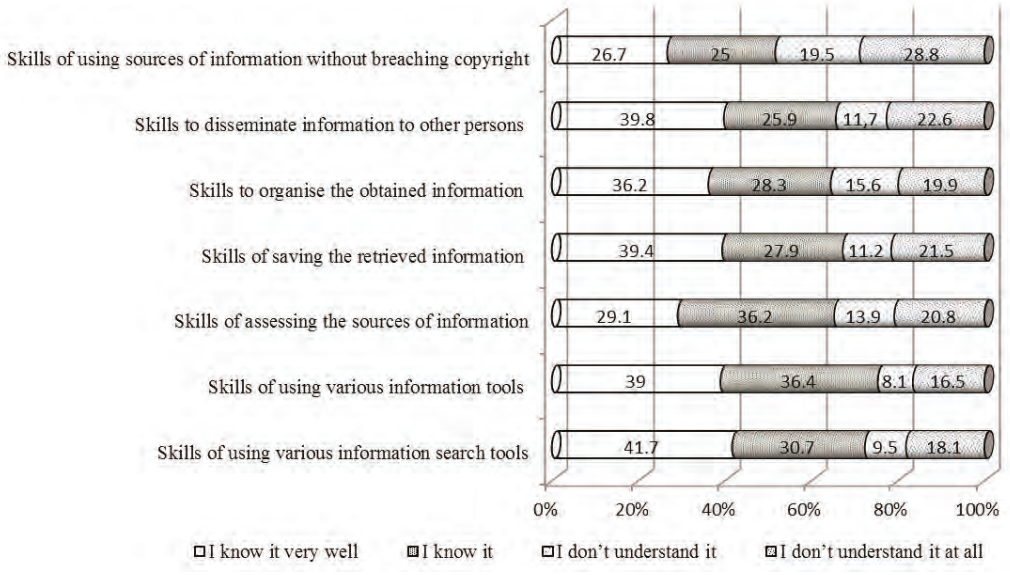

Figure 1. Opinions about dealing with information skills. N=1004.

In terms of the skills to organise and save information, the highest assessment was among the people with university education, where 85% rated it as very good or good.

The last two questions refer to the third information literacy component – summarising information, creation of new information and sharing it with other people. Responding to these questions skills were also rated relatively high, for example, 65% respondents rated their skills to disseminate information to other persons as very good or good. The highest self-assessment was also by people with higher education.

Comparing the obtained results by profession, managers and civil servants rated their skills highest, but seniors gave themselves the lowest rating (only 30% admitted that their skills of assessing the information found is very good or good) and unemployed persons (41% rated them as very good or good).

Comparing by regions, the inhabitants of Riga had a slightly higher assessment of skills, the inhabitants of Latgale has the lowest. For example, 74% inhabitants of Riga, 65% of those residing in Greater Riga, 57% inhabitants of Vidzeme, 65% inhabitants of Kurzeme, 65% inhabitants of Zemgale and 54% inhabitants of Latgale rated their skills of saving the retrieved information as good or very good.

The focus group discussion data were analysed, using six categories of the content analysis:

1. Information required;
2. Information sources;
3. Information channels;
4. Problems encountered during the process of retrieving information;
5. Lack of knowledge and skills;
6. Information literacy education needs.

In the 1st category participants of discussions had named 53 different themes of daily information needed, which were later arranged in 23 subject categories relating to the district or parish life, medicine, entertainment, housekeeping, gardening, public transport.

As the most commonly used sources of information the respondents most frequently indicated websites and Internet search engines (e.g. Google). Other people (e.g. friends, colleagues, neighbours, a postman) were mentioned as important sources for obtaining information. They were followed by databases and printed sources of information according to the frequency of mentioning. Internet was indicated as the most important information obtaining channel.

In the category 'problems encountered during the process of information retrieval', the most frequently used problems were the large volume of available information on the Internet and the usability problems of information sources. Insufficient knowledge of foreign languages and a lack of knowledge of computer software were also mentioned.

The information literacy education needs also resulted from the first five categories. They were related to the information search process, assessment of the retrieved information and summarisation, and presenting of the information found. Problems with the knowledge of foreign languages were mentioned in this category, too.

The data obtained through the qualitative method - *think aloud* - indicate that the highest results were

Table 1

Results of Think Aloud Practical Tasks (Information Literacy Level)

No.	Respondents	1. Access *Level*	2. Evaluation *Level*	3. Creation *Level*	Total
1.	Female (61, higher education, master's degree)	3	3	3	3
		3	3	1	2
2.	Female (34, higher education, master's degree)	3	2	2	2
		3	2	2	2
3.	Female (51, higher education)	2	2	2	2
		3	3	2	3
4.	Female (29, secondary education)	3	2	1	2
		3	3	2	3
5.	Man (41, secondary education)	1	0	0	0
6.	Man (33, secondary vocational education)	1	0	0	0
7.	Female (59, secondary education)	3	2	2	2
8.	Man (47, higher education)	1	1	1	1
		3	3	1	2
On average		2	2	1	2
Moda		3	2.5	2	2

Table 2

Lack of Knowledge and Skills – Education Needs

MIL Component	Problems Encountered
1 Access	To phrase the information need To select and use the search tools
2 Evaluation	To assess and compare the retrieved information sources (as often as not only the first source is chosen and viewed)
3 Creation	To summarise the selected information To compare and arrange information To lay out a text To provide references to the sources – specifying the Internet address To save information To observe the e-mail etiquette

obtained in the MIL Component 1 *Access* (average information literacy level – 2, moda – 3) (see Table 1). Majority of respondents used Google to search for information. Usually there also were no problems with the selection of keywords, as often as not there were words and expressions from the text of a task used as keywords.

It was a bit more difficult with the MIL Component 2 *Evaluation* (average information literacy level – 2, moda – 2.5) (see Table 1). Many respondents chose and viewed only the first or first three results found from the list of retrieved information.

It was most difficult to do the MIL Component 3 *Creation* (average information literacy level – 1, moda – 2) (see Table 1). In all tasks it was asked to summarise and compare the information coming from several sources. As often as not it was done by means of copying, and it was very rare when a text was created. There were no references to the retrieved information made – no addresses were recorded as to where this information was found. This is the stage where the computer literacy problems appeared most of all, e.g. copying a text, saving a file, creating a new folder. Two respondents also experienced problems with using their e-mail account, because in the rules of the task they were asked to send the information found by e-mail. In several cases there was a failure to follow the e-mail etiquette observed – messages were sent without any text, unsigned, or only with a subject.

Comparing the results obtained according to the qualitative method, it is possible to see a tendency that the older respondents and with higher education level scored the highest rating. It took them longer to complete the tasks given, nevertheless they assessed the retrieved information much more carefully and summarised it more skilfully.

The results of knowledge questionnaires showed a similar picture. Answering to the Block A questions (about the selection of information sources; *Access*), the average information literacy level was 2. In the second block (*Evaluation*) of questions there were some questions about the assessment of various information sources included. Similarly to the data obtained through the use of other tools, the questionnaire results indicated that the biggest difficulties were encountered during the third MIL stage (*Creation*) – creation and communication of new information (Holma et al., 2014).

Comparing the data obtained through the use of all four methods it can be concluded that the people are aware of a partial lack of knowledge and skills in all MIL stages. Younger people were more optimistic in their self-assessment. Older people assessed their searching for information and assessment, as well as new information creation skills in a more critical way.

The think aloud method demonstrated vividly what the problems are people encounter when searching for the daily information needed. Although answering to the question, how they assess their skills of searching for the information of daily use, 75.5% respondents had answered that they can do it very well, the results of practical tasks showed many shortages in searching and assessing information, but especially in summarising it, creating new information and saving or sending it. Respondents mentioned some of the problems they had encountered during the practical tasks in the focus group discussions, e.g. comparing and assessing the information sources, using their e-mail accounts, mastering computer software, comparing product and service prices, but the think aloud method helped to reveal several other problems (see Table 2).

Conclusions

The following conclusions can be drawn based on the description of importance of social capital and information literacy in community development, and the results of the conducted research.

1. Social connections represent the social capital and all the benefits they generate. The social capital is considered to be an important public resource for the community functioning. It has effect both

on the economic development and well-being of the society. One of the benefits of social capital is information exchange and sharing. Effective information exchange depends on information literacy of an individual.

2. To evaluate information literacy for adults in the local community several methods (both subjective (self-evaluation) and more objective (practical tasks; knowledge questionnaires)) should be used and obtained results should be compared. The carried out research results showed that the middle level of information literacy dominates among adults.
3. The results showed the following situation: people often use other persons as the source of information (e.g. friends, colleagues, neighbours, postmen, etc.), which shows that the social capital has an important role in obtaining information. Learning the information literacy competency level of people through application of several methods, it is apparent that it is the exchange and sharing of information (MIL Component 3 *Creation*) that is in the lowest level of skills: there is a lack of knowledge on summarising the retrieved information, critical assessment, use of legally correct sources of information, as well as efficient exchange of information, using the possibilities of modern technologies.
4. In terms of generation and use of social capital, there should be a special study conducted on the social media literacy of population, because the social media promote the development of social networks and exchange/ sharing of information.

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