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Information behavior of elderly citizens in search for information on current events

Information Behavior of Elderly Citizens in Search for Information on Current Events

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Abstract

Interest in current events and topics is one of the manifestations of active participation of elderly citizens in society. Access to relevant, accurate and credible information therefore constitutes one of the conditions as well as forms of social inclusion as it helps to anchor and integrate individuals in the society. It also prevents manipulation of elderly citizens. The novelty and scope of topics and increasing breadth of information resources represent a challenge for application of information literacy skills by elderly population, especially in terms of the competency framework[1].

The objectives of this research were to determine how seniors gather and analyze information about current events, how they seek relevant and reliable resources, which resources they trust, what types of information they prefer and how well they understand information presented. Research was carried out within the target group of elderly students attending the University of the Third Age at Institute of Information Science and Librarianship, Prague and the University of the Third Age at Masaryk University in Brno.

Research methodology included qualitative research methods and techniques like questionnaires as well as observation techniques to monitor information seeking behavior to the given topics.

The analysis of gathered findings concentrated on the application of information literacy skills, in particular selection of information resources, their prioritization, evaluation and relevance assessment etc.

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1 BRUCE, Christine, Sylvia EDWARDS a Mandy LUPTON. *Six Frames for Information literacy Education: a conceptual framework for interpreting the relationships between theory and practice. Innovation in Teaching and Learning in Information and Computer Sciences* [online]. 2006, 5(1), 1-18 [cit. 2016-09-20]. DOI: 10.11120/ital.2006.05010002.

Conclusions: the usage of online information resources vis-a-vis daily events among respondents from our target group progressively increases, in some aspects electronic information sources are more used and/or preferred than traditional media. Information literacy skills correlate with the acquired level of computer handling skills. Despite theoretical knowledge of literate

information behavior, there is still large space for improvement particularly in the field of its practical application. Research outcomes are used to improve information literacy curriculum for elderly students at the University of the Third Age (further only U3A)[2].

Key words: *elderly, information behavior, information seclusion, survey, information literacy, information seeking*

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[2] *The University of the Third Age is an international movement whose aims are the education and stimulation of members of the community in their third 'age' of life.*

Introduction

The starting point for our pilot study was the intersection of three important driving factors: a) increase of elderly citizens in the Czech population, b) increasing usage of IT products by Czech elderly in their interaction with the outer world and c) high vulnerability of elderly to manipulation in the process of information exchange. The aim of the study was to identify patterns in their information behavior vis-a-vis day-to-day news and events, that would help us later to address more clearly their information literacy competences. Access to relevant, accurate and credible information constitutes one of the conditions as well as forms of social inclusion as it helps to anchor and integrate individuals in the society.

The outcomes of the pilot study will be used to improve the research methods applied in the pilot stage, eliminate misleading steps and prepare a framework for broad-scale research. The final aim of this study is to establish a program of information literacy courses tailored specifically to the needs of Czech elderly population, in particular to the needs of U3A students so that they may acquire skills and capabilities useful for effective information strategies in their day-to-day situations. In further stages, the methods and outcomes may be further modified to suit needs of other segments of Czech elderly population.

Elderly population

As in most developed countries, also in the Czech Republic the definition of an elderly person accepts the chronological age of 65 years as the threshold to refer to older population. According to the Czech Statistical Office, elderly represented 17,4% of the total population in 2014, which constitutes an increase of 3,4 % compared to year 2004[3]. The trend will continue in the years to come. This process again mirrors the development in most industrialized countries, in which the United Nations expect the elderly to constitute 21,1% of the population by year 2050[4].

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3 *Senioři. Český statistický úřad [online]. Český statistický úřad, 2015 [cit. 2016-09-20]. Available from:*
https://www.czso.cz/csu/czso/seniori
4 *World population ageing [online]. New York: United Nations, 2015 [cit. 2016-09-20]. Available from:*
http://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2013.pdf

Social seclusion

Traditionally, elderly citizens are considered to be more endangered by social seclusion, sometimes also referred as social disconnectedness (a lack of contact with others, infrequent social interaction, and lack of participation in social activities and groups)[5]. Loss of social contact after retirement, children leaving home, deaths among friends, lower incomes as well as physical limitations may become decisive factors creating foundations for social seclusion. In the Czech Republic, another factor enhancing seclusion of elderly is the prevailing type of living: the households of seniors are of two most prominent types - "households of individuals" and "complete families (definition further below)". More than half a million Czech elderly, particularly widowed women, lived in 2001 in households of individuals[6]. The second major group of elderly households more prevalent in younger age groups of seniors are "complete families". These are by 80% married couples with whom does not typically live any other person. In great majority of these households, both people are non-working pensioners[7]. Unlike some other European countries, very small minority of elderly lives in households with their children and grandchildren.

IT Access and Usage among elderly

Statistical data from recent research programs of the Czech statistical office show, that for a significant and growing number of elderly access to the internet, mobile phones and other types of modern information technologies represent no more an obstacle. In fact, the evolution of information technology usage among elderly over the last 10 years (2005-2015) is remarkable: usage of mobile phones increased from 29,8% to 88,5%, internet use from 2,2% to 28,4%. 23,6% of elderly use personal computer at least once in a week, Among elderly internet users, 57,4 spent on the internet up to 5 hours a week, 26,1 % spent 5 to 10 hours on the internet a week, and 16,2% even 10 and more hours a week[8].

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5 CORNWELL, E. Y. and L. J. WAITE. *Social Disconnectedness, Perceived Isolation, and Health among Older Adults. Journal of Health and Social Behavior [online]. 2009, 50(1), 31-48 [cit. 2016-09-20]. DOI: 10.1177/002214650905000103. ISSN 00221465. Available from: http://hsb.sagepub.com/cgi/doi/10.1177/002214650905000103*
6 *Domácnosti seniorů. Český statistický úřad [online]. Český statistický úřad, 2014 [cit. 2016-09-20]. Available from: https://www.czso.cz/csu/czso/6b004993af*
7 *ibid*
8 *Využívání informačních a komunikačních technologií v domácnostech a mezi jednotlivci - 2015 [online]. Český statistický úřad, 2015 [cit. 2016-09-20]. Available from: https://www.czso.cz/csu/czso/jednotlivci-vyuzivajici-vybrane-infromacni-a-komunikacni-technologie*

As we can see, for an ever-growing number of elderly information technology represents a commonly used information channel that helps them to gather, evaluate, assess and exchange information with the outer world[9]. According to the Czech statistical office, out of the 28,6% of elderly that has used the internet at least once in the last three months, most respondents have used it for the purposes of: email 82,8%, social networks 11,7%, internet calls 35,6% and shopping on internet 28% (at least once in the last year)[10].

Target group

The target group of our research are elderly 65 - 75 years of age, participants of the program of University of the 3rd Age (further only "U3A"). Reasons for these limitations were:

1. Age: Senior population is equally diverse as any other segment of the society. In order to reach as high level of predictive value as possible, we included respondents only in between 65 - 75 years of age. Cohort membership plays in our research a significant role due to communist political system that was in place in the Czech Republic throughout the productive life of all our respondents. In respect to our research, major factors in question related to this cohort group are a) lower possibilities to learn foreign languages other than Russian b) lower level of trust towards information published by establishment and official institution due to their experience with communist censorship and propaganda.

   Younger or older applicants interested in participation in the study were accepted, however their results were excluded from the final evaluation.

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9 *Jednotlivci v ČR používající mobilní telefon, 2005-2015. Využívání informačních a komunikačních technologií v domácnostech a mezi jednotlivci - 2015 [online]. Český statistický úřad, 2015 [cit. 2016-09-20]. Available from: https://www.czso.cz/csu/czso/jednotlivci-vyuzivajici-vybrane-infromacni-a-komunikacni-technologie*
10 *Činnosti prováděné jednotlivci na internetu. Využívání informačních a komunikačních technologií v domácnostech a mezi jednotlivci - 2015 [online]. Český statistický úřad, 2015 [cit. 2016-09-20]. Available from: https://www.czso.cz/csu/czso/cinnosti-provadene-jednotlivci-na-internetu*

2. U3A: Pure restriction on the basis of the chronological age does not reflect the diversity of this population segment and omits other influential factors of a potentially high level of significance. Outcomes of the statistical research of Czech Statistical Office and Eurostat show[11], that the usage of information technology and related services among elderly steeply rises with the level of education achieved. According to Czech Statistical Office and Eurostat, out of elderly Internet users 27,1% with elementary education, 60,4% with secondary education a 85,2% with university degree read news on the internet[12]. That number significantly exceeds the EU28 average which is 14,7% (elementary education), 37,4% (secondary education), 63,3% (university degree)[13]. It proves that elderly with higher level of education represent the early adopters in this segment of population as described by the Roger´s technology adoption curve[14]. Any U3A applicant must prove to have completed secondary education or higher in order to be accepted to the program. As secondary school or university graduates, U3A students are also supposed to have enhanced reading, computer and information literacy skills due to higher education achieved than is the population average.

Respondents were addressed by the central office of the U3A program of the Charles University in Prague and Masaryk University in Brno. Thus they were limited purely to U3A students participating in the program of the institutes of information science and librarianship in Prague and Brno. The total number of respondents in our pilot study was 29.

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11 *Jednotlivci používající internet – uživatelé internetu v zemích EU podle pohlaví, věku a vzdělání ve 2. čtvrtletí 2014. Využívání informačních a komunikačních technologií v domácnostech a mezi jednotlivci - 2015 [online]. Český statistický úřad, 2015 [cit. 2016-09-20]. Available from: https://www.czso.cz/csu/czso/jednotlivci-vyuzivajici-vybrane-infromacni-a-komunikacni-technologie*
12 *Jednotlivci používající internet ke čtení online zpráv, novin a časopisů v zemích EU podle pohlaví, věku a vzdělání v roce 2014 - podíl na uživatelích internetu. Využívání informačních a komunikačních technologií v domácnostech a mezi jednotlivci - 2015 [online]. Český statistický úřad, 2015 [cit. 2016-09-20]. Available from: https://www.czso.cz/documents/10180/20568879/062004-1538.pdf/8dac348a-0cfd-45f1-9047-d764a0bcf7ba?version=1.0*
13 *ibid*
14 *ROGERS, Everett M. Diffusion of innovations. 4th ed. New York: Free Press, c1995. ISBN 0029266718.*

Methods

Theoretical background

Information behavior of the elderly has been extensively studied by Williamson and Asla[15],[16],[17] and others, many of the studies concentrating on specific part of this topic, e.g. human computer interaction (Hawthorn[18], Dickinson[19] etc.) or health information seeking (Medlock[20], Eriksson-Backa[21] of Robertson-Lang[22]).

The topic of our study belongs to the field of everyday life information seeking (ELIS), a term coined by Savolainen[23]. In his study Savolainen described a framework for the study of ELIS (Fig. 1) with „way of life" and „mastery of life" as determinant factors of ELIS practices. As way of life and mastery of life are structured by a set of factors including purchasing power, nature of contact networks, and cognitive resources acquired through education and life experience[24], the elderly from this point of view constitute a distinctive group. In our pilot study we concentrated only on one type of everyday life information, namely orienting information (information concerning current events)[25].

15 WILLIAMSON, Kirsty. The information needs and information-seeking behaviour of older adults: an Australian study. In: Perti VAKKARI, Reijo SAVOLAINEN and Brenda DERVIN eds. ISIC '96 Proceedings of an international conference on Information seeking in context. London: Taylor Graham, 1997, s. 337-350. ISBN 0-947568-719.

16 WILLIAMSON, Kirsty and Terryl ASLA. Information behavior of people in the fourth age: Implications for the conceptualization of information literacy. Library & Information Science Research [online]. 2009, 31(2), 76-83 [cit. 2016-12-01]. DOI: 10.1016/j.lisr.2009.01.002. ISSN 07408188. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0740818809000073

17 ASLA, Terryl M. and Kirsty WILLIAMSON. Unexplored territory: information behaviour in the fourth age. In: Proceedings of ISIC, the Information Behaviour Conference, Leeds, 2-5 September, 2014: Part 2 [online]. 2014 [cit. 2016-09-20]. Available from: http://www.informationr.net/ir/20-1/isic2/isic32.html#.V-ES2IiLS70

18 HAWTHORN, D. Interface design and engagement with older people. Behaviour & Information Technology [online]. 2007, 26(4), 333-341 [cit. 2016-12-01]. DOI: 10.1080/01449290601176930. ISSN 0144929x. Available from: http://www.tandfonline.com/doi/abs/10.1080/01449290601176930

19 DICKINSON, A., J. ARNOTT a S. PRIOR. Methods for human – computer interaction research with older people. Behaviour & Information Technology [online]. 2007, 26(4), 343-352 [cit. 2016-12-01]. DOI: 10.1080/01449290601176948. ISSN 0144929x. Available from: http://www.tandfonline.com/doi/abs/10.1080/01449290601176948

20 MEDLOCK, Stephanie and et al. Health Information-Seeking Behavior of Seniors Who Use the Internet: A Survey. Journal of medical internet research [online]. 2015, 17(1), 1 [cit. 2016-12-01]. DOI: 10.2196/jmir.3749. ISSN 14394456. Available from: http://www.jmir.org/2015/1/e10/
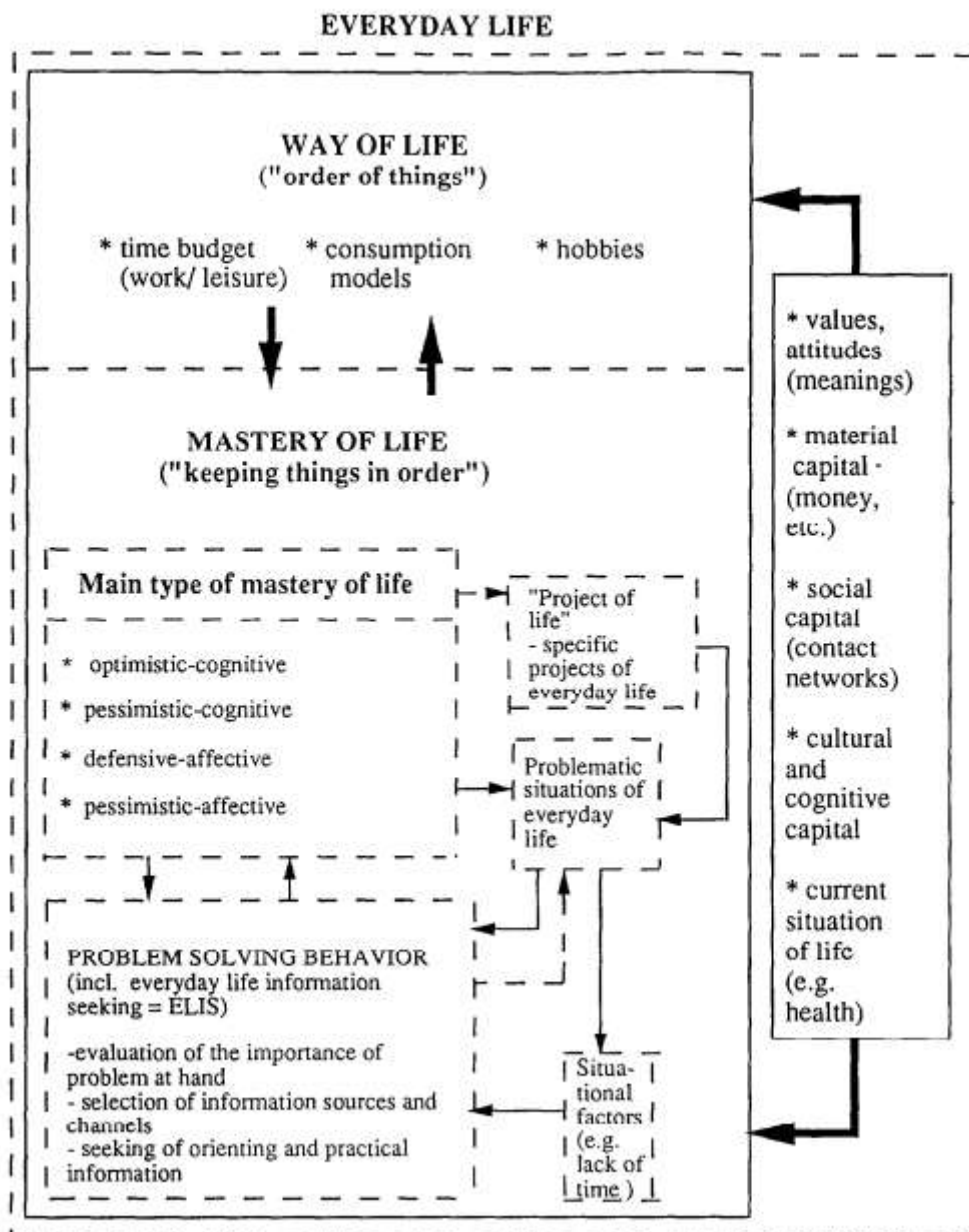
21 ERIKSSON-BACKA, K., S. EK, R. NIEMELA and M.-L. HUOTARI. Health information literacy in everyday life: A study of Finns aged 65-79 years. Health Informatics Journal [online]. 2012, 18(2), 83-94 [cit. 2016-12-01]. DOI: 10.1177/1460458212445797. ISSN 14604582. Available from: http://jhi.sagepub.com/cgi/doi/10.1177/1460458212445797

22 ROBERTSON-LANG, Laura, Sonya MAJOR and Heather HEMMING. An Exploration of Search Patterns and Credibility Issues among Older Adults Seeking Online Health Information. Canadian Journal on Aging / La Revue canadienne du vieillissement [online]. 2011, 30(04), 631-645 [cit. 2016-12-01]. DOI: 10.1017/S071498081100050X. ISSN 07149808. Available from: http://www.journals.cambridge.org/abstract_S071498081100050X

23 SAVOLAINEN, Reijo. Everyday Life Information Seeking : Approaching Information Seeking in the Context of "Way of Life". Library & information science research. 1995, 17(3), 259-294. ISSN 0740-8188.

24 ibid

25 ibid

EVERYDAY LIFE

WAY OF LIFE
("order of things")

* time budget   * consumption   * hobbies
  (work/ leisure)   models

MASTERY OF LIFE
("keeping things in order")

Main type of mastery of life

* optimistic-cognitive

* pessimistic-cognitive

* defensive-affective

* pessimistic-affective

"Project of life"
- specific projects of everyday life

Problematic situations of everyday life

PROBLEM SOLVING BEHAVIOR
(incl. everyday life information seeking = ELIS)

-evaluation of the importance of problem at hand
- selection of information sources and channels
- seeking of orienting and practical information

Situa-tional factors (e.g. lack of time)

* values, attitudes (meanings)

* material capital · (money, etc.)

* social capital (contact networks)

* cultural and cognitive capital

* current situation of life (e.g. health)

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Applied Research Methods

Research questions for our pilot study were:

- How seniors gather and analyze information about current events?
- How do they seek information? Based on which factors do they evaluate relevancy and reliability of information resources?
- Do self-assessment results from the questionnaire correspond to information behavior observed during the testing?
- Additionally also what types of information they prefer and how well they understand information presented.

The pilot study was completed in four steps:

1. **Questionnaire**. At first, respondents were asked to fill in an anonymous questionnaire. Every participant was assigned a number that was used throughout the whole research in order to link all its parts together. The questionnaire contained 29 questions, all of them compulsory. The questions were all closed, 21 of them were multiple choice with either single or multiple answer, 8 used Likert scale. The first four questions were demographic, asking for age, gender, education and participation in U3A.

2. **Initial observation**. Initial performance testing was based on search for information on Zika virus. This topic was selected as it represents a recent event that caught the attention of the worldwide public and at the same time it relates to the area of health information which is one of the prime interest-areas of most seniors[26]. The respondents were instructed that the main factor observed will not be merely the correct answer to the question, but also the process of acquiring correct and reliable information.

   The following aspects were observed and evaluated:

   - Which search engines did the respondents use?
   - Do they follow any information credibility procedures related to the authorship, information source, source-data etc.?
   - Do the respondents face any problems related to the use of computer itself or the search on internet?
   - Are the answers correct?

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26 WICKS, Don A. Older Adults and Their Information Seeking. Behavioral & Social Sciences Librarian [online]. 2004, 22(2), 1-26 [cit. 2016-09-20]. DOI: 10.1300/J103v22n02_01. ISSN 01639269. Available from: http://www.tandfonline.com/doi/abs/10.1300/J103v22n02_01

The time limit to complete the answers was 30 minutes, in most cases respondents completed the task far under the time limit. Respondents put their answers to an online form, using the same identification number as with the questionnaire. Each participant had his/her own observer, who made notes about the search methods used by the particular participant e.g. search engines used throughout the tasks, links followed, information verification and also about participants' overall handling of the task and any „incidents" related to its fulfilment. The questions given to the respondents during the initial performance testing were: 1. Does Zika virus represent a danger to seniors, if so, how? 2. What is the current status of research in this field? 3. Describe individual symptoms of the Zika virus.

3. **Lecture**. Short lecture on search methods for trustworthy information on the internet (with particular emphasis on health information websites) was held. Participants were taught basic health information reliability assessment methods and examples of best practices were presented.

4. **Second observation**. The participants had to answer other three health related questions, again using the information found on the internet. Again, the individually assigned observers made notes about the search methods used by the participants. The questions given to the respondents during the initial performance testing were: 1. Varicella zoster virus causes chickenpox to children. In the adult age, it may cause also another very unpleasant illness. Which one? 2. Is it possible to get vaccinated against this illness. ? How long lasts the immunity after the vaccination against flu?

Thus, research methodology included qualitative research methods and techniques like questionnaires as well as observation techniques to monitor information seeking behavior to the given topics. Research was designed based on previous knowledge of the target group (U3A students).

An extensive attention was paid to the training of observers. The method of observation protocol notes was broadly discussed throughout the preparation, incl. the mind mapping method[27]. Although the notes varied sometimes slightly in the level of detail, the outcomes were comparable. The use of video recording method was dismissed due to potential disruptive influence on the respondents. Likewise, the eye-tracking method was not applied due to the technical limitations of the testing environment.

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27 BECKETT, Angharad. Exploring Mind-Mapping as a Research Tool: from application to analysis. In: Thinking Critically About Analysis' Conference, 13th September 2010, University of Leeds [online]. 2010 [cit. 2014-12-04]. Available from: http://www.sociology.leeds.ac.uk/assets/files/research/events/A%20Beckett%281%29.pdf

Results

Questionnaire

The results of the questionnaire can be clustered into three basic information seeking habit groups.

  a. Intensity of "hunger for information"

The group of respondents showed no signs of any passivity as sometimes perceived via stereotype-lens. In contrary, the results show high interest of seniors in current events in the society. They follow the news on a daily basis (97%). Internet represents one of the major channels used for this purpose, 96% of the respondents follow the news on internet on a daily basis or every second day. Within our group of respondents, internet has thus surpassed the television (76%) which is traditionally considered to be the prime information source of elderly population. Another typical feature turned out to be strong need to search for additional information expressed by 90% of the respondents. Respondents consider information provided by the media to be one-sided (52%), incomplete (48%) and 32% of the respondents considers them to be even manipulated. 75% of respondents expressed need for "more points-of-view".

  b. Formal aspects of preferred information resources:
  - **Language skills**: Knowledge of foreign languages reflects standards of this cohort group in the Czech Republic[28]. During the communist regime foreign languages taught in the educational system were mostly limited to Russian. Contact with other, particularly non-communist countries was also limited. However, there is a space for improvement in the formulation of this question in the questionnaire in the next phase of the research. Taking in consideration the existing formulation, we assume that better foreign language skills may be explained either by higher education of the respondents and their obvious desire for further self-improvement (also represented by their participation in the U3A courses as well as the pilot study), or it may also relate to widely spread knowledge or passive understanding of Slovak language, a language which is extremely close to the Czech language and particularly for people grown up in former Czechoslovakia it is easy to understand.

    Despite their claimed knowledge of foreign languages and their interest in additional information and "other-points-of-view", 80% respondents surprisingly declared not to use foreign portals to search for information on current events.

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28 *Stav a vývoj znalostí cizích jazyků české populace. Insoma [online]. Insoma [cit. 2016-09-20]. Available from: http://www.insoma.cz/index.php?id=1&n=1&d_1=paper&d_2=jazyky_cz*

- **Traditional vs. electronic media**: Interesting discrepancies among the responses were found when the participants were asked about their preferable media form. 72% prefer traditional printed text to the electronic form. Simultaneously, respondents appreciate advantages of the "less-preferred, but more used" electronic resources such as easy access and recency of information. This difference may be explained by the financial costs related to acquisition of newspapers and journals. Whereas, costs related to internet connection may be considered more useful not only for gathering information from the internet, but also for email, skype and other services which our respondents claimed to use, costs of traditional newspapers may be considered non-essential.

c. Information reliability assessment approach

- Respondents listed among the prime factors indicating quality and reliability of information: information resource in which the information was found, authorship of the information and links to source-data . These self-assessment results contrast sharply with information behavior of the respondents vis-a-vis their tasks in the first observation session. Theoretical knowledge was not transferred into practical application.

- Credibility

- Respondents were asked to indicate level of credibility they assign to authors of information coming from different professions. The lowest level of trust is linked to politicians, followed by charitable and human-rights organizations and "vox populi". In the middle of the scale, there are journalists, international organizations and sociological surveys. As most credible sources of information are considered scientists and specialists-practitioners.

Initial Performance Testing - Observations Results

Despite the initial instructions, fifteen respondents had the tendency to answer at least one of the questions straight away based on information they had known with an obvious conviction that that knowledge was correct and does not have to be checked. Four respondents stuck to this approach despite friendly appeals from their observers. Fourteen respondents tried to find correct and reliable information to all the questions on the internet.

Taking in consideration space dedicated to this subject by mass media in 2016, is this situation comprehensible, although initially the respondents were expected to follow the instruction set given in the beginning of the performance testing. On the other hand, this result proves high level of interest in current events expressed by the participants in their questionnaire answers. Answers to the questions that were provided without previous search on the internet were correct, the approach of the respondents may thus not be contested.

In those cases, when the respondents did decide to search for the information on the internet, keywords were given into the browser address bar. When search engines were used, most respondents turned to Google.com and Seznam.cz (often also second choice after Google). All the respondents used some of the links listed on the top 5 positions of the Google/Seznam query results. More than half of the respondents used Wikipedia as the preferable resource. Minority of the respondents picked reliable information sources such as the Czech Radio Website (article related to Zika virus was published as a supplement to their broadcasted program) or the National Institute of Public Health.

Second Performance Testing - Observation Results

The second performance testing followed immediately after the lecture on search strategies in the health domain. However, only one respondent extensively changed his/her information searching patterns and used as the starting point the Ministry of Health website which were specifically mentioned as an example of a reliable information source during the lecture. As he/she did not succeed in finding the information required, he/she again returned back to Wikipedia.

The second question set was more difficult than the first one, respondents were not sure with correct answers. Only three respondents answered again without prior research, but their answers were not correct this time. About half of the respondents had a tendency to consult their approach with their observers. Their advice was however limited to minor issues: e.g. encouragement to continue if the correct answer could not have been found in the first link. However, respondents again preferred Google.com, less Seznam.cz. In the second step, they chose the English and Czech Wikipedia, webpages of the National Institute of Public Health or Czech Radiobroadcast and this time also Wikiskripta [Czech equivalent of Wikilectures, electronic study materials written by students of medical faculties]. A language barrier turned out to be an obstacle in their search. In response to the keyword "Varicella zoster" Google provided also links to English web pages. Only one respondent continued with this search, however even he/she was not able to find relevant information in the English text and his/her observer reported that his/her response was "creatively invented". 90% of the other respondents proved to be aware of the automatic

translator function of Google and they tried to use it throughout the search process. Despite the claimed knowledge of foreign languages, foreign portals again proved not to be a preferred source of information for our respondents, which makes respondents naturally dependent on the scale and depth of information provided by Czech media and also vulnerable to manipulation as they are not able to proactively confront their particular opinions with foreign approaches.

Throughout the experiment, the respondents seemed to have a problem with orientation on the screen, which obviously did not match with the customized interface they were used to. Only one respondent proved to master elementary research techniques and narrowed down his/her search query in the second step to "Varicella zoster + čeština" [transl. "Czech"]. The absence of a targeted selection of portals and web pages of estimated high quality and reliability of information was surprisingly very similar to the initial performance testing. In two cases, respondents' answers were based only on information from an annotation under the link. Google was used as the prime and often even the last information gate, as illustrated by one response: "According to Google, immunity to flu depends on the virus type and individual health condition".

It is important to stress, that during the pilot study, respondents replied to questions indicated in the questionnaire. They were not pursuing their true information needs. Therefore it would be a mistake to conclude that respondents do not give any importance to the quality of resources or that they are not aware of risks related to commercial or any other types of information manipulation on the internet. However, despite initial instructions as well as the following lecture, no quality related search behavior was observed. In most cases, respondents used the first set of outcomes provided by the search engine. This result sharply contrasts with the self-assessment part of the questionnaire, where a vast majority of respondents indicated to search for quality information and provided reasonable answers on questions related to methods of information quality assessment. On the other hand, the observation results do correspond with the list of information resources that respondents indicated as their main information resources (Google.com, Seznam.cz, news portals). The gap between these two may be further investigated.

Our pilot study was not specifically targeted on assessment of computer skills. The following outcomes are therefore just a secondary by-product which resulted from the observations. However, observers were not given any specific instructions regarding notes about computer skills of the participants, and therefore the outcomes were very diverse in the level of detail. On the other hand, no respondent faced any crucial problem regarding the use of computer, mouse or keyboard. Individual difficulties were detected in respect to interface. Most respondents found it difficult to deal with a different working environment than they were used to. Common problems included confusion caused by unusual starting web page

(Faculty of Arts homepage), problems with "starting" Google, switching Explorer and Chrome or working with more opened windows of the browser. 30% of the respondents obviously did not know the "step back" function. Equally, the change of visited links color was not understandable to most. Most respondents used the autocomplete feature during the search. In total, 14 respondents were ex-post evaluated as "advanced" computer users (no problems with computer, internet etc.) and 15 as "intermediates" (uncertainty using the interface or computer itself).

Despite the simplicity of questions, eight respondents claimed not to understand some questions and observers had to explain the meaning at first. Among the "advanced" computer users, correct and complete answers were provided by eight respondents, in six other cases there was one serious mistake. The most difficult seemed to be the questions related to possibilities of vaccination against Varicella zoster or related risks. Two respondents gave two false answers. Among the "intermediates", only three respondents provided correct and complete answers. Two respondents did not complete the task. Five respondents submitted answers with one serious mistake. Three respondents gave more than two false answers.

It is obvious that in the information society computer skills are an important prerequisite to developed information literacy skills. The outcomes of our experiment show, that despite regular use of information technology in day-to-day life, a significant number of elderly does not yet reach the level of computer skills needed for sound application of information literacy skills. Although all participants claimed to use computers in search for news and information on a daily basis, the respondents with advanced level of computer skills proved to be far more efficient in their information searching behavior. We may estimate that despite statistical data showing an increase of computer/internet usage among elderly[29] and availability of a wide variety of courses, books and study-materials of computer skills for elderly, there is still space for an improvement in this domain.

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29 Využívání informačních a komunikačních technologií v domácnostech a mezi jednotlivci - 2015 [online]. Český statistický úřad, 2015 [cit. 2016-09-20]. Available from: https://www.czso.cz/csu/czso/jednotlivci-vyuzivajici-vybrane-infromacni-a-komunikacni-technologie

Conclusion

Respondents in our pilot study proved to have high interest in news and current events in the society. This hunger for information is also satisfied to a great extent by electronic information sources. Despite this improvement of computer skills, which represent a prerequisite to information literate behavior, for a significant part of almost a half of the participants there is still space for improvement, probably also depending on the extent to which they had been used to work with computers in their previous professions. Problems with computer skills logically influence their capacity to complete operations extending pure "leisure and fun" activities. It would be interesting to investigate more in-depth how seniors pursue their online shopping activities, which majority of our respondents claimed to complete on a regular basis. The experiment showed discrepancies between self-assessment and outcomes of the practical performance tests: theoretical knowledge about information quality search techniques on the internet is widespread, but not practically applied in assigned tasks. Based on our experiment we may conclude, that due to the lack of adequate competencies, our respondents rather use the online information sources in a way similar to the more "passive" reception of offline information. There is also space for further research in the field of reading competences among the target group. Throughout the experiment, there were signs of possible inadequate reading skills that would help our respondents acquire overview and insight into previously unknown topics and domains.

Although it is too early to make far reaching conclusions, the results of our pilot study show a) ongoing need for courses of computer skills for elderly followed by b) information literacy courses providing the elderly with possibilities to practice theoretical knowledge in real-life situations. Such courses may be also embodied into the U3A curricula where they may be enriched by topics about "behind-the-scenes" of internet. U3A students may then become familiar with answers to questions such as search algorithms of search engines, internet marketing and its pitfalls, protection of personal data on the internet or internet safety in general etc. In the next phase, the following adjustments to the research method are desirable: a) revocation of the time limit (although most respondents did not use the 30 minutes allocated for the completion of the tasks, the pure existence of the time limit seemed to create slightly stressful atmosphere b) adjustment of the tasks for performance testing so that they better reflect real-life needs of the respondents c) better formulation of the question related to foreign language knowledge. Interesting topics for further research would be an in-depth research of real information needs of elderly citizens or digital financial literacy which is also tightly related to the information literacy domain.

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