



ASSOC. OF LIBRARIES OF CZECH UNIVERSITIES



**The Fourth European Conference on
Information Literacy (ECIL)
Prague, Czech Republic
10-13 October 2016**

Editors: S. Špiranec, S. Kurbanoglu, H. Landová, E. Grassian, D. Mizrachi, L. Roy, D. Kos

Abstracts

**The Fourth European Conference on Information Literacy
(ECIL)**

October 10th-13th, 2016, Prague, Czech Republic

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Editors:

Sonja Špiranec, Serap Kurbanoglu, Hana Landová, Esther Grassian,

Diane Mizrachi, Loriene Roy, Denis Kos

Association of Libraries of Czech Universities

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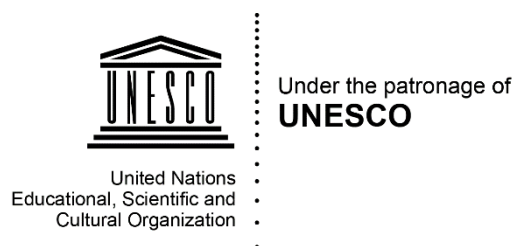
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Foreword

Dear colleagues, dear conference participants,

It is our great pleasure to welcome you in Prague, Czech Republic, as you become part of the 4th European Conference on Information Literacy – ECIL 2016. We are meeting here in order to share our experiences and knowledge, discuss the new developments and get inspired – so we can move the issues related to information literacy one-step forward. Or two. This year, the main theme of the conference is “Information Literacy in the Inclusive Society”. All the changes in the world and in the society we live in, make us think about how to add our part on the journey towards the society that is open, accessible and inclusive in the true meaning of these words. Information literacy, without any doubts, is an important piece of this puzzle.

It was very exciting to see the increasing number of researchers, information professionals, librarians, educators, media specialists and policy makers from all around the world submitting their proposals to participate actively in ECIL 2016. In total, 240 proposals were submitted and subjected to a double-blind review. 180 of them were accepted and you can find their abstracts in this book. We hope you will find the selection interesting as it creates a wide spectrum of opinions, perspectives and methods. Some of them theoretical, some of them focusing on the everyday practice in the educational institutions, libraries or other settings.

This book of abstracts also includes two keynotes and three invited speeches. It is a great honour to welcome their authors in Prague with us. Our keynotes, Tara Brabazon and Jan A. G. M. van Dijk, share their perspectives on the information literacy in the context of inclusive society. Our invited speakers - Annemaree Lloyd, Ola Pilerot and Vít Šisler represent different approaches and topics, showing how variable and colourful the world of information literacy is.

As a host of the ECIL 2016, we are grateful for the support of several organizations and institutions. Our special thanks go to IFLA and UNESCO for their patronage. These two organizations have been supporting tremendously the development of information literacy around the world. We were very happy to find the support also in the Czech Republic: the Czech Commission for UNESCO as well as the Ministry of Education, Youth and Sports provided their patronage. The financial support of several partners made this wonderful event happen. We would like to express our gratitude to several universities, members of the Association of Libraries of Czech Universities that became partners of ECIL 2016: Czech Technical University in Prague, Charles University (Faculty of Arts), Masaryk University, University of South Bohemia in České Budějovice, Czech University of Life Science in Prague, University of Pardubice. We were very glad to receive support by EBSCO and Thomson Reuters.

ECIL 2016 would not exist without the passion, energy and hard work of many people. It is our pleasure to thank the members of the Standing and Programme Committees who made a great effort to ensure the timely review of the submitted manuscripts. Personally, I would like to thank Serap Kurbanoglu and Sonja Špiranec for providing us a guidance through the process of organizing ECIL conference, the event that would not be here without these two wonderful and passionate ladies. Last, but not least, I would like to acknowledge my colleagues in the Local Organizing Committee. They were always present and ready to share excitement, ideas, as well as worries and doubts. Our minds and hearts worked together in a wonderful synergy. Thank you!

Nevertheless, at the end, it is you, the conference participants, who create the experience. Presentations, questions, discussions, meeting old friends and new friends, having a glass of wine and dancing to the music - that is what makes ECIL the event we all love to come back to. Thank you for that.

We hope you enjoy the conference as well as Prague in its autumn colours. It can be magical. And it is here for you.

On behalf of the Local Organizing Committee,

Hana Landová

President of the Association of Libraries of Czech Universities

Preface

The main theme of this year's ECIL is 'Information literacy in the inclusive society'. Social, economic and political inclusion, participation, democracy and, stemming from these imperatives, empowerment: information literacy is deeply relevant here. The Alexandria Proclamation recognised this back in 2015, with its view that information literacy "empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals". This view remains pertinent where a large proportion of the world's population remains sidelined, disenfranchised or excluded, and also where populism and demagoguery undermine rational discourse. Information literacy fosters inclusivity by equipping citizens to use information as a means of affirming their stake in society, challenging mis-information and developing critical attitudes to prevailing norms, particularly where these stand in the way of greater well-being and emancipation.

The conference's varied programme addresses these sometimes controversial challenges. It kicks off on the first day with a strand of presentations on inclusive society, examining topical themes such as how information literacy addresses the political fallout from large-scale terror attacks; financial literacy in the light of economic crises; the role of school library programmes in combatting young people's social exclusion; and information seeking instruction for indigenous peoples. The variety of these contexts underlines the relevance of information literacy to a range of social, cultural and economic contexts.

Other strands of ECIL2016 also address inclusivity and participation. The third afternoon sees a series of presentations on information literacy as a way towards inclusion, with a strong emphasis on intercultural engagement and the information needs of immigrant communities – a theme also picked up by Annemaree Lloyd in her invited address on information resilience and the resettlement of refugees. On the final day, the relationship between democracy and information literacy is explored, with a consideration, for instance, of how IL can contribute to social justice and active citizenship, and how information behaviour is influenced by ideology. The practical role of libraries in helping to foster digital inclusion is covered in the panel session on the first day. The pre-conference event looks at how information literacy practices may inadvertently hinder inclusivity, and may be improved through critical approaches.

Much more could be said, but it is impossible for a short preface to do justice to the rich, stimulating programme of the conference. Every part of the four-day event offers fascinating insights into the multi-faceted aspects and implications of information literacy, through the prism of theory, pedagogy, research methods, librarianship, health literacy, media literacy, and more, right across the globe. These frames will often touch on issues of inclusion. Whether or not you have previously attended ECIL, you will not be disappointed by the breadth of coverage this time round, and the quality of the programme.

And to cap it all, ECIL this year is hosted in the beautiful, extraordinary city of Prague, birthplace of Václav Havel – playwright, former dissident, last President of Czechoslovakia, first President of the Czech Republic – who once said that "there can be no doubt that distrust of words is less harmful than unwarranted trust in them". He could have said the same about information, and thereby provided a fitting justification for the vital importance of critical faculties that are inherent to information literacy.

Stéphane Goldstein

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KEYNOTES

3D Librarian: Information Literacy in an Accelerated Age

Tara Brabazon

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The greatest challenge of our time is not terrorism, but ignorance. One key enabler for xenophobia is a lack of information literacy. It is easy to preach fear and hatred when the foundation for these beliefs is opinion and emotion, rather than information and knowledge.

My presentation provides an under-researched solution to ignorance and fear: *the 3D librarian*. I explore how librarians can manage the three Ds – **digitization**, **deterritorialization** and **disintermediation** – and create an educational culture of thinking, reflection and analysis, rather than commentary, abuse and linguistic violence.

Keywords: *information literacy, digitization, deterritorialization, disintermediation*

Digital and Substantive Skills for Every Citizen, Worker and Consumer in the 21st Century

Jan A. G. M. Van Dijk

University of Twente, the Netherlands

This keynote speech will bring the most important conclusions about long-term research developments and testing a framework of six digital skills for everybody in society, not only in particular educational programs. These skills are operational, formal, information, communication, creative and strategic skills in using digital media such as the Internet.

The first question is: What is the distinction between digital and substantive skills? For instance, what is the difference between traditional and digital literacy or information skills? The second question is: How are digital skills related to so-called '21st century skills' such as problem solving, co-operation and critical thinking?

The second part of the speech focuses on policy and practice. How can digital skills be improved by educational and other means for all in society? Should the strategy be more technical, social (context) or educational? Who will be the most important drivers: governments, educational institutions, libraries, businesses (workers and consumers) or communities (citizens)?

Keywords: *information literacy, digital and substantive skills, citizen, worker, consumer*

INVITED PAPERS

Learning to Go On: Information Resilience in a Resettlement Landscape: Key Themes and Challenges of Fractured Landscape Research

Annemaree Lloyd

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The concept of information resilience has emerged from a series of studies that explored the information literacy experiences and practices of resettling refugees (Lloyd, Kennan, Thompson & Qayyum 2013; Lloyd, 2014; Lloyd & Wilkinson, 2016) as they engage with new information environments and build new information landscapes. These studies considered the construction of information literacy practice from a socio-cultural perspective.

Information resilience (Lloyd 2014) describes an attribute of practices such as information literacy. The concept emphasises the central role that communities play in enabling people to transition in times of uncertainty. Engaging with information and creating an understanding of the information environment and its multiple landscapes occurs through interaction with, and exchange of, information. Becoming and being resilient is therefore predicated upon creating and maintaining communal relationships with others in order to draw from internal and external banks of knowledge; of sharing information and, in turn developing shared understanding and meanings; and developing knowledge about the literacies of information that are required to tap into the content knowledge of established information environments.

The concept of information resilience has the potential to provide a focal point and an analytical resource for understanding and describing the outcomes of information literacy practice that extend beyond the current focus on skills and attributes. It does so by drawing attention towards the critical role that information literacy has in (re) constructing knowledge bases, social networks and information landscapes that have become disrupted and fractured during transition; and, operate within formal and informal spaces

Key questions for this presentation are:

- What is information resilience?
- How is resilience understood from an information studies perspective?
- What is the relationship between information literacy and information resilience?
- What role do libraries play in building and supporting strategies that enable resilience? How do libraries act as sites for information resilience training?
- What are the challenges for LIS researchers working in the humanitarian space?

References

- Lloyd, A. (2015). Stranger in a strange land; enabling information resilience in resettlement landscapes. *Journal of Documentation*, 71(5), 1029–1042.
- Lloyd, A., & Wilkinson, J. (2016). Knowing and learning in everyday spaces (KALiEds): Mapping the information landscape of refugee youth learning in everyday spaces. *Journal of Information Science, Special Issue: i3 Conference Aberdeen June 2015*, 1–13.
- Lloyd, A., Kennan, M. A., Thompson, K. M., & Qayyum, A. (2013). Connecting with new information landscapes: Information literacy practices of refugees. *Journal of Documentation*, 69(1), 121–144.

Keywords: *information, resilience, information literacy, health information, refugees, resettlement, transition*

A Toolbox Approach to Researching, Understanding and Teaching for Information Literacy

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The elusive phenomenon of information literacy (IL) is traced, narrowed down, and conceptualized in three different ways: as a “label” for a field of research, as an empirical entity; and as a theoretical notion. From a perspective grounded in over twenty years of teaching and research in the area, a toolbox approach to information literacy is presented. Such an approach comprises a set of sensitizing concepts which will be introduced and discussed in relation to various aspects of IL. Accordingly, IL will be considered from the perspectives of e.g. situatedness, discourse, genre, materiality, and distributed agency. The overall ambition is to present and discuss these aspects in a manner that make them relevant to both research and educational practices focusing on IL.

Keywords: *information literacy, toolbox approach*

Designing Educational Games and Simulations for Humanities: Case Study of Czechoslovakia 38-89

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Computer games and simulations are increasingly being used in formal education. The key meta-analyses of comparative studies examining the learning effects of games report their general instructional effectiveness. Nevertheless, there is much less solid empirical evidence on which game features support the learning process. Simultaneously, there are very few evidence-based guidelines for game designers on how to design games that facilitate meaningful learning, particularly for humanities. This paper briefly introduces the educational simulation Czechoslovakia 38-89, which we have developed at Charles University and the Czech Academy of Sciences, and critically discusses its design process. Czechoslovakia 38-89 presents key events from Czechoslovakia's contemporary history and enables learners to "experience" these events from different perspectives. It aims to develop deeper understanding of the multifaceted political, social and cultural aspects of this time period. Its content stems from historical research and personal testimonies. Emphasis is given on the diversified historical experiences of the population, including previously marginalized groups. The primary aim of this paper is to critically discuss the design challenges stemming from adapting the real-persons' – oftentimes emotionally and ethically loaded – testimonies in order to construct the in-game narratives. In particular, the paper discusses the intersections and tensions between educational aims and gameplay, authenticity and fictionality, and gaming and learning mechanics. The secondary aim of this paper is to investigate the acceptance of Czechoslovakia 38-89 by Czech teachers and students as a teaching tool for history education.

Keywords: *educational games, humanities, case study*

PAPERS

Information Literacy Instruction: An Overview of Research and Professional Development in Pakistan

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Introduction

The area of Information Literacy (IL) has attracted the attention of Pakistani academicians and researchers during the recent years. There are visible developments in education and research on IL. The first author of this paper produced the first ever paper on IL from Pakistan (Ameen & Gorman, 2009). At present, 12 public and private sector universities in Pakistan offer LIS education at master level. However, only four universities offer regular M.Phil. and Ph.D. programs comprised of course work and dissertation.

Objectives

This paper aims to present an overview of IL instruction in Pakistan from the following perspectives: Offering IL instruction as a credit course at library schools; literature produced; and continuing professional development activities in the field of IL instruction.

Methodology

This study is based on multi-methods of collecting data including review of the literature produced in Pakistan, a survey of library schools and searching through the message archives of the professional electronic groups.

Findings

The findings reveal that studies have been conducted on the topic of IL at M.Phil. and Ph.D. level. However, only 12 research papers have been published on IL in Pakistan from 2009 to 2015. Out of 12 LIS schools, four offered a 3-credit hour course on IL instruction at master level. Three LIS schools offered it as compulsory while one as an optional course. Continuing professional development opportunities were almost non-existent for LIS professionals in Pakistan.

Conclusion

Offering IL instruction to library users is an important role of information professionals. Therefore, IL needs to be included in the curriculum at all LIS schools. Research studies on different aspects of IL must be conducted. LIS schools and associations must prepare the professionals to run IL instruction programs in order to equip their library users with the skills they need in their career.

Significance

This paper explored and presented a holistic picture of the IL education and research in Pakistan. No such work has been produced so far. The study might be of great help to the LIS researchers, professionals and academicians of the region while introducing the international audience with the scenario of IL progression in a South Asian developing country.

References

Ameen, K., & Gorman, G. (2009). Information and digital literacy: A stumbling block to development? A Pakistani perspective. *Library Management, 30*, 99–112.

Keywords: *information literacy, information literacy education, information literacy research, Pakistan*

Academics' Perceived Usefulness of Higher Education Commission E-journals at University of the Punjab, Pakistan

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Problem Statement

Pakistan's Higher Education Commission (HEC) provides more than 50,000 high quality peer reviewed e-journals to public and private universities of Pakistan. Some important databases of journals and articles are American Institute of Physics (AIP), Institute of Electrical and Electronics Engineers (IEEE), Emerald, Elsevier, JSTOR, Taylor and Francis journals and others. Studies in the Pakistani scenario (Arshad and Ameen, 2015; Mirza & Mahmood, 2012; Tahira and Ameen, 2009) depicted an increasing trend of using electronic information resources among students, researchers and academic staff of universities. The studies also revealed that researchers made more use of free scholarly e-journals and articles as compared to high quality peer review e-journals subscribed by HEC's consortium of e-journals. Therefore, it appeared important to investigate academic staff perceptions regarding usefulness of HEC consortium of e-journals and databases.

Objectives of the Study

This research study aimed to investigate academics perceptions of usefulness of HEC consortium of e-journals.

Methodology

A survey was conducted at the University of the Punjab and self-administered questionnaires were distributed among all 949 regular and contractual academics of Quaid-e-Azam and Allama Iqbal campuses of the university. Visiting academics were not included. The questionnaires were distributed personally and with the help of information professionals at the University of the Punjab. Validity and reliability of the questionnaire was established. After follow ups 457 questionnaires were returned with a response rate of 54 %.

Findings

The results of the study indicated that the majority of the academics found that HEC e-journals were useful for their research tasks and improved their teaching experience as well. They also reported that e-journals were easy to access. Most of the academics (47 percent) also found that core e-journals relevant to their subject were available through HEC consortium of e-journals. Almost 39 percent of academics reported that Punjab University Library did not offer enough training and instruction programmes for locating e-journals.

Significance of the Study

The findings of the study will be helpful for the HEC National Digital Library Programme authorities in reviewing their policies of access and subscription of e-journals. The results of academics e-literacy skills do have practical implications for information professionals of Punjab University Library and departments of the university to arrange training programmes in improving e-literacy skills of academics.

References

- Arshad, A., & Ameen, K. (2015). Usage patterns of Punjab University Library website: A transactional log analysis study. *The Electronic Library*, 33(1), 65–74.
- Mirza, M. S., & Mahmood, K. (2012). Electronic resources and services in Pakistani university libraries: A survey of users' satisfaction. *The International Information & Library Review*, 44(3), 123–131.
- Tahira, M., & Ameen, K. (2009). Information needs and seeking behavior of science & technology teachers of the University of the Punjab, Lahore. *Pakistan Journal of Information Management and Libraries*, 10(1).

Keywords: *e-journals, electronic journals, university, Punjab, Pakistan, higher education, commission*

Developing Information Literacy Skills Lesson Plans Integrated in the Iranian Primary Science Curriculum based On the Big6 Model

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Objectives

There is a lack of information literacy (IL) skills instruction in the education system of Iran, especially in primary schools. This research aims to develop IL skills lesson plans integrated into the sixth grade Iranian primary science curriculum by linking the classroom and the school library using the Big6 model as part of a wider study.

Theoretical framework

The Big6 instructional model of Eisenberg and Berkowitz (1990), the IL model of Keene, Colvin & Sissons (2010) and the integrated IL instruction framework of Kessinger (2013) are built based on revisions of Bloom's taxonomy. In summary, the current body of literature reveals a wide use of The Big6 model in K-12 classrooms (Gibson, 2002; Moreira, 2012 and others) and show positive results of training in library and problem-solving skills and the integration of IL instruction into the curriculum.

Methodology

The Delphi method was included in the instructional design and a sample of 12 sixth grade teachers were selected using a snowball sampling method as the panel of the experts. This research was conducted in Ahvaz city in south western of Iran. Then, lesson plans were drafted of items of the 11th and 12th units extracted according to the basic curriculum design resources and integrated into the Big6 model. The drafts lesson plans were distributed among the panelists and after analysing the responses received, items that had a median value of 4 or higher and an interquartile range of 1.5 or less were selected as the main contents of the Unit Plan and 5 Lesson in context lesson plans based on the Big6 information skills. Finally, the Delphi process stopped after achievement of consensus and stability of results in the third round.

Outcomes

In sum, the developed and confirmed the new lesson plans based on the Big6 information skills can used as the initial framework for developing the IL skills lesson plans in other curricula and subjects in order to upgrade and improve the IL level of the Iranian primary school students.

References

- Eisenberg, M. B., & Berkowitz, R. E. (1990). *Information problem solving: The Big Six approach to library and information skills instruction*. Norwood, NJ: Ablex.
- Gibson, M. R. (2002). *A qualitative investigation for designing intermediate (grades 4-6) information literacy instruction: Integrating inquiry, mentoring, and on-line resources* (Doctoral dissertation). Retrieved September 28, 2013.
- Keene, J., Colvin, J., & Sissons, J. (2010). Mapping student information literacy activity against Bloom's Taxonomy of cognitive skills. *Journal of Information Literacy*, 4(1), 4-20. Retrieved from <http://jil.lboro.ac.uk/ojs/index.php/JIL/article/viewArticle/PRA-V4-I1-2010-1>
- Kessinger, P. (2013). Integrated instruction framework for information literacy. *Journal of Information Literacy*, 7(2), 33-59.
- Moreira, I. V. (2010). *Information literacy in elementary schools*. Retrieved from http://pure.iva.dk/files/30875376/Information_Literacy_in_elementary_schools_3_.pdf

Keywords: *information literacy, instruction, curriculum, lesson plans, primary science lesson plans*

Looking at Financial Information in Public Libraries

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This study is a quantitative evaluation of the actual diffusion of financial education activities in Italian public libraries and whether it may be improved through courses of financial literacy addressed to public librarians. Financial literacy is considered an essential competence to make good financial decisions in an increasingly complex world (Mitchell & Lusardi, 2011). The recent economic crisis has underlined how necessary it is that both individuals improve their financial literacy and governments define national strategies for financial education (OECD, 2013). Conceptual correlation of financial literacy and information literacy has been proven (Špiranec, Banek Zorica & Stokić, 2012). Both international organizations (Koontz & Gubbin, 2010) and professional associations (ALA-RUSA 2014) claim for a specific role for public libraries in promoting education and information literacy in all fields, including finance. Nevertheless, the literature review shows a few papers and experiences regarding financial literacy education in public libraries, suggesting that the number of activities in this field is still quite limited. Among this literature, it has been said that librarians often do not receive specialized training in order to respond to finance-related inquiries (Keller et al., 2015). It is acknowledged that very few Italian public libraries have offered activities for improving financial literacy but the phenomenon has never been measured. It is also acknowledged that Italian public librarians do not receive specific training to respond to financial related inquiries, but this aspect has never been measured and studied either. This study will use survey questionnaires administrated to a sample of Italian public librarians to understand:

- The percentage of reference librarians who have received questions about financial problems
- The presence of courses or workshops related to financial literacy and financial information literacy in the library
- The percentage of reference librarians who have received specific training about finance and/or financial information sources
- The percentage of reference librarians in the sample who have at least basic financial competence
- The self-perceived level of financial literacy competence of the reference librarians in the sample
- The adequacy of library collections covering finance to respond to user questions, in the opinion of the reference librarians

Correlations will be made between the level of activities of financial literacy education in public libraries and variables related to public librarians.

References

- ALA-RUSA. (2014). Financial literacy education in libraries. Washington: RUSA. Retrieved April 12, 2016 from http://www.ala.org/rusa/sites/ala.org.rusa/files/content/FLEGuidelines_Final_September_2014.pdf
- Keller, K. et al. (2015). Meeting the need for library-based financial literacy education. *Reference & User Services Quarterly*, 54(3), 47–51. Retrieved April 12, 2016 from <https://journals.ala.org/rusq/article/view/5643/6974>
- Koontz, C., & Gubbin B. (Eds). (2010). *IFLA public library service guidelines*. Berlin: De Gruyter Saur.
- Mitchell, O., & Lusardi, A. (2011). *Financial literacy: Implications for retirement security and the financial marketplace*. Oxford: OUP.
- OECD. (2013). *Advancing national strategy for financial education*. Paris: OECD. Retrieved April 12, 2016 from <http://www.oecd.org/finance/financial-education/advancing-national-strategies-for-financial-education.htm>
- Špiranec S., Banek Zorica S., & Stokić, S. G. (2012). Libraries and financial literacy. *Journal of Business & Finance Librarianship*, 17, 262–278.

Keywords: *financial literacy education, financial information, public libraries, Italy*

Student Teachers' Perceptions of an Inclusive Future

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Contemporary societies are characterized by stronger connections and influences between different cultures, opinions, and ways of seeing the world. Due to the recent migrant crisis which is affecting Europe, diversity among the population is growing and therefore social inclusion is necessary more than ever. In this changing society, future teachers need to be prepared to meet the needs of diverse students. Our study examines student teachers' attitudes towards social inclusion, perceived attributes of information and communication technologies (ICT) usage, and perceived information literacy self-efficacy. We administered a survey to 300 future teachers studying at the graduate level within the university system in Croatia at the University of Zagreb and University of Split). The randomness of the selection process ensured a representative sample. The research study results are situated in the context of current literature on social inclusion in the modern technology society where the focus is on people's ability to use technology in order to engage in meaningful social practices. Social inclusion is influenced by the ability to access, adapt, and create knowledge using ICT (Warschauer, 2004). A role of teacher preparation programs is to develop students' attitudes and beliefs in order to prepare them for inclusive education. Since education is taking place in both physical and virtual environments, student teachers should be prepared for inclusion using ICT (Beacham & McIntosh, 2012). In order to understand the attitudes of student teachers towards social inclusion and technology's role in that process, we used three validated scales with strong metric properties: Information Literacy self-efficacy (ILSE) scale (Kurbanoglu, Akkoyunlu, & Umay, 2006), the Attitudes Toward Disability and Social Inclusion (ATDSI) scale (Novo-Corti, 2010) and the Perceived Attributes of ICT (PAICT) usage scale (Usluel, Askar, & Bas, 2008). We selected the scales based on satisfactory metric properties and the alignment of the dimensional structure of the scales with our research question. The results of the statistical correlation indicate a relationship between future teachers' attitudes towards social inclusion, perceived attributes of ICT usage, and information literacy self-efficacy.

References

- Beacham, N., & McIntosh, K. (2012). Student teacher attitudes and beliefs towards using ICT as part of inclusive practice: A 2008-2009 pilot survey. *Teacher Advancement Network Journal*, 4(2).
- Kurbanoglu, S. S., Akkoyunlu, B., & Umay, A. (2006). Developing the information literacy self-efficacy scale. *Journal of Documentation*, 62(6), 730-743.
- Novo-Corti, I. (2010). Attitudes toward disability and social inclusion: An exploratory analysis. *European Research Studies Journal*, 13(3), 83-107.
- Usluel, Y. K., Askar, P., & Bas, T. (2008). A structural equation model for ICT usage in higher education. *Educational Technology & Society*, 11(2), 262-273.
- Warschauer, M. (2004). *Technology and social inclusion: Rethinking the digital divide*. MIT press.

Keywords: student teachers, social inclusion attitudes, information literacy self-efficacy, attributes of ICT usage

After the Attacks, the Information Literacy in Libraries in Question

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In the absence of any laws outlining the missions of French libraries, it's a commonly accepted notion that librarians' primary vocation is to emancipate the citizens of their community through access to information, providing the resources necessary for each patron to construct his or her own representation of society (ABF, 2014; Bertrand, 2015). However, neutrality is such a fundamental concept for librarians that the political dimension of librarianship, as vague as it is specific, is difficult to observe from day to day (Jaeger et al., 2013; Bats, 2016). In visible and emotional political processes, the library can truly manifest its agency. But how, in these moments of political disturbance, librarians are redefining their role of emancipators in re-examining the definition of information literacy (IL).

The January 2015 attacks in France are one of these exceptional political situations which give us to see unexpected and historical reactions of librarians. French librarians expressed their concern through action during this period of social disruption (Bats, 2015). We interviewed librarians from public libraries of different sizes, like those of Rennes, Lingolsheim, St-Aubin du Pavail, and Lyon, where such actions were done, and where librarians took these events as an opportunity to question their role. Our analysis takes support on the research of Christine Pawley on the necessity for specialists to have a critical approach to IL, which emphasizes the notions of contextualization, political commitment, and of consumers-producers (Pawley, 2003). We have also studied a corpus of texts from the Bulletin des Bibliothèques de France (BBF), published at the end of the 1990's, when a censorship was exercised in cities that were politically dominated by the Front National (National Front). Those, now classics, texts are expressing the base of the political discourse of French librarianship (Kupiec, 1999; Gautier-Gentès, 1999; Lahary, 2005).

We shall show that following the attacks, French librarians developed a new vision of their role as IL specialists, as less neutral than they were as thinking citizens and civil servants, as leaders of participatory projects. This research questions the emancipation of the librarian from the prescribed role of the teacher (Rancierer, 2009), the civil servant, and the expert (Merklen, 2013). Finally, librarians have to be described as committed citizens within the society, acknowledging his/her responsibilities to democracy (Tassin, 2014), through his/her role in political literacy.

References

- Association des Bibliothécaires de France (2014). *L'ABF exprime sa position sur les pressions exercées sur les bibliothèques publiques*. Retrieved April 15, 2016 from <http://www.abf.asso.fr/1/22/410/ABF/1-abf-exprime-sa-position-sur-les-pressions-exercees-sur-les-bibliotheques-publiques>
- Bats, R. (2015). #bibenaction - Typologie des actions menées par les bibliothèques après #Charlie. *Bulletin des Bibliothèques de France*, (5).
- Bats, R. (2016). *Post Charlie Hebdo: The French libraries between freedom of expression and neutrality of the cultural institutions*. Presented at the Bobcatsss 2016, Lyon, France.
- Bertrand, A.-M. (2015). Les bibliothèques sont filles des Lumières. *Quoique... Bulletin des bibliothèques de France*, (5).
- Gautier-Gentès, J.-L. (1999). Réflexions exploratoires sur le métier de directeur de bibliothèque. *Bulletin des Bibliothèques de France*, (4).
- Jaeger, P. T., Gorham, U., Bertot, J. C., & Sarin, L. C. (2013). Democracy, neutrality, and value demonstration in the age of austerity. *Library Quarterly: Information, Community, Policy*, 83(4), 368–382.
- Kupiec, A. (1999). Éléments de réflexion pour une déontologie professionnelle. *Bulletin des Bibliothèques de France*, (4).
- Lahary, D. (2005). Le fossé des générations. *Bulletin des Bibliothèques de France*, (3). Retrieved from <http://bbf.enssib.fr/consulter/bbf-2005-03-0030-005>
- Merklen, D. (2013). *Pourquoi brûle-t-on des bibliothèques? Essai*. Villeurbanne, France: Presses de l'ENSSIB.
- Pawley, C. (2003). Information literacy: A contradictory coupling? *Library Quarterly*, 73(4), 422–452.
- Rancière, J. (2009). *Le maître ignorant: Cinq leçons sur l'émancipation intellectuelle*. Paris, France: Fayard.
- Tassin, É. (2014). Ce que l'action fait à l'acteur. *Tumultes*, 1(42), 41–54.

Keywords: *political events, political culture, critical LIS, librarianship, LIS schools*

What about Information Literacy for Librarians in Participatory Libraries?

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Participatory projects in French libraries have achieved real success over the past five years (Bats, 2015). There are few studies on the information literacy (IL) of librarians themselves, and such projects make new studies a necessity, considering how it changes the approach to information. Indeed, in a participatory project, on top of the daily information literacy that is needed, new information is required on political questions (Blondiaux & Fourniau, 2011), linked to the notions of participation, democracy and empowerment, in a work situation where neutrality has always been considered one of the most important principles (Bats, 2016). So, with such a paradoxical situation, it seems useful to explore what criteria librarians use, as civil servants, to decide the value of political information.

Our study uses a sociological methodology based on semi-structured interviews and on observations of meetings, appointments and other preparatory actions for the organization of the participatory project “Elle est où la démocratie?”¹ at the public library of Lyon, France. The study also looks into the information monitoring that was conducted by the group setting up this project.

Our analysis is based on the notion of ‘culture communicationnelle’, as studied by Olivier Le Deuff (Le Deuff, 2008), a notion which gives great importance to both a civic and a critical approach to information literacy. In this collective and individual approach, this notion gives us the opportunity to question what within the choice of criteria comes from a political or technical approach, from an accentuation of individual tastes and interests or from the collective values of the librarians, and finally what comes from an actor’s (Tassin, 2014) or a spectator’s position.

We shall show that in these participatory projects, the search for information is thought of as:

- A mobilizing action rather than pure knowledge: the library also has to be situated in the political action and not solely focused on the transmission of knowledge (Bertrand, 2015).
- A commitment: the librarian is a citizen as well as a civil servant. The neutrality of the library does not have to be a principle, but the consequence of its assumed political role (Jaeger & al., 2013).
- Collective: the librarianship expertise shared by all the agents is abandoned for the benefit of the mobilization of the knowledge of each. The library is thought not only as a place for democracy, but as a democratic place (Ksibi, 2013).

This way we shall draw the portrait of a new generation of librarians who accept their political role as the civil servant-citizen, further from librarianship techniques, but closer than ever to the assertion of a responsibility towards society.

References

- Bats, R. (Ed.). (2015). *Construire des pratiques participatives dans les bibliothèques*. Villeurbanne, France: Presses de l’Enssib.
- Bats, R. (2016). *Post Charlie Hebdo: The French libraries between freedom of expression and neutrality of the cultural institutions*. Presented at the Bobcatss 2016, Lyon, France.
- Bertrand, A.-M. (2015). Les bibliothèques sont filles des Lumières. *Quoique... Bulletin des bibliothèques de France*, (5).
- Blondiaux, L., & Fourniau, J.-M. (2011). Un bilan des recherches sur la participation du public en démocratie : Beaucoup de bruit pour rien? *Participations*, 1(1), 8.
- Jaeger, P. T., Gorham, U., Bertot, J. C., & Sarin, L. C. (2013). Democracy, neutrality, and value demonstration in the age of austerity. *Library quarterly: Information, community, policy*, 83(4), 368–382.
- Ksibi, A. (2013). *Le manque du civisme dans les “printemps arabe” et les devoirs des bibliothécaires et des gestionnaires de documents pour une culture citoyenne*. Presented at the IFLA 2013, Singapour.
- Tassin, É. (2014). Ce que l’action fait à l’acteur. *Tumultes*, 1(42), 41–54.

Keywords: *participation, public libraries, political culture, expertise, librarianship*

¹“So where’s democracy, then?”

Print vs. Electronic: What do French Students Prefer in Their Academic Reading Material?

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Digital technology has deeply influenced our daily activities, our economy, our behaviors, and our social practices. The digital revolution also shaped education, transforming the way of learning and reading. Since 2000, France has experienced a digital shift in higher education and still: “the development of the digital pedagogy is largely dependent on the existence of a high-quality educational materials. We should make an immediate commitment for the development of digital publishing” (Djebara et Dubrac 2015). Today, the number of digital resources has increased and the nature of the textbooks has changed, especially with e-education, e-learning, m-learning and Massive Open Online Courses (MOOCs). But is this format adapted to the needs of students when engaging with their academic reading?

We conducted a self-administered online survey using the open source software Lime Survey to be able to answer this question. We adapted the instrument from the questionnaire developed by (Mizrachi 2014) with her permission. Students, from all levels, had to answer 16 questions using a five-point Likert scale of agreement from “strongly disagree” to “strongly agree”. The survey also included demographic questions to allow for comparisons such as age, gender, and discipline.

Data was collected over eight weeks starting on 1 March 2015. The message, including the link to the survey, was posted in around 200 student groups on Facebook from different universities and disciplines. 1629 completed answers were collected. The results showed that 73.2 percent of the students believe that they remember information best when they read them from printed pages; 80.6 percent are more likely to review their course readings when they are in print; and 88.1 percent can focus on the material better when they read it in print. This preference for paper has been confirmed, only 16.1 percent consider that it is more convenient to read their assigned reading electronically. Results showed that students are more used to work on paper as 87.6 percent of them highlight and annotate their printed course material. Only 20.1 percent do it on their electronic material. The language of the document has no effect on their preference. We used Chi-square tests of independence to test whether factors such as gender, age, level of study, and discipline had an incidence on the preferred format.

Even though the number of the respondents is very small compared to the number of students in France (2.470.700)², this study showed that students are still attached to the print format. There is a clear preference for the paper format despite government and the university policies which push for a digital format. The results may help academic librarians in making collection development decisions for their academic departments as well as teachers in their reading recommendations. Should librarians comply to the dominant policy and the pressure of publishers and develop digital collections or should they shift towards the preferences of readers but deprive them of rich digital resources? Where is the middle ground or balance?

References

- Djebara, A., & Dubrac, D. (2015). *La pédagogie numérique: Un défi pour l'enseignement supérieur. Avis du Conseil économique, social et environnemental*. Paris: Journaux officiels, éd. Conseil économique, social et environnemental.
- Mizrachi, D. (2014). Online or print: Which do students prefer? In S. Kurbanoglu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 733–742). Cham: Springer International Publishing.

Keywords: *academic readings, France, higher education*

² Les effectifs d'étudiants dans le supérieur en 2014-2015 en forte progression, notamment à l'université, 8/12/2015. <http://goo.gl/B1W1hS>

Making the Tacit Explicit: Dialogue as a Guiding Principle at Writing Centres, Assisting and Enabling Students to Crack the Academic Writing Codes

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Academic writing is a key activity for learning, understanding, conducting research, and presenting and disseminating work and results. These complex and essential activities present a challenge to students when entering the academic environment. Faculty expects students to write and work in an academic fashion, using academic language and methods. However, it often takes much time and guidance to crack the academic codes and norms. Who can the students turn to for help?

In our presentation, we shed light on our dialogue-based approach to guidance and work-methods in our writing centres, one at Bergen University College and the other at the University of Bergen. The centres have been established through close collaboration between the library and the writing experts among the faculties – together we function as pedagogical teams.

We combine process and product oriented writing pedagogy (Dysthe, 1997, 2001; Bean, 2011) with user-oriented approaches on information literacy viewed from the students' point of departure (Kuhlthau, 2004; Holliday, 2013). We accomplish this through working from sociocultural theories on dialogue from Lev Vygotsky and Mikhail Bakhtin, as presented by Olga Dysthe, and the learning by doing approach of John Dewey.

Our dialogical guidance is “based on a dialogic understanding of meaning and communication, where we take the consequences of the fact that meaning arises and is developed through interaction between people” (Dysthe, Bernhardt and Esbjørn, 2012, p.6). Students interact with, and relate their written work to, existing voices. An ongoing task is to find and develop their voices in their meetings with others (Dysthe & Samara, 2006). In our writing centers students are met with dialogue-stimulating questions rather than “correct” answers.

Based on the theoretical framework above, we discuss:

1. What does our dialogical guidance approach mean in our practice? What does it require us to do?
2. What kind of questions do we ask to enable our student to enter into a dialogue with different sources? How can we use students' experiences and their voices to develop our services and guidance further?
3. And finally, how can our dialogical approach inspire you as a supervisor and information literacy specialist? Can writing centres contribute to develop and strengthen dialogical communities in the library?

References

- Bean, J. (2011). *Engaging ideas. The professor's guide to integrating writing, critical thinking, and active learning in the classroom*. San Francisco: John Wiley & Sons.
- Dysthe, O. (2001). *Dialog, samspel og læring*. Oslo: Abstrakt.
- Dysthe, O., & Samara, A. (2006). *Forskningsveiledning på master- og doktorgradsnivå*. Oslo: Abstrakt.
- Dysthe, O., Bernhardt, N., & Esbjørn, L. (2012). *Dialogbasert undervisning: Kunstmuseet som læringsrom*. Oslo: Fagbokforlaget.
- Holliday, W., & Rogers, J. (2013). Talking about information literacy: The mediating role of discourse in a college classroom. *Libraries and the Academy*, 13(3), 257–271.
- Kuhlthau, C. C. (2004). *Seeking meaning: A process approach to library and information services*. Westport, CT: Libraries Unlimited.

Keywords: *writing centres, dialogical guidance, process and product oriented writing, information literacy, critical thinking*

Civic Action-Driven Information Literacy Instruction in Taiwan

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In addition to diverse inquiry skills, social responsibility is also the concern of information literacy. How to make wise decisions and be informed citizens in today's chaotic society is a goal which information literacy wishes to pursue (AASL, 2007; Bruce, 2008; Lloyd, 2010). In recent years, the fields of social studies, science and English in Taiwan suggest teachers depart from their scripted textbooks. Instead, teachers should get students to analyze problems in the real world, gather information and take action based on the inquiry process (Green & Medina-Jerez, 2012; Lee, 2012; NCSS, 2013; MOE, 2014). However, it is still questionable whether such an interdisciplinary instructional design can help students assume the responsibilities of democratic citizenship.

Thus the purpose of this study was to investigate the feasibility of implementing a civic action-oriented information literacy plan across the disciplines within an elementary school, including analysis, design, development and evaluation of the plan. A collaborative action research approach was used for this study. The plan topic was the US-Taiwan Eco-Campus Partnership Program. Students first identified environmental problems of the school; they then developed and implemented an action plan based on the collected information, communicated with their American partners, and finally evaluated its effectiveness. The researchers collaborated with a librarian who taught information literacy, as well as a science teacher and an English teacher. The civic action lasted for ten months with two cycles. This study was conducted in an elementary school in the area of Chiayi, Taiwan. The Eco-Campus test was used for the pretest and posttest to measure students' information literacy and civic action skills. The data was gathered through participant observations, tests, surveys, interviews, and document analysis. The results showed that it is feasible to promote the civic action-oriented information literacy curriculum in sixth grade. Students' problem solving skills, rational participation in public actions, and intercultural understanding improved through several strategies. They were a progressive information literacy curriculum, collaboration among teachers, the support of school administration, and integration of information technology.

References

- American Association of School Librarians. (2007). *Standards for the 21st-century learner*. Chicago, IL: American Association of School Librarians.
- Bruce, C. (2008). *Informed learning*. Chicago: Association of College and Research Libraries.
- Green, C., & Medina-Jerez, W. (2012). Project citizen: Promoting action-oriented citizen science in the classroom. *The Science Teacher*, 79(9), 58–63.
- Lee, K.-Y. (2012). Teaching intercultural English learning/teaching in world Englishes: Some classroom activities in South Korea. *English Teaching: Practice and Critique*, 11(4), 190–205.
- Lloyd, A. (2010). Framing information literacy as information practice: Site ontology and practice theory. *Journal of Documentation*, 66(2), 245–258.
- Ministry of Education. (2014). *Grade 1-12 curriculum guidelines in Taiwan*. Taipei: MOE.
- National Council for the Social Studies. (NCSS) (2013). *The college, career, and civic life (C3) framework for social studies state standards: Guidance for enhancing the rigor of K-12 civics, economics, geography, and history*. Silver Spring, MD: NCSS.

Keywords: civic action, information literacy instruction, intercultural understanding, eco-campus, Taiwan

Assessing the Library Service and Instructional Needs of Engineering Undergraduates: An Ethnographic Examination of Bachelor Students at Two Czech Technology Universities

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In this paper we present original interim research results from an ongoing ethnographic examination of selected undergraduate engineering students from two technology universities in Prague, Czech Republic. We describe research design and methodology for the study and also provide a discussion of data gathered online and in-person. “Library service” is broadly defined to include not only traditional reference and instructional/information literacy support services but also new, emerging areas of activity that can be categorized under the broader concept of undergraduate student support (Seal, 2015). We also explore the notion of “backward design” (Richards, 2013) for library services.

Research questions

Our primary research question (RQ1) is: How are selected engineering students at two technology universities in Prague interacting with libraries? The secondary research question (RQ2) is: Do these engineering students feel libraries can play a role in their overall educational process? Finally, the authors ask (RQ3) how instructional/information literacy support services might be modified in relation to the research findings.

Why engineering undergraduates?

Research studies that consider the potentially unique service needs of Millennial generation engineering undergraduates are rare and are often, as outlined by Johri et al. (2014), focused on how students interact with the online environment and technological devices. In the Czech Republic, no ethnographic studies of undergraduate engineering students using the methods we describe here have previously been conducted. For an introduction to ethnography used in design and library environments, see (Dourish, 2014) and (Khoo et al., 2012) respectively.

Our paper will provide an example for other institutions seeking to conduct similar research projects across undergraduate student populations. It will, more broadly, providing original research data that enriches the overall literature on the needs of Millennial engineering undergraduates in relation to library services.

References

- Dourish, P. (2014). Reading and interpreting ethnography. In J. S. Olson, & W. A. Kellogg (Eds.), *Ways of Knowing in HCI* (pp. 1–25). New York: Springer Science+Business Media.
- Foster, N., & Gibbons, S. (2007). *Studying students: The undergraduate research project at the University of Rochester*. Chicago: Association of College and Research Libraries. Retrieved from http://www.ala.org/acrl/sites/ala.org/acrl/files/content/publications/booksanddigitalresources/digital/Foster-Gibbons_cmpd.pdf
- Gabridge, T., Gaskel, M., & Stout, A. (2008). Information seeking through students’ eyes: The MIT photo diary study. *College and Research Libraries*, 69(6), 510–523. doi: 10.5860/crl.69.6.510
- Johri, A., Teo, H. J., Lo, J., Dufour, M., & Schram, M. (2014). Millennial engineers: Digital media and information ecology of engineering students. *Computers in Human Behavior*, 33, 286–301. doi:10.1016/j.chb.2013.01.048
- Khoo, M., Rozlakis, L., & Hall, C. (2012). A survey of the use of ethnographic methods in the study of libraries and library users. *Library & Information Science Research*, 34(2), 82–91. doi:10.1016/j.lisr.2011.07.010
- Richards, J. C. (2013). Curriculum approaches in language teaching: Forward, central, and backward design. *RELC Journal*, 44(1), 5–33. doi: 10.1177/0033688212473293
- Seal, R. (2015). *Resource sharing begins at home: Opportunities for library partnerships on a university campus*. Presented at the 14th Interlending and Document Supply Conference, Istanbul, Turkey. Retrieved from http://ecommons.luc.edu/cgi/viewcontent.cgi?article=1036&context=lib_facpubs

Keywords: *ethnography, engineering undergraduates, information behavior, information literacy, library instructional design*

Information Practices for Sustainability: Information, Data and Environmental Literacy

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Although sustainability has remained a topic of discussion and debate for nearly half a century, it became a major agenda item for every country, government and business over the past decade or so. The 17 Sustainable Development Goals (SDGs) proposed by the United Nations in 2015 (<https://sustainabledevelopment.un.org/sdgs>) clearly lay out the major challenges for achieving sustainability. While it may be argued that information and data form the foundation of all the activities required for achieving sustainability in every area, some of the SDGs can be linked directly to specific information research and development activities (see Table 1).

Table 1: SDGs and information research

SDG	Information	Research Action
SDG3: Ensure healthy lives and promote well-being for all at all ages	Health informatics; health information literacy	Sustainable design and provision of health information for all; sustainable information practices for achieving sustainability in health
SDG4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Information (access and use) as a key to successful education and lifelong learning	Social sustainability of information (user- and context-specific information for all); Information skills and sustainable information practices
SDG8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Information for digital economy	Social sustainability of information systems and services (user- and context-specific information for all); sustainable information practices
SDG11: Make cities and human settlements inclusive, safe, resilient and sustainable	Digital living; big data, linked data; social networks	Sustainable information systems, data analytics; sustainable information practices
SDG13: Take urgent action to combat climate change and its impacts (Related SDGs: 14 and 15)	Information for sustainability; sustainable information systems	Data and environmental literacy; sustainable information design; sustainable information practices
SDG17: Strengthen the means of implementation and revitalize the global partnership for sustainable development	Information for sustainability; training; knowledge exchange	Data and environmental literacy; developing best information practices for achieving SD; global networking and knowledge exchange – iSchools

As shown in Table 1, information and data literacy and sustainable information practices are essential for achieving sustainability in all areas. This research aims to demonstrate how data and environmental literacy is embedded in information practices and policies of higher education (HE) institutions. It will run a web-based questionnaire survey amongst students, academics and staff of three selected universities in three countries – UK, Turkey and France – to measure the level of awareness of sustainable information practices. The research is expected to show hitherto unrecognised gaps in sustainable information practices. The resulting findings will produce a set of recommendations for the design of appropriate data and environmental literacy training required to promote sustainable information practices in HE, a cornerstone for sustainable development.

Keywords: *environmental literacy, data literacy, sustainability, sustainable development, information literacy, sustainable information systems, United Nations sustainable development goals*

Critical Incident Technique in Information Literacy Research in the XXI Century

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Objectives

The paper discusses some selected methodological issues related to the field of Information Literacy (IL) in the 21st century. It focuses on a promising research procedure called critical incident technique (CIT) and its actual use in the contemporary IL research.

Hilary Hughes describes CIT as “a well proven qualitative research approach that offers a practical step-by-step approach to collecting and analysing information about human activities and their significance to the people involved” (Hughes 2007, p. 49). The critical incident technique is a set of procedures used to systematically identify and analyze human behaviors that have critical importance and contribute to success or failure of individuals or organizations in specific situations. Critical incidents are gathered in compliance with the defined criteria, and in different ways, but typically respondents are interviewed or asked to tell a story about their experiences.

The first purpose of this paper is to discover if CIT was ‘common’ within IL research area in years 2001-2015, that is, to find out how many empirical projects employed this method. The second purpose is to determine WHAT information literacy issues and problems were studied using the critical incident approach, and HOW it was done (techniques of data gathering, numbers of respondents, types of interviews or questionnaires, ways of data analysis, conceptual frameworks and general methodological approaches). In other words, this study is done to identify, analyze and describe the current “state of usage” of CIT in the information literacy research.

Methodology

This paper is descriptive and exploratory in nature, with elements of simple statistics. The systematic review has been the leading method. Six databases (Emerald Management Extra, Francis, LISTA, SAGE Journals, Scopus, and Web of Science – SSCI) were searched to find articles reporting empirical research utilizing critical incident technique. The query “critical incident” AND “information literacy” (or similar, depending on the specificity of a particular database) with limiters (publication dates 2001-2015) retrieved only few records in each case. For example, in the LISTA database (Library, Information Science and Technology Abstracts, by EBSCO) there were four results, in SSCI (in the category Library Science and Information Science) also only four.

Outcomes

The first observation is that in years 2001-2015 CIT was employed to study various information literacy problems, but by no means was it the leading or most popular method within that field. Also, there were only few theoretical considerations or reflections on CIT. On the other hand, the critical incident technique appears to be a flexible procedure, used in different contexts and having at least two main variants: “traditional” and expanded ones (Hughes 2007; 2012). It has also been employed within both qualitative and mixed methods research designs.

References

- Flanagan, J. C. (1954). The critical incident technique. *Psychological Bulletin*, 51, 327–358.
- Hughes, H. (2007). Critical incident technique. In S. Lipu, K. Williamson, & A. Lloyd (Eds.), *Exploring methods in information literacy research* (pp. 49–66). Wagga Wagga, N.S.W.: Centre for Information Studies, Charles Sturt University.
- Hughes, H. (2012). An expanded critical incident approach for exploring information use and learning. *Library and Information Research*, 36(112), 72–95.
- Urquhart, C. et al. (2003). Critical incident technique and explication interviewing in studies of information behavior. *Library and Information Science Research*, 25(1), 63–88.

Keywords: *critical incident technique, CIT, information literacy, methodology, XXI century*

How is Information Literacy Related to Social Competences in the Workplace?

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Traditionally seen as a sub-concept of librarianship, information literacy has evolved far beyond issues of information access, management, or transmission (Moeller et al., 2011). The changing settings of mediated environments transform what it means to be information-savvy in the digital age. Hence, information literacy is becoming an issue to be tackled in the analysis of complex social and technical arrangements such as new work environments, where technologically-mediated teamwork and distance work have spread widely (Bruce, 1999). In particular, while the ability to consult, produce, search, or organize information are often implicitly considered as skills of the individual, it is also necessary to take the collective dimension of information literacy at work into account (Crawford & Irving, 2009).

Our presentation is based on work-in-progress research on digital and media literacy in distant teamwork environments. We introduce a theoretical framework that articulates the social and informational dimensions of competences in workplace environments. Using this framework, we interview office workers about how digital technology supports their distant teamwork practices and analyze these practices in terms of the technical, informational, and social competences they involve.

In this presentation, we use preliminary field data to highlight how our informants' informational work practices are not valuable in themselves, but only in relation to the social organization they elaborate. We see information literacy as inseparable from the ongoing social condition of the practice. For example, the observed employees' activities include the management of collective tasks, and of synchronous and asynchronous collective time. They involve the collective creation, maintenance, and sharing of information. Some activities are dedicated to the monitoring and visibility of the coordinated activity, or to the gathering of information for decision-making. Those examples illustrate how the information landscape in the workplace participates in the sociotechnical design of collective action and how information literacy may contribute to the social construction of an organization.

In other words, the information literate workers are able to produce, retrieve, and process information according to their workplace affordances and constraints. Their informational practices enable efficient collective activity and contribute to the constitution, maintenance, and evolution of the organization and the fulfillment of its mission. As it empowers the workers to fully participate to the existence of the organization, information literacy contributes to social inclusion.

References

- Bruce, C. S. (1999). Workplace experiences of information literacy. *International Journal of Information Management*, 19(1), 33–47.
- Crawford, J., & Irving, C. (2009). Information literacy in the workplace: A qualitative exploratory study. *Journal of Librarianship and Information Science*, 41(1), 29–38.
- Moeller, S., Ammu, J., Lau, J., & Carbo, T. (2011). *Towards media and information literacy indicators. Background document of the expert meeting (Bangkok, Thailand, 4–6 November 2010)*. Paris: UNESCO.

Keywords: *information literacy, digital and media literacy, distant teamwork, social organization*

Self-reported Information Literacy Skills among Researchers within a Medical and Health Science Faculty

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Introduction

Ghent University Library (Belgium) conducted a survey in 2015, “Skills@UGent”, comprised of questions considering library, reading, searching, writing, research, information, presentation, academic and publication skills. Respondents (Bachelor, Master and PhD students and researchers) were asked to report their self-efficacy level. In this fast evolving world of health research, gaining insight in specific needs could be a basis for the development of a strategic plan of action.

Methods

Information literacy (IL) in students has been studied well, whereas for researchers, data are lacking. This paper focuses specifically on the subset of questions related to research planning, deontology and visibility queried in a group of researchers of the Faculty of Medicine and Health Sciences (n=118). The answers were scored on a 7-point Likert scale. Mean (SD) and median (IQR) have been calculated per skill (min=0, max=7). One-sample Wilcoxon signed ranks tests were used to look for a difference from median=5 [specific skill accomplished] with alpha=0.05. SPSS (v23) has been used to perform all statistical analyses.

Results and discussion

Even though researchers know how to contact the ethical committee (p<0.001) and its procedures (p<0.001), they encounter specific difficulties with respect to ethical codes of conduct (p=0.032). Looking at research planning, specific problems have been encountered for knowing how (p=0.001) and where (p<0.001) to store data, setting up a data management plan (p<0.001), knowing new insights concerning data management (p<0.001) and applying those new insights (p<0.001). The respondents also have problems with different aspects of visibility: using research network platforms (p<0.001), knowing how to optimize the visibility of the research project (p<0.001), and -after publishing- not knowing what their author rights are (p<0.001).

The results of the survey gave the Knowledge Center a better insight of the IL self-efficacy of researchers, which lead to several initiatives. For example, lunch meeting seminars were organized to improve their IL skills. During one seminar, the data life cycle and a data management plan tool (DMPOnline.be) were presented and discussed. Researchers were encouraged to share their best practices and were invited to keep in contact with the Knowledge Center for further assistance. During another seminar, researchers received an appropriate communication strategy to disseminate their research. Additionally, the results of this study also lead to a more user-oriented website with up-to-date information for this target group. Through these initiatives, the Knowledge Center set the results of the survey into action.

Keywords: *data management, deontology, visibility, information literacy, self-efficacy, researchers, health sciences*

Autoethnography: Research as Reflection, Inclusion and Empowerment

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Autoethnography is a personal, reflective, qualitative research method. It is obviously associated with anthropology, but may be more widely used in sociology and it occasionally appears in research in other social science fields. In this method, the researcher and the subject of research are the same person. It requires the researcher to engage in deep, rigorous, and reflective examination of their own experience and then to systematically analyze that reflection, drawing connections to theory, society, and culture as they do so. The resulting analyses can take many forms, including: scholarly prose, poetry, narrative, dialogue, and more.

For the last year, we have been leading a learning community of librarians in the U.S. and Canada exploring the potential of this method to enrich the scholarly discourse in librarianship. Librarians in the community have committed themselves to collaboratively learning about the method, and each member is also producing an autoethnography of their own, exploring themes of identity and professional practice in librarianship.

Most of the librarians in the learning community teach information literacy and it is increasingly clear that this method has a great deal to offer teaching librarians. Teaching librarians understand the importance of reflective thinking and metacognition in the learning process and there is a long tradition of reflective practice already in place in this community. Autoethnography is a method that busy, practicing librarians can do well and rigorously to inform their practice. Practicing professionals must make decisions quickly and in the moment as they draw on a body of practice knowledge gained through experience to do so. Donald Schön calls this “Reflection in Action.” Autoethnography offers a way to capture and share that practice knowledge that is so important in the classroom.

It is also important to reflect on experience after the fact – Schön calls this “Reflection on action” – and autoethnography supports this as well. It pushes the researcher to connect their experience to something broader, to draw in theory, culture, and social factors, to make deeper meaning. Heidi Jacobs articulates the significance of this for librarians who teach information literacy: “Praxis – the interplay of theory and practice – is vital to information literacy since it simultaneously seeks to ground theoretical ideas into practicable activities and use experiential knowledge to rethink and re-envision theoretical concepts” (p. 15).

Autoethnography makes it possible for voices that get drowned out in large scale aggregations of data to be heard. It provides a way for the lived experiences of all librarians to be included in the professional conversation. It is an inclusive method and offers the potential to understand the role of information literacy in an inclusive society – as well as the inclusivity within the practice community itself. We will reflect in this paper on the experience of leading this learning community and share the insights we have gained about the potential of this method to inform the professional conversation about information literacy.

References

- Jacobs, H. L. M. (2008). Information literacy and reflective pedagogical praxis. *Journal of Academic Librarianship*, 34(3), 256–262.
- Schon, D. A. (1984). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Keywords: *autoethnography, research methods, qualitative methods, reflective practice*

Mastering Information and Teaching Controversies: An Exploratory Study

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Since the French universities adopted the LMD reform (Licence-Master-Doctorat) in 2004, content in the master's level education Information has become a central issue. Teaching about information sources and classic information management skills does not near the requirements for teaching actual digital context, especially for Y generation students. In fact, this digital context implies a hyper-connected and fragmented world where trust and authority are questioned. We claim that the ability to carry out critical reflection and to achieve reflexivity with self-sufficiency should become the aim of these educational programs, particularly for the master's degree.

Teaching controversies is probably one of the most promising ways to pursue this aim of critical reading and use of Information. Each grande école in France, some engineering schools such as ESIEE Paris and Telecom Paritech, and some universities as in the Social Science departments of Paris 8 University, have developed this sort of class based on Latour and Callon' Actor-Network Theory.

Some examples of the controversial subjects found are "Do robots need to resemble human beings?" or "Will digital books replace traditional books?" In this context, a variety of digital tools are available and used (e.g., Murrally, Freemind, Pearltrees, and GraphCommons).

In this paper, we first mention the theoretical framework of the Actor-Network Theory. Then we introduce our original methodological approach for studying controversies. Then we present two case study of teaching controversies to support the acquisition of mastering Information. The first case study concerns master's degree students in LIS at University Paris 8 and the second one is focused on students in design at ENSCI-Les Ateliers (design school) in Paris. The first results of our exploratory study and its methodology based on participant observation, and on a qualitative survey about knowledge acquisition by the students, are mentioned. Through this feedback analysis, we describe the different stages of these classes, the tools the students have been using, and the skills they acquired or not.

References

- Chateauraynaud, F. (2007). La contrainte argumentative. Les formes de l'argumentation entre cadres délibératifs et puissances d'expression politiques. *Revue européenne des sciences sociales*, XLV–136.
- Ihadjadene, M., Baltz, C., & Saemmer, A. (2015). *Culture informationnelle vers une propédeutique numérique: Former les citoyens à l'ère de l'Internet*. Paris: Hermann.
- Lewis, J., & Leach, J. (2006). Discussion of socio-scientific issues: The role of science knowledge. *International Journal of Science Education*, 28(11), 1267–1287.
- Thévenot, L. (2006). La connaissance dans l'action. In L. Theveont (Ed.), *L'action au pluriel*. Paris: La Découverte; TAP/Politique et société.
- Tuominen, K., Savolainen, R., & Talja, S. (2005). Information literacy as a sociotechnical practice. *The Library*, 75(3), 329–345.
- Venturini, T. (2010). Diving in magma: How to explore controversies with actor-network theory. *Public Understanding of Science*, 19(3), 258–273.
- Virkus, S. (2003). Information literacy in Europe: A literature review. *Information Research*, 8(4).

Keywords: *education, controversies, exploratory study, master's degree, cartography*

Assessing Contents and Cognitive Levels of Information Literacy in a Group of Life Sciences University Students

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Research background and methodology

The aim of the study was (1) to identify the content areas of Information literacy (IL) and cognitive levels of the Bloom taxonomy where the university students from life sciences programs exhibit shortcomings, and (2) to evaluate the contribution of a compulsory credit bearing information literacy study course (ILSC), consisting of lectures and practical work. To assess the change in IL, 308 students took an information literacy test (ILT) (Boh et al., 2015) as a pre- and post-test after completing the ILSC. Both ILSC and ILT were designed according to the IL standards for higher education (ACRL, 2000); the ILT responses were categorized into three Bloom's learning categories: B1-remember, B2-understand, and B3-apply and higher cognitive levels.

Results

The initial level of students' IL (pre-test mean 67.26%) significantly improved after the ILSC (post-test mean 79.12%; mean difference (MD) 11.86%, std. deviation 9.75). The highest post-test improvement was achieved in ACRL standard 2 – information access (MD 15.91%; increase 58.51 to 74.42%) and in standard 4 – use of information (MD 14.07%; increase 80.95 to 95.02%). In the pre-test, the students were best in standard 3 – evaluation of information (MD 6.56%; increase 85.13 to 91.69%). In the standard 1 - information needs assessment – a 10.86% improvement was achieved (increase 69.85 to 80.71%). The main initial deficit in students' IL was recorded in standard 5 - legal and ethical issues (pre-test 55.57%), however, the intervention improved the result by 11.03% (post-test 66.60%). According to the Bloom's cognitive categories, the ILSC stimulated a significant improvement as follows: 9.91% in remembering and recalling IL-related facts and concepts (improvement 75.35 to 85.26%); 8.8% in understanding, recognizing and explaining (from 66.86 to 75.71%); and 18.54% in ILT questions related to higher cognitive levels, such as applying, analyzing and evaluating (from 58.26 to 76.80%).

Conclusions

A compulsory credit-evaluated study course, designed in accordance with IL standards in higher education, can significantly improve (1) IL in content areas of deficient pre-knowledge (e. g. advanced search techniques; economic, legal and ethical issues), and (2) applying knowledge, and higher cognitive levels of IL, which are needed for critical thinking and successful problem solving.

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References

- ACRL. (2000). *Information literacy competency standards for higher education*. Retrieved January 15, 2016 from <http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>
- Boh Podgornik, B., Dolničar, D., Šorgo, A., & Bartol, T. (2015). Development, testing, and validation of an information literacy test (ILT) for higher education. *Journal of the Association for Information Science and Technology*. Retrieved from <http://doi.org/10.1002/asi.23586>

Keywords: *information literacy, higher education, standards, cognitive levels, evaluation*

The End of Information Literacy(?)

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The paper *Information Literacy as a Right and a Duty: the Experience of the Czech Republic*, presented at ECIL 2014, outlined the brief history of implementing various literacies into Czech educational curricula, and uncovered three major public policy-making “waves” throughout such implementation: First, key actors and professionals identify the issue and challenge and set an agenda to accomplish it; Second, politicians and policymakers support the agenda as of public interest; Third, the whole agenda is integrated into the legal system. Furthermore, the legal system adopts any curriculum via the following (simplified) steps: (1) a citizen has a right to be taught specific sets of skills (a particular literacy); (2) a citizen has a duty to learn those skills; (3) the State has a duty to teach citizens those skills; (4) the State has the right to expect its citizens to learn the skills (the so-called presumption of the literacy); (5) some learning-disabled persons may need to be provided with special care and assistance. Laws and legal procedures are country-specific, but the findings can be interesting for other countries as an inspiration for public policies.

Considering general literacy, information literacy and financial literacy case studies, it has been shown that information literacy in particular is failing to be adopted by the legal system, which prevents it from being adopted at a national level. The current paper aims to go further in its analysis of the legal system (using content analysis of laws as a method) and asks how different types of literacy are realised in law.³ The paper also investigates whether or not the term information literacy is even relevant and useful in the context of existing educational laws and social development (in the Czech Republic).

The term media literacy can be taken as a well-developed example⁴, because it is already present in laws and therefore is used in legal practice. Financial literacy⁵ is also present as a concept in several laws, even though it is not used explicitly as a term. Rather, it appears as a set of assumptions further being developed by particular policies. Information literacy, on the other hand, seems to have no appearance in laws; while digital literacy has appeared as a new term (in national policies) and its adoption to the legal system is most likely.⁶ As stated above, adopting the agenda by the legal system is the next step in its implementation. The paper aims to uncover which of two potential solutions can solve the situation: either increase efforts to explain IL to politicians, or replace IL with a more appealing term with a higher likelihood of uptake. It requires to investigate if the term IL is still relevant and useful in the context of existing educational laws and social requirements and social development.

References

Dombrovská, M., Landová, H., Tichá, L., & Zizienová, M. (2014). Information literacy as a right and a duty: The experience of the Czech Republic. In S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 210–216). Cham: Springer International Publishing.

Keywords: *literacy, information literacy, education, access to information, citizens' rights*

³ The (Czech) law; Act No. 106/1999 Sb./Coll. (on Free Access to Information; the explanatory memorandum literally contains the presumption of literacy as such).

⁴ The (Czech) law; Act No. 231/2001 Sb./Coll. (on TV and Radio Broadcasting).

⁵ The (Czech) law; Act No. 634/1992 Sb./Coll. (on Consumer Protection).

⁶ Strategy on Digital Literacy for 2015–2020; Government Resolution No. 523/2015.

Visual Literacy in Library Practice: Use of Images on the Facebook Pages of Croatian Public Libraries

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In the last 20 years, personal computers, Web 1.0 and, finally, Web 2.0, have become ubiquitous. These technologies enable fast and reliable transfer of huge quantities of digital images to the most remote parts of the world. With the help of digital technologies, images have inundated various aspects of everyday life. Image editing applications such as Gimp and Photoshop, as well as Web 2.0 applications such as Facebook, allow the democratization of digital image production, modification and distribution (Sadik, 2009). Many amateurs, professionals and organizations create and distribute increasing amounts of images to effectively communicate and achieve their goals (Radcliff, 2014). In view of these circumstances, visual literacy becomes one of the most important types of literacies (Callow, 2008; Rockenbach & Fabian, 2008; Spalter & Van Dam, 2008). In this paper, we will explore phenomenon from the field of visual literacy – use of images on the Facebook pages of public libraries.

The goal of this research is to explore use of images on the Facebook pages of Croatian public libraries. This will be done by determining how many images of certain image types are posted by librarians. Also, we will determine what are the various roles of these images in communicating with the user community gathered around these Facebook pages.

The content analysis method will be used to explore use of images on the Facebook pages of Croatian public libraries. Ten public libraries from the large Croatian cities will be included in the research. From the Facebook page of every included public library, we will analyze 100 last published posts. The total sample will be 1000 posts. The initial image types that we will use as categories of analysis are: photos, illustrations, 3D images, video, animated GIF. If during the content analysis, we encounter some other image types, we will include them as categories of analysis. Also, using the content analysis we will determine what is the role that each image has in communication with the user community gathered around libraries' Facebook pages. Using the content analysis, we will establish categories for the communication roles of the images and we will determine the shares of these categories in relation to the total number of analyzed images.

We will gain insights about the amount of images of various image types on the Facebook pages of Croatian public libraries and we will gain insights about the various roles of images in communication with the user community. The research results will help to advance understanding of the visual literacy of librarians. Visual literacy good practices will be identified and described. Also, the research results could be used to create educational programs which will increase the visual literacy of librarians.

References

- Callow, J. (2008). Show me: Principles for assessing students' visual literacy. *The Reading Teacher*, 61(8), 616–626.
- Radcliff, S. (2014). Teaching information literacy using argument, alternative perspectives, and images. In S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 474–483). Cham: Springer International Publishing.
- Rockenbach, B., & Fabian, C. A. (2008). Visual literacy in the age of participation. *Art Documentation: Journal of the Art Libraries Society of North America*, 27(2), 26–31.
- Sadik, A. (2009). Improving pre-service teachers' visual literacy through Flickr. *Procedia – Social and Behavioral Sciences*, 1(1), 91–100.
- Spalter, A. M., & Van Dam, A. (2008). Digital visual literacy. *Theory into practice*, 47(2), 93–101.

Keywords: *visual literacy, Croatian public libraries, images, Facebook*

Social Media Networking Literacy and Privacy on Facebook: Comparison of Pupils and Students Regarding the Public Availability of Their Personal Information

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Globally, social networks have become digital meeting places of a large number of people. One of the most popular social networks is Facebook. Its users publish personal information on a daily basis. Many of them do not take the effort to limit the level of availability of personal information (Park, 2013). Excessive and unwanted availability of personal information could pose a risk, especially for young users (Trottier & Lyon, 2012). Personal information privacy is an essential aspect of social media networking literacy which J. N. Gathegi defines as the ability to appreciate the risks posed by social media and to make calculated decisions when dealing with such social media, in order to make a careful balance between the needs for sharing, privacy and legal compliance (2014). In this paper we will describe our research, to explore and compare the personal information privacy behaviour of pupils and students who are members of Facebook, by determining the extent to which their personal information is publicly available on Facebook. Gross and Acquisti (2005) conducted a similar study. In the first phase of our study, the content analysis method will be used to quantitatively determine the extent to which the following types of personal information about pupils and students are publicly available on their Facebook profiles: posts, photos, friends, user self-description (birthday, political preference...), membership in Facebook groups, user likes (movies, books...), check-ins, events. In the second phase of study, the method of comparative analysis will be used to compare the extent to which various types of personal information about pupils and students are publicly available on their Facebook profiles. The study sample for these two research phases will consist of 400 Facebook profiles of students and pupils:

- a) 200 profiles will be chosen from among students' Facebook community "Sveučilište u Zadru" (Zadar University; Croatia);
- b) 200 profiles will be chosen from among the pupils' Facebook community "OK je OK!" and from among the male Facebook friends of the members of this community.

In the third phase of our study, qualitative content analysis will be used to determine examples of publicly available personal information that could be misused. The study sample for this phase will consist of 20 Facebook profiles chosen from the first sample. Through this research, we will gain insights about the extent to which personal information about pupils and students is publicly available on their Facebook profiles, and insights about the similarities and differences in personal information privacy behaviour of these two groups. The research results could help advance understanding of the privacy protection behaviour of young Facebook users and create better educational programs for the improvement of privacy protection behaviour and social media networking literacy. By gaining precise insights about the amount of various types of personal information available on Facebook, more focused educational programs could be developed to alleviate the most widespread, risky information disclosure behaviour.

References

- Gathegi, J. N. (2014). Social media networking literacy: Rebalancing sharing, privacy, and legal observance. In S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 101–108). Cham: Springer International Publishing..
- Gross, R., & Acquisti, A. (2005). Information revelation and privacy in online social networks. In *Proceedings of the 2005 ACM workshop on Privacy in the electronic society* (pp. 71–80). Association for Computing Machinery.
- Park, Y. J. (2013). Digital literacy and privacy behavior online. *Communication Research, 40*(2), 215–236.
- Trottier, D., & Lyon, D. (2012). Key features of social media surveillance. In C. Fuchs et al. (Eds.), *Internet and Surveillance: The challenges of Web 2.0 and social media, 16*, 89–105.

Keywords: social media networking literacy, privacy, Facebook, pupils, students

Information Literacy Program Design: A SWOT Analysis of Library and Archives in Turkey

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Information literacy is a set of skills and competencies affecting individuals' information behaviors for particular information needs. Conceptually listed among the competencies of 21st century, information literacy skills and competencies are described as important skills like other competencies required for any field of life (Çakmak and Önal, 2013). In parallel with the studies, high levels of information literacy skills impact not only individuals' lives but also the societies in which they belong. Moreover, it would not be wrong to say that individuals can become a more effective contributor to democratic society if they are equipped with information literacy skills and competencies.

Instructions related to learning how to learn, and adaptation to technological and social challenges have led to the creation of information literacy programs at many levels. In this regard, described as memory institutions, libraries, archives and museums are leading institutions in terms of equipping individuals with information literacy skills (AASL/AECT, 1998). These institutions develop information literacy training programs not only for individual aims but also for their objectives related to integration with the society. At this point, it is seen that memory institutions provide trainings for their users. They also train their professionals within the scope of in-service trainings and encourage them to learn new developments for information literacy training design. In the light of this information, this study aims to describe the current situation of 16 different memory institutions (municipal, university, school and public libraries, and private and state archives) about information literacy programs in Turkey. In order to achieve study objectives, a SWOT analysis conducted during the Information Literacy Program Development in-service training given at Hacettepe University Department of Information Management. Data were gathered from 29 LIS professionals who participated in the training. Results reflect that the current situations and insights of different types of memory institutions vary because those information environments and organizational structures are different. Findings reflect that memory institutions have some similarities in some SWOT components. In the end of the study, evaluations about the information literacy program development for Turkish memory institutions, and recommendations to correct insufficient points of the memory institutions are presented.

References

- AASL/AECT. (1998). *Information power: Building partnerships for learning*. Chicago: American Library Association.
- Çakmak, T., & Önal, İ. (2013). Bilgi okuryazarlığı becerilerinin kazandırılmasında okul kütüphanecilerinin rolleri ve algıları. *Türk Kütüphaneciliği*, 27(4), 633–647.

Keywords: *archives, information literacy programs, information literacy program design, libraries, SWOT analysis*

Investigating the Guided Inquiry Process

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Guided Inquiry (GI) is “a way of thinking, learning and teaching that changes the culture of the classroom into a collaborative inquiry community” (Kuhlthau, Maniotes, & Caspari, 2012, p. xiii). Grounded in constructivism, GI is based on the Information Search Process observed by Kuhlthau (2004) and enriched with the Guided Inquiry Design Process (Kuhlthau, Maniotes & Caspari, 2012; 2015). GI can produce deep learning with its focus on Third Space (Kuhlthau et. al, 2015), aligning personal interest with curriculum content, developing inquiry questions, working in inquiry circles, and using continuous reflection to develop metacognition. As evident in the work of a range of scholars (Kuhlthau et. al, 2012), this information literacy model is unique in observing the experience of learners engaged in effective research. GI tasks and scaffolding are emerging in American and Australian contexts. However, there is a need for more research on the use and effectiveness of the processes in schools.

Objectives

This research focused on the interpretation and engagement of GI with Year 7 students at an independent girls' secondary school in Sydney, Australia, with the following research questions:

1. How do students interpret and use the GI process whilst engaged in a research project? (Phase 1 & 2)
2. How do students transfer the GI process to another similar research project later in the year? (Phase 2)

Methodology

All students in Year 7 undertook two GI projects in History and Geography; sixteen of these students participated in this research study.

Using a mixed methods design, the research was completed in two phases at the end of each semester of 2015. Quantitative data included marks from the students' final research products and research booklets documenting their GI process and reflections throughout their projects. Qualitative data included two focus group interviews conducted at the end of each project and students' comments in their research booklets.

Findings

Data analysis indicates rich, diverse interpretations of the GI process across participants and improvement of two with process marks from Phase 1 ($\bar{x}=19.5/25$ marks) to Phase 2 ($\bar{x}= 21.5/25$ marks). Product marks went down an average of .25 marks from the first ($\bar{x}=12.63/15$ marks) to second ($\bar{x}=12.38/15$ marks) phase. Students who did not improve process marks also did not improve product marks and some voiced aversion to the GI process itself. However, discussions in focus groups also appear to indicate that many participants were able to transfer and improve their information process in the second GI. Findings demonstrated that students improved in facility and familiarity with the GI process from repetition, particularly in their metacognition, developing and answering their own inquiry questions, and in reflecting on working in inquiry circles. This study follows another GI study at the same school in Year 11 in 2014, and precedes a second study in 2016 with the same 16 student volunteers. In our conference paper we will explore findings and limitations of the 2015 study and its implications for information literacy education.

References

- Kuhlthau, C. (2004). *Seeking meaning: A process approach to library and information services*. Westport, CT: Libraries Unlimited/Greenwood Press.
- Kuhlthau, C. C., Maniotes, L. K., & Caspari, A. K. (2012). *Guided inquiry design: A framework for inquiry in your school*. Santa Barbara, California: Libraries Unlimited.
- Kuhlthau, C. C., Maniotes, L. K., & Caspari, A. K. (2015). *Guided inquiry: Learning in the 21st Century*. Santa Barbara, California: Libraries Unlimited.

Keywords: *information literacy, guided inquiry, information search process, metacognition, focus groups, inquiry circles*

Information Literacy Dialogue as a Wittgensteinian Language Game: Embedding IL into Curricula

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Information literacy (IL) has an important role to play within the higher education classroom (Whitworth, 2014). While a number of IL frameworks and models have been developed, communicating the value of IL to teachers remains difficult. This paper will address this issue by approaching IL-related dialogue with instructors as a Wittgensteinian “language game” (Wittgenstein, 1967) where IL discussions revolve around student learning. The intricacy of IL is reflected in the many attempts to create IL models and frameworks. While such models are helpful for librarians, discussions about threshold concepts (ACRL, 2014), for example, may not resonate with teachers. Rather than discuss IL with teachers using such models, my paper proposes a method to apply Wittgenstein’s concept of language games. Wittgenstein argued that language is governed by rules, conventionally agreed upon in everyday communication. This creates many language games whose rules dictate what can meaningfully be said in certain contexts. Having a meaningful conversation about football, for example, requires knowing the rules of football.

At times, librarians and teachers fail to play the same IL language game – a librarian’s perspective about IL might be informed by the new Framework while a teacher might only consider IL skills. In this paper I propose a model to consult with faculty – cultivating meaningful IL dialogue by focusing discussion on how information is used to facilitate learning. Librarians can take specific steps to learn the IL language game faculty play and then identify opportunities to embed IL at the curricular level in support of student learning. Three fundamental, though non-exhaustive, questions guide the process for establishing a common ground for communication, enabling the librarian and teacher to play the same IL language game: 1) What do you want students to know, do, or value as a result of your class? 2) How do students use or engage with information in your class? 3) Should student engagements with information be distinct from or integrated with course content?

I will discuss two case studies, demonstrating the advantages of an IL language game approach. In the first case I will discuss how a seemingly benign phrase as “student interaction with data” was problematic for an atmospheric scientist. The word “interaction” implied that students handled data improperly or unethically. In the second case I will describe how an instructor of a Production Cost Analysis course equated IL with personal financial literacy. Both examples will highlight the importance of understanding the IL language games teachers play, as well as illustrate how a librarian can establish a common conversation with teachers in various contexts about student learning. This enables teachers to see the value of IL as it relates to their learning goals, instead of as additional content to squeeze into class. Approaching dialogue with teachers as an IL language game, where a librarian must first understand the course-specific IL “rules” is a productive step for communicating the value of IL for disciplinary learning goals and embedding IL at a curricular level.

References

- Association of College and Research Libraries. (2015). *Framework for information literacy for higher education*. Retrieved 15 February, 2016 from <http://www.ala.org/acrl/standards/ilframework>
- Whitworth, A. (2014). *Radical information literacy: Reclaiming the political heart of the IL movement*. Burlington: Elsevier Science.
- Wittgenstein, L. (1967). *Philosophical investigations*. Oxford: Basil Blackwell.

Keywords: *embedding information literacy, Wittgenstein, language game*

The Informationally Underserved and Socio-Economically Distressed Neighborhoods: A Study of Exclusion

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In Boston, most third grade students are tested to place into advanced-work classes. In sixth grade, students opt in to test for admission to elite exam schools. Graduation requirements from regular high schools include core graduation coursework. However, research indicates that Boston's young males of colour are significantly under enrolled in accelerated programs and underperform in graduation preparation courses (CCE, 2014). Many reside in neighbourhoods with high crime and poverty. Jennings (2012) posits that, when combined, societal, career and educational inequities in communities create "neighbourhood distress scores," representing "spacial inequalities" (p. 10). This measurement may be exacerbated by school students' high absenteeism, mobility, homelessness, and weak achievement. This may determine targeted social, emotional, and academic interventions. An analysis of school geocodes and educational resource variables, including school library access, may allow for all students access to accelerated learning programs (CCE, 2014).

School library impact research studies (LRS, 2016) demonstrate causality between academic success and strong standardized test scores with active school library programs (ASLP). ASLP provide access to professional librarians, in-depth collections, and information literacy pedagogy. This learning empowers students to cultivate "self-reflection, self-correction, and self-regulation" (Gordon, 2009, p. 63). Lueng suggests that "information connectivity and information literacy are powerful predictors influencing the life quality perception" (pp. 287–288) and are suggestive of potential school intervention opportunities. However, little research explores whether or not those excluded from ASLP access become marginalized within their educational systems. Preliminary research indicates that those without ASLP access, or the informationally underserved (IU), perform more poorly on standardized tests than their counterparts with access (Froggatt, 2014). Thus, are students who learn in high stress neighbourhood schools with little or no ASLP the same population barred from accelerated programs?

In this study I will "conduct a resource distribution analysis" (Schott, 2012, p. 49) by expanding the IU model (Froggatt, 2014). I will compare student demographic data and entrance to accelerated learning programs with school geocode locations and level of ASLP access across a school district of 126 schools. My research may showcase how some distressed neighborhood schools are under-resourced, thus limiting the inclusion of students of colour in advanced-work classes, exam schools, and strong graduation course achievement. A school profile such as this may inform policy makers, caregivers, teachers, and community agencies about the significance of learning without ASLP. The results may expand the notion of "broaden(ing) opportunities to learn" (Schott, 2012, p. 49) that include equitable access to active school library programs. This warrants further research about ASLP access and individual school geocode rank, determined by the characteristics of students from distressed neighborhoods.

References

- Miranda, H. P. et al. (Eds.). (2014). *Opportunity and equity: Enrollment and outcomes of black and Latino males of Boston public schools*. Boston: Center for Collaborative Education.
- Froggatt, D. (2014). *The informationally underserved: A pragmatic model for social justice*. Retrieved January 19, 2016 from http://schoollibrarysig.weebly.com/uploads/1/9/9/2/19927521/deborah_froggatt.pdf
- Gordon, C. A. (2009). An emerging theory for evidence based information literacy instruction in school libraries, part 1: Building a foundation. *Evidence Based Library and Information Practice*, 4(2), 56–77.
- Jennings, J. (2014). *Social, demographic, and economic profile of young Black and Latino males, Boston, Massachusetts 2010–2018*. Medford, MA: Tufts University. (2016). Retrieved from <http://www.lrs.org>
- Lueng, L. (2010) Effects of internet connectedness and information literacy on quality of life. *Social Indicators Research*, 98, 273–290.
- Schott Foundation for Public Education. (2012). *The urgency of now: The Schott 50 state report on public education and Black males*. Retrieved January 23, 2016 from <http://blackboysreport.org/bbreport2012.pdf>

Keywords: school library access, informationally underserved, geocode, race, equity

Information Seeking Behaviour of University Students in Health Care: Use and Evaluation of Information Resources

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The development of advanced information seeking skills is essential for health scientists and a major factor for an effective provision of health services. New developments in web structure, operation and information and communication technology systems, like mobile technologies creating new opportunities and experiences for information seekers. In order for all these opportunities to be effective it is of great importance to investigate how users locate, evaluate and use the available information. This seems to be even more important in the context of health sciences, since a lack of appropriate information seeking skills of health care professionals can result in an error which might endanger safety of their patients and the quality of care (Hider et al., 2009).

Objectives

The aim of this study was to specify the information seeking practices of Greek university students in health sciences. In particular: to define students' preferences and level of experience in the use of mobile technologies and the web for information seeking; to examine their knowledge and preferences of online information sources relevant to their field of study, and to investigate the criteria used to evaluate these resources. Finally, an attempt was made to evaluate the relation between the information literacy skills of those students and the information seeking practices most widely used.

Methodology

A web-based questionnaire was used as a data gathering tool, which contained both open and closed-ended questions. The content of the questionnaire was informed by relevant evidence located during the examination of relevant health information seeking and information literacy research. The survey took place at the ATEI of Thessaloniki, Greece, from April 2015 to December 2015. All participants were undergraduate students in the Aesthetics and Cosmetology Department. A total of 130 students participated in the survey. Analysis of data included both descriptive statistics and chi-squared tests to investigate differences in categorical variables.

Results & Conclusions

Preliminary findings indicated that all students tend to use web-based information sources to access relevant information online. The majority of participants in the study looked for information using simple search functions provided by publicly available search engines, like Google (98 percent). Most participants did not tend to search for information using a pre-specified search strategy (95 percent). Also demonstrated a preference for using mobile technology when searching for information, as it is readily and easily accessible from anywhere. However, their information seeking patterns seems to be affected by the task complexity as it impacted the selected information access. For example, for tasks involving higher cognitive functions, participants showed a preference for using their tablet or laptop device rather than a mobile device. Preliminary findings of the study suggest that most of the students lack important information literacy skills that could assist them in empowering their information seeking abilities.

References

- Hider, P. N., Griffin, G., Walker, M., & Coughlan, E. (2009). The information-seeking behavior of clinical staff in a large health care organization. *Journal of the Medical Library Association*, 97(1), 47–50. <http://doi.org/10.3163/1536-5050.97.1.009>
- Moorer, C. (2011). Mobile technology and libraries. *Journal of the Medical Library Association*, 99(2), 172.

Keywords: *information seeking behaviour, user studies, information literacy, mobile technologies, health care*

Web 2.0 and Academic Libraries: A Survey Investigating Uptake among University Students

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Web 2.0 technologies, such as wikis, blogs and social networks provide an alternative creative launch pad both for libraries and their users to create, access and share information (Xu, Ouyang and Chu, 2009). The concept of libraries 2.0 (LeBlanc & Kay, 2014) represents efforts made by the library community to engage users and market its services and online tools to the public through Web 2.0 eliminating geographical, temporal, or economic constraints (Stephens & Collins, 2007). In addition, mobile technologies can play an important role in promoting access to online information, as they offer a wide range of applications for social networking and promotion of Web 2.0 library services. Despite the fact that there is an increasing number of services offered by libraries using Web 2.0 through different types of mobile devices, still there is little known with regards to user needs and the use of such services by the public.

Objectives

The study aims to examine the use of Web 2.0 library services, by university students in an academic environment. In particular, the objectives were: to identify their level of familiarity with Web 2.0 services; to examine their preferences of mobile technologies for accessing and using Web 2.0 services; to investigate the level of uptake and use of the Web 2.0 services provided by the university library; to use the findings of this study to inform the design of information literacy programs specifically focused on the use of these services by university students.

Methodology

A web-based survey was used to collect data for this study. The contents of this questionnaire were informed by relevant research in area of Web 2.0 and libraries as well as the literature on information literacy. The survey took place at the ATEI of Thessaloniki, Greece from June 2015 to December 2015. The sample consisted of all undergraduate students in the Department of Aesthetics and Cosmetology. A total of 135 students participated in the study, which represents a 30.5 percent of our total sample. Data analysis included descriptive statistics and chi-squared tests to identify differences in categorical data.

Outcomes

Findings indicated that although students of the Aesthetics and Cosmetology Department use some of the Web 2.0 tools and services, they do not possess a deep knowledge and familiarity with the majority of the tools, and their use of educational settings. Results also highlighted student intentions to learn more about the use of Web 2.0 as well as increase their use. In any case penetration of mobile technologies seems to be very high with regards to their daily use by students, as it is readily available and it is used to access information anywhere, anytime.

References

- LeBlanc, L., & Kay (Kwahng) K. (2014). Web 2.0 and social media: Applications for academic libraries. *Information Security and Computer Fraud*, 2(2). Retrieved April 8, 2016 from <http://pubs.sciepub.com/iscf/2/2/2/#>
- Stephens, M., & Collins, M. (2007). Web 2.0, Library 2.0 and the hyperlinked library. *Serials Review*, 33(4), 253–256.
- Xu, C., Ouyang, F., & Chu, H. (2009). The academic library meets Web 2.0: Applications and implications. *The Journal of Academic Librarianship*, 35(4), 324–331.

Keywords: *Web 2.0, Web 2.0 tools, library 2.0, social networks, wikis, blogs, rss feeds, mobile technology, academic libraries*

Integrating the Personal Information Culture Concept and the Idea of Media and Information Literacy offered in the UNESCO Curriculum for Teachers: Experiences of Russia and Uzbekistan

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Introduction

UNESCO and IFLA have initiated work on the integration of two independent directions: media literacy and information literacy. In 2011, the UNESCO Curriculum on Media and Information Literacy (MIL) for teachers was introduced. It stimulated the research developing the methods of combining these two types of literacy and adaptation of the results of this integration to the specific of national curricula in different countries.

Objectives

The research objective in this paper are: 1) analyzing the relationships of information literacy and media literacy in the UNESCO Curriculum on MIL for teachers; 2) exploring ways to integrate the personal information culture concept and the MIL idea from the UNESCO Curriculum for teachers; and 3) developing an adaptation mechanism of the UNESCO Curriculum on MIL to specific of information training the pupils in Russia and Uzbekistan.

Methodology

A combination of methodological approaches was used: system, technological, active and culturological. Particular attention was paid to the adaptation theory as interdisciplinary field of scientific research.

Results

The strengths and weaknesses of the UNESCO MIL Curriculum have been identified. Strengths: this program brings together not only the media and information literacy, but civic literacy as well; it involves the subsequent adaptation and development. Weaknesses: Curriculum has a disparity of media literacy and information literacy, the predominance of media literacy at the expense of information literacy. The main ideas of the UNESCO MIL Curriculum have been studied in Russia for the enrichment of the course “Principles of Information Culture for Pupils.” Goals, methods and conditions of adaptation of UNESCO curriculum were defined. This adaptation mechanism was first tested in Russian schools and later in Uzbekistan.

In 2015-2016, on the initiative of the UNESCO Office in Uzbekistan and the National Library of Uzbekistan, the project “Formation of Information Culture and Media Literacy of Information Library Specialists of Uzbekistan during the Reforms in Information and Library Sphere” was held. The purposes of the project are: 1) training the librarians of Uzbekistan on the methodics of promoting UNESCO and IFLA ideas on media information literacy through the course “Principles of Information Culture for Pupils”; and, 2) training methods for adaptation of teaching materials for MIL, due to good perception by school children of Uzbekistan.

The study showed the necessity for obligatory adaptation of UNESCO MIL Curriculum for a particular country and identified the most important adaptation conditions.

References

- Gendina, N. I. (2013). *Media and information literacy in Russia and the countries of the Commonwealth of Independent States (CIS): A survey undertaken on behalf of UNESCO's Communication and Information Sector*. Retrieved from <http://information-literacy.blogspot.ru/2013/03/conceptual-relationship-of-information.html>
- Gendina, N. I., & Kosolapova E. V. (2014). Media literacy in information culture of elementary school students. *The Russian-American Education Forum: An Online Journal*, 6(1). Retrieved from <http://www.rus-ameeduforum.com/content/en/?task=page&iid=18&article=1000596&page=About+the+Project>
- Wilson, C., Grizzle, A., Tuazon, R., Akyempong, K., & Cheung, C. K. (2011). *Media and information literacy curriculum for teachers*. Paris: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0019/001929/192971e.pdf>

Keywords: *personal information culture, media and information literacy, UNESCO, curriculum, Russia, Uzbekistan*

Information Literacy and Graduate Employability

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Issue and objectives

For universities, the employability of their graduates is an increasingly important strategic factor, and this paper reports on a study of how information literacy contributes to this employability. The output of the study is a graduate employability lens for SCONUL's Seven Pillars of Information Literacy (7P) [1]. Building on the well-established SCONUL 7P model, the new lens provides academic librarians (and others, such as university careers managers) with a practical frame they can use to better understand how IL contributes to graduate employability.

Through an analytical review, the study investigates the needs of employers and graduates, and explains IL in a way that relates to these needs; this is potentially important, because the concept of IL, and its relevance to the world of employment, is not well recognised by enterprises, whether commercial, public or not-for-profit.

Methods

The study examines definitions of graduate employability, particularly in UK settings, and then consists of:

- A review of selected sources on how employability attributes are perceived by key stakeholders, particularly employers.
- An overview of how employability attributes are viewed more broadly than for the immediate requirements of employers, and how these attributes might be affected by long-term developments in working practices.
- A brief consideration of the scholarly literature on information literacy in the workplace.

Drawing from this evidence, the study allows for the consideration of competences that have not traditionally formed part of library-centered IL discourse.

Conclusions

The study identifies five cross-cutting themes which are used to characterise these competences:

- Business and customer awareness: keeping proactively informed about the practices, expectations and goals of employers; the dynamics of the workplace; the evolving nature of the business environments in which enterprises operate and the needs of customers and users.
- Coping with workplace complexities: understanding that the information needs of enterprises are complex, often messy and largely determined by the nature of their services, products and organisational cultures.
- Analytical skills and problem-solving: using, handling, interpreting and analysing information / data, to resolve business questions and problems.
- Ability to work socially: making use of people (colleagues, associates, clients and others) and teams as valuable sources of organisational information and knowledge; and sharing information as appropriate.
- Career management and lifelong learning capacity: keeping informed about career opportunities, the evolving nature of work, and the adaptability and resilience needed to cope with that.

These themes are used to inform the contents of the 7P lens, which therefore reflects the perspectives and priorities needed to meet business goals, as well as the complex nature of workplaces and the unpredictability resulting from the often rapidly-evolving nature of work.

References

SCONUL. (2015). *A graduate employability lens for the SCONUL Seven Pillars of Information Literacy*. Retrieved from <http://www.sconul.ac.uk/sites/default/files/documents/Employability%20lens%20and%20report.pdf>

Keywords: *information literacy, employability, graduate students*

Views of Legal Scholars about the Concept of Information Literacy in the Field of Law: Case Study of a Law Faculty in the Republic of Croatia

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Purpose

Research on the concept of information literacy (IL) in the field of law is non-existent in the Republic of Croatia. In order to obtain a comprehensive insight into this problem it was necessary to conduct a broad study that would allow for a deeper understanding of the context of IL in the field of law.

This study provides some of the results of my doctoral research on the views and opinions of legal scholars, in this case faculty members, regarding the concepts of IL and information skills. Specifically, I will share the findings concerning: (1) the needs of today's students regarding the development of information skills in the field of law; (2) a profile of experts who should conduct the IL programs; (3) identification of target groups for IL programs; and, (4) the possible content of such programs. These results allow for a deeper understanding of the context of IL in the field of law and offer insight from legal scholars into the required generic skills of IL and contextual information skills in this discipline. My aim was to discover the information skills law students should acquire, especially those that would be useful in their future work as lawyers. My recommendations suggest the IL skills that help define what it means to be information literate in the field of law.

With this in mind, I attempted to answer the following research questions: What is the attitude of the academic staff towards IL and towards the cooperation of academic staff and librarians in creating and implementing IL programs? Should this attitude be changed and how? What are the attitudes of the academic staff regarding the existing and needed information skills of the students, especially in the field of law? What are the attitudes of academic staff on the possible content that should be included in the application of IL?

Design/Methodology/Approach

I used a qualitative method of in-depth interviews with academic staff in a case study at the Faculty of Law, University of Rijeka. The respondents were an intentional sample, including 20 participants from the academic staff who teach legal courses. I based the interviews on underlying phenomenography interviews since this approach allows the description of a certain phenomenon through a holistic and integrated approach.

I used the Relational Model by Christine Bruce to obtain a complete and unbiased opinion of academic staff regarding the concept of IL in the field of law. This approach enabled me to view this research of IL from the viewpoint of experts from various disciplines on the basis of their experience in the use of information (Bruce, 1997).

Originality/Value

The Method of this particular case study can be used for similar research on various levels (i.e., regional) since it is applicable to any higher education context. In addition, this study will serve to set guidelines for research and understanding of the wider context of IL in the field of law, and as an aid in the design of IL programs for law students conducted by faculties' libraries. At the theoretical level, my desire was to stimulate discussion and awareness of the importance of the concept of IL in the field of law and open the way for further research.

References

Bruce, C. (1997). *The seven faces of information literacy*. Adelaide: Auslib Press.

Keywords: *information literacy, legal scholars, law faculties, Republic of Croatia, in-depth interview*

Information Literacy Programs in the Field of Law: Case Study of Two Law Faculties in Croatia

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Purpose

The goal of our research is to investigate and identify the key elements for a successful formal inclusion of information literacy (IL) programs into the curriculum and strategic institutional documents at the institutional level of law faculties in Croatia based on the viewpoint of the senior administration of two Croatian law faculties (in Rijeka and Osijek). The inclusion of IL programs into the strategic institutional documents as well as into the curriculum stands among the most important factors that affect the learning outcomes and the skills necessary for lifelong learning.

At the national level, there is a possible lack of knowledge and understanding of the importance of IL by some members of higher education (HE) institution administration. This is seen when Croatian law faculty, administration, and, in some cases even librarians themselves, have not yet formally implemented information literacy (IL) programs. Because of the informal and non-systematic conducting of the IL programs, students at law faculties possess different levels of both generic and contextual IL skills needed for the development of their lifelong competencies. While the IL programs are currently implemented only as isolated and sporadic library programs, the authors strongly believe that IL instruction should be integrated into the strategic documents and program outcomes at the institutional level (Golenko, Vilar & Stričević, 2013).

Design/Methodology/Approach

We used a qualitative method of semi-structured individual interviews to gather the data for this research. We conducted the interviews in April 2016. At each faculty we interviewed the representatives of institution's senior management as well as the representatives of the decision-making faculty body on strategic documents and institution's curriculum. The interview questions focused on institution's senior management's and faculty body's views on inclusion of IL into strategic documents and into the institution's curriculum.

Originality/Value

The results of the study will serve to set the appropriate indicators for a broader future research and understanding of the context of IL in the field of law. In addition, the results will provide support for creating adequate formal IL programs in order that law students acquire necessary lifelong learning IL competencies and skills.

The results of this case study can serve to promote the idea of creating the joint IL program that could be implemented at all law faculties in Croatia.

References

Golenko, D., Vilar, P., & Stričević, I. (2013). Academic strategic documents as a framework for good information literacy programs: Case study of law faculties in the Republic of Croatia. In S. Kurbanoglu et al. (Eds.), *Worldwide Commonalities and Challenges in Information Literacy Research and Practice, European Conference on Information Literacy, ECIL 2013, Istanbul, Turkey, October 22–25, 2013: Proceedings. CCIS, vol. 397* (pp. 415–421). Cham: Springer International Publishing.

Keywords: *information literacy, curriculum, strategic documents, law faculties, Republic of Croatia*

Affective Dimensions of Librarians as Educators

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Librarians as educators are still being marginalised in the university community – they are neither “real” librarians, nor “real” faculty members (Rosenfeld et al., 2013). As a result, librarians have negative emotions about their educational duties especially regarding their teaching. Evidence suggests that the emotions librarians feel in their roles as educators may be among the most important factors for improving their teaching proficiency (Julien and Genuis, 2009; Medaille, 2011). This suggests a need to analyse the affective dimensions of librarians’ teaching.

The objective of our research is to enhance knowledge regarding librarians’ emotions about their teaching, as a component of librarians’ identities as educators. We would like to suggest a new line of research about the emotions librarians feel in their roles as educators in order to collect more valid evidence about the affective dimensions of teaching in Lithuania and Poland academic libraries. Our research provides an explanation of librarians’ emotions about their educational duties in countries where teaching activity is still quite novel in comparison, for instance, with Scandinavian countries.

We gathered data for this study using a computer-assisted web interviewing (CAWI) technique. We administered an online survey using the 1KA.SI web survey tool. The questionnaire was based on research conducted by counterparts from Spain who analysed affective dimensions of university professors about their teaching by exploring it through a semantic differential technique (Badia, Meneses and Monereo, 2014). Respondents of the survey were librarians from academic libraries in Lithuania and Poland who deliver information literacy courses. We asked respondents to evaluate 15 bi-polar adjectives, asking librarians to indicate their feelings about their motivation for teaching; evaluation of oneself as a teacher; and performance of Teaching.

Results of the survey showed that librarians had more positive emotions about their teaching than negative ones. Librarians felt that their teaching was consistent and deep but required significant effort. We saw the biggest difference in results when librarians spoke about their motivation to teach and how demanding the process was. To better understand the analysis, we compared these results with those from librarians in Lithuania and Poland. We also compared the librarians’ emotions tied to their roles as educators with their emotions about their sense of job meaningfulness.

The present study should fill a gap in the literature by giving insight about how librarians as educators evaluate their teaching motivation, their roles as teachers, and their teaching performance. Results also might be used to evaluate the impact of librarians’ self-esteem.

References

- Badia G. A., Meneses, J., & Monereo, C. (2014). Affective dimension of university professors about their teaching: An exploration through the semantic differential technique. *Universitas Psychologica*, 13(1), 161–173.
- Julien, H., & Genuis, S. K. (2009). Emotional labour in librarians’ instructional work. *Journal of Documentation*, 65(6), 926–937.
- Medaille, A. (2011). Librarians view instruction as integral to their professional identities. *Evidence Based Library and Information Practice*, 6(4), 120–123.
- Rosenfeld, J., Gatten, R., Nalani Meulemans, Y., & Carr, A. (2013). Not at your service: Building genuine faculty-librarian partnerships. *Reference Services Review*, 41(1), 80–90.

Keywords: *affective dimension, librarian as educator, academic library*

How Information Literate Are We as Teachers?

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The information behaviour of teaching staff has been reported to have a strong impact on student perceptions of information literacy (Godwin, 2005). This research uses citation analysis (Fransen, 2012) to investigate the information use in the course content of the Information Communication Technologies (ICT) undergraduate programme at The Hague University of Applied Sciences in the Netherlands. The ICT programme is a brand-new 'broad bachelor's course' that, throughout the first half year, integrates five former subject-based courses. The programme consists of the following six different domains: software engineering, network and systems engineering, business and management, information security management, information and media studies, and professional skills. For each of these domains, the teaching staff produced new course materials that were used in the first ten weeks of the course (September-November 2015).

Research question, objective and methods

We had two main research questions. First, to what extent do teachers refer to the information sources they use in the course materials they develop? Second, which type of literature do teachers refer to in these course materials? These questions refer to important facets of 'information literate behaviour' and match with criteria three and four in the Scoring Rubric for Information Literacy (Van Helvoort, 2010). Course materials created by the teaching staff usually take the form of PowerPoint and Prezi presentations, video instructions, syllabi, assignments, and course manuals. The objective of our research is to encourage teachers to reflect upon their own information behaviour and to show the students that their course materials are based on relevant, accurate, and reliable sources. To achieve this, we used a participative research method. Six members of the Curriculum Board, who are also teachers in the ICT programme, contributed to the research as coders of the course content, some of which they also wrote. They selected codes for the types of resources from a fixed list that included handbooks, reports and white papers in Dutch or English, research articles and scholar websites in English, open educational resources, and personal content. The last code was applied when the coder was unclear which literature is used. We will discuss the outcomes of the citation analysis with ranked overviews of types of course materials and types of resources in a focus group with the members of the Curriculum Board. We expect to find explanations for the findings in the focus group and to formulate follow-up questions about the next step in the research on faculty information literacy skills. We will conduct a thematic analysis of the verbatim transcript of the focus group to provide a descriptive account of issues and illustrative quotations to highlight these issues in the participants' own words.

Expected outcomes

We will present all research results including the results of the citation analysis as well as the results of the focus group discussion with the Curriculum Board at the 2016 ECIL conference. The research itself is meant as an intervention to reflect on teaching staff's information literacy and the way they function as role models for their students.

References

- Fransen, J. (2012). Literature use in engineering and computer science research: An analysis of works cited in dissertations and theses. *Issues in Science and Technology Librarianship*, 71. Retrieved 24 October 2015 from <http://www.istl.org/12-fall/refereed3.html>
- Godwin, P. (2005). Making life easier for academics: How librarians can help staff weather the technological storm. *Journal of eLiteracy*, 2(2), 68–79.
- Helvoort, J. van (2010). A scoring rubric for performance assessment of information literacy in Dutch Higher Education. *Journal of Information Literacy*, 4(1), 22–39.

Keywords: *course materials, higher education, teaching staff, participative research, citation analysis, focus groups*

Computer Science for the Community: Increasing Equitable Opportunity for Youth through Libraries

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Using preliminary qualitative research underway through the American Library Association and Google, authors explore the nature and scope of computational thinking (CT) skills fostered through exposure to computer science (CS) learning opportunities in U.S. libraries. The paper examines the perception of and participation in CS among youth, their family, and educators through analysis of Google-Gallup research data on learning opportunities. It investigates how learning CS in informal environments can mitigate perceptions that curtail participation through an analysis of library programs. The paper concludes with recommendations for further intervention and best practices for libraries and other stakeholder institutions. Methodology includes an environmental scan of current CS activities in libraries, a literature review, focus groups, practitioner interviews, and site visits.

Recent years have seen increased international focus on CS and a growing recognition of the need to provide students with the requisite 21st century skills. In the U.S. parallel efforts are underway to include CS education in schools, as well as through out-of-school initiatives in informal learning environments such as public libraries CT is a critical component of CS: it is the process of breaking down problems into more manageable elements, developing a sequence of steps to solve those problems, generalizing that process, and using computers to efficiently solve similar problems (Wing, 2006). CT skills developed are transferable beyond CS to any domain.

Globally, growth in jobs requiring CT fuel the need for increased access to CS learning. Yet opportunities are not broadly available, and demographic and socioeconomic disparities exist in U.S. schools, exacerbating the lack of diversity among youth participating in formal CS education. While efforts to change these dynamics in formal education are underway, parallel efforts in informal learning spaces such as libraries can bridge gaps in opportunity and provide an incubator for innovative approaches. Learning in libraries is inquiry and project based, putting the learner at the center of facilitated activities. Libraries promote lifelong learning, central to CT. We discuss the development of a library-centric approach to facilitating CT learning.

U.S. libraries have traditionally played a key role in promoting information literacy and workforce development in local communities, reaching people of all ages, income levels, and ethnicities. Today, they are on the front lines of digital inclusion efforts, building CT skills through CS-related activities and increasing opportunities for youth through a broad range of informal learning programs. Finally, libraries collaborate with a range of stakeholders including anchor organizations (government or non-profit), businesses, or foundations—key to sustaining initiatives.

References

- Bertot, J. C., Real, B., Lee, J., McDermott, A.J., & Jaeger, P.T. (2015). 2014 Digital inclusion survey: Findings and results. College Park, MD: Information Policy & Access Center, University of Maryland College Park. Retrieved March 1, 2016 from <http://digitalinclusion.umd.edu/>
- Google-Gallup (2015). Searching for computer science: Access and barriers in U.S. K-12 education. Retrieved March 1, 2016 from https://services.google.com/fh/files/misc/searching-for-computer-science_report.pdf
- Institute of Museum and Library Services. (2013). Growing young minds: How museums and libraries create lifelong learners. Washington, D.C.: Institute of Museum and Library Services. Retrieved April 15, 2016 from <https://www.ims.gov/sites/default/files/publications/documents/growingyoungminds.pdf>
- Ito, M., Gutiérrez, K., Livingstone, S. et al. (2013). Connected learning: An agenda for research and design. Irvine, CA: Digital Media and Learning Research Hub. Retrieved April 15, 2016 from http://dmlhub.net/wp-content/uploads/files/Connected_Learning_report.pdf
- Wing, J. M. (2006). Computational thinking. *Communications of the ACM*, 49(3), 33–35.

Keywords: computer science education, computational thinking, libraries, informal learning, coding, equitable access for diverse youth

Everyday Health Information Literacy of Young Finnish and Namibian Students: Is There a Difference?

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Background

Studies on cultural differences of health information literacy (HIL) are rare. This study focuses on the everyday health information literacy (EHIL) of Namibian and Finnish students. These populations were selected on the basis of collaboration between the University of Namibia and the University of Oulu within the North-South-South Library and Information Studies Network from 2005 to 2015. From 2013 to 2015 this network focused on information literacy research which enabled this study.

Objectives

We aim at finding out how people with different cultural backgrounds respond to the statements of an EHIL screening tool and discussing the findings in relation to related studies.

Methodology

The method of this comparative study is quantitative. The data were collected with the previously developed EHIL screening tool (Niemelä et al., 2012) from Namibian university students ($n = 271$) and Finnish upper secondary school students ($n = 217$). Both population groups lived in urban areas and were of closely related age, the Namibian students from 17 to 19 years old and the majority (88.1%) of Finnish students from 17 to 18 years old. The EHIL screening tool includes ten statements with response options from 1 (strongly disagree) to 5 (strongly agree). To compare the two groups' responses to the individual statements, cross-tabulations with Pearson's chi-squared tests were conducted and the means of an EHIL sum variable were compared with students' t-test.

Findings

Preliminary analysis indicates statistically significant ($p < 0.001$) differences between the two groups with regard to all ten statements. For example, 51.1 percent ($n = 136$) of the Namibian students and 18.5 percent ($n = 40$) of the Finnish students agreed or strongly agreed with the statement: "It is easy to assess the reliability of health information from the Internet". Respectively, 44.2 percent ($n = 120$) of the Namibian and 14.7% ($n = 32$) of the Finnish students agreed or strongly agreed with the statement "It is difficult to know who to believe in health issues".

Significance of the study

We contribute to research on cultural differences on HIL. We present a HIL screening tool that is based on literate individuals' self-assessment and subjective experience. It is highlighted as a screening result for health professionals to interact in care practice. The study validates the EHIL screening tool for further development.

References

Niemelä, R., Ek, S., Erkkisön-Back, K., & Huotari, M.-L. (2012). A screening tool for assessing everyday health information literacy. *Libri*, 62, 125–134.

Keywords: *health information literacy, screening tool, students, cultural differences, survey*

Relationality is the Key: The Family of Digital Competencies' Catalogues and their Potential Applications

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Theoretical frameworks

The family of digital competencies' catalogues (DCCs) is being developed as an effective tool for diagnosis and evaluation of digital (including information and media) competencies of different social groups. It is built on the relativity theory (Filiciak et al., 2013), referred strongly to Pierre Bourdieu's (2010) theory of class distinction, Jan van Dijk's (2005) concepts of a network society and digital divides, Reijo Savolainen's (1995) model of everyday information seeking, and the Big6 Skills Model of Mike Eisenberg and Bob Berkowitz of 1990. The relativity theory emphasises objective differences in information needs and behaviours within the society, related to one's social, economic, cultural, and/or educational status and perspectives.

Research aims

The project aimed in developing: (1) a concept of functional digital competencies, which are no longer a separate type of skills, but added to any other type of competencies, to enhance them and make them useful within a society based on digital technologies; (2) a common framework for developing profiled DCCs for selected social groups with specific needs; (3) digital competencies catalogues which answer the needs of potential users' groups. The authors assumed differences among information literacy levels resulting from both social status of the beneficiaries, and types of activities being undertaken in everyday life. Therefore, information skills are grouped in the following catalogues either according to essential life spheres, or to the basic types of entrepreneurial activity (production, promotion, HRM).

Methodology

Different methodologies have been used in the project: desk research, field studies, FGIs (focus group interviews) and IDIs (individual in-depth interviews) with experts and professionals.

Outcomes

The project's aims have been achieved. The concept of functional digital competencies has been verified as a reliable tool in evaluating and/or developing digital skills of people with different social and/or professional background. A common framework for developing DCCs has been offered and verified in different contexts. Three DCCs have been developed so far. The most universal and general DCC framework is currently being applied by the Polish Ministry of Administration and Digitization in information literacy diagnosis and education projects. It also has been introduced as a benchmark for e-integration programmes within the Operational Programme Digital Poland - 3rd Axis. The other relates to the needs of the 50+ group, considering different levels of their ICT skills and the specific of their status. The third one refers to the SME sector: information competencies, needs, and professional practice of the Polish entrepreneurs.

References

- Bourdieu, P. (2010). *Distinction: A social critique of the judgement of taste*. London: Routledge.
- Dijk, J. van. (2005). *The deepening divide: Inequality in the information society*. Thousand Oaks: Sage Publications.
- Filiciak, M. et al. (2013). *The use of media and social divisions*. Warsaw: Centrum Cyfrowe. Retrieved January 12, 2016 from http://ngoteka.pl/bitstream/handle/item/215/the_use_of_media_and_social_divisions.pdf?sequence=6
- Savolainen, R. (1995). Everyday life information seeking: Approaching information seeking in the context of "way of life". *Library & Information Science Research*, 17(3), 259–294.

Keywords: *digital competencies; catalogue, digital literacy, information literacy, relationality theory*

Scaffolding Information Literacy in the Nursing Curriculum

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Objectives

Nursing faculty and librarians at the University of Wisconsin-Eau Claire noticed that current library instruction did not provide students with an understanding of how to effectively retrieve, evaluate, and use information. Without information literacy skills, students cannot effectively develop the skill of evidence-based practice (EBP) and its application in practice. Three library and three nursing faculty created an interdisciplinary team in order to address this problem. This team used the lesson study methodology as the intervention method to build information literacy skills and facilitate incorporation of EBP concepts across the nursing curricula. Unique lesson study sessions were planned and implemented at the sophomore, junior, and senior levels. Each of these classes had specific goals that worked toward the overall goal: “Students will be able to retrieve various levels of scholarly information and apply or evaluate its usefulness to clinical practice.”

Methodology

Lesson study is unique in that it is learner-focused rather than focused on the instructor. When teaching each lesson study session, team members and other observers record student engagement and participation in the session for use in assessing the lesson’s effectiveness.

At the beginning of the lesson study intervention, students took a pre-test to gauge their baseline knowledge. Subsequently, the team embedded assessments into the curriculum at the sophomore, junior, and senior levels. A control group of seniors who did not have the intervention were given the same senior-level assessment as the intervention group.

Outcomes

Three main themes emerged from the qualitative research.

1. Collaborative relationships: Students identified value of librarians and nursing faculty working closely together as it enhanced their learning.
2. Process continuity: Students appreciated the purpose of scaffolding the lessons. They also valued the replication of structure in each course lesson and in-class worksheets.
3. Concepts valued: Students articulated the value of EBP and information literacy.

Quantitative data indicated growth in student learning, but students’ retention of knowledge was inconclusive. For example, junior nursing students demonstrated a significant ability to identify the appropriate level of evidence to use in a clinical situation, improving from eight percent to 69.5 percent (n=109). However, it was unclear the degree to which students’ sustained an understanding of the levels of evidence based on the decline in correct responses from junior (69.5 percent) to senior year (25.5 percent). Yet, senior students demonstrated the retention when applying hierarchy of evidence in classroom application and discussion.

References

- American Association of Colleges of Nursing. (2008). *The essentials of baccalaureate education for professional nursing practice*. Washington DC: American Association of Colleges of Nursing.
- Carbin B. (2011). *Lesson study: Using classroom inquiry to improve teaching and learning in higher education*. Sterling, VA: Stylus.
- Stombaugh, A., Sperstad, R., VanWomer, A., Jennings, E., Kishel, H., & Vogh, B. (2013). Using lesson study to integrate information literacy throughout the curriculum. *Nurse Educator*, 38, 173–177. doi: 10.1097/NNE.0b013e318296db56

Keywords: *information literacy, lesson study, collaboration, curriculum development, evidence-based practice*

Print and Digital Reading Preferences and Behaviors of University Students in Qatar

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This paper will present findings of a study that investigates the reading preferences and behaviors of university students in Qatar. The study will be conducted in two stages with the first stage involving a survey of the print versus digital preferences of students at two universities in Qatar (including both undergraduate and postgraduate students in different disciplines). This survey is being undertaken as part of the larger Academic Reading Format International Study (ARFIS), which is investigating print versus digital reading preferences in 31 countries. The second stage of the project involves investigating the academic reading behaviors of different groups of university students in Qatar by using eye tracking software to investigate if their reading behaviors differ when reading print versus digital materials. This second stage aims to build on results obtained from the ARFIS study. A wide range of students will be represented in the study including undergraduate and postgraduate students, ESL learners and students studying in different disciplines, in order to investigate if these factors impact on reading behavior. The first stage of the project will survey around one hundred students with around 30-40 students participating in the second eye tracking stage.

Results of several surveys conducted as part of ARFIS have indicated that most students acknowledge that print works best for learning and still prefer reading their academic texts in print format (Boustany, 2015; Mizrachi, 2015). Preliminary results from the ARFIS survey in Qatar also show similar results, with postgraduate students from one university in Qatar indicating that students prefer to print out their course readings rather than read them electronically and prefer reading course materials and textbooks in print. Preliminary results also indicate that language does not play a part in students' preferences of reading in print or digital format; the length of the material impacts on their preferences; they prefer to print out course readings and; that they highlight and take notes in both formats. Similar to Mizrachi's study students also stated their reasons for preferring print was because there is greater inclination to highlight and annotate printed readings and that reading print meant there would be less eyestrain and fatigue. Students who preferred digital did indicate that this choice was often due to wanting to be environmentally conscious. In order to provide more in depth evidence of students reading behaviours, further investigation will be undertaken by tracking their reading behaviours in both print and digital formats; including different digital formats and studying if they exhibit different behaviors when reading in different formats and different languages.

The outcome of this research will provide useful insights into the reading preferences and behaviours of a diverse range of students studying in an international environment including their preferences and behaviours based on format and language. The study will also contribute to growing international research investigating reading preferences and behaviours of students. This research will create new knowledge of the reading behaviours of students that has been gathered using innovative eye tracking technology. This knowledge will inform libraries, universities and publishers of students reading behaviour studying in international multi lingual environments.

References

- Boustany, J. (2015). Print vs. electronic: What do French students prefer in their academic reading material? In: S. Kurbanoglu et al. (Eds.), *Information Literacy: Moving Toward Sustainability, Third European Conference on Information Literacy, ECIL 2015, Tallinn, Estonia, October 19–22, 2015: Revised Selected Papers. CCIS, vol. 552* (p. 17). Cham: Springer International Publishing.
- Mizrachi, D. (2015). Undergraduates' academic reading format preferences and behaviors. *The Journal of Academic Librarianship*, 41(3), 301-311. Retrieved from: <http://dx.doi.org/10.1016/j.acalib.2015.03.009>

Keywords: *reading preferences, reading behaviours, print versus digital, format, language, eye tracking*

Citizen Science as an Educational Tool for Improving Scientific Literacy of Undergraduate Students

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The aim of this study is to analyze the possible role of citizen science projects in improving scientific literacy of undergraduate students, and to outline possible methods of involvement of citizen science projects into the curriculum.

Given the increasing impact of scientific research on our lives, understanding the science concepts becomes essential to understanding the world around us. Described by U.S. National Research Council (1996) as an ability to “understand scientific concepts and processes required for personal decision making, participation in civic ... affairs, and economic productivity”, scientific literacy holds an important place among the key competencies for the 21st century.

Although the roots of the concept of citizen science date back to the nineteenth century, it is widely considered a phenomenon of the last fifteen years. The projects in question include traditional projects held mostly outdoors, strongly supported by software applications for mobile devices (Jepson & Ladle, 2015) as well as so-called citizen cyberscience projects, led entirely over the internet. The actual impact of so-called citizen scientists’ work on the efficiency of data collection and analysis is rarely questioned. Moreover, the positive impact of citizen science projects on the level of scientific literacy of the participants has been already recognized by several authors (Cronje, Rohlinger, Crall, Newman, 2011). As Bonney et al. (2009) remarked, “most citizen science projects ... strive to help participants learn about the organisms they are observing”.

According to Prise and Lee (2013), besides an increase of awareness about the research subjects, participation in citizen science projects can lead also to changes in participants’ scientific attitudes and their motivation to stay interested in scientific issues. Having a place in undergraduate curriculum, it represents a possible way of engaging the students who have never had the opportunity to participate in real scientific research more effectively.

Regardless of these findings, there is still a very limited amount of effort to use citizen science as an educational tool. In this paper, the desk research of current efforts to integrate citizen science projects into curriculum, and analysis of educational potential of selected citizen science projects will be applied. As a result, we will present specific methods of their use as an educational tool, with emphasis on undergraduate learning environment.

The findings of this work will help the lecturers identify opportunities that citizen science projects offer and apply them effectively in their lessons. The paper could also possibly serve as a background for broader discussion about opportunities and limits of citizen science as an educational tool.

References

- Bonney, R., Cooper, C., Dickinson, J., Kelling, S., Phillips, T., Rosenberg, K., & Shirk, J. (2009). Citizen science: A developing tool for expanding science knowledge and scientific literacy. *BioScience*, 59(11), 977–984.
- Cronje, R., Rohlinger, S., Crall, A., & Newman, G. (2011). Does participation in citizen science improve scientific literacy? A study to compare assessment methods. *Applied Environmental Education and Communication*, 10(3), 135–145.
- Jepson, P., & Ladle, R. J. (2015). Nature apps: Waiting for the revolution. *Ambio*, 44(8), 827–832. doi: 10.1007/s13280-015-0712-2
- National Research Council. (1996). *National science educational standards*. Washington: National Academy Press.
- Prise, A. C., & Lee, H. (2013). Changes in participants’ scientific attitudes and epistemological beliefs during an astronomical citizen science project. *Journal of Research in Science Teaching*, 50(7), 773–801.

Keywords: *citizen science, public participation in scientific research, scientific literacy, higher education, undergraduate students*

Searching as Strategic Exploration: How well does Faculty Know Their Students' Opinions Regarding Information Sources?

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Objectives

This research study aims to identify existing gaps between undergraduate students' perceptions of the importance and difficulty of use of various information resources to the completion of academic course assignments (papers, projects, presentations, etc.) and the corresponding perceptions that faculty hold of students' information-seeking behavior.

The following common stages related to the preparation of academic course assignments were suggested by the literature (He et al., 2012; Saunders, 2012), practice and discussions with students, and departmental faculty: **identifying a topic; formulating a research question; finding scholarly publications; evaluating sources.** Each of these steps may be perceived by students as requiring different approaches with respect to gathering information; hence different questions cover different aspects of the research process.

Overall research question: **How do faculty perceptions of the relative importance and difficulty of use of various information sources that students may use in the completion of academic course assignments differ from students' actual opinions?**

Methodology

Two separate surveys with matching questions were developed and administered, one to undergraduate students and the other to faculty. This allows for pair-wise comparisons between students' opinions and faculty perceptions. Corresponding demographic information also has been collected for cross-tabulation with the data. Questions, respective to the four outlined stages, ask for rating ten different types of resources in terms of importance and difficulty of use. Resources include both people (faculty, peers, and librarians) and information print and electronic resources. These Likert-type scale 1 to 5 questions address both importance and difficulty of use. Surveys were deployed to random samples of 1000 undergraduate students, excluding freshmen, and 250 departmental faculty members across the university.

Outcomes

Clarifying what students find important (along with corresponding difficulty of use) and what faculty think that students consider important (as well as perceived difficulty of use) is designed to detect any discrepancies or misconceptions and help increase campus awareness of student and faculty needs. This provides rich opportunity for dialogue areas across the library and campus, which can support future meaningful collaboration. An elucidation of differences will help to focus information literacy instruction to students and faculty curricular support more effectively. This research project addresses an important and recognized gap in the scholarly literature (Aguirre & Fleming-May, 2012) and would help both groups, in practice, to conserve time and effort.

References

- Aguirre, M., & Fleming-May, R. (2012). "You just type in what you are looking for": Undergraduates' use of library resources vs. Wikipedia. *Journal of Academic Librarianship*, 38(6), 391–399.
- He, D., Wu, D., Yue, Z., Fu, A., & Thien Vo, K. (2012). Undergraduate students' interaction with online information resources in their academic tasks: A comparative study. *Aslib Proceedings*, 64(6), 615–640.
- Saunders, L. (2012). Faculty perspectives on information literacy as a student learning outcome. *The Journal of Academic Librarianship*, 38(4), 226–236.

Keywords: *information literacy, information-seeking behavior, undergraduate students*

Accessibility of Digital Information: Standards, Frameworks and Tools Related to Information Literacy and Information Technology

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One of the aspects of information literacy is awareness of broad range of different information users, their abilities, characteristics, and needs. Access to information and information services is a basic human right, the prerequisite for equality and equal opportunities emphasized in Convention on the Rights of Persons with Disabilities (UN, 2006). Putting this awareness into the practice means the inclusion of people with disabilities.

The general definition of the phrase, accessibility of information, as the ability to reach information. However, this phrase has a deeper meaning and greater importance when viewed in the context of people with disabilities. In this sense, it denotes the capability of information being perceivable, understandable, user friendly and available to people with all kind of disabilities including visual, auditory, physical, speech, cognitive, and neurological disabilities as well as to older people with changing abilities due to aging and those using different kinds of assistive technologies.

Commonly, the accessibility of information and adapting services to users with different abilities is discussed in information literacy standards, models, and frameworks in specific sections that focus on information scope and access (SCONUL, 2011); information content creation and presentation (ACRL, 2000); and the value of information having value (ACRL, 2015). Still, there is no strong, clear emphasis of accessibility of information in these key documents and resources. Accessibility to both digital information and information technology (IT) in general is more obviously supported in international standards and recommendations for IT and other related professionals (ISO, n.d.). These fields address different aspects of accessibility including the issues of ergonomics; adaptability and accessibility of the workplace and learning environment; IT assistive technology; and the accessibility of user interfaces and information/web content (W3C, 2008). Besides the IT professionals' communities, all IT users creating digital information content should be familiar with and use common, simple, and easy procedures and tools to check and ensure at least a minimum level of digital information accessibility. Common software products for creating digital documents including text and presentations have built-in features for checking accessibility. Similarly, here are many free resources to test web accessibility available. So, there is no excuse for not using tools to increase digital accessibility.

The goal of my research presented was to investigate how accessibility of information is addressed in information literacy and information technology standards, recommendations, models, and frameworks and supported by tools when creating digital information content. I used a descriptive method and in-depth content analysis. I will present the outcomes of the study - identified set of knowledge and skills needed to facilitate inclusion of people with disability through the accessible (digital) information.

References

- ACRL. (2000). *Information literacy competency standards for higher education*. Retrieved February 14, 2016 from <http://www.ala.org/acrl/sites/ala.org/acrl/files/content/standards/standards.pdf>
- ACRL. (2015). *Framework for information literacy for higher education*. Retrieved February 14, 2016 from http://www.ala.org/acrl/sites/ala.org/acrl/files/content/issues/infolit/Framework_ILHE.pdf
- ISO. (s. a.). *Bringing down barriers*. Retrieved February 14, 2016 from http://www.iso.org/iso/bringing_down_barriers-infography_final.pdf
- SCONUL (2011). *The SCONUL Seven pillars of information literacy - Core model for higher education*. Retrieved February 14, 2016 from <http://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf>
- UN. (2006). *A convention on the rights of persons with disabilities*. Retrieved February 14, 2016 from <http://www.un.org/disabilities/convention/conventionfull.shtml>
- W3C. (2008). *Web content accessibility guidelines (WCAG) 2.0*. Retrieved April 14, 2016 from <http://www.w3.org/TR/WCAG20/>

Keywords: *information literacy, information technology, accessibility, digital information, standard, framework, tool*

Information Literacy Competencies as Part of Information Curation

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In art and historical museums curation means organizing an exhibition of a specific theme. Information or content curation encompasses several competencies familiar to information professionals (Ridarch 2009, Farrier 2012, Olander 2012). A curator needs to be aware of the interests of his or her target audience (Ridarch 2009, Farrier 2012, Olander 2012) and helps to solve the problem of information overload from the Internet (Olander 2012, Farrier 2012, Cisnero 2014). More than just resending previously published material, curation retells a story in a personalized way. It has added value and includes a human element. (Farrier 2012; Gunelius 2012.) Content curator manifesto (2009) defines curators as people whose job it is not to create more content, but to make sense of all the content that others are creating, to find the best possible relevant content and bring it forward, and in doing so save readers' time (Olander 2012). Content can be text, images, or, for example, videos originating from elsewhere (Bhattarai 2016). Several of the above mentioned competencies are among the elements of information literacy defined by the Association of College and Research Libraries (2000). Content curation has been proposed as an alternative career of information professionals.

The purpose of this paper is to enhance the understanding of the elements of information curation. The research question posed in this study is: What elements of information literacy are present in the definitions of information or content curation in articles and on relevant web sites? The elements of information literacy were used as criteria for a qualitative content analysis, but other elements present in the research material were also taken into account. Research material consisted of eighteen research articles collected from scientific databases (LISTA, ERIC) and twelve websites. Websites concentrating merely on tools for content curation were left out of the analysis. Elements of information literacy are present in the definitions of content curation, although some of them implicitly and they are described by many different terms. Although the elements of information literacy would be present in the definitions, references to information literacy are rare. The definitions also include elements outside the traditional definitions of information literacy. Web sources mostly regard curation as tool for marketing, but it is also used for knowledge management, and to teach students information literacy.

References

- Association of College and Research Libraries. (2000). *Information literacy competency standards for higher education*. Retrieved from <http://www.ala.org/acrl/standards/informationliteracycompetency>
- Bhattarai, U. (2016). *Content curation and its role in content strategy*. Retrieved February 3, 2016 from <http://www.ujjwal.com/search-engine-optimization/content-curation-content-strategy-965/>
- Cisnero, K. (2014). *A beginner's guide to content curation*. Retrieved from: <http://blog.hootsuite.com/beginners-guide-to-content-curation/>
- Deshpande, P. (2015). *A definitive guide to content curation*. Retrieved from: <http://www.curata.com/blog/the-definitive-guide-to-content-curation/>
- Farrier, J. (2012). *Digital content curation is career for librarians*. Retrieved February 1, 2016. from <http://lj.libraryjournal.com/2012/02/opinion/backtalk/digital-content-curation-is-a-perfect-career-fit-for-librarians-backtalk/>
- Gunelius, S. (2012). *5 ways to use content curation for marketing and tools to do it*. Retrieved from <http://www.forbes.com/sites/work-in-progress/2012/07/05/5-ways-to-use-content-curation-for-marketing-and-tools-to-do-it/#411d03420187>
- Influential Marketing Group. (2009). *Manifesto for the content curator: The next big social media job of the future*. Retrieved from <http://www.rohitbhargava.com/2009/09/manifesto-for-the-content-curator-the-next-big-social-media-job-of-the-future.html>
- Olander, I. (2012). *Opas sosiaaliseen tiedonhakuun ja kuratointiin: Välineet, strategiat, ihmiset*. Retrieved from <http://sometek.fi/opas-sosiaaliseen-tiedonhakuun-ja-kuratointiin-valineet-strategiat-ihmiset/>
- Ridarch, R. (2009). *Content curation: How does it build value?* Retrieved from <https://www.flickr.com/photos/stefanomaggi/4165897362>

Keywords: *information curation, content curation, information literacy*

Information Literacy Education and Needs of Teaching Librarians: The Situation in the Czech Republic in Comparison with the Visegrad Four

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Research background

Librarians have to cope with limited preparation for educational practice at courses in the Czech Republic. Content of lessons was studied in public libraries (Nejezchlebová, 2012) and university libraries (Landová & Cívínová, 2010) by questionnaires, which did not cover organization and using of information technologies in lessons and such aspects of information literacy as the credibility of sources. Some similarities, as well as differences on a deeper level were described in 2010 (Koltay, Krakowska, Landová & Prókai, 2010), the question remains if the results among nearby countries in the Visegrad Four are portable or not.

Objectives

The goal is to describe the organization and content of current information literacy education in Czech libraries, and to explore the educational needs of teaching librarians. Connecting them can help in expressing and identifying information needs and norms. Educational content is described according to the Media and Information Literacy Competency Matrix (Coles, 2013). A questionnaire was distributed in all countries of the Visegrad Four.

Methodology

The questionnaire consisted of 26 questions. All local language versions were distributed electronically by local experts using online communities of practice, between December 3d and 20th, 2015. We received 97 responses from the Czech Republic, 280 responses from Poland, 35 responses from Hungary, and 33 responses from Slovakia.

Outcomes

The majority of Czech teaching librarians (62.9%) mostly have their own conception of the topic and still use the same, usually traditional teaching methods (frontal presentation, discussions, individual exercises). According to the MIL Competency Matrix, the topics most often addressed related to:

- basic questions for search in getting information (47.4%),
- the selection of key information from the document in understanding and evaluating information (42.3%),
- comparing information from different media sources in the creation and monitoring (30.9%).

The results of all countries were fairly similar, although some significant differences were also found (e.g. 42.9% of Polish respondents carried out an educational needs analysis, while this does not exceed 20% in other countries).

References

- Coles, P. (Ed.). (2013). *Global media and information literacy assessment framework: Country readiness and competencies*. Paris: UNESCO. Retrieved from <http://www.uis.unesco.org/Communication/Documents/media-and-information-literacy-assessment-framework.pdf>
- Koltay, T., Krakowska, M., Landová, H., & Prókai, M. (2010). Information literacy in the Visegrad group countries: Literature and initiatives. *Education for Information*, 28(1), 57–76. Retrieved February 06, 2016 from <http://ezproxy.muni.cz/login?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,uid&db=lls&AN=66358655&lang=cs&site=eds-live&scope=site>
- Landová, H., & Cívínová, Z. (2010). Aktivita vysokoškolských knihoven v oblasti informačního vzdělávání: Vývoj v letech 2006–2010 na veřejných vysokých školách v ČR [Activities of university libraries in the area of information education: Development in 2006-2010 at public universities in the Czech Republic]. *ProInfow*, 2, 4–22.
- Nejezchlebová, J. (2012). Veřejné knihovny 21. století a informační vzdělávání [Public libraries of the 21st century and information education]. In P. Kovářová (Eds.), *Trends in information education* (pp. 38–48). Zlín: VeRBuM.

Keywords: *educational needs analysis, libraries, media and information literacy, organization of lessons, research*

Ideological Views, Social Media Habits, and Information Literacy

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According to liberal political theory, democracy can flourish only to the extent to which its citizenry has free access to information, are able to reason well, and, consequently, are able to make reasonable choices (McNair, 2003).), liberals propose education for democracy that will foster critical thinking. In this context, information literacy, understood also as a sociopolitical skill (Andersen, 2006), perfectly fits to liberal normative demand of “rational citizenship”. Hence, not a few authors have seen a connection between information literacy and active citizenship, believing in the idea that “voters with information resources are in a position to make more intelligent decisions than citizens who are information illiterates” (Bawden, 2001).

The advent of Web 2.0 additionally fostered liberal optimism since it opened up new ways to access, share, and publish information about politics. Many have argued how Web 2.0 represented the ultimate realization of participatory democracy. As some surveys show (Mitchel et al, 2014), social media users usually turn to social networks, especially FaceBook, to fulfill different types of information needs. An important distinctive feature of FaceBook is that the political news that the user sees is impacted by users’ choice of friends and his/her past behavior. Therefore, if a user regularly comes across political news incidentally, this opens a question of his/her ability to freely choose or control information sources. For example, it is possible that the way people get information about politics to a lesser degree depend on a free and informed choice and much more on their or their FaceBook friends’ ideological views.

This becomes especially obvious with information related to topics such as gay marriage, abortion, and sex education. These cause morally and emotionally saturated conflicts, often metaphorically named as culture wars, that often lead to polarization of the political spectrum. Regarding this ideological polarization, the main objective of my paper is to look at whether or not are social media habits and activities of users, related to the users’ ideological views. if this is the case, the users’ information sources just perpetuate their ideological views (Sunstein, 2007). In order to get the answers, I will administer a questionnaire to one hundred Communication Management students at the University of Applied Sciences “Baltazar” Zaprešić.

References

- Andersen, J. (2006). The public sphere and discursive activities. Information literacy as sociopolitical skill. *Journal of Documentation*, 62(2), 213–228.
- Bawden, D. (2001). Information and digital literacies: A review of concepts. *Journal of Documentation*, 57, 218–259.
- Limberg, L., Sundin, O., & Talja, S. (2012). Three theoretical perspectives on information literacy. *HUMAN IT*, 11(2), 218–259.
- McNair, B. (2003). *An introduction to political communication*. Routledge: London.
- Mitchel, A., Gottfried, J., Killely, J., & Matsa, K. E. (2014). *Social media, political news and ideology*. Retrieved February 14, 2016 from <http://www.journalism.org/2014/10/21/section-2-social-media-political-news-and-ideology/>
- Sunstein, C. R. (2007). *Republic.com 2.0*. Princeton University Press.

Keywords: *education for democracy, ideology, information literacy, political polarization, social media habits*

Information Literate or Not? A Nationwide Survey among University Students in the Czech Republic

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Introduction

The Information Education and Information Literacy Working Group – IVIG (ALCU, 2013) was established in 2000. Among other activities, IVIG created an Information Literacy Model (Landová et al., 2008) and the Information Literacy Standards of a University Student. Both documents later became part of the Information Education Strategy at Universities at the Czech Republic (ALCU, 2009). In 2004 and 2005 a Pilot Survey on the Level of IL of university students was conducted. Based on very interesting results (e.g. clear correlation between IL courses and level of IL and confirmation of the IVIG IL model) as well as experiences from the pilot survey, an extensive survey among students of public universities in the Czech Republic was conducted in 2015.

Methodology

The sample was carried out by random stratified selection by faculties at 17 public universities. The individual university database of students was utilized to extract email addresses. 87,572 respondents were selected and received email with the link to the questionnaire. Data were collected via the online questionnaire. The data were collected from 27th April – 18th May 2015, and 25,389 questionnaires were returned (average 29 percent response rate). The final data set encompassed 23,834 students. Information literacy was designed as a composite score in the analysis. It was based on the IVIG Information Literacy Model (Landová et al., 2008) and it was verified by reliability analysis and factor analysis (principal component analysis). The Kruskal Wallis H test, the Mann Whitney U test, Fisher Eta² and Kendall tau b were used as well to measure differences and the relations between different literacies and sociodemographic characteristics, and other relevant variables, all at a significance level of $p < 0.05$.

Survey Results

The data were analysed both as a complete data set and as a results for every participating university. Therefore, an overall analysis anonymized results are available, as well as a very detailed analysis that was delivered to every participating university. The most valuable findings include: The connection between the study major and the level of IL; gender specifics of IL; the positive role of library IL courses and the level of students' IL; as well as the very close connection between the level of numeric literacy and ICT literacy.

References

- Association of Libraries of Czech Universities. (2013). *Information education and information literacy working group*. Retrieved February 22, 2016 from <http://www.ivig.cz/e-index.html>
- Association of Libraries of Czech Universities. (2009). *Information education strategy at universities of the Czech Republic*. Retrieved February 22, 2016 from <http://www.ivig.cz/en-koncepce.pdf>
- Association of Libraries of Czech Universities. (2007). *Information literacy standards of a university student*. Retrieved February 22, 2016 from <http://www.ivig.cz/Information-literacy-standards.pdf>
- Landová, H., Tichá, L., Dombrovská M., & Šedinová, P. (2008). Information literacy programmes in higher education in the Czech Republic: The path of theory and practice. In C. Basili (Ed.), *Information Literacy at the crossroad of Education and Information Policies in Europe* (pp. 72–91). Rome: CNR.

Keywords: *information literacy, survey, questionnaire, Czech Republic, ALCU, IVIG, university, students*

Assessing Spanish-Speaking University Students' Info-Competencies with iSkills, SAILS, and an In-House Instrument: Challenges and Benefits

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The assessment of information literacy (IL) skills is a must for any university that has the strategic goal of helping students learn how to evaluate the quality and reliability of information. However, it becomes a challenge in Spanish-speaking universities because there are no standardized or formalized tools available for review and use in the Ibero American region. The list of sources compiled by Mueller (2014) and described by Blevens (2012) does not include any instrument in Spanish, a language spoken in more than 20 countries. Although the development of IL instruments has been a concern in Ibero American universities, few have attempted to create testing tools because of the complexity of this task. Evaluation normally comes at the end of librarians' and educators' IL concerns (González, 2014) and scattered experiences have not been published. There are many international assessment instruments available and reported in the literature, primarily from English-speaking countries. iSkills, SAILS, and MREST tests stand out among the few designed for multiple institutional users. The use of such international tools designed in the United States and commercially available is one option for non-English speaking universities, such as those in Mexico, where there are few professional library staff and limited resources to develop competencies assessment instruments. However, the use of these international tests is a challenge given language, culture, and information resource differences and locally developed tests present outcome shortcomings (Mery, 2010). CETYS Universidad is a Mexican institution whose strategic goal is to be an information culture-oriented organization with a requirement to assess student information competencies. CETYS first developed an in-house instrument. Then, it applied the pilot-revised version of SAILS for the first time in a Spanish-speaking nation. In its third action, CETYS implemented iSkills. Our paper analyzes data gathered from these three institutional implementations. Our goal was to objectively assess IL initiatives performed by CETYS libraries and its academia in developing an information culture. Our methods involved statistical and content analysis to compare the three instruments: to find similarities in the skills measured, describe how they measured them, and to study their differences. The objectives were to assess CETYS's information culture, while providing the basis for making an informed and evidence-based decision. This decision could be to: a) improve CETYS' local IL instrument, b) to develop a Spanish-language multi-institutional tool, or c) to continue using international instruments.

References

- Blevens, C. L. (2012). Catching up with information literacy assessment: Resource for program evaluation. *College and Research Libraries News*, 73(4), 202–206.
- González, C. L. (2014). Apuntes relevantes sobre la evaluación en la alfabetización informacional. *Librinsula: La Isla de los Libros*, 331. Retrieved February 8, 2015 from <http://eprints.rclis.org/23580/>
- Lym, B., Grossman, H., Yannotta, L., & Talih, M. (2010). Assessing the assessment: How institutions administered, interpreted, and used SAILS. *Reference Services Review*, 38(1), 168–186.
- Mery, Y., Newby, J., & Peng, K. (2011). Assessing the reliability and validity of locally developed information literacy test items. *Reference Services Review*, 39(1), 98–122.
- Mueller, J. F. (2014). *Assessments of information literacy*. Retrieved February 10, 2016 from <http://jfmuellet.faculty.noctrl.edu>
- Schilling, K., & Applegate, R. (2012). Best methods for evaluating educational impact: A comparison of the efficacy of commonly used measures of library instruction. *Journal of the Medical Library Association*, 100(4), 258–269.

Keywords: *information literacy assessment, information competencies, evaluation, Spanish-speaking information literacy assessment*

Using I-LEARN to Foster the Information and Digital Literacies of Middle School Students

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Objectives

Technology innovations have changed the way students are taking up literacy practices in school and out-of-school. The National Council of Teachers of English stated the importance for middle and high school students to “develop proficiency and fluency with tools of technology” (NCTE, 2013) as one of the 21st century learning standards. Beyond acquiring digital skills, students must also “create, critique, analyze, and evaluate multimedia texts.” The purpose of our paper is to present the preliminary data analysis of a research study that utilized the I-LEARN framework (Author 4, 2011) to support the information and digital literacy development of teachers and students from Chestnut School, an urban charter school located in the northeast region of the United States. Our central research questions were: 1) How can the I-LEARN model be used to support problem-based, information-rich learning? 2) What dimensions of digital literacy are most salient for urban teachers and students? 3) How can these dimensions be taught and evaluated?

Methodology

The study took place during the 2014-15 school year. The participants included two teachers who taught fifth grade Language Arts, two teachers who taught seventh grade Social Studies, and 40 students. The research team met with the teachers twice to present the I-LEARN model and to help the teachers design the projects. In addition, we discussed digital platforms they could use to organize and present the students’ final products. The fifth grade teachers decided that they wanted their students to research the topic of “How to make their community better.” The seventh grade teachers gave their students the option to select any topic that was interesting to them and ones that they wanted to learn more about such as gun violence or bullying.

The data we collected included field observation notes taken in each teacher’s classroom, artifacts of student work, and materials the teachers created for the I-LEARN project. At the end of the project, the research team conducted focus groups with the two fifth grade teachers, the fifth grade student participants, the seventh grade teachers, and the seventh grade student participants. We recorded and transcribed the interviews and utilized deductive and inductive coding methods to analyze the data. First, we established organizational categories or “pre-established sets of categories” (Maxwell, 2005). Then each researcher individually coded the data utilizing these initial organizational categories as well as discovering new categories. New “substantive categories” or categories developed through close open coding of data (p. 97) emerged as a result of the individual coding process and collective discussion of the data. As a result, we identified a total of 21 major coding categories and one sub-category.

Outcomes

Preliminary data analysis suggests that the teachers’ design of the I-LEARN project yielded mixed results for students’ learning outcomes around the I-LEARN model, digital and information literacy development, and what they ultimately learned about their topics from the project. We will share findings from the study drawn from the teachers’ and students’ focus group data and student products from the project.

References

- Maxwell, J. A. (2005). *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage.
- National Council of Teachers of English. (2013). NCTE framework for 21st century curriculum and assessment. Retrieved from: <http://www.ncte.org/governance/21stcenturyframework>
- Neuman, D. (2011). *Learning in information-rich environments: I-LEARN and the construction of knowledge in the 21st century*. New York, Springer.

Keywords: *middle school, urban education, digital literacy, information literacy, I-LEARN*

The Science of Scholarly Communication in the Fields of Information Literacy and Library Information Science: A Bibliometric Analysis

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In this study, the historical roots, evolution and recent research trends of publications in the fields Library Information Science (LIS) are identified using citation analysis. Publications in the subject category of LIS are examined by using the *Referenced Publication Years Spectroscopy* (RPYS) method to determine which publications are frequently cited and whether they refer to more recently published papers or the earlier literature. RPYS methodology is based on cited references search and analysis, allowing to identify peak years in citations. The purpose of this study is to aid researchers on the discovery of influential research and early pioneering work in the fields of Information Literacy and Library Information Science. The data sources used in this study are publications, citations and bibliographic information from the online citation database Web of Science Core Collection. The obtained results show that cited references analysis can identify important publications in the field of LIS.

The Web of Science Core Collection indexes more than 428,500 publications under the subject category of Library Science and Information Science during 116 years. We analyze the top 500 most cited papers in the LIS category. These papers contain 21,001 cited references spanning to the time period 1665-2012. Obtained results analysing the time period of the cited references show that:

- Cited References to papers published between 2000-2016 account for 4,615 (22 percent);
- Cited References to papers published between 1990-1999 account for 8,266 (39 percent);
- Cited References to papers published between 1980-1989 account for 4,854 (23 percent);
- Cited References to papers published between 1970-1979 account for 2,036 (10 percent);
- Pre-1970 Cited References to papers published between accounts for 1,230 (6 percent).

Further analysis of the total output in the LIS field shows that the majority of the document types published are book reviews (46.6percent), articles (30.3percent) and proceedings papers (9.5percent). The top five journals that publish the most LIS papers are the Library Journal, Scientist, Wilson Library Bulletin, Library Quarterly and College Research Libraries. Since 2002, LIS publications in open access journals such as College & Research Libraries, Journal of the Medical Library Association and Information Research-An International Electronic Journal have significantly increased in volume, however the overall LIS OA output is still relatively small accounting for 2.5percent (10,623 out of 428,502) in relation to the open access contributions of other scientific fields. The countries that produce the most LIS publications are USA, followed by England and Canada. Amongst the top funders in the area of LIS are the National Natural Science foundation of China, National Science Foundation (NSF), National Institutes of Health (NIH) and the European Union (EU). Further bibliometric analysis of LIS papers published in the 1980's decade shows that earlier literature that has been published during the 1980's decade remains still very influential to today's researchers.

Keywords: *bibliometrics, citation analysis, library information science, web of science*

Passion, Engagement and Spirit of the Community: Surveying Social Climate of Czech LIS Schools

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Introduction

School social climate is the sum of perceived expectations, interactions and evaluations of a school's social actors reflecting on the atmosphere of the school. The positive setting of school social climate shapes the form and the spirit of the local learning community. It manifests itself in the community members experiencing a phenomenon termed Sense of community (McMillan; Chavis, 1986). School sense of community serves as a model for school social climate description and comparison. The aim of this research is to compare the perceived strength of community with diversity of extracurricular activities. We supposed more extracurricular activities cultivate a learning community with higher completion rates and with consequences for courses design. Sense of community was used as well for study of religious pluralism and perceptions of inclusion among students (Bottom et al., 2013), perception of justice (Petrillo et al., 2013), and social justice attitudes and student activism (Torres-Harding et al., 2015).

Methods and analysis

We surveyed social climate among students of four Czech LIS university departments. The structure of social climate is measured by Sense of Community Index - SCI (Chavis et al., 1984) and by School Sense of Community Index – SSCI (Wright, 2004), both in form of a questionnaire. The Questionnaire is composed of two indexes and combination of closed questions with Lickert scale and opened questions. The questionnaire was distributed by means of electronic information systems in each university to every enrolled student. We analyze five dimensions of sense of community: membership, influence, integration and fulfillment of needs, shared emotional connection, and sense of purpose. Kruskal-Wallis H test and Mann-Whitney U test were utilized in SCI analysis with nonparametric distribution, ANOVA and post hoc test LSD in performing SSCI analysis with parametric distribution. Obtained results are completed by identification of motivational elements leading to perceived social climate among students.

Results and conclusion

Students are interested in a broad spectrum of activities. Students with a broad spectrum of options to participate in department life are more creative, proactive, more networked, and feel more satisfied and affiliated with the profession. Results show, that the school with the highest score has highly participating students engaged in plenty of extracurricular activities. Setting of broad range of extracurricular activities in schools positively influences social climate and prepares the condition for passion-based learning and devotion to profession.

References

- Bottom, T. L., Ferrari, J. R., Matteo, E. & Todd, N. R. (2013). Predicting school sense of community. *Journal of Prevention & Intervention in the Community*, 41(1), 4–14.
- Chavis, D. M., Hogge, J. H., McMillan, D. W., & Wandersman, A. (1984). Sense of community through Brunswik's lens. *Journal of Community Psychology*, 14(1), 24–40.
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community. *Journal of Community Psychology*, 14(1), 9–14.
- Petrillo, G., Capone, V., & Donizzetti, A. R. (2013). Direct and indirect effects of school sense of community and perceptions of justice on students' well-being. In *Beyond the Crisis: Building Community and Critical Visions to Achieve Justice, Fairness and Well-being*.
- Torres-Harding, S. R., Diaz, E., Schamberger, A., & Carollo, O. (2015). Psychological sense of community and university mission as predictors of student social justice engagement. *Journal of High. Edu. Outreach and Engagement*, 19(3), 89–112.
- Wright, S. P. (2004) Exploring psychological sense of community in living-learning programs and in the university as a whole (Doctoral dissertation). University of Maryland.

Keywords: school social climate, school sense of community, participatory curriculum, engagement of students

Is there a Focus on Information Literacy as a Transversal Skill within Institutional Accreditation Process?

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During the last years the importance of information literacy, as one of the transversal competencies, has increased many times. But, in the process of Institutional (Colleagues and University) Accreditation we could not identify clear emphasis on that skill. There are a few research papers which emphasize the importance of collaboration between librarians and faculty and focus on the importance of information literacy within institutional accreditation process (Bradley, 2013; Saunders, 2007; Saunders, 2008; Gratch-Lindauer, 2002). And according to Saunders references to information literacy are “scattered” throughout accreditation documents (Oakleaf, 2010).

Regional accreditation organizations such as New England Association of Schools and Colleges, Southern Association of Colleges and Schools, North West Commission on Colleges and Universities supports information literacy outcomes, but the author found some differences between their practices and the procedures of European accreditation organizations.

The aim of the paper is to compare the standards and criteria of different organizations which accrediting some of the top 50 universities in the world based on the QS World University Rankings for 2015/2016 (QS Quacquarelli Symonds Limited, 2015). Analysis shows that information literacy is mentioned as an important indicator of students’ competency in some of them, but not in the other ones.

The paper also investigates the criteria system for institutional accreditation of higher schools of Bulgarian National Evaluation and Accreditation Agency (NEAA, 2011) where procedures and standards are similar with regulations of the quality of university programs around the world but without focus on information literacy.

The conclusions of the author refer to insufficient awareness of the importance of information literacy as a transversal skill in the digital society and its role for the social inclusion and integration of young people.

References

- Bradley, C. (2013). Information literacy in the programmatic university accreditation standards of select professions in Canada, the United States, the United Kingdom and Australia. *Journal of Information Literacy*, 7(1), 44–68. Retrieved from <http://dx.doi.org/10.11645/7.1.1785>
- Gratch-Lindauer, B. (2002). Comparing the regional accreditation standards: Outcomes assessment and other trends. *The Journal of Academic Librarianship*, 28(1), 14–25.
- National Evaluation and Accreditation Agency. (2011). *Criteria system for institutional accreditation of higher schools*. Retrieved from http://www.neaa.government.bg/images/Criteria_EN/Kriterialna_sistema_za_IA_eng.pdf
- Oakleaf, M. (2010). *The value of academic libraries: A comprehensive research review and report*. Chicago, IL: Association of College and Research Libraries.
- Quacquarelli Symonds Limited. (2015). *QS World University Rankings® 2015/16*. Retrieved from <http://www.topuniversities.com/university-rankings/world-university-rankings/2015>
- Saunders, L. (2008). Perspectives on accreditation and information literacy as reflected in the literature of library and information science. *The Journal of Academic Librarianship*, 34(4), 305–313.
- Saunders, L. (2008). Regional accreditation organizations’ treatment of information literacy: Definitions, collaboration, and assessment. *The Journal of Academic Librarianship*, 33(3), 317–326.

Keywords: *information literacy, transversal skills, institutional accreditation, higher education*

Institute for Research Design in Librarianship: Impact on Information Literacy Research and Practice

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Introduction

Information Literacy (IL) is one of the most extensively researched and published topics in academic library research. In a recent study that examined articles published in the *Journal of Academic Librarianship* in the past decade (Luo & McKinney, 2015), IL was the most popular topic, covered by more than one-fifth of the articles, investigating a wide array of issues such as instruction, assessment, perceptions, attitudes, interpretation, and skills. Given the significance of IL in academic library research, it is essential that IL librarians be competent and confident in conducting research and contributing to the knowledge growth of IL.

In recent years, a federally-funded program titled Institute for Research Design in Librarianship (IRDL) has been developed to provide research methods training for academic librarians in the US. The majority of IRDL participants are IL librarians. In the summers of 2014, 2015 and 2016, IRDL gathers a group of academic librarians who have been selected through a competitive process from around the country and provides them with 9-day intensive training on research methods. It consists of expert instruction, small group activities and one-one-one consultation between instructor and participant. In the following academic year, participants continue to receive support in conducting their research and preparing the results for dissemination.

In this paper, we seek to assess the effect of the IRDL experience on IL librarians' practice and research. Findings will uncover how research methods training for IL librarians helps address obstacles in conducting and publishing IL research, enhance IL practice, and connect IL research with practice for broader impact.

Methodology & Preliminary Findings

A qualitative survey is conducted among the IL librarians that have participated in IRDL, focusing on on IRDL's impact on how IL librarians 1) evaluate published IL research; 2) identify and articulate research problems related to IL; 3) determine the proper research design and methods for an IL study; 4) seek research collaborators (e.g. departmental faculty) and funding; 5) resolve obstacles or unexpected situations in a research process; 6) use IL research findings to inform teaching and practice; and 7) contribute to the ongoing scholarly conversation about IL.

Conclusion

Through an in-depth examination of IRDL's impact on IL librarians' research and practice, this paper will further the professional understanding of the role of research methods training in advancing research and practice for IL librarians, and yield insights on designing effective research methods training programs that will promote research-mindedness among IL librarians, lead to the enhancement of research and scholarship in IL, and support more evidence-based IL practice that ultimately benefits our user communities.

References

Luo, L., & McKinney, M. (2015). JAL in the past decade: A comprehensive analysis of academic library research. *Journal of Academic Librarianship*, 41(2), 123–129.

Keywords: *information literacy research, research methods for information literacy, research methods training*

The School Library Does Make a Difference in 8th Graders' Reading and Information Literacy Education! A Comparative Study in Southern Italy

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Impact studies (available at <https://www.lrs.org/data-tools/school-libraries/impact-studies/>) prove how beneficial the school library is to the learning process, information literacy (Todd-Kuhlthau, 2005) and reading (Krashen, 2004). This paper presents research findings from a comparative and qualitative study that has investigated if and to what extent the school library makes an impact on 8th graders' education. Two villages with similar socio-economic characteristics, in a county of a region in Southern Italy, were chosen. The first one (A) is provided with a functioning double use library that serves both the school and the local community; the second one (B) has no library at all. Both villages have one middle school of the same size. All of the 8th graders (N=81) were invited to fill in a questionnaire about reading (habits, enjoyment etc.).

The school "A" is an early adopter of the Big6[™] model in Italy and has implemented it through the school library for many years in order to prepare pupils for high school and successfully face many of the challenges of the new learning experience, including the increasing complexity of subjects and information problem-solving. The teacher librarian, with over 20 years of experience both as school teacher and library manager, delivers reading and information literacy education deeply intertwined to equip his pupils with competencies that are ever more required today. A second questionnaire about the library was therefore administered only to these 8th graders (N=45) who experience the library every day. Furthermore, both headmasters (School "A" and "B") and the teacher-librarian (School "A") were interviewed.

Main findings: the pupils of School "A" read more (39.4 percent read 6-12 books per year and 19 percent 12 books per year), enjoy reading more, search for and appreciate a variety of titles more than the pupils of School "B", use the internet in a competent way, and show a deep appreciation for their library. A strong correlation is also seen between high reading and information skills and habits, the family background and the availability of books at home. The leadership and supportive role of the School "A" headmaster, and the teacher-librarian's professionalism and dedication are also factors that impact reading and information literacy education in a positive manner. This study provides evidence on the effectiveness of the school library in the learning process, where reading and information literacy are crucial to the student's achievement. It may also form the basis for further and wider implementation and contribute to a deeper knowledge of the school library practice at international level.

References

- Einsenberg, M. & Berkovitz, R. (1987). *The Big6 skills approach to information problem solving*. Retrieved from <http://big6.com/>
- Einsenberg, M., Johnson, D., & Berkovitz, R. (2010). Information, communications, and technology (ICT) skills curriculum based on the Big6 skills approach to information problem-solving. *Library Media Connection*, 28(6), 24–27. Retrieved April 13, 2016 from http://big6.com/media/freestuff/LMC_Big6-ICT_Curriculum_LMC_MayJune2010.pdf
- Krashen, S. (2004). The case for narrow reading. *Language Magazine*, 3(5), 17–19.
- Lamos, S. (2013). *Strong school libraries build strong students*. Retrieved April 13, 2016 from http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslissues/advocacy/AASL_infographic.pdf
- Lance, K., & Hofschire, L. (2011). Something to shout about: New research shows that more librarians means higher reading scores. *School Library Journal*, 57(1), 28–33.
- Lance, K., & Hofschire, L. (2012). *Change in school librarian staffing linked with change in CSAP reading performance, 2005 to 2011*. Denver, CO: Colorado State Library.
- Todd, R. & Kuhlthau, C. (2005). Student learning through Ohio school libraries, Part 1: How effective school libraries help students. *School Libraries Worldwide*, 11(1), 63–88.
- Todd, R. & Kuhlthau, C. (2005). Student learning through Ohio school libraries, Part 2: Faculty perceptions of effective school libraries. *School Libraries Worldwide*, 11(1), 89–110.

Keywords: school library, middle school, reading, information literacy, school leadership, Southern Italy, Big6[™]

The Value of Information Related Practices in Patient-Doctor Relationships

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In shared health decision-making, cooperation in the patient-doctor relationship is fundamental. However, lack of health literacy may act as a significant barrier in this process. Patients are expected to make decisions even though they are in an uneven position in terms of knowledge (Bernabeo & Holmboe, 2013; McMullan, 2006). In our research we examined the information seeking behaviour of doctors, their views on cooperation with their patients, and the role that information consultations play in shared decision-making. Our study involved a survey of 162 private general practitioners and private pathologists in Greece. We collected demographic characteristics and self-assessments of doctors using a five point Likert scale. We used the Kruskal-Wallis non-parametric test for the analysis of the relationship between demographics and the importance assigned to information consultations. Doctors reported that they used both electronic and interpersonal sources for diagnoses, treatment, and updating their knowledge. The barriers they experienced included lack of time, the cost of access, and the difficulty of finding information, confirming previous research in this area (Davies, 2011). Most doctors considered the cooperation of their patients as important for decision making (mean=3.69) and improving the overall clinical outcome (mean=4.19). Most agreed that they relied on patients to further developing their own information literacy (IL). Doctors expected their patients to consult health related publications they directed them to in the form of print materials (mean=3.59), medical Internet websites (mean=3.81), or the website/Facebook page of their general practice (mean=3.20). However, there was a statistically significant difference when age was factored in. More than half of the more experienced doctors (above 60 years old, 55.1%) did not share the same positive views on cooperation and did not direct their patients to different information sources. It was mostly the younger doctors who took advantage of the Internet as a health consultation tool. Doctors between 40-55 years (97%) directed their patients to articles published on medical websites, while using the website/Facebook page of the general practice was more prevalent in doctors younger than 40 years old (90%). This paper argues that doctors form the main information literacy (IL) pillar for patients as they are their first port of call for their healthcare decisions. But not all doctors are ready and willing to offer information prescriptions that will help advance their patients' IL empowerment to be able to identify and use quality health information independently for their evidence-based and informed decision-making.

References

- Davies, K. (2011). Information needs and barriers to accessing electronic information: Hospital based physicians compared to primary care physicians. *Journal of Hospital Librarianship*, 11(3), 249–60.
- Bernabeo, E, & Holmboe, E. S. (2013). Patients, providers, and systems need to acquire a specific set of competencies to achieve truly patient-centred care. *Health Affairs*, 32(2), 250–8.
- McMullan, M. (2006). Patients using the Internet to obtain health information: How this affects the patient–health professional relationship. *Patient Education and Counselling*, 63(1), 24–28.

Keywords: *general practitioners, shared-decision making, information literacy, survey, Greece*

Everyday Life Information Literacy: A Review of Literature

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Information literacy (IL) within an everyday life context is connected to searching for, critically evaluating and using information effectively. Everyday life IL is about being able to address a range of information needs (e.g., financial, health, or legal) that relate to everyday practices as well as making informed decisions that are of significant value to individuals and communities. IL is regarded as an important condition for civic participation and engagement, informed citizenship, health, well-being and, generally, people's quality of life (Leung, 2010). However, compared to the vast amount of IL research within educational and workplace settings, there has been relatively little research conducted so far on examining the effective use of information and its impact in relation to people's everyday life situations. For example, although IL has been researched within quite diverse contexts and with a variety of foci, such as age (e.g., older adults/fourth age/retired people, young people/men, early years/preschool, nursery, aging women), different roles (e.g., parents, retired, citizens) and situations (e.g. pregnant women, immigrants, unemployed, job seekers, carers, health issues), the literature lacks a holistic view to this body of research. In addition, so far, IL in everyday life context has received less attention in terms of empirical research when compared to other conceptual lenses that have been adopted within the wider spectrum of user-focused information research, such as that of information seeking behaviour, that do not address the critical positioning and value of IL.

Thus, this paper presents a critical review of relevant literature on everyday life IL. It seeks to offer a snapshot of existing research within this area and aims to develop a research agenda for further exploration of the growing everyday life IL domain. We based the review on literature published between 2000 and 2016 and sourced from a range of different databases (Science Direct, Library and Information Science and Technology Abstracts, ERIC, Emerald, ABI/Inform, Library and Information Science Abstracts, Library Literature and Information Science, and Google Scholar). We conducted the search using two terms, "information literacy" and "everyday life" in all search fields of the individual databases. Additional related terms, such as "community", were found to be closely connected to other contexts, for example, that of education and the workplace, which were beyond the scope of this research. We also excluded from the retrieved results articles that focused directly on students' education and the workplace. Our paper emphasises the importance of examining IL within different everyday life settings and highlights existing gaps that need further development in terms of empirical research. A comprehensive review of everyday life IL research is particularly of importance since it will help us understand the diversity and the dynamic nature of IL needs and activities. It will also help us highlight the implications of the lack of IL and identify the key players in the advocacy of IL within different everyday life settings. The review suggests that the outcome of everyday life IL research has the potential to inform the design and delivery of evidence-based information services offered by decision makers and practitioners in different sectors and communities (Yates and Partridge, 2014). It also demonstrates that this area of research is still in its infancy and more varied contexts need to be explored to nurture a robust understanding of the use and impact of information in people's everyday lives.

References

- Leung, L. (2010). Effects of Internet connectedness and information literacy on quality of life. *Social Indicators Research*, 98(2), 273–290.
- Yates, C., & Partridge, H. (2014). Exploring information literacy during a natural disaster: The 2011 Brisbane flood. *Information Experience: Approaches to Theory and Practice*, 9, 119–134.

Keywords: *everyday life, information literacy, community, literature review*

Information and Media Education across Disciplines: Where is the Coherence of Info-Documentary Knowledge?

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My paper draws on the first results of ongoing research in the context of French secondary education (colleges, high schools) of three academies (Paris, Nancy-Metz, Lille). My objective was to study current changes in the field of Information and Media Education (IME) in today's digital world. I assessed the degree to which the info-documentary dimension has been progressively introduced into the curricula of traditional disciplines and whether this resulted in curricular recompositions. Specifically, I wanted to identify the scope and the contents of this education with the aim to understand whether or not it could build an info-documentary look that might provide an interpretative framework for understanding the world.

I will present the French research context as a first step. Regarded as a necessity today, information and media education is a unified concept marked by a shift from a singular to a pluralist conception of information culture "in the new age". As a field of practice, information-documentation has not been regarded as a discipline. But recent official documents, introduced "interdisciplinary practical teachings", focusing on digital learning and linking information-communication and citizenship. A clear reference was made to information and communication sciences and to the sociology of culture and media. And the role of teacher-librarian was more prominent as he or she was described as the person in charge of supervising the acquisition by all students of "an information and media culture". However, without dedicated teaching, information-documentation was addressed only on a pragmatic and operative mode and the responsibility of the different actors remained unclear.

Far from opposing 'education' and 'teaching', I studied these areas of uncertainty. In particular, I questioned how the actors seized the institutional guidelines. I was concerned with who did what. To arrive at answers to these and other questions, I administered a questionnaire survey of 17 open and closed questions, to all actors in education (e.g., teachers, teacher-librarians, principal educational advisers, school leaders) via academic mailing lists. In this first research phase the questionnaires helped me attempt to identify trends concerning the integration of IME, including perceived importance, aims and issues, modalities of inclusion, supporting devices, collaborations and partnerships, contents such as knowledge and progression, barriers, and levers to its implementation. This phase helped me prepare for the second stage, more qualitative, stage of data collection. In the second stage I aimed at deepening the understanding of the practices declared by the actors through interviews and observations in a few selected schools.

Several elements emerged that highlighted a strong disciplinary mark that can be an obstacle to an open and pluralistic approach of EIM. Key among these results is evidence that information-documentation is rarely thought as an epistemological unit in its continuity and its coherence.

References

- Lau, J. (2013). Conceptual relationship of information literacy and media literacy. In A. Lee et al. (Eds.), *Conceptual Relationship of Information Literacy and Media Literacy in Knowledge Societies. Series of Research Papers* (pp. 76–91). Unesco.
- Lebeaume, J., & Lange, J.-M. (2008). Quelle(s) didactique(s) pour une formation des enseignants aux 'éducations à'? In *Actes du colloque international Les didactiques et leurs rapports à l'enseignement et à la formation. Quel statut épistémologique de leurs modèles et de leurs résultats?* Bordeaux: AFIRSE, IUFM d'Aquitaine, Université Bordeaux IV.
- Webber, S., & Johnston, B. (2014). Information literacy as a discipline: A contemporary perspective. Retrieved from <http://information-literacy.blogspot.fr/2014/10/presentation-from-ecil2014-information.html>

Keywords: *information and media education, info-documentary look, epistemology, discipline*

Motivating Learners through Information Literacy

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Information literacy is but one of many competing educational ideas that higher education teachers are asked to consider addressing in their courses. Student motivation is often considered important for enabling learners to succeed in higher education. Thoughtful consideration of student motivation can foster greater student learning gains through creative and reflective engagements with information. This paper introduces a model librarians can use when working with classroom teachers to foster learning through highly motivating information literacy activities.

Our model is grounded in a motivational theory focused on enabling self-determined learners (Ryan and Deci, 2010). It also draws from informed learning (Bruce, 2008), an approach to information literacy that emphasizes the role that information plays in fostering learning about a subject. Teaching strategies for informed learning focus on identifying specific ways students may use information to enable content-focused learning outcomes. Self-determination theory suggests that student perceptions of three psychological needs strongly influence learning: autonomy, competence, and relatedness. Autonomy is defined as feelings of volition and choice, competence refers to the degree to which students believe they can perform academically, and relatedness is concerned with student perceptions of feeling connected to other students, the instructor, and the course content. Based on our analysis, we identified four questions to guide the development of information literacy activities that simultaneously enable learning subject content and motivate students:

1. What information-focused learning activities would enable the intended learning outcomes?
2. What structured choices about using information can students make while learning about the subject?
3. How can learning activities foster student confidence in using information in a disciplinary context?
4. How can the teacher and students empower one another in using information to learn?

We conclude our paper by describing cases in which librarians partnered with teachers to develop motivating information literacy activities. One such example was the development of an assignment for an introductory statistics course that has students use a social media platform to discuss the veracity of research studies described in the popular press (Gundlach, Maybee and O'Shea, 2015). Aligned with the learning outcome of being able to understand statistical concepts, the students find news sources and evaluate research studies described in them. The students are allowed to select their own topics, but are also provided with criteria for the statistical concepts they need to address. Thus they can make choices that are structured to build competence in their ability to complete the assignment. Fostering discussion of their conclusions through social media allows students to relate to one another and their common struggle to grasp the concepts being introduced in class.

References

- Bruce, C. S. (2008). *Informed learning*. Chicago, IL: American Library Association.
- Gundlach, E., Maybee, C., & O'Shea, K. (2015). Statistical literacy social media project for the masses. *The Journal of Faculty Development*, 29(2), 71–80.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54–67.

Keywords: *informed learning, motivation, self-determination theory*

Information Literacy as a Key to Academic Success: Results from a Longitudinal Study

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Background and Objectives

Information literacy is hypothesized to play a major role in learning and academic achievements. However, empirical evidence for this assumption is scarce. On the contrary, numerous studies have identified general cognitive ability as the most important predictor of academic success (Roth et al., 2015). Recent research has demonstrated that cognitive abilities are – albeit weakly – associated with the acquisition of information literacy (Rosman, Mayer, & Krampen, 2016). The present study adds to this research by exploring whether information literacy would contribute to university students' academic success over and above their level of cognitive abilities.

Methods

Participants were fifty-three German psychology students (18-25 years, 85% female). Data were gathered in a longitudinal study with four waves of measurement (t1 – t4) spanning the first 18 months of bachelor studies. Cognitive ability was measured at t1 by Ravens Advanced Progressive Matrices APM and at t2 by a computerized test of verbal working memory capacity. Academic success was assessed at t4: Participants completed a test of basic psychology knowledge (Peter, Leichner, Mayer, & Krampen, 2015) and provided a transcript of their grades from the university records. In addition, they worked on an information literacy test assessing knowledge about scholarly information search and evaluation in a fixed choice format (Leichner, Peter, Mayer, & Krampen, 2013).

Results and Discussion

The research question was examined by a series of four stepwise multiple regression analyses. In Step 1 of each analysis, academic success was regressed on cognitive ability and information literacy. In Step 2, the interaction term of cognitive ability and information literacy was added. In all analyses, information literacy was a significant predictor of academic success independent of cognitive ability. Ravens APM scores were correlated with both dependent measures but lost their predictive value when information literacy scores were entered into the equation. For working memory capacity, no bivariate associations but an interaction with information literacy emerged on both dependent variables. According to simple slope analyses, information literacy is associated with academic success only in participants with low working memory capacity, i.e. information literacy appears to partially compensate for limited cognitive ability. In sum, information literacy proved to be more even important for academic success than students' cognitive abilities. Further studies should strive to replicate the findings within larger samples including participants from diverse fields of studies. In addition, long-term effects of information literacy on academic achievements and the development of professional expertise should be analyzed.

References

- Leichner, N., Peter, J., Mayer, A. K., & Krampen, G. (2013). Assessing information literacy among German psychology students. *Reference Services Review, 41*(4), 660–674.
- Peter, J., Leichner, N., Mayer, A. K., & Krampen, G. (2015). A short test for the assessment of basic knowledge in psychology. *Psychology Learning & Teaching, 14*(3), 224–235.
- Rosman, T., Mayer, A.-K., & Krampen, G. (2016). A longitudinal study on information-seeking knowledge in psychology undergraduates: Exploring the role of information literacy instruction and working memory capacity. *Computers & Education, 96*, 94–108.
- Roth, B., Becker, N., Romeyke, S., Schäfer, S., Domnick, F., & Spinath, F. M. (2015). Intelligence and school grades: A meta-analysis. *Intelligence, 53*, 118–137.

Keywords: *information literacy, fluid intelligence, working memory, academic success, expertise, higher education, psychology*

A Teaching Librarian and their Educational Needs in the Czech Republic

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This report shows a popular topic in the context of educational politics of the Czech Republic. It theoretically works with the sense of strategical documents for the development of education and lifelong learning in the Czech Republic – Strategy of Digital Literacy (2014), Strategy of Digital Education (2014) and Conception of Library Development up to 2020.

The fundamental topic of the report is teaching librarians and their competence to lead an educational process, which is information education in a library. This informal form of education, taking place both in libraries and schools, is a part of formal educational scheme, because lessons of information literacy run through a cooperation between the school and the library, and the educational content of the lessons is based on fundamental curricular documents of primary and secondary schools.

The report answers a complex research question: What are the educational needs of a public librarian to teach information education focused on primary and secondary school students? This question includes more subquestions. The author will search answers to the questions from the view of theoretical attitudes, pedagogic paradigms and research: Are librarians presently prepared to be a lecturer in paradigms of constructivism and connectivism? What pedagogical and didactical competence does he have? Is the librarian professional for education in an inclusive environment? How much does he use ICT in preparation and educational content of the lesson?

Methodologically, this research takes place in libraries with regional functions. The research was focused on the knowledge and reflexion on the educational experience of teaching librarians. The results show an absence of theoretical knowledge of didactics and pedagogy and special pedagogy, and also little practical abilities of applying pedagogical and didactical theory and designing an educational process for the goal group. The research results show there is a need for the didactics of information education in libraries, together with functional methodologies, applicational groundwork and understandable expert language.

In the conclusion, the author presents realizable solutions for fulfilling the librarians' needs that are not fulfilled properly yet – on the level of formal education and adjusting curriculums educating librarians for the profession of lecturers of information literacy in the CZ, on the level of lifelong education, and grant programs more focused on this type of programs.

References

- Blanchett, H., Powis, C., & Webb, J. (2012). *A guide to teaching information literacy: 101 practical tips*. London: Facet.
- Carlson, C., & Brosnahan, E. (2009). *Guiding students into information literacy: Strategies for teachers and teacher-librarians*. Lanham, Md.: Scarecrow.
- Lloyd, A. (2010). *Information literacy landscapes: information literacy in education, workplace and everyday contexts*. Oxford: Chandos Publishing.
- Zhang, J. et al. (Eds). (2016). *ICT in Education in Global Context: The Best Practices in K-12 Schools*. Singapore: Springer. doi: 10.100/978-981-10-0373-8_1

Keywords: *action research, constructivism, didactics, information education, information literacy, pedagogy, teaching librarian*

Information Literacy as Disciplinary Inclusion: Identifying and Revealing Scholarly Communication Processes through the ACRL Framework

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Undergraduate majors in the United States are designed to provide an introduction and entry into a discipline. Disciplines, while often difficult to define, are both practical and cultural: encompassing distinct practices, methods, perspectives, values, and ways of making meaning (Larson, 2005). For full inclusion in the life and work of a discipline - including participation in knowledge creation, communication, and critique of the field - students must not only learn the methods and theories inherent to that discipline, but also become aware of the implicit values, assumptions, and accepted parameters which make up its culture. Disciplinary literacy, or understanding reading, writing, and research practices within a discipline (Piercy & Piercy, 2011), and we would argue information literacy (IL), are integral components of this process.

Scholarly communication, in addition to its essential disciplinary function, also serves as a microcosm for identifying and understanding both disciplinary practices and values, and IL instruction plays a valuable role in uncovering the ways of thinking within a discipline. While a typical U.S. undergraduate experience involves an increasing focus on discipline-based coursework as a degree progresses, IL within those disciplines is often obscured or assumed, presenting a significant barrier in the path toward disciplinary inclusion for students. A clear curricular process for disciplinary IL is frequently lacking, as evidenced by a wide gulf between basic IL skills typically addressed by librarians early on in a student's experience (e.g., database searching, mechanics) and the expectations of robust knowledge of scholarly communication for advanced undergraduate course work and research.

This paper investigates instances of librarian-teaching faculty collaboration within the discipline of writing and rhetoric that engages concepts from the ACRL Framework for Information Literacy for Higher Education (Framework) (2015) as both a scaffold for examining faculty disciplinary IL practices and a method for identifying gaps between faculty expectations and student IL practices. More specifically, the Framework supports disciplinary inclusion both structurally and conceptually, providing ways to introduce disciplinary communication practices as well as uncover values and cultural nuances for learners.

Using a disciplinary literacy assignment from a writing and rhetoric class and Framework-based reflective questions designed for a faculty workshop as case studies, we examine ways in which barriers to disciplinary inclusion are revealed through Framework concepts and provide both ideas and practical steps for removing those barriers. This approach brings student needs, expert practices, and disciplinary expectations into clear focus, bringing paths to disciplinary participation through information literacy out of obscurity. In this way, the Framework, while still working within the critically problematic structure of disciplines, becomes both a unique entry point into disciplinary culture as well as a site of critical inquiry into their function. We demonstrate how the Framework has the potential to bolster conversations between librarians, disciplinary faculty, and students in order to more fully address both practical and cultural barriers to inclusion in disciplinary communities.

References

- Association for College and Research Libraries. (2015). *Framework for information literacy for higher education*. Retrieved February 14, 2016 from <http://www.ala.org/acrl/standards/ilframework>
- Larson, M. S. (2005). Professions as disciplinary cultures. In D. Jacobs & N. W. Hanrahan (Eds.), *The Blackwell Companion to the Sociology of Culture* (pp. 317–331). Blackwell Publishing Ltd.
- Piercy, T., & Piercy, W. (2011). *Disciplinary literacy: Redefining deep understanding and leadership for 21st-century demands*. Englewood, CO: Houghton Mifflin Harcourt.

Keywords: *information literacy, disciplinary literacy, scholarly communication, disciplinary inclusion*

The Academic Reading Format International Study (ARFIS): Investigating Students around the World

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This paper presents results from the Academic Reading Format International Study (ARFIS), which investigates university students' behaviors and attitudes towards reading their academic texts on screen and print. Previous research shows students prefer academic texts on paper because they can focus and learn better. However, students also like the convenience and lower price of accessing readings online. This global study asks: 'When engaging with their academic material, do students' format preferences and behaviors vary across cultures? How do their behaviors and attitudes compare among an international sample? And how does the language of the reading impact format preferences?'

Results from Mizrachi's (2015) survey of students' format preferences at the University of California Los Angeles generated great interest in replicating the study on a multi-national scale. Mizrachi, Boustany and Kurbanoglu slightly modified the original survey to include seventeen five-point Likert-style statements on preferences and behaviors. There are also six demographic questions and a prompt for further comments. They recruited researchers for the ARFIS team from an existing multinational network and professional contacts. Each researcher received an account for the online survey tool LimeSurvey, and was responsible for the accuracy of their translated questionnaire and its local distribution. This paper presents results from the first round of data gathering (ARFIS 1). It includes responses from 9,279 students in 19 countries: Bulgaria, China, Croatia, Finland, France, Israel, Italy, Latvia, Lebanon, Moldova, Norway, Peru, Portugal, Romania, Slovenia, Switzerland, Turkey, the United Kingdom, and the United States. Researchers in additional countries are currently collecting data for an expanded study (ARFIS 2) to be analyzed in 2017 (<http://tinyurl.com/ARFISteam>).

Descriptive statistics show strong preferences for print format. For example, 72.3 percent agree/strongly agree with the statement 'I remember information from my course readings best when I read them from printed pages'; 73.0 percent agree/strongly agree that 'If an assigned reading is seven pages or more, I prefer to read it in print'; and 81.5 percent agree/strongly agree with 'I can focus on the material better when I read it in print'. Language does not impact format preference for most respondents. For example, only 16.2 percent agree/strong agree that 'My preferred reading format, electronic or print, depends on the language of the reading'. Students' favorite devices for reading electronically are their laptops (80.2 percent), phones (38.1 percent), desktops (31.3 percent) and tablets (28.1 percent). Statistical analysis and correlation tests with independent variables have been considered.

References

Mizrachi, D. (2015). Undergraduates' academic reading format preferences and behaviors. *Journal of Academic Librarianship*, 41(3), 301-311.

Keywords: *print reading, electronic reading, academic reading, international studies, college students*

Evaluation Studies of Information Literacy Programmes for Taught Students in Higher Education: A Systematic Review

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Introduction

In the 2000s, two systematic reviews of information literacy interventions in higher education suggested that online provision was as effective as face to face (FtF) training in terms of skills learned (Koufogiannakis & Wiebe, 2006; Zhang, Watson, & Banfield, 2007). This evidence has not brought about a step change in library practice despite the huge potential for increasing other academic engagement roles. Why not? Could it be related to student, or library staff, preferences? In this updated systematic review, the findings of the earlier reviews were further tested while also examining the views of students participating in the studies.

Methods

A comprehensive search of seven databases was carried out for published and unpublished studies and supplementary search methods, including reference list follow up, unpicking of related systematic reviews for primary research studies, citation tracking, expert contact and hand searching of selected journals. Comparative studies of Information Literacy programmes published from 1995 to October 2015 with at least one objective learning outcome (test, diagnostic essay, module or course results) were included. Each paper was quality assessed by two authors independently and data were extracted on both the learning outcomes and participant views.

Results

27 primary studies met the inclusion criteria. Many of the studies had methodological limitations but the body of evidence suggested that the increase in skills as a result of teaching is broadly comparable for FtF and online methods. 13 of the studies included data from students on perceived benefits and/or confidence in using library resources. Again the results were broadly comparable across the two formats. A meta-analysis is underway of the 16 papers with sufficient data on skills to be included. This analysis, along with a detailed summary of the views data, will be presented at the conference.

Conclusions

Library practice can and should be evidence-based. Further good quality studies are needed to explore the best types of online provision to meet students' requirements and avoid negative effects. However, libraries should be nimble in adding to the evidence base and adapting roles accordingly.

References

- Koufogiannakis, D., & Wiebe, N. (2006). Effective methods for teaching information literacy skills to undergraduate students: A systematic review and meta-analysis. *Evidence Based Library and Information Practice*, 1(3), 3–43.
- Zhang, L., Watson, E. M., & Banfield, L. (2007). The efficacy of computer-assisted instruction versus face-to-face instruction in academic libraries: A systematic review. *Journal of Academic Librarianship*, 33(4), 478–484.

Keywords: *information literacy, library instruction methods, library instruction, face-to-face teaching, online instruction, online teaching, university*

Intervening Conditions inside and outside Libraries in Order to Build Collaboration between Teaching Faculty and Librarians in Education: Based on a Case Study of Earlham College

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A recent massive educational reform including development of generic skills among undergraduates and construction of internal quality assurance systems in higher education, has motivated college and university libraries to review their services to ensure consistency with these reforms. Therefore, information literacy has been identified as part of graduate attributes and information literacy instruction (ILI) should be a component of higher educational systems. Among the factors contributing to the success of IL initiatives and ILI, a constructive relationship between teaching faculty and librarians has been recognised (Julien et al., 2009).

In order to build successful collaboration between teaching faculty and librarians, previous studies provided some research perspectives, such as librarians' strategic approaches to teaching faculty, and library, university and social contexts. Although these studies indicated various elements of both perspectives such as "interpersonal relationships" and "faculty attitudes," few studies have shown the holistic views which include both perspectives (Machin et al., 2009; Julien et al., 2009; Amante et al., 2012). In order to get an overall picture with direct correlations between both perspectives, those elements under a single context should be studied and correlated. Based on the case study of Earlham College, the author presents findings on the strategic approaches including "customised ILI" (Nagasawa, 2012). This paper investigates elements of the library and college contexts which influenced strategic approaches based on a case study, and indicates the overall picture of collaboration building.

The research question is "What are the intervening conditions in library, college and social contexts which promote collaboration between teaching faculty and librarians?" In order to answer this question, a qualitative case study was selected, because a holistic approach should be conducted. As a benchmark, Earlham College in the United States was selected based on purposeful sampling, in particular, maximum variation sampling, because its practices have influenced many college and university libraries. The data was collected from interviews with librarians and teaching faculty and observations of ILI sessions and social events from March 2004 to September 2014, and analysed by a grounded theory approach.

The analysis revealed the following categories related to intervening conditions in the library context: "leadership of library directors," "librarians as instructors" and "librarians' faculty status". Similarly, the analysis revealed the following categories in the College context: "small community," "flat hierarchy" and "teaching faculty as educators." These categories were explained the correlations to the categories on the strategic approaches, such as "librarians as facilitators," "proactive approaches," "customised ILI" and "instructional support for teaching faculty."

Based on correlating the categories on the strategic approaches directly to the categories on the intervening conditions in a single context, this paper showed the overall picture of collaboration building between teaching faculty and librarians.

References

- Amante, M. J., Extremeno, A., & da Costa, A. F. (2012). Modelling variables that contribute to faculty willingness to collaborate with librarians. *Journal of Librarianship and Information Science*, 45(2), 91–102.
- Julien, H., & Pecoskie, J. (2009). Librarians' experiences of the teaching role: Grounded in campus relationship. *Library and Information Science Research*, 31(3), 149–154.
- Machin, A. I., Harding, A., & Derbyshire, J. (2009). Enhancing the student experience through effective collaboration. *New Review of Academic Librarianship*, 15, 145–159.
- Nagasawa, T. (2012). Customized learning support services in order to build collaboration between faculty members and librarians in education: Based on a case study of Earlham College. *Journal of Japan Society of Library and Information Science*, 58(4), 185–201.

Keywords: *faculty-librarian relationships, collaboration, information literacy instruction, qualitative case study*

Toward a Theory of Information Literacy: Information Studies Meets Instructional Design

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Objectives

To explain how combining research and theory from information studies and instructional systems design contributes to a comprehensive theory of information literacy.

To present information as the basic building block of learning.

To discuss how to organize and represent learned information effectively.

Methodology

This presentation focuses on a theory, not a “methodology.” The theory emerged through the integration of concepts from two fields—information studies (IS) and instructional systems design (ISD)—and has been refined through ongoing research. (ISD encompasses learning theory/cognitive science and provides research-based strategies and techniques for organizing and representing information in ways that enhance learning.) The theory (Neuman, 2011) posits that information is the basic building block for “learning” in the broadest sense of that term. Through learning, information is transferred from the environment into human cognitive systems to become knowledge. An active, self-directed process, learning requires accessing, evaluating, and using information—just as information literacy does.

T.D. Wilson’s (1981, 1999) inclusion of “information processing and use” in his information-behavior model opened the door for IS researchers to explore what users do with information after they find it. Neuman’s (2011) theory posits that learners “use” information to create cognitive structures that represent new learning. ISD research provides comprehensive guidelines for using the features inherent in various information formats to support different kinds of learning. For example, charts and graphs are especially effective at supporting visual learning (Smaldino et al., 2008); film and video, at supporting the learning of processes (Salomon, 1979); and interactive materials, at supporting the learning of abstract concepts (Kozma, 1991). This presentation focuses on basic ideas related to how learners can create representations of knowledge that capitalize on and reinforce the information features inherent in that knowledge.

Outcomes

To date, the primary outcome of the theory is the I-LEARN model (Neuman, 2011), which has been presented at several ECIL conferences (e.g., Neuman, 2013; TecceDeCarlo, Grant, Lee, & Neuman, 2014) and which remains a focus for several other researchers as well. This presentation steps back from the research to focus on a broader issue: what theoretical value the intersection of the two fields offers and what research and conceptual areas must still be addressed.

References

- Kozma, R. B. (1991). Learning with media. *Review of Educational Research*, 61, 179–211.
- Neuman, D. (2011). *Learning in information-rich environments: I-LEARN and the construction of knowledge in the 21st century*. New York: Springer.
- Salomon, G. (1979). *Interaction of meaning, cognition, and learning: An exploration of how symbolic forms cultivate mental skills and affect knowledge acquisition*. San Francisco: Jossey-Bass.
- Smaldino, S. E., Lowther, D. L., & Russell, J. D. (2008). *Instructional technology and media for learning*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Wilson, T. D. (1981). On user studies and information needs. *Journal of Documentation*, 37, 3–15.
- Wilson, T. D. (1999). Models in information behavior research. *Journal of Documentation*, 55, 249–270.

Keywords: *information literacy, instructional design*

Effects of a Virtual Learning Environment on Librarians' Information and Digital Literacy Competences

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Universidade Aberta offers a postgraduate professional development course in Library and Information Sciences (LIS) for librarians. This e-learning course is based on a Learning Management System (LMS), Moodle, that not only develops information literacy (IL) and digital literacy skills (DL) but also allows the deepening of these skills due to the learning environment itself. In fact, since the Moodle educational context is also a technological context, the course enables a deeper development and proficiency of the skills associated with these literacies.

Taking into account these two aspects – the design of the course and the environment in which it develops – the aim of our study was to analyze students' perception of their competences in IL and DL and their articulation in the virtual learning context. They developed these competences across the contents of the different Curricular Units.

It is also important to mention that this course was developed according to the current approach to e-learning, focusing primarily on the transactional issue of the educational process. This approach reflected greater emphasis on the dimensions of participation, interaction, and collaboration. As these are students already inserted into the labor market, the course was also based on a paradigm of contextualized reflection about the profession.

We adopted a case study methodology through distributing a questionnaire with closed and open questions. It is also a longitudinal study in that we analyzed results collected annually from students who attended each course edition. This allowed for greater representativeness and consistency in the analysis of the results obtained with students who enrolled in one of four different editions of the course offered between 2012 and 2015. For this paper we analyzed responses to a more comprehensive questionnaire that was administered annually to LIS students in the course in LIS. In this closer analysis we looked at answers to closed questions that were directly related to IL and DL. In addition, we took into account answers to specific open-ended questions.

The results showed that, at the end of the course, students, most of whom were already in the libraries' labor market, felt they had significantly improved their IL and DL skills, which directly influenced their daily work practices. We found that respondents felt that the design of the course promoted the creation of virtual learning communities. Thus, students felt that the levels of interaction and sharing of ideas had a significant weight on improving their information and digital skills. This situation provided, according to the respondents, more diverse and better quality experiences, which was a motivation factor for the student/librarian's continued participation in the class (Shin, 2003). Learning in a virtual community allowed for a significant sharing of resources and experiences. Therefore, the data we obtained showed the importance of critical thinking, socially and professionally contextualized, taking place within learning communities and allowing for joint construction of knowledge.

As a conclusion we can say that the design of the course and the environment in which it has developed contributed significantly to a better performance of the students in their workplaces. We stressed that, while librarians, these professionals dealt directly with information, including information in digital format, and this training was particularly relevant in advancing their DL development.

References

Shin, N. (2003). Transactional presence as a critical predictor of success in distance learning. *Distance Education*, 24(1), 69–86.

Keywords: LIS education, e-learning, information literacy, digital literacy, Universidade Aberta, Portugal

Educational Comics as Media Education Technologies

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Comics are painted stories or stories illustrated by pictures. They are a combination of literature and art. There are many definitions, but they all agree that comics are a combination of the narration and the visual image. Today, painted stories (cartoons) have become a subject for learning and teaching in universities; the genre has moved from 'strange' to fully normal for the academic environment. As a kind of adapted literature they are found in Italy, USA, UK, South Korea and Japan. Researchers believe that the world's first comic book in the modern sense appeared in the US in the late 19th century (1890s). However, medieval book researcher Eric Kvakkelu from the Netherlands managed to find such art in the miniatures of the 14th century. In the 20th century, painted stories became one of the most popular genres of popular literature.

The research methodology consists of analysis of the potential usages of comics as a means of education. Since recently, the need to increase students' media and information literacy skills and the competences that students acquire through the integration of media educational technology in the training process have been widely discussed, however, there is not enough research on the prospects for comics use as one of the media education technologies.

Educational comics are a relatively new type which emerged in the 30's of the last century, according to some historians. The comics are used both at a primary school level and in higher education. They continue to be a means of education in many countries. They are often used not just as literature but as a major source of educational information – in many respects they supersede textbooks and other primary sources. Nowadays, comics constitute a large branch of art that finds its place in education. There are painted stories on gender studies, medicine, and history. An example of modern educational comics in Ukraine is a unique publication "Painted History of the Independence of Ukraine", which was released in 2013 in Kiev. For two years, the authors, the Kapranov brothers, and artists have been studying the sources. They created not only the text, but also the pantheon of heroes. In 2015, Harvard University released a comic book 'Unflattering', the source of which was the first doctoral thesis in the history of education in the form of a graphic novel: "Comics as a research tool: the dissertation in the form of a comic book" which was defended by Nick Sousanis (Rossmann).

Comics should be viewed as media text, created in a certain genre of media that the consumer must be able to identify and interpret. The purpose of this report is to show the potential of comics as a means of media education, to predict the prospects for its use in the educational process, and as one of the media education technologies as well.

References

- Braty, K. (2013). *Maliovana istoriia nezalezhnosti Ukrainy [Painted history of independence of Ukraine]*. Kyiv: Hamazyn.
- Onkovich A. V. (2015). Komiks kak zhanr uchebnoj mediaprodukcii [Comics as a genre of educational media products]. In S. V. Venidiktov (Ed.), *Mediasfera i mediaobrazovanie: specifika vzaimodejstvija v sovremennom sociokul'turnom prostranstve [Mediasphere and media education: the specificity of the interaction in the contemporary socio-cultural space]* (pp. 334–339). Mogilev: Mogilevskij institut MVD.
- Pochepcov, G. *Komiksy kak mediakommunikacii [Comics as a media communication]*. Retrieved September 7, 2014 from <http://osvita.mediasapiens.ua/maerial/34373>
- Rossmann, E. *Nahodka T&P: Pervaja doktorskaja dissertacija v vide komiksa [T & P Finding: the first doctoral dissertation in the form of comics]*. Retrieved February 1, 2016 from <http://theoryandpractice.ru/posts/10778-comics-phd>
- Zotov, S. *Komiksy Srednevekov'ja: O chem govoryat geroi drevnih knig [The Middle Ages Comics: What do the heroes of ancient books tell]*. Retrieved February 1, 2016 from <http://theoryandpractice.ru/posts/10213-komiksy-srednekovya>

Keywords: visual communication, media text, painted stories, comics, educational comics, media communication, media educational technology

Print vs. Digital Preferences – Study Material and Reading Behavior of Students at the University of Iceland

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Objectives

The possibilities of using digital class reading material have changed considerably in the past years. Educational material that previously was confined to a printed version is now increasingly available in digital format. This paper will present results from an international study where the main aim is to investigate the format preferences for study material among university students. The study posed the following two main research questions: Do the students prefer their class reading material in print or digital format? What characterizes the students' reading behaviours?

Methodology

This is an international online survey conducted among students at the University of Iceland. The same questionnaire, adapted from the Academic Reading Questionnaire created by Mizrachi (2014), was used by all participating countries. The questionnaire was translated from English to Icelandic. The measurement instrument consisted of 16 five point Likert scale questions (“Strongly disagree” to “Strongly agree”), the questions emphasized preferences for reading format, attitude and reading behaviour, a question about the electronic devices used for reading digital material. In addition, the questionnaire consisted of five background questions, and one open question. Data collection utilized the online system Lime Survey, open source software. The survey was sent in February 2016 to 11.147 students' at the University of Iceland, at an undergraduate level, Masters level and doctoral level. A total of 674 students replied to the survey, a response rate of 6%. The analysis of the data is descriptive and involves the distribution of variables by sex and fields of study.

Outcomes

The main result of the study is that participants prefer printed material rather than electronic, which supports the findings in the study by Mizrachi (2014). However, there is a certain difference, as a higher percentage of students at the University of California valued the printed format and were against reading electronic material than students at the University of Iceland. Results from the current study and Mizrachi's study (2014) about the students' approach to factors that reflect learning engagement, such as the ability to concentrate on the reading material and remembering what they read, depending on the print or electronic format of the material, are similar. The results may provide important understanding about university students' preferences for educational material, whether they chose to read it in print or digital format. By furthering the knowledge of the students' attitudes and reading behaviour, the study can provide university professors with the means to design better educational procedures, and academic library personnel to make decisions about collection development, taking into account the students' wishes and needs.

References

Mizrachi, D. (2014). Online or print: which do students prefer? In: S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings*. CCIS, vol. 492 (pp. 733–742). Cham: Springer International Publishing.

Keywords: *class reading, digital format, printed format, university students*

Information Seeking Preferences of Preschool Children: Preliminary Results

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The impact of ICTs in education has been emphasized by current research (Livingstone et al., 2014; Epstein, 2015). Quality interactive media can be used as an educational tool to improve children's skills above the age two, although research on young children before the school age is infrequent (Epstein, 2015). Nowadays, preschool children are growing up at ease with technology and become familiar with the use of digital devices such iPads, tablets, computers and mobile phones very early in their lives. Therefore, children are expected to develop different literacy skills (Blanchard & Moore, 2010). Cooper (2002) studied how seven-year-old children who attended a second grade library class coped with searching for information in different environments. Results indicated that children tend to rely on visual information rather than on using text and that they can also use meta-information successfully in textual formats to find information as long as it is presented in a direct manner. Most recently, Livingstone et al (2014) conducted a qualitative exploratory study among young children. Results indicated that children use digital devices but there is a gap in knowledge with regard to their access to and uses of technology. The aim of the study is to evaluate the information seeking behavior of preschool children and to record their learning styles. This research also aims to measure the impact of visual information on children's information seeking behavior and to understand the new technologies' impact on the information seeking behavior.

The research was conducted utilizing the grounded theory approach aiming to develop elements of a model on information seeking behavior of preschool children. Qualitative data gathered through semi-structured interviews and observation of preschool children, aged four to five years old. Semi-structured interviews did not follow a standardized set of questions, but additional, related questions asked during the interview allowed the researcher to anticipate new possible answers. A set of pre-defined questions allowed researchers to observe how preschool children seek information. A convenience sample consisted of sixty children who attended public kindergarten schools in Greece participated in the study.

The results of the study allowed the emergence of a model and contributed to the better understanding of the children's literacy skills improvement and especially, how children cope with visual and textual searching. Results also provide useful feedback on how to encourage children to become lifelong learners and further our understanding of age differences in children and adult learning along with the impact of ICTs on children's learning. Based on the research results, the authors provide recommendations and teaching strategies for improving ICT use in the classroom.

References

- Blanchard, J., & Moore, T. (2010). *The digital world of young children: Impact on emergent literacy: A white paper*. Pearson Foundation.
- Cooper, L. Z. (2002). A case study of information-seeking behavior in 7-year-old children in a semistructured situation. *Journal of the American Society for Information Science and Technology*, 53(11), 904–922.
- Epstein, A. S. (2015). Using technology appropriately in the preschool classroom. *Highscopeextensions*, 28(1), 1–19.
- Livingstone, S., Marsh, J., Plowman, L., Ottovordemgentschenfelde, S., & Fletcher-Watson, B. (2014). *Young children (0-8) and digital technology: A qualitative exploratory study-national report-UK*. Luxembourg: Joint Research Centre, European Commission.

Keywords: *preschool children, early childhood, kindergarten, literacy skills, digital literacy, online learning, information seeking behavior, teaching strategies, media literacy*

Information Seeking Behavior of Primary Teachers in Greece: A Pilot Study

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Objective and value

During the last decade methods and tools for information seeking (IS) have changed dramatically. In order to help students in their IS process teachers should be information literate themselves. There is a lack of research on teachers' perceptions and patterns of IS. Only few studies focused on teachers' information seeking behavior (ISB) (Probert, 2009; Bisto & Fourie, 2012). Bisto & Fourie (2012) explored the ISB of secondary school geography teachers. Alexandersson & Limberg (2012) present the results of six empirical studies in Swedish schools and how IS can change learning. The aim of this pilot study is to explore primary school teachers' perceptions of information literacy (IL), their IL skills, the sources and tools they use to share information and their usage of libraries.

Methodology

A literature search was carried out to identify previous studies and to provide background to this research. A questionnaire survey was used as a method to collect data on primary school teachers ISB. The questionnaire consisted of open-ended questions and Likert scale questions and was divided into four sections: a) demographics b) the use of computers and libraries as tools to search, locate, and retrieve information c) use and evaluation of sources d) the use of online IL programs. A stratified random sampling was used to collect data. Thirty-two primary public school teachers from two areas in Greece were investigated in this pilot study. Since the questionnaire consisted mainly of open-ended questions, qualitative data was analyzed utilizing the grounded theory approach of data categorizing, along with the atlas.ti software. SPSS was also used for the data analysis of the closed questions.

Findings

The study contributes to the understanding of ISB of primary school teachers and identifies the main problems and challenges they face, and the knowledge and skills needed to teach IS. Furthermore, it provides an understanding of teachers' views and beliefs concerning IL, the tools that they employ in order to educate students, problems encountered; as well as their perception about libraries and their role that should play in supporting their teaching and learning. The main findings show little connection between libraries and teachers, a hesitation to use library services and IL programmes.

References

- Alexandersson, M., & Limberg, L. (2012). Changing conditions for information use and learning in Swedish schools. *Human IT, 11*(2), 131–154.
- Bitso, C., & Fourie, I. (2012). An investigation of information-seeking behaviour of geography teachers for an information service intervention: The case of Lesotho. *Information Research: An International Electronic Journal, 17*(4).
- Mertes, N. (2014). *Teachers' conceptions of student information literacy learning and teachers' practices of information literacy teaching and collaboration with the school library: A grounded case study* (Doctoral dissertation). Berlin: Humboldt-Universität zu Berlin.
- Probert, E. (2009). Information literacy skills: Teacher understandings and practice. *Computers & Education, 53*(1), 24–33.

Keywords: *information seeking behavior, primary teachers, information retrieval, teachers' perceptions, digital skills, information literacy, digital literacy*

The Economic Straitjacket of Librarians Teaching Information Literacy in a University Setting

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In Sweden, the issue of information literacy is a prioritized area for most if not all academic libraries, and there is a longstanding tradition of librarians facilitating information literacy training for university students. This is, for example, reflected in the fact that the absolute majority of academic libraries have assigned a certain group or team of librarians as responsible for teaching information literacy. The idea that information literacy training becomes more successful if it is embedded in or integrated into disciplinary subjects, throughout courses and programs, is also well established among Swedish librarians. As a result of this assumption, most teaching librarians cherish the notion of librarian-faculty collaboration. In combination with this awareness of the importance of embedded and collaboratively arranged teaching for information literacy (Bruce 2004), there is also a strong discourse on lifelong learning, which, in an academic context, dictates that the teaching conducted should not only be aimed at developing information literate students but also information literate future professionals. However, the championing of information literacy practice in academic library contexts may also come with constraints. In this paper, we focus on an economic arrangement that is common in Swedish universities which risks hampering the fostering of information literate future professionals and, instead, primarily serves the development of students' information literacy for academic studies. This economic arrangement is based on the agreement between libraries and academic departments that the departments pay for the teaching carried out by the librarians.

The overarching research question that has guided this study is: in what ways does the of the faculty being a purchaser of a fee-based service delivered by the library affect the content and conduct of the information literacy teaching?

The study presented in this paper builds on a small-scale organizational ethnography (e.g. Neyland, 2008) of the teaching work going on among librarians in an advanced academic library of a large university of natural sciences. The empirical material comprises some 30 pages of field-notes and additional photographs, which were produced during one week of participatory observations with a team of teaching librarians. The researcher observed the work of group-based and individual planning for teaching, and participated in both formal meetings and in more informal encounters between librarians in which the teaching of information literacy was discussed.

The preliminary results indicate that the economic arrangement entails both pros and cons. In accordance with the logic that something that is connected to an economic cost must also be valuable, it appears as if the arrangement contributes to strengthen the authority of the librarians. However, the disadvantages seem to be greater. The economic arrangement leads to limitations for what can be presented by the librarians as relevant teaching content. Faculty, in their position of purchasers of a service, is given the power to dictate what is of prime importance for the students to learn regarding information seeking and resources. Teaching librarians sense that they are obliged, to a greater extent than they would like to be, to conform their teaching to the preferences of faculty.

References

- Bruce, C. (2004). Information literacy as a catalyst for educational change. A background paper. In P. A. Danaher, D. Orr, C. R. Macpherson, & F. Nouwens (Eds.), *Lifelong Learning: Whose responsibility and what is your contribution? Proceedings of the 3rd International Lifelong Learning Conference* (pp. 8–19). Yeppoon, Queensland.
- Neyland, D. (2008). *Organizational ethnography*. London: SAGE.

Keywords: *information literacy, higher education, teaching librarians*

Print or Electronic? Estonian Students' Preferences in their Academic Readings

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Today, schools and universities in Estonia are involved in providing e-learning, e-textbooks, and other electronic materials along with using traditional methods including print textbooks. A push to move toward digital materials in teaching is discernible. This is apparent when educators and the media make comments such as: “digital natives learn differently”, “they are fluent in dealing with computers and smartphones”, and “young people prefer everything electronic”. Teachers and academic personnel are aware of these changes but they have also noticed that learners print much of their reading even when it is available in digital formats.

The aim of the study is to investigate Estonian students' preferences in their academic reading formats. The study is part of a multi-national research project, the *Academic Reading Format International Study* (ARFIS). ARFIS employs the survey instrument prepared by Dr. Diane Mizrahi (2014) in her doctoral studies at the University of California, Los Angeles (UCLA). To date, various studies on this topic have resulted in different results. For example, Rockinson-Szapkiw, et al (2013) found that there was no difference in cognitive learning and grades between the two groups, one using e-resources and the other using text, suggesting that the electronic textbook is as effective for learning as the traditional textbook. Baron (2015), on the other hand, argued that the virtues of eReading were matched with drawbacks. Users were easily distracted by other temptations on their devices, multitasking was rampant, and screens coaxed the users to skim rather than read in-depth.

The ARFIS survey instrument has 16 Likert-style statements. These statements cover a range of topics including the influence format has on students' reading habits; the students' ability to remember material; their opinions about access convenience; their opinions about the options to highlight and annotate text; and students' ability to review and concentrate on text. The survey also asked questions about the importance of language and text on the students' selection of reading format and details about the electronic devices students use to read digital materials. In addition, the survey helps gather some demographic and academic data as well.

I distributed the ARFIS questionnaire to students attending the four largest universities in Estonia: the University of Tartu, Tallinn University, Tallinn University of Technology, and Estonian University of Life Sciences. I asked Specialists of academic affairs at all curricula who administer students' mailing-lists to forward the questionnaire to students. I gathered the data in February 2016 and received a total of 1,260 completed questionnaires. I will analyse the data with MS Excel and summarize the qualitative results from the open ended questions.

I expect that the results will inform universities and their libraries about students' preferences in their academic readings. The results will help academic staff in making reading recommendations and librarians in making collection development decisions. The study will also assist in making larger policy decisions education.

References

- Baron, N. S. (2015). *Words onscreen: The fate of reading in a digital world*. Oxford University Press.
- Mizrahi, D. (2014). Online or print: which do students prefer? In S. Kurbanoglu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 733–742). Cham: Springer International Publishing.
- Rockinson-Szapkiw, A. J., Courduff, J., Carter, K., & Bennett, D. (2013). Electronic versus traditional print textbooks: A comparison study on the influence of university students' learning. *Computers and Education, 63*, 259–266. doi:10.1016/j.compedu.2012.11.022

Keywords: *academic readings, reading preferences, higher education, university students, Estonia*

Evaluating Information Literacy for Adolescent Suicide Prevention

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Suicide intervention task groups have worked arduously to reduce the number of youth at risk of experiencing suicidal behaviors worldwide. Nonetheless, the World Health Organization (WHO) found that in 2012 suicide was the second largest cause for mortality in the 15-29 age group (WHO, 2015). In the United States, thoughts of suicide in the 15-24 age group increased from 13.8% in 2009 to 17.0% in 2013; 8.0 percent attempted suicide in 2013, while only 2.7 percent received clinic-based interventions during critical suicidal behaviors that same year (Kann et al., 2014).

Increasing the use of suicide support information in the everyday lives of adolescents is thought to impact future suicidal behaviors (Capp, Dean, & Lambert, 2001; WHO, 2010), thus, the mental health information literacy of adolescents is a potentially effective entry point for suicide interventions. But have the social sciences mastered a research approach, which directly engages adolescents in their everyday information spaces? And could such an approach provide a nuanced insight to adolescent information behavior related to suicide support information?

Methodology

The present study was carried out in two parts. In Part 1, we drew from a cross-section of research literature to identify existing research methodologies involving adolescents. We reviewed both qualitative and quantitative studies on health information, information literacy, and information behavior from across the disciplines of information science, sociology, clinical and public health, journalism, and educational psychology. In Part 2, we applied the literature review from part 1 to construct a methodology appropriate for research with adolescents and health information literacy for suicide interventions.

Outcomes

Adolescents differ from adults in their developmental, affective, and social relationship with health information and suicide information. Integrating these differences into the methodology and research design of a study suggests improved credibility and reliability of the collected data, further influencing the quality of data analysis and strength of a study. The research design developed through this study is proposed as a new tool for research with adolescents to support exploring mental health information literacy as an entry point for suicide interventions.

References

- Capp K., Deane F. P., & Lambert, G. (2001). Suicide prevention in aboriginal communities: Application of community gatekeeper training. *Australian and New Zealand Journal of Public Health, 25*(4), 315–321.
- Kann, L. et al. (2014). Youth risk behavior surveillance – United States, 2013. *Centers for Disease Control and Prevention MMWR, 63*(4), 1–168.
- Robinson, J., Cox, G., Malone, A., Williamson, M., Baldwin, G., Fletcher, K., & O'Brien, M. (2013). A systematic review of school-based interventions aimed at preventing, treating, and responding to suicide-related behavior in young people. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 34*(3), 164–182. Retrieved from <http://doi.org/10.1027/0227-5910/a000168>
- World Health Organization. (2010). *Towards evidence-based suicide prevention programmes*. Manila, Philippines: World Health Organization, Western Pacific Region.
- World Health Organization. (2015). *Suicide [Fact Sheet] (No. 398)*. Retrieved from <http://www.who.int/mediacentre/factsheets/fs398/en/>

Keywords: health literacy, suicide prevention, adolescents, research methodology, developmentally appropriate practices

The Searching Circle: Library Instruction for Tribal College Students

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Background

The U.S. federal government recognizes 567 tribal nations; state governments recognize an additional 64 tribes. People living in indigenous homeland areas might have one option for post-secondary education: a tribal college or university (TCU). In spring 2016, students enrolled in a “Library Instruction and Information Literacy” class in the School of Information at the University of Texas at Austin created instructional videos for librarians at TCUs.

Objectives

In this presentation we will introduce background on TCUs; describe the Searching Circle information seeking cycle based on Cajete’s (1997) orientation process of leading a fulfilled life as an indigenous person; introduce original instruction videos designed for tribal college students.

Methodology

The methodology followed a similar process of those described by Smith (2003) as both qualitative and multidimensional, building on both formal publications and lived experiences. Students created pathfinders and LibGuides for each other, interviewed TCU librarians on their experience in/and or opinions about instruction and wrote essays on their interviews, understood their own learning styles based on the Kolb (1984) model, created instruction videos using Camtasia and placed them on a YouTube channel, and wrote reflective essays. The Searching Circle is a culturally based information seeking behavior model that overlays indigenous life skills with seeking information for any purpose. We based the Searching Cycle on Cajete’s writing. Cajete’s work was built on a career of developing innovative teaching models based on indigenous worldview rather than Western notions of structure and linearity. Like Kuhlthau’s Information Search Process (ISP), the Searching Circle it is attentive to the individual learner but is less linear and acknowledges students’ affective responses within the tribal cultural context. Kuhlthau’s “Zones of Intervention” address the flexibility needed by information professionals in responding to the varying needs of the student; flexibility tempered by cultural awareness is embedded in the Searching Circle. Kuhlthau’s Guided Inquiry (GI) process might be perceived by tribal students as too rigid, imposed upon them, and dismissive of their everyday experiences and cultural context. While GI involves an organized team of librarians and educators leading students through a process of learning to learn on their own, tribal college settings are often minimally staffed, so that instruction is still a one-on-one venture for introducing a student to basic skills such as typing and mathematical skills, and introduction to sources, including tribal history, elders, and historical and current biography. As in GI, tribal college students will need assistance in becoming aware of the wide range of sources available to them in order to start to study a topic or answer a question. Unlike others, though, these sources might need to be vetted through tribal protocol.

Outcomes

The instruction videos resulted from a service learning collaboration between librarians in Indian Country and master’s LIS students. Content focused on: understanding information sources; Boolean operators; letter writing; and online safety. Students developed scripts and assisted each other through peer editing. These instructional videos are unique for their inclusion of cultural context in line with an indigenous worldview.

References

- Cajete, G. (1997). *Look to the mountain: An ecology of indigenous education*. Skyland, NC: Kivaki Press.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
- Smith, L. T. (2003). *Decolonizing methodologies: Research and indigenous peoples*. London: Zed Books.

Keywords: *American Indians, digital inclusion, information literacy, learning styles, reflection, tribal colleges*

“Bibliostory – Educational Comic Stories”. A Social Constructivist Case of Media and Information Literacy for Children and Youths

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Our paper presents a theoretical background for a Polish comic book “Bibliostory—educational comic stories” (Pl. Bibliostory—edukacyjne historie komiksowe).

The comic book consists of 24 stories. It targets children between 9 and 12 years of age and youth from 13 to 16 years of age. Each story illustrates one issue, such as information searching, organization of information, plagiarism, and information problem solving strategy. One page is dedicated to one story only.

Bibliostory is based on two constructivist pedagogical concepts: (1) the zone of proximal development (ZPD) and (2) case-based learning/teaching. These concepts, on application level, are first of all associated with designing educational situations and relationships between teachers and students (educators and learners). The aim of our paper is to present the possibilities of application of these concepts in the educational comic books. We describe the general assumptions of two concepts, then we focus on elements applied in Bibliostory project. We also provide a review of literature on the educational potential of comic books.

The intent of the comic book’s authors was to create materials supporting a constructivist approach. Bibliostory cases discuss particular problems as stories (see Spackman & Camacho, 2009). Each story has its character who must solve a problem related to information. Each solution requires an action such as application of an adequate source of information or understanding the effects of a presented action. The comic book aims to prompt learners’ reflection on the illustrated cases. It encourages learners to reflect on their own activities, and it supports them in constructing new knowledge. Further, it focuses on developing informational problem solving skills. The tools, language and graphics, the authors of Bibliostory chose, aim to trigger the interest of an audience of readers. The stories for example include elements of pop culture that are part of day-to-day life of children and youth (e.g. use of Minecraft game motives). Bibliostory is conceived to be a starting point for discussions on the application of social constructivist theories in media and information literacy education.

“Bibliostory—educational comic stories” was financed by Ministry of Culture and National Heritage Program “Education. Media and Information Education” and published in 2015. The Regional Public Library and Culture Animation Centre in Poznan was the coordinator of this project. Bibliostory is an example of a professional open educational resource (OER) that children and youth may use; also, parents and libraries may apply it in developing media and information (MIL) competences for children and youth.

References

- Rozkosz, E. A., & Matraś, A. (2015). *Bibliostory – edukacyjne historie komiksowe*. Poznań: Wojewódzka Biblioteka Publiczna i Centrum Animacji Kultury w Poznaniu.
- Spackman, A., & Camacho, L. (2009). Rendering information literacy relevant: A case-based pedagogy. *The Journal of Academic Librarianship*, 35(6), 548–554. Retrieved from <http://doi.org/10.1016/j.acalib.2009.08.005>

Keywords: *Bibliostory, case-based learning, cultural-historical theory, zone of proximal development, educational comics, Poland*

Print or Electronic: Vilnius University Faculty of Communication Students' Format Preferences for Study Readings

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Introduction

The beginning of the 21st century has been called the information age because of the explosion of information output. It has become increasingly clear that students cannot learn everything they need to know in their field of study in a few years of their studies. Information literacy equips them with the critical skills necessary to become independent lifelong learners (Association of College and Research Libraries, 2016). Academic background is a core component of the knowledge and skills our future specialists need to ensure a sustainable future worldwide. It is important to ensure that the development of ICT (i.e. information and communications technology) nowadays equips students in the best way during educational process in the universities. The topic of traditional print and online reading format is still intensive discussed worldwide.

Purpose of the study

The *purpose* of the paper is to identify and investigate the format preferences for academic readings – print or electronic – and the reading behavior of undergraduate students at Vilnius University Faculty of Communication.

Methodology

Surveying *method* was used, asking students to complete the online survey *Print vs. electronic. LimeSurvey*, an online platform, was used. The survey instrument was created by international group of researchers under direction of Professor Serap Kurbanoglu (Hacettepe University, Ankara, Turkey), Dr. Diane Mizrahi (University of California, Los Angeles), and Professor Joumana Boustany (University of Paris Descartes, France). The survey instrument consists of 23 questions, arranged into two groups: Academic readings; and demographic questions. A total of 121 respondents (1st, 2nd, 3rd and 4th year undergraduate students), from the *Culture information and communication* program at Vilnius University were surveyed.

Results

The research was performed at Vilnius University Faculty of Communication during the period of November-December, 2015. Fifty-two respondents filled in the survey (43 percent from total amount). The results are analyzed to find out students' preferences regarding print or electronic information resources for their course readings. The research is part of a multinational study the Academic Reading Format International Study (ARFIS), performed by an international group of researchers.

The results and outcomes of the research will influence our understanding of how students prefer to read their study materials, print or electronic, and will form the background for decisions and policies of libraries and academic staff regarding collection building and the dissemination of study materials for students according to their preferred format.

References

- Association of College and Research Libraries*. Retrieved February 15, 2016 from <http://www.ala.org/acrl/>
- Kortelainen T. (2015). Reading preferences of Finnish university students. In S. Špiranec et al. (Eds.), *[The Third] European Conference on Information Literacy (ECIL): Abstracts, October 19–22, 2015, Tallinn, Estonia*. Tallinn: University of Tallinn.
- Manžuch, Z. (2015). *Strateginis kultūros paveldo skaitmeninio valdymas*. Vilnius: VšĮ "Akademine leidyba".

Keywords: *electronic documents, print documents, format preferences, students' readings, Vilnius University, Faculty of Communication*

Novice and Expert Information Behavior: An Eye Tracking Study from Qatar

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This paper presents preliminary findings of original grant-funded research into the information behaviors of researchers residing in the Arab Gulf region. Specifically, the participants' approaches to evaluating and judging the quality and merit of scholarly materials were investigated using eye tracking technology to understand the focus and attention of participants on different features and sections of the published material. Participants were asked to review and rate the quality and accuracy of sample scholarly materials in electronic format using an original, validated Likert-style instrument. While undertaking this task, state-of-the-art TOBII eye tracking technology monitored the gaze and fixations of participants to document where their attention and interest was focused while attempting to evaluate the material. This data was triangulated with participants' conscious, written evaluations of the materials and analyzed for similarities and differences. The primary objectives of the study are to generate descriptive data to illuminate the patterns of behavior exhibited by both novices and experts, including the speed and efficiency of quality judgments, in order to compare and distinguish experts from novices, improve instructional practices and explore the potential for predictive measurements of research expertise. While the research aims to ultimately gather data from 300 participants, this paper will detail findings and indications from the pilot phase of the study incorporating approximately 30 participants, which is an established minimum group size for drawing inferences from this type of data. Eye tracking methodology has seen limited use in this type of application and enables us to gain insight into latent or subconscious aspects of attention which may not be apparent from direct questioning or surveying of participants, potentially including biases (Duchowski, 2007; Holmqvist, et al., 2011). This investigation represents an original contribution to the study of information behavior, as much of the research into expert information behavior focuses on information seeking rather than evaluation (Case, 2010). The initial findings include hypotheses about differences between novice and expert researchers, and the utility of different gaze measurements for assessing information evaluation processes.

References

- Case, D. O. (2012). *Looking for information: A survey of research on information seeking, needs and behavior*. US: Emerald Group Publishing.
- Duchowski, A. (2007). *Eye tracking methodology: Theory and practice*. UK: Springer-Verlag.
- Holmqvist, K., Nyström, M., Andersson, R., Dewhurst, R., Jarodzka, H., & Van de Weijer, J. (2011). *Eye tracking: A comprehensive guide to methods and measures*. UK: Oxford University Press.

Keywords: *information behaviour, eye tracking, expert, novice, evaluation*

Public Policies for Information Literacy in Portugal: An Agenda in the Making

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This theoretical study seeks to contribute to the reflection on public policies in the field of information literacy in Portugal. For this purpose, we look at the status quo of how information literacy has been addressed in Portugal, discussing the aspects concerning public policies, which include an interconnection between scientific knowledge and public action. So, the main objective is to describe public policies for information literacy in Portugal.

Theorizations of education management are methodologically used as the common thread of this interpretation. From here we attempt to explain how knowledge regarding information literacy has been mobilized, through studies and interventions over the last few years.

Barroso (2013) suggests a model which frames education management, thus unveiling (partly, at least) the working logic of this phenomenon. He explains that in order to better understand public policies, we should consider not only the action of state entities, but also, public action in general, given that in politics “problems do not exist outside of solutions”. This means it is necessary to establish a correlation between problems, knowledge and policies. Understanding this correlation will provide a broader understanding of the role of the policies, thus enabling an explanation of the subsequent interventions. So, the usual approach for these situations involves understanding that scientific knowledge may underpin the problematization of situations targeted for political intervention. Another approach is understanding that these policies use knowledge to sustain themselves, presenting the facts and results of research as an argument for solving problems they seek to tackle. In short, often, mobilized knowledge does not serve to find solutions to problems, but rather to build problems adjusted to the available solutions.

Public policies usually result from a sustained effort which places a certain topic on the social agenda. This public action agenda seeks to draw the attention of society and obtain the support of influential groups or people and politics of different levels of the government.

At the same time, we look at the way scientific knowledge gives rise to legislation, guidelines or policy recommendations. Finally, we propose a series of lines for reflection and debate on this matter.

References

- Barroso, J. (2013). Conhecimentos, políticas e práticas em educação. In A. M. Martins et al. (Eds.), *Políticas e Gestão da Educação: Desafios em Tempos de Mudanças*. Campinas: Autores Associados.
- Bruce, C. S. et al. (2000). *Information literacy around the world: Advances in programs and research*. Wagga Wagga, New South Wales: Centre for Information Studies, Charles Sturt University.
- Costa, C., Jorge, A., & Pereira, L. (2013). *Media and information literacy policies in Portugal*. ANR Translit and Cost “Transforming audiences / Transforming societies”.
- Hamilton, M. (2012). *Literacy and the politics of representation*. London: Routledge.
- Haras, C., & Brasley, S. S. (2011). Is information literacy a public concern? A practice in search of a policy. *Library trends*, 60, 361–382.

Keywords: *public policies, scientific knowledge, information literacy, Portugal*

Re-Framing Information Literacy for Social Justice

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Libraries in the United States have a long, although not uncomplicated, history of social justice. Through documents like the *Code of ethics* (2008), and the *Library bill of rights* (1996), the American Library Association (ALA) stresses the importance of equity of services, diversity, and intellectual freedom. Social responsibility, including responding to problems within society and being willing to take a stand on those problems, is considered a core professional value by ALA (2004). Librarians have been champions for and leaders in promoting information literacy as critical to success in school, work and personal life, and there are large social justice implications related to information literacy learning. Indeed, ALA underscores the importance of information literacy for full participation in a democratic society, indicating that information literacy skills could be integral in “addressing many long-standing social and economic inequities” (1989, para. 3).

Despite widespread recognition of its importance, information literacy is rarely discussed within the framework of social justice and human rights. In outlining the actual and potential ways that American libraries advance social justice and support the human rights of their communities, Jaeger, Greene Taylor, and Gorham (2015) note that most of the discussion and work around social justice in libraries centers on information access, ignoring the fact that simply having access to information or the technology through which much information is delivered is not the same as being able to understand, evaluate, and use that information, skills generally associated with information literacy. Likewise, Sturges and Gastinger recognize an “enormous, unexploited scope for professional activity” related to social justice and social responsibility (2012, p.202).

The Association of College and Research Libraries (ACRL) has been a leader in developing definitions and standards for information literacy. In 2015, an ACRL Task Force that developed a Framework for Information Literacy, which shifts focus from task and process-based standards to more conceptual ideas. While the new frames provide scope for addressing social justice, they stop short of directly addressing the topic. This paper seeks to further the conversation by examining how information literacy relates to social justice and how librarians can further promote social justice through library instruction using the (ACRL) *Framework for information literacy* as a lens. The paper will examine each frame to identify actual and potential ways for addressing social justice within that frame, and offer practical ideas for instruction related to social justice for each frame. Drawing on ACRL documents and the writings of Task Force members and other interested parties, the paper will then make a case for expanding the framework to include a new frame focused on social justice.

References

- American Library Association. (1989). *Presidential committee on information literacy: Final report*. Retrieved from <http://www.ala.org/acrl/publications/whitepapers/presidential>
- American Library Association. (1996). *Library bill of rights*. Retrieved from <http://www.ala.org/advocacy/intfreedom/librarybill>
- American Library Association. (2004). *Core values of librarianship*. Retrieved from <http://www.ala.org/advocacy/intfreedom/statementspols/corevalues>
- American Library Association. (2008). *Code of ethics of the American Library Association*. Retrieved from <http://www.ala.org/advocacy/proethics/codeofethics/codeethics>
- Association of College & Research Libraries. (2015). *Framework for information literacy for higher education*. Retrieved from <http://www.ala.org/acrl/standards/ilframework>
- Jaeger, P. T., Greene Taylor, N., & Gorham, U. (2015). *Libraries, human rights, and social justice: Enabling access and promoting inclusion*. Lanham, MD: Rowman & Littlefield.
- Sturges, P., & Gastinger, A. (2012). Information literacy as a human right. *LIBRI: International Journal of Libraries and Information Services*, 60, 195–202. doi: 10.1515/libr.2010.017

Keywords: *information literacy, social justice, human rights, ACRL framework, library instruction*

Gender Differences in ICT Use and Information Literacy in Public Libraries: A Study in a Rio de Janeiro Public Library

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Objectives and discussion

We approached gender differences in information and communication technology (ICT) use and appropriation and other aspects of information literacy in this study that focused on users of a large and modern public library situated in a poor neighborhood in Rio de Janeiro. We took into account the literature and research evidence that considered the importance of the public library as a place for ICT and information literacy development (Berlot, 2009). We especially noted studies that stressed the positive impact of ICT use in these institutions by members of impoverished groups and communities (Audunson, 2005). We discussed the argument that points out that mere access to ICT does not guarantee effective use (Kline, 2016). We also took into account the literature and evidence on gender differences in ICT use that tend to emphasize that women show lower interest in ICT and lower levels of ICT literacy.

Data and methodology

We obtained the empirical data through a study carried out in a new experience called “park library”. This library offers ICT infrastructure through a large number of computers with internet access and a diversified library collection as well as an architectural design aiming at attracting the community to the library. This type of experience is inspired on a successful model utilized in Colombia that contributed to a reduction of violence and issues associated with poverty. We administered a questionnaire to a sample of users.

Results

Initial data analyses showed that the library met the demands of youngsters who came from low socioeconomic strata. These young people shared a motivation to go to the library for the site’s computers and internet access. Their library use was similar to that provided in a LAN House where young people are left on their own without professional help. Although females in the group were as equally interested in computers and the internet as the males, their use and competence profile differed from the male group in some important aspects. As already pointed out in some studies in Brazil and elsewhere, boys showed a more diversified and autonomous relationship with ICT and other aspects of information literacy. For example, the women’s use of conventional information sources was higher, which might indicate that they had lower familiarity with internet resources. As a whole, the data suggested that these public library experiences do not seem to represent a major contribution to the development of information literacy of this user group. Therefore, more attention should be given to information literacy projects associated with education and professional training in public libraries.

References

- Audunson, R. (2005). Public library as a meeting-place in a multicultural and digital context: The necessity of low-intensive meeting-places. *Journal of Documentation*, 63(3), 429–441.
- Berlot, J. C. (2009). Public access technology in public libraries: Effects and implications. *Information technology and libraries*, 28(2).
- Kline, D. et al. (2014). *Children, ICT and development: Capturing the potential, meeting the challenges*. Florence: UNICEF.

Keywords: *ICT and gender, information literacy, ICT literacy, public library and society*

Using Phenomenographic Methods to Support Political Information Use

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This paper presents the results of a study into young people's experiences of political information. The study used phenomenography to identify the different ways young people understand political information. This paper builds on preliminary findings presented at ECIL 2014 (Smith, 2014) which focused on personal construct theory and critical pedagogical perspectives. This paper focuses on the phenomenographic findings and the different ways the participants are aware of, acquire, engage with and apply political information.

The paper explains the phenomenographic research approach with a short review of the application of the method in previous LIS research (for example Bruce et al., 2006; Andretta, 2012; Diehm & Lupton, 2012; Yates et al., 2012), placing the present study in the broader research context. The outcome space that forms the basis of the research findings from the present study is presented. It includes six categories of description, namely:

Political information as...

1. ... A range of sources of information;
2. ... Something which is encountered out of context;
3. ... Something to fill a knowledge gap;
4. ... Something through which to gain meaning and context;
5. ... Something relevant to one's own life;
6. ... Something which can help to achieve social change.

Within the categories of description, dimensions of variation provide a detailed insight into the ways in which young people experience political information. Participants experienced differences in their understanding of the production and evaluation of information, the relationship between information and agency and their conception of politics. Young people's conceptions of political information are varied, and they encounter a wide range of information sources providing them with the knowledge to form political opinions. This paper focuses on categories 3 to 6 and connects the findings to how information literacy can be applied to support more complex conceptions of political information.

Awareness of the variation in young people's experiences and conceptions of information and politics is important to help them meaningfully participate in civic life and to appreciate the wide variety of valid forms of political participation. The findings help us understand the ways young people experience political information and provide insight into how to help young people move from less to more complex ways of understanding, to increase engagement with political life. Recommendations for practice are made.

References

- Andretta, S. (2012). *Ways of experiencing information literacy*. London: Chandos Publishing. Retrieved from <http://doi.org/10.1016/B978-1-84334-680-7.50002-4>
- Bruce, C. S., Edwards S., & Lupton, M. (2006). Six frames for information literacy education: A conceptual framework for interpreting the relationship between theory and practice. *Innovation in Teaching and Learning in Information and Computer Sciences*, 5(1), 1–18. Retrieved from http://www.ics.heacademy.ac.uk/italics/vol5-1/pdf/sixframes_final_1_.pdf
- Diehm, R.-A., & Lupton, M. (2012). Approaches to learning information literacy: A phenomenographic study. *The Journal of Academic Librarianship*, 38(4), 217–225. Retrieved from <http://doi.org/10.1016/j.acalib.2012.05.003>
- Smith, L. (2014). *ECIL 2014: Critical information literacy and political agency*. Retrieved from <http://www.slideshare.net/laurensmith/critical-information-literacy-and-political-agency-40561346>
- Yates, C., Partridge, H., & Bruce, C. S. (2012). Exploring information experiences through phenomenography. *Library and Information Research*, 36(112), 96–119.

Keywords: *information literacy, political information, phenomenography*

Open Science and the Research Information Literacy Framework

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Open science represents a challenge for information literacy research. The purpose of this paper is to explore a possible framework for integration of concepts of open science and research information literacy. We ask the following question: Which factors of open science make an impact on research information literacy? How can we determine the notion of research information literacy in order to understand changes in the research and information processes? Open science identifies relations of the research process with the broader public based on transparent information practices, methods, data, publications and democratic access to knowledge. Digital scholarship means transformations of scholarly processes and communications into digital environments as presented in several models (e.g. Borgman 2015, Chowdhury 2014). A new concept of information literacy in transformation of scholarly processes was presented in the ACRL Framework (2015). For example, van Helvoort (2014) emphasized the personal knowledge base; other authors introduced a concept of information fluency (e.g. Bawden 2014). A number of authors presented concepts of scholarly and research literacy (e.g. Koltay et al. 2016, Schneider 2014). Understanding open science can help determine such concepts as research information literacy, methodological and ecological information literacy and other multiliteracies based on knowledge of information use patterns in academic communities.

In this paper we report on findings of a qualitative study into information behavior of 19 selected researchers in Slovakia. We applied the methodology of semi-structured interviews. First analyses point to common patterns and disciplinary differences. The information process is embedded in the research process and knowledge infrastructure based on research data and publications. External influences include policies, values, barriers, and metrics.

An ecological framework of ecological information interactions is developed. The framework determines research information literacy as a complex multilayered notion based on understanding, critical thinking and sense making. Its factors include: construction of context, knowledge discovery, data management, analytical and methodological skills, interpretations, social networking and trust, and project management. Practical implications lead to design of support for digital literacy, value-added services and tools, sustainable research process workflow, and creative digital representations of research results. For new models of digital scholarship, we propose knowledge infrastructure based on data management and concept models. Research information literacy is considered as part of a personal knowledge base, including personal information style and researchers' information spaces. Open science contributes to the conceptual advancement of research literacy for further generations of researchers.

References

- ACRL (2015). *Framework information literacy for higher education*. February 2, 2015. Retrieved February 5, 2016 from http://www.ala.org/acrl/sites/ala.org/acrl/files/content/issues/infolit/Framework_ILHE.pdf12-19
- Bawden, D. (2014). Being fluent and keeping looking. In S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 13–18). Cham: Springer International Publishing.
- Borgman, Ch. L. (2015). *Big data, little data, no data. Scholarship in the networked world*. Cambridge: MIT Press.
- Chowdhury, G. G. (2014). *Sustainability of scholarly information*. London: Facet Publ.
- Helvoort, J. van (2014). The personal knowledge base conception of information literacy. In S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 31–36). Cham: Springer International Publishing.
- Koltay, T., Špiranec, S., Karvalics, L. Z. (2016). *Research 2.0 and the future of information literacy*. Amsterdam: Chandos.
- Schneider, R. (2013). Research data literacy. In S. Kurbanoğlu et al. (Eds.), *Worldwide Commonalities and Challenges in Information Literacy Research and Practice, European Conference on Information Literacy, ECIL 2013, Istanbul, Turkey, October 22–25, 2013: Proceedings. CCIS, vol. 397* (pp. 134–140). Cham: Springer International Publishing.

Keywords: open science, research information literacy, information behavior of researchers, ecological framework of information interactions

Exercising Critical Health Literacy Skills: A Qualitative Study of how Patients Make Sense of their Information Landscape

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Objective

Critical health literacy is defined as the set of cognitive and social skills required by patients to analyse and apply health information to manage their health (Gould, & DeVoght, 2010). In research, critical health literacy is operationalized and measured as an individual level-construct (Chin, 2011). However, there is very little research on what strategies patients actually appraise health information. In this study we investigated how patients with a chronic disease condition (coronary artery disease) used various strategies to appraise and apply health information to manage their condition.

Methodology

Data was collected from 30 coronary artery disease patients who participated in six focus group discussions conducted in Singapore in both English and Mandarin from April to July 2015. These discussions were audiotaped, transcribed and analysed using open coding and inductive recognition of emerging themes using QSR NVivo10 (Hsieh, & Shannon, 2005).

Findings

The analysis revealed six recurring themes. First, the reasons why critical health literacy skills are important can be explained by the broad nature of health information in the public realm, patients' limited access to medical professionals, and their need for tailored information. Second, participants wove their own web of human and non-human information sources to gather and appraise health information. Third, patients used very different criteria for evaluating information from different sources. Fourth, patients often contested doctors' recommendations by gathering their own information and altering these recommendations to fit their own needs. Fifth, patients also critically analysed health information by experimenting with the recommendations and then analysing their body experiences, and integrating these experiences into their sense making activity. Sixth, patients' informal and formal social interaction contexts facilitated learning through mutual sharing of experiences.

Conclusion

Critical health literacy must be viewed both as an individual skill and a community-based skill. Patients illustrated community level decision-making when they negotiated through a complex network of human and non-human information sources and assembled and appraised this health information through social interactions. Then patients integrated this new knowledge with their experimental, experiential, and intuitive knowledge. Health literacy interventions can greatly benefit from understanding and integrating patient perspectives and the various informal strategies they use in appraising health information.

References

- Chinn, D. (2011). Critical health literacy: A review and critical analysis. *Social Science and Medicine*, 73(1), 60–67.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288.
- Johnson, J. C., & Weller, S. C. (2002). Elicitation techniques for interviewing. In J. F. Gubrium, & J. Holstein (Eds.), *Handbook of interview research: Context and method* (pp. 491–514).
- Mogford, E., Gould, L., & DeVoght, A. (2010). *Teaching critical health literacy as a means to action on the social determinants of health*. Health Promotion International.

Keywords: health literacy, critical health literacy, chronic diseases, health education, qualitative study

Expanding Children's Digital Literacy Experiences and Skills: Public Library Practices in Guangzhou, China

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Purpose

As the arrival and rapid dissemination of digital technology, digital literacy (Gilster, 1997) has become a focus of research for recent years (Burnett, 2010). Public libraries play a vital role in improving the digital literacy skills needed for children, who are raised in a digital, media-saturated world. The Guangzhou Children's Library and Guangzhou Library have developed a series of programs to narrow the digital literacy gap of children. The purpose of this paper is to analyze the pros and cons of these programs, so as to develop some guidelines for the digital literacy education in public libraries.

Methodology

The research method employed in this paper is case study. An assessment panel was set up, combined with the directors of the Guangzhou Children's Library, and professors from LIS School. The statistics, documents, comments and pictures of these digital literacy education programs were reviewed, and librarians who were responsible for running them were interviewed.

Outcomes

The programs we studied were: computer basics and Internet fundamentals instruction, finding books instruction, tablet training courses, digital reading skills training program, and Virtual Reality immersive learning. We found that most of the programs were applied in the forms of games or contests, which were attractive for learners, and provided positive effects on expanding children's digital literacy experiences and skills (Unsworth, 2006). Some guidelines were developed to help public libraries to deliver digital literacy training and services for children in their communities successfully:

1. Make a good plan. Librarians need to spend time to clarify goals, develop the guides, find trainers, and deliver the sessions.
2. Identify specific learning outcomes. It not only enables library staff to better evaluate the success of the program, but also helps learners identify exactly what should be learned and what is to be accomplished.
3. Promote. The library should cooperate with local media and promote all its programs.
4. Cooperate. Libraries can actively seek community partners to build the capacity of all agents involved with providing digital literacy programming.
5. Develop online digital literacy resources.

References

- Burnett, C. (2010). Technology and literacy in early childhood educational settings: A review of research. *Journal of Early Childhood Literacy*, 10(3), 247–270.
- Gilster, P. (1997). *Digital literacy*. New York: Wiley Computer Publishing.
- Unsworth, L. (Ed.). (2006). *E-literature for children: Enhancing digital literacy learning*. London: Routledge.

Keywords: *digital literacy, digital literacy gap of children, digital natives, public library*

Copyright Literacy Competencies from Portuguese LIS Professionals

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Changes introduced by Information and Communication Technologies in information supports and in media that allow access and dissemination of information raise increasingly complex problems in the area of copyright and related rights. In this context, information professionals have to deal with new issues directly linked to this scope such as licenses to use some information resources, conditions of licenses use in institutional contexts, copyright related with institutional repositories, authors rights regarding resources available in e-learning tools, Creative Commons Licenses or the notion of fair use, among others. These professionals have to deal with increasingly complex copyright issues which require specific knowledge and skills.

Attending to this new environment, this communication proposal intends to present the Portuguese results from a survey which gathered the opinions and perceptions of experiences related to copyright issues among librarians, archivists, and other professionals from cultural institutions. The project, part of an international study entitled *Copyright literacy of specialists from libraries and other cultural institutions*, focused on two main objectives: 1. to ascertain to what extent these information professionals are familiar with the issue of copyright, and 2. their knowledge levels regarding the policies and copyright practices in their country and in their institution.

A common questionnaire was created for distribution in fourteen countries (United Kingdom, Italy, USA, Romania, Finland, Hungary, Portugal, Mexico, Lithuania, Norway, Bulgaria, Turkey, France, Croatia) and translated into the respective languages. In terms of structure, this data collection instrument has four parts: one dedicated to general knowledge and perceptions, one on copyright policies at institutional level, on relevant aspects of the formation on copyright and related rights, and the demographic information of the respondents' (gender, age, education and occupation). The questionnaire includes 22 questions, most of which have closed response options.

In Portugal, the survey was distributed between December 2014 and February 2015 and 127 completed questionnaires were collected. Portuguese data will be analyzed and some of them compared with data collected in other countries. Most of the Portuguese respondents claimed to have little knowledge or moderate knowledge about important aspects such as copyright-related works in the public domain, copyright applicable to digitization projects, acceptable use, Open Access, Open Data, Open Educational Resources, Creative Commons Licenses, copyright related with resources available in e-learning tools, copyright related to works outside the commercial circuit or copyright within institutional repositories. However, more than a half of the respondents stated that they are very or moderately interested in issues related to initiatives on copyright promoted by international and national bodies. These and other aspects will be presented and deepened in order to draw a picture about the copyrights literacy knowledge and skills of librarians, archivists and other Portuguese cultural institutions professionals.

As stated in some information literacy standards, the information literate person should be able to use information ethically, namely understanding and applying correctly concepts such as intellectual property, copyright and fair use of copyrighted material. Given this, research aimed at assessing and uncovering copyrights knowledge and skills from LIS professionals can be an interesting contribution to draw a picture of information literacy competencies.

Keywords: *copyright literacy, Portugal, LIS professionals*

Information Literacy Skills Instruction in South Africa: Strategies and Practices in Academic Institutions

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Information literacy is a skill and forms the basis for life-long learning. Information skills instruction is much more than teaching specific tools. It is a process that includes understanding the information environment, identifying an information need, finding and critically using resources to meet that need, and managing information found.

In South Africa many learners leave school without information literacy skills needed in higher education studies. Many students come from a home environment with few or no information skills. A large number of schools have no computer and internet facilities (Hogdson, 2012). Various studies have found that many teachers are not information literate (Zinn, 2013; Wessels & Mnkeni-Saurombe, 2012). Higher education institutions thus face enormous challenges with regards to information literacy skills instruction.

Many theoretical frameworks and models for information literacy have been developed. Different standards have been adopted in South Africa. For example, the University of Stellenbosch information literacy standards are based on the Australian and New Zealand information literacy framework (Burdy, 2004). LIASA (Library Association of South Africa) has a Higher Education Libraries Interest Group (HELIG) that is working on an InfoLit Curriculum for Higher Education and Research institutions. In this paper I will highlight trends in setting standards for information literacy instruction. I will also focus on practices in different higher education institutions in South Africa to develop information literacy skills. I used a questionnaire as a research instrument to survey practices in most of the 25 public higher education institutions. I used qualitative and quantitative data collection methods.

I found that information literacy programmes ranged from basic to advanced information literacy instruction using a wide variety of practices. At one institution, a face-to-face full course on information literacy was compulsory to all first year students. Other institutions have an online information literacy course, compulsory for all first year students where students write and take an online test after completing the course. A number of institutions use LibGuides as information literacy tutorials. The use of mobile information literacy training is another option. Respondents noted the challenge of engaging students in information literacy when such programmes are not mandatory. The best practice for information literacy skills instruction is a topic for investigation in a future study.

References

- Burdy, A. (Ed.) (2004). *Australian and New Zealand information literacy framework: Principles, standards and practice*. Adelaide: Australian and New Zealand Institute for Information Literacy.
- Hogdson, H. (2012). Computer literacy out of reach. *Mail & Guardian*, 22 Sept. Retrieved January 12, 2016 from <http://mg.co.za/article/2012-09-22-computer-literacy-out-of-reach>
- Wessels, N., & Mnkeni-Saurombe, N. (2012). Teacher's use of a school library in a South African township school: Closing the literacy gap. *South African Journal of Library and Information Science*, 78(1), 45–56.
- Zinn, S. E. (2013). The information literacy self-efficacy of disadvantages teachers in South Africa. In S. Kurbanoğlu et al. (Eds.), *Worldwide Commonalities and Challenges in Information Literacy Research and Practice, European Conference on Information Literacy, ECIL 2013, Istanbul, Turkey, October 22–25, 2013: Proceedings. CCIS, vol. 397* (pp. 212–218). Cham: Springer International Publishing.

Keywords: *information literacy, study, teaching, higher education, South Africa*

Academic Policy Reflections of Student's Reading Behavior Study in ULSIT

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Introduction

The Strategy for Effective Implementation of Information and Communication Technologies (ICT) in Education and Science of the Republic of Bulgaria (2014 to 2020) has as its main objective digital transformation in education. In this context, the 2015 survey of students at the University of Library Studies and Information Technologies (ULSIT) as a part of the Academic Reading Format International Study (ARFIS) is essential for updating the institutional policy according to the requirements of the National Strategy.

The ARFIS covers 27 nations and the international collaboration is headed by Mizrachi, Boustany and Kurbanoglu (Mizrachi et al., 2015). The survey goal is to investigate the attitudes and behaviors of students towards academic readings on paper and online; what factors impact their preferences (print or electronic) and their behavior, and how these factors impact their behavior.

Survey implementation in ULSIT

ULSIT is a higher educational institution, which has educational capacity in the field of: Library and Information Sciences, Cultural and Historical Heritage Sciences, Social Communications, Computer Sciences and National Security. The main university units: *Faculty of Library Studies and Cultural Heritage (FLSCH)* and *Faculty of Information Sciences (FIS)*, offer full-time, part-time and distance learning in Bachelor's, Master's and PhD programs. According to the unique nature of ULSIT, we are expanding the goals of the survey with the following question: *Does the studied specialty at ULSIT (belonging to FLSCH or FIS) influence the preferences and behavior of students' academic reading?* The purpose is to gather data for analysis and conclusions with further reflection on institutional policy and concrete improvements in the Quality Management System (QMS) in ULSIT.

Outcomes

In ULSIT the survey was met with interest: from the target group of 350 students - 236 respondents answered the whole survey. The analysis of the results highlighted the statistically significant differences in preferences and behavior of students from both faculties at ULSIT. The students' preference for printed materials from FLSCH stands out, while their colleagues from FIS gladly prefer using teaching materials in electronic format in many cases.

The findings were brought to the attention of ULSIT's management and teaching staff. The recommendations aimed at rethinking the shape of the envisaged educational content, the methodology of student teaching and assessment, acquisition policy and cooperation with the university library, as well as overall academic interaction in different specialties in FLSCH and FIS towards application of ICT in the learning process, and optimization of the learning processes and self-study of LIS students in the modern academia.

The findings of the study at ULSIT on similarities and differences in student's reading behavior and the actions, which are taken to optimize the institutional policy, could be interesting to the LIS international community.

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References

Mizrachi et al. (2015). Academic reading format international study: Investigating the "Print or Electronic" question around the world. In S. Špiranec et al. (Eds.), *[The Third] European Conference on Information Literacy (ECIL): Abstracts, October 19–22, 2015, Tallinn, Estonia* (p. 58). Tallinn: University of Tallinn.

Keywords: *academic readings, ULSIT, LIS higher education, academic reading format international study*

Action Plan for Improving the Learning Practices and Motivation of LIS Students

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Introduction and background

The action plan for improving the learning practices and motivation of Library and Information Science (LIS) students at the University of Library Studies and Information Technologies (ULSIT) is the main focus in this paper.

In 2012-2013 ULSIT participated in an international survey, titled '*Information Behaviours and Information Literacy Skills of LIS Students*' (Saunders et. al., 2015). At ULSIT the survey covered students from BA Programmes (Library and Information Management, Library Studies and Bibliography) and some PhD students. There were 94 complete responses out of 122 respondents. The data is both a valuable source of information and the subject of a thorough analysis to reach theoretical and methodological implementations.

Survey findings and problem oriented conclusions

Purposefully selected data will be used for the goals of this paper. From the results of the 15 core questions, we will interpret the findings from two questions, aimed at obtaining information on student learning skills and study practices when completing course-related assignments as well as about their motivation of learning and expression in an academic environment.

The analysis of LIS students' responses at ULSIT regarding practices applied in the process of learning, shows a positive trend. More than half of the respondents state that they develop a preliminary plan for work on the assignment; understand the importance of quality information retrieval, of mastering the terminology and the ability to formulate a hypothesis. However, a fact that deserves attention is that about a quarter of the students tend to: use the same resources when proceeding from one assignment to another; write on the same topic when proceeding from one assignment to the next one and spend as little time as possible doing the assignment. A negative prerequisite for duplication of presented topics and developments in the different disciplines has been established - hence a lack of incentive for the development of the students. In terms of motivation for learning, the students demonstrate maturity; they are driven by the desire to learn something new and strive to pass their exams and get high marks. It makes a good impression that more than 80 percent of the students are motivated to improve their skills for research activities and analytical thinking. With regard to students' technological skills and their use of tools for preparation and sharing course-relating assignments, the conclusion is that it is necessary to carry out targeted training in order to boost the use of productivity and communication tools.

Action plan for improving the LIS students learning practices and motivation

The core of the Action plan is the new design continuing training program of LIS students, based on the integration between academic education, university library and the Laboratory of Library Technologies, Communications and Informing (LibLab). Setting up a Virtual Information System for users, divided into two main modules - Electronic Register of Academic Assignments and Virtual Personal Workplace, has been suggested as well.

Our main goal is the establishment of updated training methodology and services for our students, according to the new concept of integrating the knowledge triangle (education, research and innovation) at institutional, national and European levels, according to the EIT Strategic Innovation Agenda (SIA) 2014-2020.

References

Saunders, L. et. al. (2015). Information behaviors and information literacy skills of LIS students: An international perspective. *Journal of Education for Library and Information Science (JELIS)*, 56(1), 80-99.

Keywords: LIS higher education, ULSIT, learning practices, student motivation, Virtual Information System

Learning by Doing and Activating the Mind, Key Premises for the Acquisition of Informational Competences

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We present a pilot sample from a research project launched at the University Campus of Lugo. We began with the observation, experience and checking of data which provided evidence that training for the acquisition of competences by means of specific courses provided by university libraries or other training centres do not result in the expected progress in students' learning, taking account of the trends, challenges and progress laid down in Horizon 2020 framework.

We reflect on the current state of this issue as portrayed in various theoretical studies and reports issued by national and European organisations: for example, the Horizon Report Europe: 2014 Higher Education (Commission European, 2014), UNESCO guidelines (UNESCO, 2013), the PISA reports, DIGCOMP (UE, 2013), but also on trends in the labour market, social demands and educational frameworks. This information, once organised and structured, forms the basis for the design of a map or computer graphic representing an optimal synopsis of the realities that we must address.

The aims of this research are: (1) to check that the training programs in informational competences are adapted to the realities as shown in the map and (2) to ascertain whether the learning is integrated into the students' academic life and the teaching staff's educational methods. We have sought to identify weaknesses by analysing the results of a survey carried out among a small sample of the campus's student body. This pilot test has served to assess this methodology and to decide on the definitive sample population. The survey approach has the following dimensions: The aims of the training programs are adapted to the realities of the map. The content corresponds to the aims and the realities. The types of learning methods being used, and the informational competences are integrated into the educational organisation plans. They are developed in the teaching guides, the curricula of the subjects, and in the teaching methods.

The analysis of the results of this small survey show that in the training programs it is necessary to modify the aims, update the contents, and use other methods, more interactive and participative. However, the greatest weakness detected is the failure to integrate informational competences into the study plans, guides, and curricula, together with teaching/learning methods that are directional and outdated. The conclusion is that the performance in the acquisition of informational competences requires learning methods based on projects and on research in the classroom. All the above implies "activating the mind" and "learning by doing".

References

- European Commission. (2014). *The NMC Horizon Report Europe: 2014 Schools Edition*. Retrieved from https://ec.europa.eu/jrc/sites/default/files/2014-nmc-horizon-report-eu-en_online.pdf
- UNESCO. (2013). *Global media and information literacy assessment framework: Country readiness and competencies*. Retrieved from <http://unesdoc.unesco.org/images/0022/002246/224655e.pdf>

Keywords: *digital competences, information literacy, information skills, autonomous learning, learning by doing*

Information Competencies of Historians as Archive Users: A Slovenia/UK Comparison

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This paper reports a study of the information literacies and competencies of historians, both amateur and professional, as users of archives. Better understanding of these issues is particularly important at a time when archives are increasing becoming digital, and providing services to remote users, and also as they begin to store data collections as well as more familiar archival documents. It makes two comparisons of user groups. First, between professional historian and amateurs: the latter, typically genealogists and family historians, are often skilled and sophisticated in their 'serious leisure' information practices. Second, between participants in Slovenia and the United Kingdom: variations here may result from differing national histories, cultures and political systems.

The study is in three parts. First will be a detailed and comprehensive literature analysis, including information competencies of archivists where relevant, as well as those of users, and following methods of qualitative synthesis (Bawden 2012). This will identify the main issues to be examined, focused on the needed and observed competences, and how these may differ between professionals and amateurs. It is well established that there are significantly different issues in information literacies and competencies in the archival context (Vilar and Šauperl 2014), and the literature analysis will draw these out in detail. Second will be a Delphi study with a panel of experts from both countries. The Delphi study is particularly valuable in this context in pointing up consensus or divergence of opinion, and is being used increasingly in information behaviour research (Poirier and Robinson 2014). The experts, in this case, would be archivists; the validity of using expert opinion of this sort to investigate archive users behaviour has been demonstrated (Vilar and Šauperl 2014). This phase will further explore the differences, if any, between amateur and professional historians, and will also investigate any national differences. The third part will consist of proposal development for a more thorough follow-up study, informed by the findings of the first two stages. This would involve a close study of particular contexts and user groups, as well as a larger-scale Delphi study.

References

- Bawden, D. (2012). On the gaining of understanding: Syntheses, themes and information analysis. *Library and Information Research*, 36(112), 147–162. Retrieved from <http://www.lirjournal.org.uk/lir/ojs/index.php/lir/article/view/483>
- Poirier, E., & Robinson, L. (2014). Slow Delphi: An investigation into information behaviour and the slow movement. *Journal of Information Science*, 40(1), 88–96.
- Vilar, P., & Šauperl, A. (2014). Archival literacy: Different users, different information needs, behaviour and skills. In S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 149–159). Cham: Springer International Publishing.
- Vilar, P., & Šauperl, A. (2015). Archives, quo vadis et cum quibus?: Archivists' self-perceptions and perceptions of users of contemporary archives. *International Journal of Information Management*. 35(5), 551–560.

Keywords: *archives, archivists, historians, information competencies, Delphi method*

Knowledge Management and Information Literacy: An Exploratory Analysis

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Objective and Value

Since the mid-1990s knowledge management (KM) has emerged as a rapidly growing field that covers diverse areas and disciplines. According to Dalkir (2011, p. 3): KM “is the deliberate and systematic coordination of an organization’s people, technology, processes, and organizational structure in order to add value through reuse and innovation. This coordination is achieved through creating, sharing, and applying knowledge as well as through feeding the valuable lessons learned and best practices into corporate memory in order to foster continued organizational learning”. Several authors have explored KM from the library and information science perspective and found a strong link between these two domains (Roknuzzaman, 2009). However, research on information literacy (IL) and its relationship to KM is still quite rare. Most of the literature on workplace based IL research and practice does not attempt to define IL for the workplace (Williams, Cooper & Wavell, 2014). Williams et al. (2014, p. 3) note that in comparison with many of the generic definitions and models of IL these contextualised workplace IL descriptions all tend to place much greater emphasis on social, informal, contextualised processing of information, the transformation of information to knowledge, and information creation, packaging, and organisation. IL in this study is defined as the skills, knowledge, attitudes, experience, attributes, and behaviour that are needed to find, evaluate and use information effectively (Virkus, 2006, p. 470). This article explores the questions to what extent IL and KM are addressed in the research literature.

Methodology and Expected Outcomes

Analysis of research publications was based on searches in the Web of Science, Scopus and the Google Scholar database. Searches were carried out by the author in February 2016 using terms ‘information literacy’, ‘information skills’, ‘information competence’, ‘information practice’, ‘information culture’, ‘information use’ and ‘knowledge management’ or ‘workplace’. The following research questions were proposed: 1) What are the main tendencies in document types, publication years, source titles, subject areas, languages and countries of publications related to IL and KM? 2) What are the main themes discussed in the publications related to IL and KM? A statistical descriptive analysis of document type, authors, source titles, publication years, languages, countries, keywords and subject areas of publications as well as a thorough content analysis of these publications was made.

Results of the Study

The author will present an overview of how IL and KM are discussed in the research literature and identifies research gaps in this field. A statistical descriptive analysis of document type, authors, source titles, publication years, languages, countries, keywords and subject areas of publications is presented. A thorough discussion of the findings in relation to previous studies on IL in work contexts will be presented in the paper. The added value of this paper is that this analysis for identifying research gaps from systematic review can direct research agendas to influence future research and practice.

References

- Dalkir, K. (2005). *Knowledge management in theory and practice*. Amsterdam: Elsevier.
- Roknuzzaman, M. (2009). *When existing and emerging disciplines meet: Library and information science vs. knowledge management* (Doctoral dissertation). Japan Advanced Institute of Science and Technology.
- Virkus, S. (2006). Development of information-related competencies in European ODL institutions: Senior managers’ view. *New Library World*, 107(11/12), 467–481.
- Williams, D., Cooper, K., & Wavell, C. (2014). *Information literacy in the workplace: An annotated bibliography*. Aberdeen: Robert Gordon University.

Keywords: *information literacy, knowledge management, literature review, statistical descriptive analysis, content analysis*

Digital Literacy as a Factor Boosting Employability of Students

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Introduction

In the world in which the labor market is changing frequently, students are making a great effort to acquire knowledge and skills necessary for their employment. Today, employers expect students to have excellent digital capabilities, that is, to be digitally literate and to be able to transfer their acquired digital literacy related knowledge and skills to their future working environment. The failure to meet the requirements for digital literacy may decrease a student's odds for easy employment.

There are numerous views on the role of digital literacy in increasing employability. For instance, Hicks and Hawley-Turner (2013, 59) see digital literacy as an opportunity to “critically consume information, to create and share across time and space, to co-create and collaborate to solve problems, to persevere in light of setbacks, and to maintain flexibility.” There are also other numerous views on digital literacy, and each view proposes its own set of elements necessary to call a person digitally literate. In the context of students and their employment, each view provides an insight into requirements that a digital literate person should meet in order to become suitable as an employee for a specific job.

At the Faculty of Humanities and Social Sciences, University of Zagreb, Croatia (the FHSS), students are taught about the concepts of digital literacy in different courses in order to become prepared for their future jobs. In this paper I will (1) analyze several views on digital literacy written by the information professionals and scientists and, (2) I will then compare these views with the views and perceptions of the FHSS students. This paper presents students' views on digital literacy and its relationship to their employability.

Objectives

The objective for this research is to identify challenges in three main topics (1) the current state of their digital literacy; (2) students' views and perspectives on education in digital literacy; and, (3) students' views and perspectives on the influence of digital literacy on their employability. The results of the research will serve as an input for a discussion about changes in academic curriculum necessary for its adaptation to the requirements of the labor market.

Methodology

In the first part of the paper, I will conduct the analysis and comparison of digital literacy definitions and their key elements. In the second part of the paper, I will describe the results of a survey about digital literacy and employability of the FHSS students.

Outcomes

A healthy labor market requires active involvement of several stakeholders: students (future working force), employers, and the educational institutions that will prepare students for different digital technology related and supported jobs. The main outcome of this research will be the increase of the employability awareness in the student population as one of the key stakeholders in the labor market. It should also assist students in articulating their wishes and requirements for the digital technology related knowledge and skills that they want or need to develop that will easily transfer to their future working environment.

References

Hicks, T., & Turner, H. K. (2013). No longer a luxury: Digital literacy can't wait. *English journal*, 102(6), 58–65.

Keywords: *digital literacy, employability, academic achievement, academic curriculum*

Extending Digital Literacy in Mid-teens to Support Information Discernment

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Introduction

Research with young people demonstrates that their ability to function in digital environments on a psychomotor level may well be impressive but cognitive responses need to be supported by mechanisms that increase their understanding of the information environment (Pickard et al, 2010). This work aims to build a new toolkit for digital literacy and informed digital citizenship drawing on previous research on trust (Pickard et al, 2010) and digital discernment (Walton & Hepworth, 2013). It aims to empower school students to make informed judgments on the trustworthiness of online information resources. This paper presents the findings of a British Academy/Leverhulme funded project involving one case study of 16-17-year-old students in a UK school.

Research objectives

The project had 4 objectives: 1. Create a practical digital literacy toolkit methodology; 2. Evaluate the methodology using pre- and post-intervention observations on a sample of 16-17-year-old students; 3. Redesign the digital literacy toolkit via participatory research methodology to be offered to schools at a variety of educational levels; 4. Consider the potential of this methodology for application with a wider population to encourage empowered citizenship.

Research methodology

Participative Research and Action was used, which emphasises participants' perceptions and interpretations of their own information needs. The team monitored and evaluated the intervention (using the toolkit methodology) by seeking written and focus group feedback from participants, before, during and after the workshops (n=42). A final evaluation employed in-depth interviews with teachers (n=3), a school student focus group (n=6) and an analysis of artefacts produced by students. One cycle of design, synthesis, action and evaluation was used to evidence impact.

Findings

Our findings confirmed the results of many studies (for example, Pickard et al, 2010) that school students adopt a cognitive default position of trust and are relatively unquestioning when using information sources for their work (in this case the Extended Project Qualification or EPQ). Results also showed that with an appropriate embedded learning and teaching intervention toolkit, which includes aspects of information and digital literacy, school students adopt a cognitive questioning state (pro-active scepticism), develop their own sceptical vocabulary which enhances their information discernment and in turn enables them to make better information choices. This has implications not only for school teachers and librarians but for educational policy makers also.

References

- Pickard, A. J., Gannon-Leary, P., & Coventry, L. (2010). *JISC users' trust in information resources in the Web environment: A status report*. Retrieved March 16, 2015 from: http://repository.jisc.ac.uk/470/2/JISC_User_Trust_final_report.pdf
- Walton, G., & Hepworth, M. (2013). Using assignment data to analyse a blended information literacy intervention: A quantitative approach. *Journal of Librarianship and Information Science*, 45(1), 53–63. Retrieved March 16, 2015 from <http://lis.sagepub.com/content/45/1/53.short>

Keywords: *information discernment, digital literacy, secondary schools, participatory research*

Information Literacy, Threshold Concepts, and Disciplinarity

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Threshold Concepts (TCs) are significant in developing the Association of College and Research Libraries (ACRL) Framework for Information Literacy (ACRL, 2015) and this has stimulated discussion about using TCs in Information Literacy (IL). This paper briefly summarises TCs; identifies key disciplinary and pedagogical anomalies in the approach to TCs in IL; and presents proposals for exploring TCs in IL more holistically. TCs emerged from research into characteristics of quality learning environments in UK higher education (Meyer & Land, 2005). TCs are described as transformative concepts within disciplines, enabling learners to conceive the subject in a new way and experience possibilities for deeper disciplinary thinking and practice. Meyer & Land (2005) identify ways for educators to use TCs to facilitate “epistemological transitions, and ontological transformations” (Meyer & Land, 2005: 386). They note the danger of structuring teaching mechanistically, which might encourage mimicry rather than understanding; they also identified the value of variation as a teaching strategy. Åkerlind et al. (2014) have taken this further by combining phenomenography, variation theory, and TCs.

We identify two anomalies in the way in which TCs have been developed for IL. The first is in sidestepping the question of disciplinarity (as do Townsend et al. (2011)). The studies that have inspired ACRL’s use of TCs have investigated the views of librarians teaching IL to learners of other subjects. This is different from identifying the TCs of a discipline, for learners aiming to think and practice in that discipline (the usual focus for TCs). Tucker et al (2014) have proposed TCs as valuable for the information curriculum, but there is no study of IL TCs for people studying IL as a subject in its own right. The second anomaly is the way in which TCs are fixed generically within the ACRL Framework, rather than acknowledging that IL is experienced differently within different subject disciplines (Webber et al., 2005). Further, there is evidence that they are being incorporated in reductive ways (e.g, Oakleaf, 2014), that may negate transformative possibilities and lead to mimicry and surface learning.

We draw on experience in teaching IL as a subject to propose an approach to discovering and using TCs for IL education that acknowledges that IL has its own epistemology and ontological reality (Johnston & Webber, 2006). This is elaborated with observations and reflections from an IL module using an action research framework.

References

- Åkerlind, G., McKenzie, J., & Lupton, M. (2014). The potential of combining phenomenography, variation theory and threshold concepts to inform curriculum design in higher education. In J. Huisman, & M. Tight (Eds.), *Theory and Method in Higher Education Research II*. (pp. 227–247). Bingley, England: Emerald Group Publishing Limited.
- Association of College and Research Libraries. (2015). *Framework for information literacy for higher education*. Retrieved February 15, 2016 from <http://www.ala.org/acrl/standards/ilframework>
- Johnston, B., & Webber, S. (2006). As we may think: Information Literacy as a discipline for the information age. *Research Strategies*, 20(3), 108–121.
- Meyer, J., & Land, R. (2005). Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher Education*, 49(3), 373–388.
- Oakleaf, M. (2014). A roadmap for assessing student learning using the new framework for information literacy for higher education. *The Journal of Academic Librarianship*, 5(40), 510–514.
- Townsend, L., Brunetti, K., & Hofer, A., (2011). Threshold concepts and information literacy. *Portal: Libraries and the Academy*, 11(3), 853–869.
- Tucker, V., Weedman, J., Bruce, C., & Edwards, S. (2014). Learning portals: analyzing threshold concept theory for LIS education. *Journal of Education for Library and Information Science*, 55(2), 150–165.
- Webber, S., Boon, S., & Johnston, B. (2005). A comparison of UK academics’ conceptions of information literacy in two disciplines: English and Marketing. *Library and Information Research*, 29(93), 4–15.

Keywords: *information literacy, pedagogy, threshold concepts, disciplinarity*

How Groups Talk Information Literacy into Being

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This paper reports on an investigation of how groups make collective judgments about the relevance of information. The aggregation of individual perceptions of need, credibility, value, and other aspects of relevance, into a collective judgment that can be captured and then used to guide the selection of information by a group, is, according to Saracevic (2007), an intractable problem in information science. This problem exists despite the fact that practice-based views of information literacy (IL) define IL not as individual competencies and skills but as intersubjective agreements through which the information landscape of the group or community is continuously negotiated. The problem Saracevic describes, therefore, can be posed not as one that questions the existence of these intersubjective processes – but of how to raise them into the collective awareness of the group and then capture them. And it is important to capture them in ways that do not reify or institutionalise the judgments (cf. Wenger 1998), but allow the community to scrutinise them, review them if necessary, and thus distribute authority over information practice widely across the group. Scrutiny of information practice in this way is an essential element in integrating IL into workplace learning in ways that empower communities of practice rather than take judgments about practice out of community hands (Whitworth 2014), but these difficulties have led to the problems Saracevic describes.

As part of the *Bibliotek i Endring* (“Changing Libraries”) project, four groups of workplace learners – in this case academic librarians – engaged in six facilitated concept mapping sessions over a period of one year. These sessions took place in the context of a period of substantial organisational change involving the merger of several libraries into one and the arrival of a new Director (see Whitworth, Torras, Moss, Amlesom Kifle and Blåsternes 2016). The maps created were intended to raise their awareness of their information landscape and issues such as blockages in flows, contested judgments about relevance, priority areas for scrutiny, and review. But just as important as the maps was the *mapping*; the process of facilitated discussion that “talked the map into being”, and how this increased community members’ knowledgeability (Wenger-Trayner and Wenger-Trayner 2015) of practices, values, and judgments across the workplace landscapes.

The mapping sessions were audio-recorded. We will report in our paper on the analysis of these recordings. The analysis will particularly focus on the role of facilitators in helping the groups with their collective judgments. In addition, we will examine how the facilitators and participants learned about mapping as a practice and how they used it to fulfill their shared – and separate – information needs. Through doing so, some light can be shed on the difficulties involved with capturing collective judgments. We will also use these results to greater understand where these difficulties can be overcome and the benefits which accrue through an understanding of how IL plays out at the collective, intersubjective level.

References

- Saracevic, T. (2007). Relevance: A review of the literature and a framework for thinking on the notion in information science. Part III: Behavior and effects of relevance. *Journal of the American Soc. for Information Sci. and Tech.*, 58, 2126–2144.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.
- Wenger-Trayner, E., & Wenger-Trayner, B. (2015). *Learning in landscapes of practice: A framework. Learning in landscapes of practice boundaries, identity and knowledgeability*. London, United Kingdom: Routledge.
- Whitworth, A. (2014). *Radical information literacy: Reclaiming the political heart of the IL movement*. Oxford: Chandos.
- Whitworth, A., Torras i Calvo, M., Moss, B., Amlesom Kifle, N., & Blåsternes, T. (2016). Mapping the landscape of practice across library communities. Paper forthcoming in *portal: Libraries and the Academy*.

Keywords: *workplace learning, radical information literacy, mapping, intersubjectivity, communities of practice*

Teacher Perspectives on Whole-Task Information Literacy Instruction

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Introduction

Contemporary instructional design models for complex skill learning adhere to holistic, task-centered design principles. We used such contemporary ‘whole-task model’ –the Four-Component Instructional Design model (4C/ID-model; Van Merriënboer & Kirschner, 2013) – to design a premaster’s course on conducting literature reviews in the domain of Educational Sciences. A previous study we conducted on the quality of this course proved that the 4C/ID-approach was effective. All subjects passed the course and they positively valued course content and level. However, ‘time on task’ for both students and teachers was relatively high, which questioned efficiency (Wopereis, Frerejean, & Brand-Gruwel, 2015). To triangulate these findings, we initiated the current study that aimed to reveal the teacher’s views on effective holistic course design and successive development and implementation issues.

Methods

Seven university teachers of the distance premaster’s program Educational Sciences at the Open University of the Netherlands participated in this study. At the time of the data collection, each had supervised, on average, 46 students in the online literature review course. This course consisted of five learning tasks that were based on authentic literature reviewing tasks. Each task comprised all phases of a literature review from formulating a research question to presenting the results in a paper. The completion strategy was applied to scaffold instructional support throughout the course. To collect data on (perceived) course quality, we asked the teachers to fill in the SEIN questionnaire, which records perceptions on course level, content, and studiability (see Wopereis et al., 2015). In addition, we asked the teachers to perform a SWOT analysis to specify strengths, weaknesses, opportunities, and threats related to the holistic approach to course design, and subsequent development, and implementation.

Results and discussion

Analyses of the SEIN questionnaire showed that the teachers’ perceptions on course quality were positive, which resembles the students’ views presented by Wopereis et al. (2015). Non-parametric tests only indicated differences in perceived feedback quality. Teachers were more critical towards feedback scale and frequency than the students. The SWOT-analysis emphasized the teachers’ critical stance towards the course feedback system: its nature was regarded a strength, its scale a threat. Most of the strengths in the course that the teachers identified were related to basic 4C/ID-principles like authenticity as base for instruction, completion strategy to scaffold instruction, and whole-tasks for integrated learning. The teachers also regarded the latter as a threat since the scope of a full literature review is broad. Since the length of the course was limited to 120 hours of study, this led to restrained attention for important skills like ‘critical thinking’ and ‘academic writing’ and consequently to a misalignment of learning goals, course content, and assessment. According to the university teachers, more emphasis on constructive alignment of goals, content, and assessment would improve the return on investment of the 4C/ID-approach. We propose further development of large inter-related units of information literacy skill learning throughout the pre-master’s curriculum as an opportunity for curriculum redesign. There, 4C/ID-principles like ‘backward chaining with snowballing’ could be implemented to meet task complexity.

References

- Van Merriënboer, J. J. G., & Kirschner, P. A. (2013). *Ten steps to complex learning: A systematic approach to four-component instructional design*. New York, NY: Routledge.
- Wopereis, I., Frerejean, J., & Brand-Gruwel, S. (2015). Information problem solving instruction in higher education: A case study on instructional design. In S. Kurbanoglu et al. (Eds.), *Information Literacy: Moving Toward Sustainability, Third European Conference on Information Literacy, ECIL 2015, Tallinn, Estonia, October 19–22, 2015: Revised Selected Papers. CCIS, vol. 552* (pp. 293–302). Cham: Springer International Publishing. doi: 10.1007/978-3-319-28197-1_30

Keywords: *information literacy, instructional design, whole-task models, 4C/ID-model, university teachers*

Seeking Creativity: A Case Study on Information Problem Solving in Professional Music

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Introduction

This study explored the information seeking behavior of a professional jazz musician during creative work. It aimed at revealing the information seeking skills necessary to successfully execute present-day musical projects. Project-based work, such as a composition assignment or a recording, is a prominent task in the domain of jazz music. It gives musicians the opportunity to exercise agency over their artistic lives, which is regarded important for sustaining a passion for music (Wopereis, Stoyanov, Kirschner, & Van Merriënboer, 2013). Therefore, we decided to focus on a concrete musical project as unit of study. Research on information-seeking in musical projects is relatively scarce and merely focuses on solving information problems in educational and scholarly contexts. For that reason, this study addressed information-seeking in the professional context of creating art. Due to the emergence of internet technology it was assumed that information seeking and sharing would play an important role in the course of contemporary musical projects.

Method

The study used a case study approach (Yin, 2014) to explore the information seeking behavior of the second author, a professional jazz pianist. The project central to the exploration covered a solo piano composition and recording activity. We selected this project because it represents a common professional activity of a professional jazz pianist (i.e., composition and subsequent studio recording). A two-stage interview procedure was set up to collect data from the pianist/composer. The first interview focused on revealing the project's scope and phases. It further aimed to identify information needs, seeking strategies, and sources on a global level. The second interview systematically analyzed information seeking behavior during the several phases of the musical project. The musical information seeking framework of Lavranos, Kostagiolas, Martzoukou, and Papdatos (2015) was used to analyze the interview data.

Results and discussion

The results show that the pianist mainly searched for information in the first phases of the project (initiation, planning, and composition). Within these phases he iteratively searched for examples (recordings) of solo piano performances of personally respected pianists in order to get an idea how to arrange the CD-recording and how the sound of the recording should be. Ideas were shared with the recording engineer and tested in the studio. Sources of information to get inspired were web sites and social network sites of renowned solo pianists, music publishers, and (other) musical databases. Search strategies were both goal-driven and data-driven. A specific crowdfunding site was used to promote the project (dissemination phase). In the paper we will discuss the musician's phases of information seeking and dissemination behavior. Furthermore, we will elaborate on the application of Lavranos et al.'s (2015) framework for analyzing such behavior in a contemporary professional musical context.

References

- Lavranos, C., Kostagiolas, P., Martzoukou, K., & Papdatos, J. (2015). Music information seeking behaviour as motivator for musical creativity. *Journal of Documentation*, 71, 1070–1093. doi:10.1108/JD-10-2014-0139
- Wopereis, I. G. J. H., Stoyanov, S., Kirschner, P. A., & Van Merriënboer, J. J. G. (2013). What makes a good musical improviser? An expert view on improvisational expertise. *Psychomusicology: Music, Mind, and Brain*, 23(4), 222–235. doi:10.1037/pmu0000021
- Yin, R. K. (2014). *Case study research: Design and methods*. Thousand Oakes, CA: Sage.

Keywords: *information literacy, information seeking, creativity, music*

Using Character Strengths: Two Years of Action Research on Academic Information Literacy

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Objectives

Even with the knowledge of journal databases or Boolean operators, some students cannot find the information they need or even understand the retrieval knowledge, particularly for finding research topic. The purpose of this paper is to find an effective solution to this problem.

Methodology

This action research was conducted from two routes, one was individual face to face research consulting, and the other was information literacy courses and workshops. The questions and solutions found in the consultations were applied to the courses and workshops, by redesigning the Problem-Based Learning(PBL) with the 24 Character Strengths (Peterson & Seligman, 2004). The researcher modified action plans for each round based on the interview feedback. From 2014 to 2015, the researcher designed several rounds of action plans, which were divided into four stages, including five courses (or workshops) and more than 30 individual counseling. The courses (or workshops) lasted approximate 58 hours. And consultations totaled about 60 hours. Nearly 600 university students and teachers participated in this research. The researcher added the different Character Strengths elements during the first three stages. The fourth stage was a comprehensive validation phase.

Outcomes

This research constructs an information literacy teaching approach, whose core purpose is developing judgment. The key links are spirituality, perseverance, self-regulation, supplemented with the social intelligence, team work, honesty, and so forth. The approach is based on task-based learning (Skehan, P.,1996, Vakkari, P., 2001): different groups of students need to solve different problems to complete the task. There are four main modules: asking the right question to find the purpose; an imagining game to find the keywords; clustering the results with mind manager to find the contents; and setting up the scheduling calendar to follow through. The teaching approach enables individuals to follow the retrieval behavior and apply retrieval knowledge flexibly. It has a significant effect on finding research topics. However, this approach is more suitable for small classes. The instructional design has higher requirements for instructors. In addition, because the participants in this study were mainly from the Arts and Humanities, application to other disciplines may need more consideration.

Originality/Values

The research proposes a technique of teaching academic information literacy and supporting readers' skills development to achieve academic success. In the new digital age, acquiring the information literacy and being well educated people should complement each other. The approach hopes to cultivate educated people, which is essential for a society's development.

References

- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Oxford: Oxford University Press.
- Skehan, P. (1996). A framework for the implementation of task-based instruction. *Applied Linguistics*, 17(1), 37–62.
- Vakkari, P. (2001). A theory of the task-based information retrieval process: A summary and generalisation of a longitudinal study. *Journal of Documentation*, 57(1), 44–60.

Keywords: *moral reasoning, pedagogy, critical thinking, information literacy*

English Language as a Promoter of Media Literacy Education

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In a postliterate society, wherein the previous print literacy is augmented by the notion of multiliteracy, media literacy education implies learning and teaching about the media arts to foster students' ability to access, analyze, create and evaluate messages in various formats and genres. This paper, therefore, compares appropriation, collective intelligence, distributed cognition, experiment, judgment, multitasking, negotiation, networking, simulation, performance, play and transmedia navigation in a mother tongue (for example, in Croatian) to the English language, which, de facto, is a lingua franca. Hypothetically, language instruction within an expanded media literacy concept facilitates a unified empowering and protective perspective, for it provides for an examination of representational typology to detect censorship, copyright breaches, gender and racial stereotypes (for example, sexist expression), propaganda, violence, and Internet privacy infringement (that is, cyberbullying) in the new digital "narratives" or "texts," too.

The students' profiles may thus be modified from simple consumers to conscious observers, who are capable of discerning commercial profit-driven manipulation or reality constructs fabricated by public relations experts, as hypothesized by media theoreticians (Buckingham, 2007) in terms of audience, language, production and representation. Henry Jenkins (2009) consequently reconfigures these media landscapes to better reflect participating industry professionals' practices, i.e., to address their circulatory and distributional regulations, as well as to appease the differences and satisfy the target audience's expectations, so an involved modern juvenile has to acquire a new set of media-influenced cultural competences and social skills.

Rationale

Constructively contextualized and pioneered by the Center for Media Literacy's 2010-2011 interviews and UNESCO's curricular training resources, an integrated, modern critical and theoretical framework has been historically established in the United States, the European Union, and beyond. This framework is derived from the variously focused but generally positive experiences that usually date back, in the case of Europe, as far as the 1990s (including, Finland, Sweden, Denmark, France, Germany, and the Netherlands). Nonetheless, pursuant to the notes by Culver, Hobbs, and Jensen (2010), this paper's objective is a congenial demonstration that a concept of media literacy education should be extended to also encompass "teaching about media," not merely a state-of-the-art multimedia technology application in classrooms, especially when it comes to English language instruction.

Methodological application and contribution

In terms of a communicational interactivity, this paper's outcome is dedicated to exemplification of how formal, informal, and non-formal English language instruction, assisted by the ideas of active inquiry, critical thinking, and lifelong learning, may be successfully instrumentalized and transmediated in a realization of thematic and terminological (intertextual) connection between history, literature, motion pictures and television. Consequently, this exemplification promotes an objective appraisal of contemporary audiovisual digitalization of mass culture, as well as collaborative problem-solving techniques, necessary for an individual's engaged democratic socialization. Involving its paradigmatic selections and syntagmatic combinations, the English language is a frequent vehicle of multimedia products' syntheses and information disseminations, whereby a proper study of its codified conventional semantics and salient linguistic details may indeed increase the students' media literacy and their inclusive mental capacities.

References

- Buckingham, D. (2007). *Media education: Literacy, learning and contemporary culture*. Cambridge: Polity.
- Culver, S., Hobbs, R., & Jensen, A. (2010). Media literacy in the United States. *International Media Literacy Research Forum*. Retrieved April 8, 2016 from <http://www.imlrf.org/united-states>
- Jenkins, H. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. Cambridge, MA: The MIT Press.

Keywords: *education, English, language, literacy, media, promotion*

Are We Speaking the Same Language? IT Employer's Requirements on IL Generic Competences of Their Future Employees

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Dialogue of employers and administrators in higher education regarding practitioner production is usually poor when there is no mutual understanding of needs and offerings. Educational reforms in Croatia rarely focus on generic competences related to information literacy. The research of the university syllabi (Banek Zorica and Spiranec, 2014) has shown that there is no general approach to the issue but a partial incorporation of information competences in the study programs by individual enthusiasts. Furthermore, research on employers' job advertisements (Pažur Aničić and Arbanas, 2015) shows focus on diploma qualifications and negligence of the competences as an employment criterion. Still, the body of literature, from the human resource management field, shows that competencies present the most prevalent method used to define ideal employees and have become a fundamental part of talent management (Griffiths and Washington, 2015). The concept of competency has shown to be a base for providing a common language, but the emergence of various the competency models published is actually deepening the communication divide. The employment sector and workplace research shows that there are lot of valuable generic competences expected from new practitioners, which can be mapped to information literacy, often bringing more value than their subject matter expertise (Banek Zorica, Spiranec, Ogrizek Biskupic, 2014). Furthermore, examples like recent SCONUL employability lens (Goldstein, 2016) prove a necessity to emphasize information literacy competences as a bridge between graduates and employees.

Current socio-political trends in Croatia are focused on connecting graduates with the employment sector. Still, there seems to be a wide gap in communication between higher education institutions, employers and graduates. Therefore, our research is oriented towards creating tools that could improve communication between these three instances in creating a framework of competences related to information literacy. The first step was to investigate employer insights on the generic and transferrable competences they expect from their employees in different stages of their employment. Research was based on grounded theory where interviews with human resource managers of the five biggest Croatian companies (i.e. companies with the highest employability rates) were conducted, data analyzed and coded. The results were used to create a set of core competences mapped to information literacy skills and competences to create a base for framework. The purpose of the research is to develop the competency framework that can serve as a communication tool during the development of the curriculum, as guidance to graduates during their transfer between higher education and employment sector, and as a set of clearly defined competences for the human resource management sector during their employment process.

References

- Banek Zorica, M., Špiranec, S., & Ogrizek Biškupić, I. (2014). What is the employers stand on information literacy: Researching employers on expected generic outcomes of their future employees. In S. Kurbanoglu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 673–682). Cham: Springer International Publishing.
- Banek Zorica, M., & Špiranec, S. (2014). Assessment of the information competences in the study programs at the University of Zagreb. In L. Gómez Chova, A. López Martínez, & I. Candel Torres (Eds.), *INTED2014 Proceedings* (pp. 4439–4446). Valencia: IATED Academy.
- Goldstein, S. (2016). *Graduate employability lens on the SCONUL Seven pillars*. Retrieved February 20, 2016 from <http://www.sconul.ac.uk/publication/graduate-employability-lens-on-the-sconul-seven-pillars>
- Griffiths, B., & Washington, E. (2015). *Competencies at work: Providing a common language for talent management*. New York: Business Expert Press, LLC.
- Pažur Aničić, K., & Arbanas, K. (2015). Right competencies for the right ICT Jobs: Case study of the Croatian labor market. *TEM Journal - Technology, Education, Management, Informatics*, 4(3), 236–243.

Keywords: employer requirements, competences, information literacy

DOCTORAL PAPERS

Information Literacy (IL) Integration Provision in the Curriculum and Primary School Teachers' Teaching Practice: A Case of Pakistan

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Our paper analyses the extent to which information literacy (IL) can be identified in the Pakistani school curriculum. We combine these findings with those from a case study investigation into IL in primary schools in Lahore, Pakistan, to illuminate the possibilities and practice of incorporating IL into the primary school curriculum.

The basic IL curriculum components identified by experts, professional associations, and researchers include library, media and computer literacy for young children (e.g. Eisenberg, 2011). A number of studies have agreed on a process based IL approach in school settings (Abilock, 2004). However, in a Pakistani context, the literature contains few research based studies at the school level. A previous study by the first author of Pakistan's primary school teachers' perceptions of IL showed that this level is vulnerable in terms of IL learning (Batool & Khalid, 2012).

In our study we reviewed the official Pakistani primary school curriculum (National Curriculum, 2007) to find the components of information literacy suggested by school based IL models and teachers' teaching practice. In order to map the IL in the current curriculum, we used an existing IL framework. We chose James Herring's PLUS model (1996) as this model is research based and specifically designed for school settings. We used the PLUS model components to analyse the national primary (Grade 1 & 2) curriculum of Pakistan in three subjects: English language, General Knowledge, and Mathematics). We also interviewed primary school teachers to examine practical implementation of IL components in their teaching methodology. These interview data formed part of a multiple case study investigation of the information literacy needs of primary schools in Lahore, Pakistan. We selected six accessible and different types of schools from public and private sectors as cases to see the picture of information literacy from different lenses at the primary level (Shahid, 2014).

We found that both grades of the English language curriculum incorporated basic IL components of the "P", "L," and "U" of PLUS model. The General Knowledge curriculum has limited IL connections, only integrating location skills. Our interview findings showed that only elite class private school teachers were incorporating limited IL skills into their teaching methodology; thus the teachers were not taking advantage of opportunities for IL that are present in the curriculum documents. We conclude our paper by suggesting practical implications for policymakers, educationists, researchers, school management, teachers, and librarians in Pakistan. However, the recommendations can be used in the same circumstances (or cities of Pakistan or in developing countries context) or where similar education systems are in practice.

References

- Abilock, D. (2004). Information literacy from prehistory to K-20: A new definition. *Knowledge Quest*, 32(4). Retrieved November 11, 2008 from <http://www.ala.org/ala/mgrps/divs/aasl/aaslpubsandjournals/kqweb/kqarchives/vol32/32n4abilock.pdf>
- Batool, S. H., & Mahmmod, K. (2012). Teachers' conceptions about information literacy skills of school children. *Pakistan Journal of Library & Information Science*, 13. Retrieved from <http://pu.edu.pk/images/journal/pjlis/pdf/pjlis-13-batool.pdf>
- Eisenberg, M. (2011). *Introducing the Big6*. Retrieved from http://big6.com/media/presentations/Big6%20Overview_Eisenberg_2011.pdf
- Herring, J. (1996). *Teaching information skills in schools*. London: Library Association Publishing.
- Government of Pakistan. Ministry of Education. (2007). *National Curriculum for General Knowledge Grades I-III*. Retrieved from http://www.ibe.unesco.org/curricula/pakistan/pk_pr_gen_2007_eng.pdf
- Shahid, S. H. (2014). Early findings from a study of information literacy practices in primary schools of Pakistan. In S. Kurbanoğlu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20-23, 2014: Proceedings. CCIS, vol. 492* (pp. 282-290). Cham: Springer International Publishing.

Keywords: *information literacy, primary school, curriculum, Pakistan*

Exploring the Lived Experience of Middle School Students Engaged in Inquiry Based Learning

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This paper details pilot study research that uses the phenomenological method (van Manen, 1990) to explore the lived experience of middle school students (ages 13-14) engaged in a Student Driven Inquiry (SDI) approach to Inquiry Based Learning. IBL is well-established active learning model based on the pursuit of a question or problem (Duffy & Raymer, 2010; Kuhlthau, Maniotes, & Caspari, 2007) and is of interest to librarians and information scientists for the information literacy skills (McKinney, 2010) and “higher skills” (Bruce, 1997) embedded in IBL practices. SDI is a unique and emerging form of Inquiry Based Learning (IBL) that privileges student autonomy. Here the teacher operates as facilitator and not director. The driving question for this study is: What is the essence of the student experience in a Student Driven Inquiry framework?

There exists a raft of IBL literature showing positive student academic and achievement outcomes focused at high school and college levels in science and math courses (Saunders-Stewart, Gyles & Shore, 2012). There exists a dearth of research on the affective outcomes of the student experience of IBL at the lower grade levels, in other content areas, and from the student perspective (Saunders-Stewart, Gyles, Shore & Bracewell, 2015). The phenomenological method allows an in-depth look into the student lived experience of SDI through the use of open-ended interviews. The method includes: aural description of experience by the student, student-edited researcher writing, common theme identification, and a final description that limns the essence of the lived experience. The pilot study outcomes are derived from the phenomenological reduction and interpretation of student interviews, which elicited six common themes of student experience: joy in study, appreciation for autonomy, satisfaction with self-selected topic, enthusiasm for learning, time management learning, and stress. These themes suggest the essence of the Student Driven Experience is one of deeper, joyful student engagement and learning.

This research will add important information to the growing conversation on K-12 information literacy (Bruce, 2004) and inquiry learning models (Duffy & Raymer, 2010; Kuhlthau et al., 2007). The illumination of these affective outcomes of the student experience of SDI will inform further scholarly research and practitioner focus on deeper learning, research with youth, curriculum development, student motivation, and the holistic student experience.

References

- Bruce, C. (1997). The relational approach: A new model for information literacy. *The New Review of Library and Information Research*, 3, 1–22.
- Bruce, C. (2004). Information literacy as a catalyst for educational change. A background paper. In D. Patrick. (Ed.), *Lifelong Learning: Whose responsibility and what is your contribution?: The 3rd International Lifelong Learning Conference, 13–16 June 2004*. Central Queensland University Press: Yeppoon, Queensland.
- Duffy, T. M., & Raymer, P. L. (2010). A practical guide and a constructivist rationale for inquiry based learning. *Educational Technology*, 50(4), 3–15.
- Kuhlthau, C., Maniotes, L., & Caspari, A. (2007). *Guided inquiry: Learning in the 21st century*. Westport, Conn.: Libraries Unlimited.
- McKinney, P. (2010). *Inquiry-based learning and information literacy*. Sheffield, UK: University of Sheffield.
- Saunders-Stewart, K. S., Gyles, P. D. T., & Shore, B. M. (2012). Student outcomes in inquiry instruction: A literature-derived inventory. *Journal of Advanced Academics*, 23, 5–31.
- Saunders-Stewart, K. S., Gyles, P. D. T., Shore, B. M., & Bracewell, R. J. (2015). Student outcomes in inquiry: Students’ perspectives. *Learning Environments Research*, 18, 289–311. doi:10.1007/s10984-015-9185-2
- van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. Albany, N.Y.: State University of New York Press.

Keywords: *information literacy, inquiry based learning, lived experience, phenomenology, project based learning, self-directed learning, student-centred learning*

Model for Teacher Training in Inclusive Education: A Proposal Based on the Principles of Information Literacy

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This piece presents the results of the first stage of a survey conducted in Brazil among inclusive education teachers during the year of 2014 with the aim of identifying the needs and information expectations of these teachers. The formatting of a training model is based on the Information Literacy models with a view to enhance inclusive teaching practices. We have employed a methodology inspired by Carlo Ginzburg's Evidential Paradigm, which establishes a course of analysis dictated by the rigorous observation of evidence, the detailed and exhaustive record of the characteristics of the evidence and the establishment of a flowchart of stages and procedures. Data have been collected in sampling using distinct techniques called Evidential Pre-Tests. The first Evidential Pre-Test was given to a sample of 58 teachers in a social network of inclusive education groups in Brazil, comprised of a virtual questionnaire with ten questions about the use of information in Specialized Educational Assistance (an inclusive education program by the Brazilian Government). The second Evidential Pre-Test was given to a sample of 13 teachers working at a public school in the Federal District developing inclusive education activities in three modalities: inclusion classrooms, reverse inclusion classrooms and specialized educational assistance classrooms. The third Evidential Pre-Test was given during a teacher training course to a sample of 23 teachers. For each Evidential Pre-Test, a different technique of collection, treatment and data analysis was employed: digital questionnaire using the SurveyMonkey platform; open interviews analyzed according to content analysis and the production of mind maps using the Manyeyes platform for producing tag clouds. The results obtained in the analysis of each Evidential Pre-Test were denominated as "Evidence" and are presented as charts, tables and images with conceptual and numerical syntheses of each stage. The evidence obtained have oriented the elaboration of a teacher training model for inclusive education based on the hypothesis that Information Literacy can fill academic gaps as well as flaws in information needs resulting from the complexity of assistance to people with special needs in the public education network. This proposal for a training model recognizes in the theoretical and practical frameworks of Information Literacy some contributions for teacher training in elementary education and synthesizes nineteen Information Literacy models developed in international contexts with the aim of finding a basic grid for the elaboration and/or adaptation of a specific model. In order to achieve that, it presents data about inclusive education in Brazil to back a training model that contemplates the diversity of backgrounds (social, economic and cultural) and can be replicated elsewhere. It proposes a teacher training model that is four-dimensional and hybrid (in-house and remote, digital and analogical) encompassing community-related, organizational, technological and identity-related aspects, structured as a network and based on the principles of Information Literacy.

Keywords: *teacher training, inclusive education, information literacy*

Teaching and Learning Information Literacy in Upper Secondary Schools in Vietnam

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Equipping students with a high level of information literacy (IL) is a vital mission of educational institutions (Williams, Wavell, & Morrison, 2013). While there is much knowledge about IL around the world such as in the USA, Australia, UK, Africa and some countries in the Far East (Hepworth & Walton, 2013), there is little understanding of IL in Vietnam. Therefore, this project addresses the gap by investigating the practice of IL teaching and learning in Vietnamese upper secondary schools. The research used a mixed-methods approach including three phases. The first phase employed a multiple-choice questionnaire to assess students' IL as well as explore their self-assessment. The study uses *Standards for the 21st-Century Learner* devised by the American Association of School Librarians (AASL) (AASL, 2007) as a tool for measuring current IL capabilities amongst students. However, the research expanded the original AASL model by adding one more standard that is "Using foreign languages to engage with information effectively" because of the special characteristics of the study programme in the country. The assessment used indicators under each standard to measure four IL components including developing search strategies, evaluating information sources, using information ethically, and using English to engage with information. Students selected from among survey participants took part in the semi-structured interviews in the second phase. The third phase involved professional interviews (librarians, teachers and administrators) and a document review that collected data from library reports, school policy and guidelines, study programme, and teachers' resources. The research purposely selected two Vietnamese upper secondary schools including one public school and one private school to participate in the study. This paper presents significant findings of the IL assessment and the practice of IL teaching and learning in those schools. The results indicate that a large number of students had basic IL knowledge and skills to engage with information. However, their IL skills have not been developed comprehensively; evaluating information sources was a specific weakness. Furthermore, pupils' self-ratings of their IL were much higher than what they performed in the test. Additionally, boys self-rated at a higher level than girls but performed less well. There are two main reasons that caused different IL results including students' awareness of IL and their IL self-learning. Specifically, students who have higher prior awareness of IL also have better IL scores. Furthermore, students who are better in taking full advantages of activities both from the school and outside of the school in developing IL, also have better IL scores. The weakness in students' IL capabilities may be because, in practice, those schools do not have any formal IL programmes. There are three main reasons leading to the lack of IL initiatives including time pressure, teaching method, and resource issues. Time pressure results from private class attendance and a strict learning timetable. Also, although the schools are moving from a transmission approach in teaching to a more active teaching and learning method, it appears that they still give priority to traditional approaches.

References

- AASL. (2007). *AASL Standards for the 21st Century Learner*. Chicago: American Library Association.
- Hepworth, M., & Walton, G. (2013). *Developing people's information capabilities: Fostering information literacy in educational, workplace and community contexts*. Bingley, United Kingdom: Emerald.
- Williams, D., Wavell, C., & Morrison, K. (2013). *Impact of school libraries on learning: Critical review of published evidence to inform the Scottish education community*. Aberdeen: Robert Gordon University.

Keywords: *information literacy, secondary school, information literacy assessment, Vietnam*

Discourse Analysis of Finland's Core Curriculum of 2016 from Information Literacy Perspective

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Finland is at the moment facing a vast educational change. Because of good PISA results, Finland has been a leading educational country for the last 10 years (Sahlberg, 2015). However, according to the latest research data, Finland has been performing worse than before. The latest development has been that especially the growth in number of low-performing children in Finland has been dramatic (OECD, 2016). The dissertation as a whole will study the conception of information literacy in the current Finnish 2004 curriculum as well as the upcoming 2016 core curricula as well as the conceptions of teachers and librarians. This presentation is concentrating on the second empirical part and to the comparison of the first and second empirical parts. The third empirical part in form of interviews will take place in fall 2016.

The objective of this presentation is to present the findings of the discourse analysis as well as the comparison and subject the study for commenting and reviewing. The object of the study itself has been to understand the information literacy conception in these documents assembled by the Finnish Board of Education. Drawn up by a national institute it can be said this be the administrative view to information literacy. The objective was to study how the findings compare to conceptions found in Christine Bruce's model of 'Seven faces of information literacy' (Bruce, 1997). The reasons for this study being important are many. For example, Limberg, Hultgren and Jarneving (2002), Moore (1999) and Smith (2013) concluded that teachers have a vague understanding of information literacy. Information literacy skills are considered an individual issue not attached to subjects (William and Wavell, 2007) and that teachers do see the difficulties, but they do not have the necessary skills to tackle these issue (Ladbrook & Probert, 2011).

The methodology of the analysis is discourse analysis. The same methodology and analyzing platform was used in both text analyses to make the results comparable. Some structural changes were done in the analysis of 2016 curriculum to fit the analysis platform of curriculum 2004. This however did not affect the analysis results itself.

The text and structure of the curriculum has changed radically. The word analysis showed 1738 occurrences in top five information literacy themes; 1) Information, 2) Searching, 3) Critical thinking, 4) Media, and 5) ICT. Phenomenon based learning and research based learning are more present in the renewed core curriculum. But still, the document is lacking in definitions, including that of information literacy. The concepts related to information literacy are mentioned often in a cluster of words but not in an orderly form. The 2016 curriculum is emphasizing "research like working methods", "information thirsty way of studying" and there is also signs of 'language game' theory of Wittgenstein. In all, suggestions towards information intensive ways of studying have increased.

References

- Bruce, C. (1997). *Seven faces of information literacy*. Adelaide: AuslibPress.
- Ladbrook, J., & Probert, E. (2011). Information skills and critical literacy: Where are our digikids at with online searching and are their teachers helping? *Australasian Journal of Educational Technology*, 27(1), 105–121.
- Limberg, L., Hultgren, F., & Jarneving, B. (2002). *Informationssökning och lärande – en forskningsöversikt*. Stockholm: Skolverket.
- Moore, P. (1999). Revealing thinking: Teachers working together in information literacy. In L. Lighthall, L., & E. Howe (Eds.), *Unleash the power! Knowledge – Technology – Diversity* (pp. 133–143). International Association of School Librarianship.
- OECD (2016). *Low-performing students: Why They fall behind and how to help them succeed*. PISA. Paris: OECD Publishing.
- Sahlberg, P. (2015). *Suomalaisen koulun menestystarina ja mitä muut voivat siitä oppia*. Helsinki: Into.
- Smith, J. K. (2013). Secondary teachers and information literacy (IL): Teachers understanding and perceptions of IL in the classroom. *Library & Information Science Research*, 35, 216–222.
- Williams, D., & Wavell, C. (2007). Secondary school teachers' conceptions of student information literacy. *Journal of Librarianship and Information Science*, 39(4), 199–212.

Keywords: Finland, curriculum, information literacy, Christine Bruce

Mechanical Engineering Students' Information Literacy Needs: Findings of a Case Study in an English University over Three Levels of Undergraduate Study

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Our paper aims to discuss the outcomes of a research study of the information literacy (IL) needs of Mechanical Engineering students at an English University. We collected data collected from the Mechanical Engineering department and included students from the three levels of undergraduate study, academics, and the librarian. This forms part of a comparative case study of the Information literacy provision in Engineering programmes in the UK and Greece. Data from the Greek case are not presented here.

This case included action research elements and took place in academic years 2013-14 and 2014-15. The data were collected from three levels of study by semi-structured interviews from 11 students and three academics and through discussion forums and student feedback that were used in class to ensure student participation and helped collect data on IL student views and perceptions. To enhance triangulation, the data also included the librarian's reflective diary, lecture notes, and handbooks. We analysed all data thematically. Results from the pilot study of this research have been previously reported in Tramantza, (2015). Limitations of this study were the difficulty in recruiting students to participate and the focus on academic and professional information rather than information acquired via practical or lab work experience.

Emergent findings notably include: variation in IL needs between different levels of study; variation between stakeholders in their understanding of IL needs; challenges in communication about needs between stakeholders; student motivation to engage with the library; students' extensive use of the web for learning; engineering student communities of learning from each other; the need for independent learning as a characteristic of the engineer; the nature of the engineer as problem solver; the limited use of books, perceptions about the web, Wikipedia and Google and student naivety about sources and in the way information is applied; a shift in the way information is found today that affects academics; and the complexity of the librarian's role that does not allow for time to immerse in IL teaching. Important needs identified were: being critical, having models of expected work, notetaking, and time management. Multiple comments from the discussion fora revealed that the partnership between the academic and the librarian in IL teaching can overcome the hurdle of misconceptions (e.g., about Wikipedia and Google) and that critical thinking in the selection of sources can be improved.

There is currently little research in Mechanical Engineering information literacy needs. The findings from this study may advise the action research cycle in the institution studied, and may be more widely applicable since most Mechanical Engineering schools are accredited by the same global institution IMechE (2016), which has a presence in 140 countries. Thus findings may help improve the teaching provision in Universities not only in the UK and Greece but also worldwide.

References

- Institution of Mechanical Engineers. (2016). *Near you*. Retrieved February 14, 2016 from <http://nearyou.imeche.org/home>
- Tramantza, E. (2015). Electronic engineering student information literacy needs: A pilot study at the University of Surrey. In S. Špiranec et al. (Eds.), *[The Third] European Conference on Information Literacy (ECIL): Abstracts, October 19–22, 2015, Tallinn, Estonia* (p. 109). Tallinn: University of Tallinn. Retrieved February 14, 2016 from http://ecil2015.ilconf.org/documents/ecil2015_abstracts.pdf

Keywords: *information literacy, higher education, UK, students, needs, mechanical engineering*

BEST PRACTICE

Student Interaction with Online IL Course Content: The Impact of Exam Structure and Course Design

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In 2015, UiT launched a MOOC on information literacy, iKomp (www.ikomp.no). Built on Open EdX, iKomp consists of four modules: learning strategies, information evaluation, information searching, and academic formation. The final exam consists of a 40 question multiple-choice test, originally allowing an unlimited number of attempts and with easily accessible explanations of the questions.

An analysis of the exam results and learner behaviour (N=399) revealed that only 22,6% passed on their first attempt, and 24,8% used more than 10 attempts. Further, engagement with in-course activities correlated only weakly ($r = .18$) with exam score (Andreassen et al., 2015). These findings might indicate either that the exam is too difficult, or that students do not engage fully with the course content before taking the exam. An analysis of error rates and response distribution for the separate questions leads us to hypothesise that the second explanation is the correct one.

To improve student learning, we consider it necessary to enhance their engagement with the course content. In an attempt to achieve this, we have modified the settings on the exam, thereby imposing soft constraints on learner behaviour. Number of possible attempts have been reduced to 4, and elaborate explanations have been replaced by hints cross-referencing to course content.

In this paper, we evaluate the impact of the revision on student engagement with the course content. We first present data collected after revision of the exam (Spring-2016) and compare them to the data from our previous analysis, on the same parameters. Second, we present data (Spring-2016) indicating student interaction with the course content between the first and final exam attempts. Specifically, by examining their time spent on chapters and units, we aim to see whether the students follow the hints provided for the failed answers.

In light of these findings, we discuss whether or not we have achieved the balance between student control and constraints imposed by course design.

References

Andreassen, H., Låg, T., & Stenersen, M. (2015). *The long and winding road: insights from student misconceptions*. Presented at the ECIL 2015, Tallinn, Estonia Retrieved from <https://www.cristin.no/as/WebObjects/cristin.woa/wo/22.Profil.29.25.2.3.15.1.0.3>

Keywords: *MOOC, information literacy, online course design, learner behaviour, online assessment*

For the Greater Good of Science: The Place of Research Data in Information Literacy Teaching for PhD students

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In addition to the demanding task of writing a thesis, PhD students face the challenge of balancing the roles of “good scientists” and “good academics”, which in some cases might conflict (Carter, 2015). They are expected to carry out a laborious research project where they are responsible for keeping in line with the norms and values of research ethics, all while building the foundation for their research career, where a “publish or perish” culture currently rules. In addition, requirements for data management and sharing have started to rise.

Information literacy teaching has experienced a shift in focus in recent years. If libraries traditionally have devoted their time to teaching undergraduate students the hows of using sources, they now spend more time on the whys and the importance of being information literate for the acquisition of knowledge. At our university, this shift has led to reflection upon how information literacy needs persist, but gradually change, from the undergraduate to the PhD level. In 2015, we launched the cross-disciplinary seminar series *Take control of your PhD journey*⁷ to meet these needs. This seminar series widens the traditional scope of information literacy, taking academic integrity to include the ethics of open science. Focusing on the practical use, as well as the theory behind, open access thus constitutes a natural component of the course content we provide to our PhD students. Due to an increasing demand for information on research data, we are in the process of developing a separate seminar on the topic, which will be held in May this year.

During the seminar series, we will collect information on how PhD students reflect upon academic integrity and open science through open-ended questionnaires. They contain both questions with right/wrong answers to show their understanding, and opinion scales to show their thoughts on, e.g., the importance of “prestige” – often linked to publications in journals with high impact factor. The questionnaires will be sent before and after each seminar so that we can find if their opinions have changed, and what they have learned at the seminar.

In this presentation, we aim to assess the attitudes that our PhD students display towards open access research data, and their skills relating to searching and publishing data. We view these findings in light of the current definition and further development of information literacy teaching at higher academic levels.

References

Carter, G. (2015). *Goals of science vs Goals of scientists (& a love letter to PLOS One)*. Retrieved February 11, 2016 from <http://socialbat.org/2015/08/12/goals-of-science-vs-goals-of-scientists-a-love-letter-for-plos-one/>

Keywords: *academic integrity, open science, information literacy, teaching, PhD*

⁷ cf. <https://uit.no/ub/laringsstotte#linje2>

CORA: Building a Virtual Community of Practice for Information Literacy

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Objectives

This “best practices” session will introduce CORA (Community of Online Research Assignments), a pilot open access educational resource developed for faculty and librarians in higher education. CORA was developed through a Statewide California Electronic Library Consortium (SCELC) Project Initiatives Fund grant in the United States. The grant proposed to expand upon an internal information literacy assignment collection by using the “cooking” metaphor to envision the assignments as recipes that could be tweaked or easily adapted to fit into any information literacy curriculum. The project outlined in the grant proposal sought to create a collection of research assignments designed to be extended and enriched by its users- eventually building a community of faculty and librarians sharing their knowledge of pedagogy, information literacy, research, and writing within the landscape of higher education. The design is intended to promote and encourage the sharing of success and lessons learned so the entire community can benefit from a rich corpus of best practices. This session will cover the timeline of events during the first two years of development and a demonstration of the live online prototype to show how CORA is built to extend information literacy pedagogy beyond the one-shot.

Methodology

Two faculty focus groups were run by the presenters to gather input on the characteristics of effective research assignments and the desired features in a searchable, open access repository. A draft prototype was developed, keeping in mind recurring themes from the focus groups such as the importance of modeling, scaffolding, and peer learning. The Cherry Hill Company was then contracted to build and host a live prototype of CORA using Drupal, an open source content management platform. CORA was further tweaked through biweekly online check-in meetings and an online ticketing system. A “CORA Development Group” was formed with over ten librarians to provide additional feedback, improve the site functionality and design, and reevaluate CORA’s usefulness and scope.

Outcomes

CORA cultivates an open space for the sharing and discussion of information literacy assignments, lesson plans, and activities. All teaching resources contributed to this collection are released under an intellectual property license that permits free use and repurposing by other educators. The community-building features allow contributors to comment on and generate discussions with other contributors surrounding individual contributions. The current collection of research assignments and teaching resources will be enriched over time by additional user feedback, eventually turning into a reliable and reproducible collection. Pay a visit to www.projectcora.org to see this new virtual community for librarians and faculty.

Keywords: *librarian-faculty collaboration, assignment design, learning outcomes, teaching resources, curriculum integration*

Influence of Public Policies in the Development of Digital Literacy and Skills Acquisition Programmes in Barcelona Libraries

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Objectives

Our proposal for the 2016 European Conference on Information Literacy is based on how important public policies are in developing digital literacy and skills acquisition programmes.

Methodology

The document, *Barcelona Libraries 10 years+ (2010)*, makes the point that libraries should be regarded as a priority public service for local policies. This is supported given libraries missions in terms of: (1) their role as spaces and services for redistributing resources and ensuring everyone has equal access to culture, knowledge, and information; (2) their work in preventing digital illiteracy and a digital divide between large segments of the population; and, (3) their role as meeting points where various generations, and people with very different backgrounds and experiences, can mix and socialise.

The Barcelona Digital Literacy and Skills Acquisition Plan, 2010-2015 establishes that public libraries are one of the strategic facilities for achieving greater competitiveness. They do this through getting more of the city's active population into work as well as helping increase the use of ICTs and the internet among groups at risk of social exclusion or suffering the so-called digital divide.

When these two public policies were combined in 2010, it gave an important boost to digital training and skills acquisition programmes in the city's libraries. This resulted in more investment in technological equipment and facilities, and the launch of a collaboration programme with Cibernàrium, the city's reference body for digital literacy and skills acquisition, to develop digital training programmes in the public libraries.

There are currently 30 to 40 public libraries belonging to the city network with classrooms equipped for ICT training activities. Public libraries have become reference centres for digital literacy and skills acquisition with our offerings in training programs:

Basic ICT Literacy Programme; the +55 Programme on using smartphones and tablets, for users over 55; the Cibernàrium Satellites Programme with various courses covering basic, intermediate, and advanced ICT skills; the Codeclub Programme for children aged 10-12, to get them started in computer programming; and the Work in the Neighbourhoods Programme, that targets unemployed people who need to improve their ICT skills.

The public libraries have become centres where people can take official examinations and get official ACTIC accreditation (ICT Skills Acquisition Accreditation).

They can also receive individual ICT support at the libraries. All this has been made possible because of the political will to develop digital literacy and skills acquisition strategies and to position the public libraries as one of the key elements in the network of local cultural facilities in Barcelona.

References

- Bailac, A., & Muñoz, M. (Ed.). (2010). *Biblioteques de Barcelona 10 anys +: Nous reptes noves oportunitats*. Retrieved April 15, from http://www.bcn.cat/biblioteques/docs/bib10anys_cat.pdf
- Barcelona City Council. (2010). *Plan d'alfabetització i capacització digital a Barcelona 2010-2015: Mesura de govern*. Retrieved April 15, 2016 from <http://hdl.handle.net/11703/84616>
- Koontz, C., & Gubbin, B. (Ed.). (2010). *IFLA public library service guidelines*. Berlin/New York: Walter de Gruyter GmbH & Co. KG, 2010.
- Mobile World Capital Barcelona. (2016). *The digital divide in Barcelona*. Retrieved April 15, 2016 from http://www.mobileworldcapital.com/esletxa-digital/index_eng.php

Keywords: public policies, digital literacy, public libraries, Barcelona libraries, public services

Variations on the Theme of Information Literacy – Implementation of Information Literacy into the First-Year Curriculum at Åbo Akademi University

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Introduction

Åbo Akademi is a medium-sized university in Finland enrolling about 800 freshmen every year. There are three faculties in Åbo (Turku) and one in Vasa (Vaasa). This abstract concerns the information literacy instruction in Åbo at the Faculty of Arts, Psychology and Theology, Faculty of Social Sciences, Business and Economics, and the Faculty of Science and Engineering.

Since the 1990's we have offered general introduction to the library services for the first-year students. The introduction has included demonstrations of the library database and the portal for electronic resources. Some of the university programs have also included short courses in information search and retrieval in their curriculum and the library has offered optional web-based introduction courses for beginners. But for many years we have felt a need to develop courses in the context of academic study skills together with the faculties/teachers. These courses would be tailor made for the study programs. Finally, during the fall of 2015 these courses were implemented, and the library was responsible for the information literacy portion.

Methods

We developed eight different courses, called academic study skills (Akademiska studiefärdigheter) with each course providing five ECTS credits. The courses covered study orientation, study techniques, information literacy, and study planning. The courses were implemented in different ways in the curricula. Some courses were taught as separate modules. Some were embedded in a project with a joint goal, for example, to produce a poster and/or a report on a theme or problem. The students were encouraged to make use of the skills they had learned during the course and this paper deals with the different implementations they carried out. We describe the “success stories” as well as the failures along with some of the interactive methods used to enhance the learning. We will evaluate and analyze all eight courses and the learning outcome during the 2016 spring semester. We will conduct the analyses based on the students' own evaluations, discussions with the course planners, and reports from the information specialists/librarians/faculty teachers involved.

Results

At the conference we want to present the best practices we have experienced as well as the results of the evaluations. We particularly want to stress the results from the course for Chemical Engineering students. This course was a totally embedded project-based course where the information specialist actively co-operated with the faculty teachers during the whole process.

Keywords: *embedded librarianship, first-year experience, academic study skills, information literacy*

Teaching Key Words with Word Clouds

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Introduction

At the University of South Florida, School of Information, Tampa, Florida we have been teaching a for credit information literacy class for almost twenty years. This class has had to change to stay current with the times. In the past few years we have noticed that students have difficulties identifying and focusing research topics and identifying keywords to use for more effective searches. We went on a quest to find better ways to teach students to do these things.

Objectives

Audience members will be able to:

- Use word clouds to define a research query.
- Identify keywords for any given subject by using a word cloud generator.
- Use keywords from a word cloud to search for information.

Methodology

We know from experience that students love Wikipedia and like word clouds. Consequently, we teach students to craft focused research queries and identify useful keywords using Wikipedia and word cloud generators. Word clouds or tag clouds are defined by the Oxford English Dictionary as, “An image composed of words used in a particular text or subject, in which the size of each word indicates its frequency or importance” (Oxford English Dictionary, 2016). A word cloud generator is an internet program that allows users to input text or a link to text about a desired topic. It then scrapes that data for the most often repeated words in the data and displays them in a way such that color and size indicate the frequency at which the words occur in the text (Wikipedia, 2016). The word cloud generator provides us an unorthodox way to view a topic, bringing forward related terms and concepts in ways that are new. Each student generates a word cloud from the broad topic of their choice. They use the terms in the cloud to narrow or focus their research query. We then practice searching with terms identified in the word clouds allowing the students to practice Boolean searching and using a mix of terms until they have identified the combination of terms which produces the best results for their query.

Outcomes

- Identify words which uniquely identify their research need in the word cloud they create.
- Construct a search statement using the identified keywords in order to search library and internet resources.
- Analyze their search results and strategize ways to reformulate the search statement to improve accuracy.

References

Tag cloud [Wikipedia entry]. Retrieved April 11, 2016 from https://en.wikipedia.org/wiki/Tag_cloud#cite_note-2

Word cloud. (2016). In *Oxford English Dictionary*. Retrieved from http://www.oxforddictionaries.com/us/definition/american_english/word-cloud

Keywords: *word clouds, tag clouds, keyword searching, research query, teaching, information literacy*

Introduction to the Research Process: An Online Course to Embed and Standardize Basic Information Literacy Skills across a Multicultural Student Population

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Objectives

With the current ad hoc and randomly-delivered information literacy (IL) classes, the Middlesex University (MDX) Dubai Librarians are concerned that the majority of the student population is not learning the basics of IL skills. To complement in-classroom IL skills sessions despite the limited manpower (Donaldson, 2000), the Librarians identified the need for a tool to standardize IL skills across the student population from diverse educational and cultural backgrounds. This will also help them embed IL skills in all levels of undergraduate and postgraduate programs.

Methodology

The Librarians designed a six-unit online course within the framework of the Association of College & Research Libraries (ACRL) Information Literacy Competency Standards (Association of College & Research Libraries, 2000). As the course will be developed through the Moodle platform, the Librarians attended a series of trainings and workshops on the use of Moodle. The independent-study course is offered as a free-of-charge self-registered option to undergraduate and postgraduate students, and as a mandatory formative component of the Foundations program. A pilot section was launched for Foundations students in January 2014. Thereafter, seven sections were opened with more than 800 student registrations in AY2014-2015. Marketing strategies were established – brochures, roll-ups, and promotion during orientations, IL skills classes and in Librarians' liaison areas. To reward students who completed all the required activities, certificates of achievement, signed by the Library Manager and the Director, were awarded. The course has been evaluated and extensively revised since the pilot. Feedback from students, faculty members in Dubai and Library colleagues in Hendon have been gathered and considered.

Outcomes

With the Library team winning the Innovation Award for developing the online course, it is evident that the course has made an impact in the MDX Dubai academe. It resulted in a higher profile for the Librarians and library services. It established a stronger relationship between the Librarians and faculty members and made the Librarians' roles known to the students. Most importantly, with one-third of the student population registered for the course, the maximum number of students learns the essentials of information literacy. Similar to the results of Johnston's research (2010), it is evident in the students' feedback that the online course has helped them develop their IL skills as per the ACRL standards.

References

- ASSOCIATION OF COLLEGE & RESEARCH LIBRARIES. 2000. Information Literacy Competency Standards for Higher Education. *American Library Association* [online]. [cit. 2016]. Dostupné z: <http://www.ala.org/acrl/standards/informationliteracycompetency#ilhed>
- DONALDSON, Kelly 2000. Library Research Success: Designing an online tutorial to teach information literacy skills to first-year students. *The Internet and Higher Education* [online]. 2(4): 237251 [cit. 2016]. DOI: 10.1016/S1096-7516(00)00025-7.
- JOHNSTON, Nicole. 2010. Is an online learning module an effective way to develop information literacy skills?. *Australian Academic & Research Libraries* [online]. 41(3): 207-218 [cit. 2016]. DOI: 10.1080/00048623.2010.10721464.

Keywords: *online information literacy course, online learning, Moodle, research process, information literacy standards*

Inclusive Information Literacy: Empowering Classroom Faculty

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Background and Objectives

The cornerstone of the library instruction program at Oregon State University has long been a deep, robust and dynamic collaboration with the First-Year Composition (FYC) program. For many years, librarians and writing faculty have worked together to introduce students to a learning-focused exploratory research process in their first year. In 2013, the results of an assessment project convinced us that we needed to shift the model we were using to deliver information literacy. We were uncovering evidence that students need authentic, intentional instruction in information literacy concepts and skills throughout the research process, and the standalone instruction session delivered by librarians could not meet all of those needs.

However, training writing instructors to teach research skills and information literacy is not a simple task. In 2013-2014, librarians stopped teaching required sessions in the FYC classes. We still provided a thorough training workshop before the start of Fall term, and we also built a variety of online tools students and instructors could use to learn the mechanics of research. In this initial year we discovered that even though the composition instructors had more experience with academic research than their students did, they still faced significant barriers when it came to teaching information literacy. They were very hesitant to move out of their comfort zones and introduce new resources, tools, or concepts to their students. Many instructors were so uncomfortable with the mechanical aspects of choosing and using research tools that they focused on those skills instead of the deeper concepts we wanted them to incorporate into their teaching. To address this, we needed to develop training that incorporated outcomes from all learning domains: affective, cognitive and psychomotor.

In the fall of 2015, we launched a structured, intentional training program for composition instructors that extended throughout their first term to more intentionally introduce these instructors to the deeper concepts behind the research skills. At the same time, we used a variety of data-gathering methods, including semi-structured interviews, individual writing prompts, and structured reflective activities, to learn more about the instructors' needs, and assess the effectiveness of our training program. In this presentation, we will describe the activities we used with writing instructors, and draw out themes useful to anyone working collaboratively with faculty to achieve information literacy goals.

Outcomes

Participants will take away:

- An understanding of the barriers teaching faculty face when teaching information literacy skills and concepts.
- A variety of activities to use when helping faculty partners build their skills.
- Resources and talking points to help convince teaching faculty that they should embed information literacy instruction into their courses and assignments

Resources needed

No special resources needed beyond a projector to display slides.

Keywords: *train-the-trainer, rhetoric, composition*

Easing the Transition: Empowering First-Year Students with Course-Integrated Information Literacy Instruction

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First-year students, whether they've just graduated high school or are working adults, must confront an entirely new set of cultural expectations when they enter college. It's often difficult for these newcomers to make the transition--to learn the language, values, and norms that will enable them to become contributing members of the higher education community.

First-year students at California State University, Fresno have additional challenges that may make their transition to academic life difficult. More than two-thirds of the university's undergraduates are the first in their families to attend college and only 43% of entering first-generation freshmen graduate within six years (Rudd and Leimer, 2009). Fresno State librarians have, for many years, struggled with how to help ease the transition for these students and equip them with the information literacy skills they need to succeed.

With the recent hire of a First Year Student Success Librarian, the Henry Madden Library at Fresno State has had the opportunity to expand its services and collaborate with others to find new ways to design inclusive, scalable, sustainable, and engaging instruction for the critical first year of college. In order to do this, the presenters' first step was to form an advisory group composed of representatives from groups that serve first year students such as our English and Communication Studies departments and the campus Writing Center. The group met regularly throughout the 2015-2016 academic year in order to collaboratively develop learning objectives for a new approach to information literacy instruction that would empower students to engage more fully in the higher education experience.

The group concluded that the traditional model of offering "one-shot" information literacy sessions was unsustainable and ineffective. In order to establish a foundation for first year information literacy skills that would enable students to be successful in higher education, and which they could build upon throughout their educational and personal lives, it was necessary to take a different approach that would integrate information literacy throughout the first year curriculum using a series of tutorials and accompanying assignments.

One of the challenges addressed in this project was the lack of human connection that exists when only tutorials are used for instruction. Advisory group members felt that meeting and working with a librarian was a valuable and effective way to help first year students feel more connected in the higher education environment. The presenters will share ways in which they were able to meet this need, in part, by collaborating with the campus Writing Center to offer research and writing events in the library.

The presenters will describe the project in three phases: forming a first year advisory group, collaboratively designing learning objectives that utilize the ACRL Framework for Information Literacy for Higher Education, and the pilot of course-integrated tutorials and supplementary services. Attendees will leave with ideas about how to create their own scalable, effective, and inclusive first year information literacy programs regardless of their size or staffing levels.

References

Rudd, B., & Leimer, C. (2009). *First generation students: First in the family, less likely to succeed in college*. Retrieved from http://www.fresnostate.edu/academics/oie/documents/documents-research/fgscgs_brief.pdf

Keywords: *first-year students, information literacy, collaboration, course-integrated instruction*

Education of Media and Information Literacy Teachers in the Czech Republic

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The aim of this contribution is to compare the curriculum of a new planned study program for Media and Information Literacy Teachers in the Czech Republic with a relevant curriculum for library and information science education (including information literacy) and with the UNESCO Media and Information Literacy Curriculum for Teachers (Wilson, 2011). We show the specific aspects of our planned program as well as shared foundations in information science and information literacy in the curriculum. For the comparative analysis we use the literature review and the qualitative content analysis method.

In our article we introduce our idea of a new study program. Although Information Literacy is on a long-term basis a steady part of our curricula for information studies and librarianship, our graduates are not allowed to carry out professional teacher duties concerning information and media literacy skills in elementary or secondary schools. The teacher profession is set by a special law in the Czech Republic and it is necessary to have a special certification for a teacher program at universities. We have decided therefore to develop a new study program strictly for (future) teachers of media and information literacy. Students will have to study our program in a combination with another teacher program at the Faculty of Arts (including languages, history, and philosophy).

We have followed several approaches to the media and information literacy education when constructing the curricula. We have taken into account the Big6 Model (2014) and the SCONUL Seven Pillars of Information Literacy (2011). Various approaches for information literacy pedagogy theory and models are summarized by Černý et al. (2015). We have implemented the Framework Educational Program for Elementary Schools as well as the Framework Educational Program for Grammar Schools. The Czech Standard for Strategy of the Digital Education to 2020 has been taken into consideration. A literature review concerning information literacy pedagogy created by Eamon Tewell (2015) and other theoretical studies (e.g. Jacobs, 2008; Torres and Mercado, 2006) have been also of our interest.

References

- Big6. (2014). *The Big6: information & technology skills for student success. The Big6 skills overview*. Retrieved April 14, 2016 from: <http://big6.com/pages/about/big6-skills-overview.php>
- Černý, M., Chytková, D., Mazáčová, P., & Šimková, G. (2015). *Informační vzdělávání pro učitele* [Information education for teachers]. Brno: Flow. Retrieved from <http://eknihy.knihovna.cz/static/files/informacni-vzdelavani-pro-ucitele.pdf>
- Czech Republic. Ministry of Education. (31 April, 2014). *Strategie digitálního vzdělávání do roku 2020*. [Strategy for the Digital Education to 2020]. Praha: MŠMT. Retrieved March 1, 2016 from <http://www.msmt.cz/file/34429/>
- Czech Republic. Ministry of Education. (9 September, 2013). *Rámcový vzdělávací program pro základní vzdělávání* [Framework educational program for elementary education]. Praha: MŠMT. Retrieved April 14, 2016 from <http://www.msmt.cz/vzdelavani/zakladni-vzdelavani/upraveny-ramcovy-vzdelavaci-program-pro-zakladni-vzdelavani>
- Czech Republic. Ministry of Education. *Rámcový vzdělávací program pro gymnázia* [Framework educational program for grammar schools]. Praha: Výzkumný ústav pedagogický. Retrieved April 14, 2016 from www.msmt.cz/file/10427_1_1/
- Jacobs, H. (2008). Information literacy and reflective pedagogical praxis. *The Journal of Academic Librarianship*, 34(3), 256–262. Retrieved from <http://dx.doi.org/10.1016/j.acalib.2008.03.009>
- SCONUL Working Group on Information Literacy. (2011). *SCONUL Seven pillars of information literacy: Core model for higher education.*, Retrieved April 14, 2016 from <http://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf>
- Tewell, E. (2015). A decade of critical information literacy: A review of the literature. *Communications in Information Literacy*, 9(1), 24–43. Retrieved from: <http://files.eric.ed.gov/fulltext/EJ1089135.pdf>
- Torres, M., & Mercado, M. (2006). The need for critical media literacy. *Teacher Education Core Curricula. Educational Studies*, 9(3), 260–282. doi: 10.1207/s15326993es3903_5
- Wilson, C. et al. (2011). *Media and information literacy curriculum for teachers*. Retrieved March 1, 2016 from <http://unesdoc.unesco.org/images/0019/001929/192971e.pdf>

Keywords: educational curricula, media and information literacy pedagogy, university study programs

Effective Teaching of Information Literacy – An Example of Good Practice in Secondary School

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The aim of this paper is to present good and effective practice of teaching information literacy. We have experienced that information process has to be taught through specific situations. Inquiry-based learning is more effective than the traditional. Students have to experience the information process themselves, with the guidance of school librarians.

In Slovenia we have a curriculum for LIS (Library Information Science) for primary and for secondary schools, which were adopted by the expert council at the Ministry of Education and all schools are obliged to implement this curriculum. In primary schools, each class has a minimum of four sessions per year (in nine years 36 classes for each student in primary school), and lessons are implemented as a cross-curriculum theme. In secondary school, we have a minimum 15 sessions for each form. The main overall objectives are reading, learning and information literacy. The school librarian as teaching staff teaches LIS in collaboration with teachers.

Our goal is for each student to be a competent and independent (self-directed) user of information – to know how to determine an information need, where and how to access information, evaluate sources and information, incorporate new information into their knowledge, and use information responsibly and effectively – those are skills for lifelong learners and for independent users.

We worked together: subject teacher, teacher of English language, school librarian and teacher for Computer Science. Subject teachers offered a list of themes and titles for seminar work, and students selected the themes that interested them. An accompanying form contained dates of consultations. To receive a final grade, students needed to submit this completed form. The librarian explained about the information process, plagiarism and citing sources. At the end of the writing seminar paper, students needed to have all of the following signatures: subject teacher for the content, the teacher of the foreign language for synopsis, the signature of teacher for Computer science for presentation, and the signature of librarian for plagiarism and information process. The librarian introduced the students to how to search for information, about sources of information, about copyright, citing sources, documenting and plagiarism, and how to avoid it. They also got handouts and instructions with examples. Methods of collaborative teaching and teaching information literacy as a cross-curricular theme proved to be very effective. Students learned how to search information in specific and real situations and they learned the information process under the guidance of a school librarian.

Keywords: *school library, information literacy, students, cross-curricular theme, collaborative teaching*

A New Information Literacy Website in Germany

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Most German libraries consider teaching information literacy as one of their core tasks. Librarians from different libraries work together on a very cooperative basis in order to work out recommendations and to share good practice.

The website, www.informationskompetenz.de, is the central information and communication platform for information literacy in Germany. In 2016, the commission for information literacy of the German Library Association and the Association of German Librarians undertook a fundamental relaunch of the website of the design as well as the content. In this talk I will present the main topics and features of the new website and give an overview of the information literacy initiatives and activities of German academic libraries.

Standards and the reference framework information literacy

Since the early 2000s, German information literacy working groups and networks developed different sets of IL standards for university students, doctoral students, and high school students. In 2016, the Commission for Information Literacy combined these standards in one reference framework information literacy for all educational levels. The reference framework consists of the five partial competencies: Search, Evaluate, Organize, Present, and Communicate. It contains performance indicators for six competency levels ranging from A1 (elementary information literacy) to C2 (sustainable information literacy). Learning outcomes and practical examples are given for each indicator and competency level.

Information literacy statistics

More than 80 German university libraries participated in providing detailed statistics of their information literacy courses. They provided data not only about the number of courses and participating students, but also concerning the length and content of the courses, the didactical methods, the target group, and integration of information literacy into the curricula. German libraries have proof of performance and are able to track the advancements of their teaching activities with these data.

Qualification profile of a teaching librarian

With the assistance of a round table of libraries and library schools, the Commission developed a profile of qualifications and requirements for teaching librarians that describes necessary technical, vocational, and social skills. Based on this qualification profile, certificate courses for teaching librarians have been initiated that combine on the job training and peer consulting.

Cooperation and infrastructure

The Commission for Information Literacy organizes an annual best practice competition in order to promote best practice and to share know-how and experiences. The topic of the competition 2016 was the cooperation of libraries with other institutions. This topic corresponds to the recommendation of the German Rector's conference to build new infrastructures for supporting information literacy. The award-winning contributions describe joint activities of university libraries with a high school, a computer science department, and a House of Competence.

Keywords: *teaching library, Germany, information literacy website, information literacy statistics, information literacy framework*

Strange Lands: Using Intercultural Communication Pedagogy in Information Literacy Instruction

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This session introduces the audience to the application of intercultural communication theories as pedagogical strategies for teaching information literacy. The premise for this is the conceptualization of library instruction as a communication event in a “foreign culture.” While researchers have addressed challenges in library instruction for international students due to language barriers, less attention has been given to co-cultural factors of communication in instructional contexts.

The presenter draws parallels between information literacy instruction and intercultural encounters, much like travels to a foreign land, where access can only be gained through mastery of the language (controlled vocabulary), understanding of specific values (the political economic context of information) and willingness to embrace new rituals, such as the systematic evaluation of information resources. Applying intercultural communication pedagogy in library instruction helps students gain “conscious competence” (Howell, 1982) and become reflective researchers. For example, in a semester-long course, information literacy instruction can be structured as a “journey” through different stages of research, where students move from their comfort zone of inquiry, typically Google, to unfamiliar territory, such as databases or the library catalog. The librarian serves as a “tour guide” at various points in students’ research assignments and uses communication accommodation models (Gallois, Ogay & Giles, 2005) to recognize when and how to adjust their communication to facilitate student learning. Each information literacy assignment includes a reflective component and self-assessment of the student, culminating in a final reflection on the overall process of moving from Google browsing to strategic library research. Scholars have acknowledged library anxiety as part of students’ emotional disposition toward information seeking and proposed to solve this through teaching research skills (Kuhlthau, 1991; Onwuegbuzie, Jiao & Bostick, 2004). However, librarians should guide students not only in the acquisition of information literacy skills but also in the discovery of the “culture” of research in its cognitive and affective complexity. Gudykunst’s (2005) theory of anxiety-uncertainty management offers strategies for students to embrace anxiety and uncertainty as opportunities for academic, professional, and personal growth. While continuous and scaffolded library instruction is ideal, a one-shot session or workshop can benefit from a flipped classroom, where students are provided with tutorials and other resources prior to meeting the librarian. During the information literacy session, the librarian then guides students in peer-to-peer instruction based on what they learned earlier. For example, different teams present parts of the research process and, with the whole group, reflect on challenges they encountered and discoveries they made. Peer-to-peer instruction and discussion empowers students to become experts and more easily adjust to research language and a way of thinking that may be unfamiliar to them.

In sum, adopting intercultural communication models to information literacy instruction allows students to negotiate power in the information literacy instruction context, which traditionally privileges the librarian’s communication system. It adds a valuable dimension to the culture of learning at libraries and academic institutions, and to the identity of the librarian as teacher.

References

- Gallois, C., Gay, T., & Giles, H. (2005). Communication accommodation theory. In W. Gudykunst (Ed.), *Theorizing about Intercultural Communication* (pp. 121–148). Thousand Oaks, CA: Sage.
- Gudykunst, W. (2005). An anxiety/uncertainty management (AUM) theory of strangers’ intercultural adjustment. In W. Gudykunst (Ed.), *Theorizing about Intercultural Communication* (pp. 419–450). Thousand Oaks, CA: Sage.
- Howell, W. S. (1982). *The empathic communicator*. Belmont, CA: Wadsworth.
- Kuhlthau, C. (1991). Inside the search process: Information seeking from the user’s perspective. *Journal of the American Society for Information Science*, 42, 366–371.
- Onwuegbuzie, A., Jiao, Q., & Bostick, S. (2004). *Library anxiety: Theory, research, and application*. Lanham, MD: Scarecrow Press.

Keywords: *intercultural communication, information literacy pedagogy, best practices*

A Quest for a Better Information Literacy Instruction Strategy – I-LEARN Model vs. Traditional Model

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Introduction

I-LEARN is an information use and teaching model developed by Prof. Neuman (Neuman, 2011). According to Dr. Neuman, the traditional information literacy (IL) instruction focuses on information seeking ('access-evaluate-use' sequence) The I-LEARN model emphasizes the "use" process by adding "apply, reflect, and kNow" to complete the information teaching and learning process. This study looks at the effectiveness of the I- LEARN model in speech communication classes at Rider University, New Jersey in 2014 and 2015.

Methods

The research was conducted in 2014 and 2015 on the incoming freshmen in the summer Educational Opportunity Program at Rider University, New Jersey, USA by two librarians and a teaching faculty member. They collaborated on integrating IL concepts in an intensive five-week communication course and tested the effectiveness of I-LEARN model. Students were divided into an experimental (I-LEARN) group and a control (traditional) group for three instruction classes. Two different research guides were created for each group. The librarians taught the first three research steps "identify, locate, evaluate" to both groups. Only the experimental group received additional instruction on the last three steps "apply, reflect, and kNow." Three videos were developed for the experimental group for reinforcement of these concepts. The assessment instruments included pretest, posttest, and a second posttest to measure students' comprehension of the basic IL concepts. In addition, the authors used students' discussion board, one-minute survey, and citation analysis to evaluate student research process and the quality of the resources used. Owing to the small sample sizes in 2014, the study was repeated in 2015.

Results

In 2014 and 2015, both groups started at the same level in the pretest. The 2014 experimental group improved significantly in the posttest at the end of the summer while the control group did not improve. Furthermore, both groups did not improve in the 2nd posttest and no differences were found between the groups. The results suggest that I-LEARN model may have initial impact on student learning but the long-term effect is not certain. The 2015 experimental group improved significantly in the posttest and continued to improve in the 2nd posttest. The effects were the same for both groups albeit no differences were found between the groups.

Value

The study explored the "apply, reflect, and kNow" part of the I-LEARN model to see if this method would improve students' IL skills. While it is unknown why the control and experimental groups didn't show any differences, it is possible that more IL time was spent teaching the first 3 steps of the I-LEARN for both groups. More teaching materials can be developed for teaching the last three steps of the I-LEARN model with more research to examine the effectiveness of this model.

References

- Greenwell, S. (2013). *Using the I-learn model for information literacy instruction: An experimental study* (Doctoral dissertation). University of Kentucky, Lexington, KY. Retrieved from http://uknowledge.uky.edu/edc_etds/6
- Neuman, D. (2011). *Learning in information-rich environments: I-LEARN and the construction of knowledge in the 21st century*. New York, NY: Springer.

Keywords: *I-LEARN, college students, information literacy instruction*

ICT Mentoring for the Development of Teachers' Digital and Information Literacy

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Our input deals with the issue of further training of the educational institutions' staff for the use of ICT during school lessons and for preparation for such lessons. In the INTERES project, developed by Masaryk University in Brno, internal mentoring in ICT was used as one of the forms of the training. An internal mentor was an ordinary teacher in the involved partner school (primary or secondary) who provided colleagues with individual support and help in the pursuit of enhancing their digital and information literacy. The position of an internal ICT mentor, involved in the project, proves that not only expertise in ICT, but especially, personal motivation and excitement can help in acquiring new skills and transferring them to colleagues. This follows the process of commonly getting to know their needs concerning the implementation of digital educational content in their instruction, preconditions for executing such internal mentoring training.

In the project at Masaryk University, internal mentoring was instituted in the partner schools in two steps – firstly, the programme was focused on computer literacy and reflected the need to learn how to use the touch-screen gadgets. In the second step, mentoring was concentrated on information literacy and it was linked with the didactics of the instructed subject. At the same time, mentors mentioned the topics of information hygiene, ethics and safety while processing information. The starting point of the mentoring activities were models of information literacy, particularly Big6 and The SCONUL Seven Pillars of Information Literacy.

The example of best practices from 13 partner primary and secondary schools involved in the Masaryk University project highlights the positive impact of internal mentoring, which was manifested by the advancement of teachers' digital and information skills. The research which took place along with the internal mentoring clearly and positively reflected the need for an internal mentor as a solid member of the staff of an educational institution. The latter contradicts the existing practice in the field where external services focused on the development of computer literacy lacking information literacy predominate as part of the subject's didactics.

References

- Blank, M. A., & Kershaw, C. A. (2008). *Mentoring as collaboration: Lessons from the field for classroom, school, and district leaders*. Thousand Oaks (CA): Corwin Press.
- CAMV. (2014). *Česká asociace mentoringu ve vzdělávání*. Retrieved February 27, 2016 from <http://www.camv.cz/>
- Drago-Severson, E. (2004). *Helping teachers learn. Principal leadership for adult growth and development*. Thousand Oaks (CA): Corwin Press.
- Jonson, K. F. (2008). *Being an effective mentor. How to help beginning teachers succeed*. Thousand Oaks (CA): Corwin Press.
- Portner, H. (Ed.). (2005). *Teacher mentoring and induction. The state of the art and beyond*. Thousand Oaks (CA): Corwin Press.
- Wollman-Bonilla, J. E. (1997). Mentoring as a two-way street. *Journal of Staff Development*, 18, 50–52.

Keywords: adult education, digital literacy, ICT mentoring, information literacy, primary and secondary schools, teacher training

Opportunities for the Development of Information Literacy: Experiences on a Library Bus

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In Hungary from 2012 the development of the information literacy is officially one of the libraries' tasks. Simultaneously this research area has become a hot point of library science. My research was focused on disadvantaged children because I thought they are already at a disadvantage in the race for taking their place in the labor market, and this makes them a particularly important target group in this area of development. In Hungary this is the first research which specifically deals with the information literacy of this group either in theory or in practice.

The objective of the research was to create a project that could effectively develop the information competencies of children. The exercises in weekly blocks and full of online and offline searching tasks helps children in getting to know foreign cultures. The primary objective of the project's task is the development of information literacy, but also making the children open for unexpected experiences and increase their adapting ability.

The second phase of the research was to test the project plan in practice. The project was designed for children between the ages 12-17 from children's home, but in my research I wanted to show that the proposed plan can be effectively used in other contexts. For this I tested the project on a library bus where the priority task involved villagers of Baranya County. I also made a case study. I worked with 28 children who were between age 7 and 19.

Before the start of the research the following hypotheses were formulated:

The disadvantaged children struggling with serious lags in information literacy, which is not necessarily coupled with the lack of knowledge of computer use.

The elaborated project is able to effectively develop these competencies on any terrain. With minimal attention, the children can experience meaningful progress in a short period of time.

Non-formal learning environment provides an ideal framework for the development of information literacy, so the opportunities of the libraries are considered almost infinite.

The research showed that the developed project works effectively in practice, in both formal and non-formal learning environments. The children did not have problems switching laptops, using Internet search engines, and playing games, but they had difficulties with reading, interpretation of the tasks, and finding the correct information. Therefore, formal education structures should pay more attention to these aspects within the information technology classes.

References

- American Library Association Presidential Committee on Information Literacy. (1989). *Final report*. Chicago: American Library Association.
- Hírhez, T. (April 7, 2012). *Nevelési Tudásdepo Mintaprogramok*. Retrieved March 1, 2016 from http://olvasas.opkm.hu/portal/menu/hirek/nevelési_tudasdepo_mintaprogramok
- Neuman, S. B. & Celano, D. C. (2012). *Giving our children a fighting chance: Poverty, literacy, and the development of information capital*. New York: Teachers College Press.
- Tóth, M. (2012). Könyvtárbusz-szolgáltatások Magyarországon. *Könyv, könyvtár, könyvtáros*, 21(2), 26–35.

Keywords: *information literacy, library bus, development, disadvantage*

Enhancing Librarians' Transversal Skills: Best Practice in Four Stories

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This paper presents four stories on enhancing librarians' transversal skills in a digital world with the goal of making libraries and their services responsive to today's customers' everchanging needs. It will describe challenges, advantages and outcomes of creating and delivering continuing professional development courses that correspond to a dynamic library environment. As Laal & Salamati (2012) point out, "*globalization and the growth of the fast-changing knowledge economy mean that people require upgrading their skills throughout their adult lives to cope with modern life, both in their work and in their private lives*".

In 2015 the University Library in Belgrade received national accreditation for four different lifelong learning courses designed for librarians and volunteers working in school, public, academic and national libraries in Serbia. Throughout the year academic librarians taught fellow librarians how to become knowledgeable, fluent, engaging and charming in a digital world by having them attend four courses: Digital Marketing Culture, Advanced Google for Librarians, Wiki Librarians, and Metadata in Contemporary Librarianship.

Our courses delivered a multitude of librarians skilled to:

- create a website in WordPress and use Trello for teamwork and project management
- effectively use advanced Google tools such as Google Scholar, Books, Analytics
- create rich, quality and reliable content on Wikipedia
- map, deliver and transfer metadata in various formats with real life simulations in University Library's thesis repository.

The University Library became a mover and shaker among Serbian libraries by having hands-on trainings that focus on enhancement of skills and knowledge using methods that ignite imagination, creativity and innovative thinking but in relation to solving real life problems. Pandey (2015) found that "*experiential and highly interactive training ingrains skills and attributes in a gradual and subtle way which get internalized over a period of time*". For example, when learning how to create a powerful story in the Digital Marketing Course, librarians worked interactively in groups creating a scenario, assigning roles and developing a story following content marketing principles. Roleplaying i.e. simulating real life cases, provides the best way to truly get the skills they need. Zadra (2014) says that "*the focus on transversal competences seems to involve an inevitable reduction in declarative knowledge and the foundation of new contexts and learning experiences*".

Even though we achieved great success with 2015 workshops, we wanted to make sure to have new courses developed based on the feedback from the participants. As each of the trainings ended, we asked librarians what it was they wanted in 2016 in terms of educational and competences needs. Results of surveys that were conducted throughout the year helped us shape our training catalog for 2016 which was accredited by the National Library of Serbia.

Having libraries deliver top notch services is not easy in a whirlwind of diverse cultural, educational and leisure content, but at the end of the year it is incredibly inspiring to have over 500 librarians in Serbia equipped with novel skills and knowledge to make libraries more visible, more attractive, dynamic and most importantly -- responsive to today's customers' evolving needs. Now, we are in pursuit of an even more advantageous course year!

References

- Laal, M., & Salamati, P. (2012). Lifelong learning: Why do we need it? *Procedia - Social and Behavioral Sciences*, 31, 399–403. Retrieved from <http://dx.doi.org/10.1016/j.sbspro.2011.12.073>
- Padney, M., & Padney, P. (2015). Global employability of unemployed youth through soft skills. *International Journal of Multidisciplinary Approach and Studies*, 2(2), 73–77.
- Zadra, C. (2014). Schooling and lifelong learning. The role of transversal key competences. *Procedia - Social and Behavioral Sciences*, 116, 4727–4731. doi:10.1016/j.sbspro.2014.01.1016

Keywords: librarians, lifelong learning, competencies, information and digital literacy

Libraries User-centered Service Design

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This paper describes Pencho Slaveykov Public Library - Varna best practices in terms of information literacy.

Founded in 1883 Varna Library is a public institution supported by the municipality and the government. It is situated in a city of 400,000 inhabitants, with regional responsibilities in an area of significant change. The increase of the number of adults with only lower-level of education highlights the risks of social exclusion and loss of local traditions, which is of a deep concern for the library.

As a result of the participation in a number of European projects focused on non- and informal learning, Public Library Varna analyses the librarians' and other library workers' needs. This analysis exposes the difficulties of the systematic usage of ICT (i.e. information and communications technology) and Web 2.0 faced by the two groups in their routine. In the analysis the need for training becomes clear, as well as the librarians' intention of developing new smart services. The lack of knowledge and skills is the base for development and implementation of such services.

In the last two years one of the library's main goals is to identify what kind of new services (in the term of SMART ICT concept) users need and what else they would like the library to provide. Library staff realizes that these new services need to be both user center-oriented and web 2.0 based. A number of workshops were run where users were trained to develop new services by the usage of innovative methodologies such as Lego Serious Play®, Gamification, Business Model YOU®, Storytelling, and Design Thinking. These methods enabled them to co-design at least a few entirely new ICT-based or ICT-related services.

Several workshops for librarians were run as well, with a primary goal to identify what exact new SMART ICT services users need. The Librarians were trained how to design and develop these services and how to prototype and integrate them into the library's agenda.

Since Pencho Slaveykov Public Library is the second largest public library in Bulgaria, the results from the user and librarian workshops needed to be evaluated by the general public needs and perspectives. Based on the work and the reflections from all workshops, five new services were developed, prototyped and implemented into the Library's agenda.

These services will be presented in details as well as the users' feedbacks.

Keywords: *libraries new services, users' engagement, design thinking, user-centered model*

Composing the Recent Reference Resources by RSS Combiner Tools for Class Room Teaching

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Information search literacy, which is a sub category of information literacy, should be the most significant in a Web based society. In classroom teaching, especially in undergraduate courses, teaching staff must show many relevant learning resources to their students in addition to textbooks. Two main tools can be considered to search and obtain these resources on the Internet. One is to execute the advanced search engine and databases. The other one is to use RSS feed combiner tools by gathering, combining and filtering relevant resources from various RSS feeds on the Web pages and Web scale discovery services. This paper emphasizes the later one and presents some experiences of using the RSS combiner tools in the Japanese librarianship course to set up the class room reference Web pages. Two free tools for combing RSS feeds, Feed Informer and FeedWind, are selected to practice. The RSS feed outputs that are manufactured by the combiner tools and then converted to HTML format can function as ready reference resources, path finders and subject guides for students. Some advantageous features of the combined RSS feed contents will be considered. First is that they are better for getting and keeping current information. Second is that they can automate their update works. Very few tasks are required after the initial set up of the feeds form Third, is that new Web scale discovery services, which are including RSS feeds, can play important roles today. For example, the National Diet Library of Japan, is now providing their original Web scale discovery service, the NDL Search, to the public. The NDL Search has an English interface and an option to search English text resources, too. We can run the Web search discovery services to find various types of information, such as books, journal articles and reference questions and answers, and e-resources at the same time. Outputs that teaching staff composed by using these RSS tools can become rich resources for their students and can be open to the public, too. These fabricated resources can assist students and the public who are interested in the specific subjects. We can also include these gathered RSS resources in LibGuides and any other widgets.

Keywords: *RSS feeds, RSS feed combiner, library science education, search literacy, web scale discovery*

Integrating Information Literacy Threshold Concepts across the Curriculum

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The official adoption in January 2016 of the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education has created a critical shift in the way librarians conceptualize and teach lessons on information literacy. The Framework began as an update to the Information Literacy Competency Standards for Higher Education published in 2000. However, rather than identifying a list of specific standards, this framework outlines six key “threshold concepts” specific to information literacy. Threshold concepts, according to Jan Meyer and Ray Land (2010), “are core or foundational concepts that, once grasped by the learner, create new perspectives and ways of understanding a discipline or challenging knowledge domain.” The six threshold concepts identified by the Framework for Information Literacy are:

1. Scholarship as Conversation
2. Research as Inquiry
3. Searching as Strategic Exploration
4. Authority is Constructed and Contextual
5. Information Creation as a Process
6. Information Has Value

As the first step in creating an instruction assessment plan at Palm Beach Atlantic University, librarians determined that an information literate student should internalize each threshold concept in the Framework for Information Literacy by the time he or she has graduated. However, by nature, threshold concepts are troublesome to grasp. Many of the concepts may be new to students and can vary in practice by discipline. For this reason, instruction librarians have begun to integrate the threshold concepts from the Framework for Information Literacy not only into course specific instruction but also their drop-in workshops.

In this presentation, attendees will learn how to create library workshops aligned to the threshold concepts as well as how to identify discipline specific threshold concepts. The presenter will describe her experience teaching workshops relating “citation chasing” to the threshold concept of scholarship as conversation as well as how the workshop was underpinned by the learning theories of constructivism and transformative learning theory. Additionally, as her university’s library liaison to the School of Education and Behavioral Studies, she will explain how she worked with a fellow faculty member to design a lesson for education students teaching the discipline specific threshold concept of culturally responsive teaching. Though the Framework for Information Literacy was written for higher education, these same concepts are key to research at all levels and can be taught as workshops in school and public libraries as well.

References

- Association of College and Research Libraries. (2016). *Framework for information literacy for higher education*. Retrieved from <http://www.ala.org/acrl/standards/ilframework>
- Bravender, P., McClure, H., & Schaub, G. (Eds.). (2015). *Teaching information literacy threshold concepts: Lesson plans for librarians*. Chicago, IL: Association of Colleges and Research Libraries.
- Meyer, J. H. F., Land, R., & Baillie, C. (2010). Editors’ preface. In J. H. F. Meyer, R. Land, & C. Baillie (Eds.), *Threshold concepts and transformational learning* (pp. ix–xlii). Rotterdam, Netherlands: Sense Publishers.

Keywords: *information literacy, standards, threshold concepts, university libraries*

Parallel Lines: A Look at Some Common Issues in the Development, Repurposing and Use of Online Information Literacy Training Resources

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Based on a chapter from “Distributed Learning: Incorporating Online Options into Your Information Literacy Instruction” edited by Maha Kumaran and Tasha Maddison, Elsevier, 2016. A literature review on production and evaluation of online information literacy (IL) training resources in Higher Education was carried out. A direct comparison of our products with others in the sector was not possible, so I refocused it to examine the issues faced by IL training developers.

The main issues are:

- Market scan or literature review
- Planning - storyboarding, design and project management
- Pedagogical issues and IL frameworks
- Development software
- Hardware and delivery methods
- Testing and piloting
- Teaching
- Futureproofing

These stages will be discussed in light of technological and pedagogical developments. Not all of these main stages are appropriate if you are working on an existing open educational resource. Accessibility, look and feel, plus navigation are included in planning. Mapping against national and international IL frameworks and standards is discussed. Varying approaches to delivery of IL training are considered, weighing the advantages of a closed system such as a VLE (or LMS) against the greater functionality and discoverability provided by the open web. User feedback usability testing, pilot exercises and surveys are included in the discussion of testing and piloting. The question of measuring changes in IL competence and users’ ability to complete the actual package are considered. The question of how to incorporate online IL training into the curriculum is addressed. Should they be timetabled as part of a module or recommended as extras for a student to complete in their own time? The development of trends on online education are examined and the provision of mobile-friendly resources is discussed.

References

- Crawford, J., & Irving, C. (2013). *National information literacy framework Scotland blog: Framework levels*. Retrieved September 3, 2015 from <http://www.therightinformation.org/temp-use-highereducation/>
- Crawford, N., & Broertjes, A. (2010). Evaluation of a university online Information Literacy unit. *Australian Library Journal* 59(4), 187–196.
- Stubbings, R., & Franklin, G. (2004). A critical analysis of the INFORMS project at Loughborough University. *JeLit*, 1(1), 31–41.
- Thomas, J., & Gosling, C. (2009). An evaluation of the use of ‘Guides at the side’ web-based learning activities to equip students in health sciences and nursing with information literacy skills. *New Review of Academic Librarianship*, 15(2), 173–186.
- Vitae. (2011). *Researcher Development Framework*. Retrieved March 11, 2015 from <http://www.vitae.ac.uk/researchers/428241/Researcher-Development-Framework.html>
- Yang, S. (2009). Information literacy online tutorials: An introduction to rational and technological tools in tutorial creation. *The Electronic Library* 27(4), 684–693.

Keywords: *information literacy, online training, design and construction, IL resource development, project management, literature review, IL research*

Information Literacy and Digital Divide: The Case of the University of Botswana Students Studying Part-Time

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In Botswana, the costs and requirements to study full-time are very high. Not everyone can afford to study full-time without forfeiting their current roles, for example, in 1999 the Center for Continuing Education (CCE) in Botswana launched a Diploma in Primary Education distance education programme, to upgrade academic and professional qualifications of some 8000 primary certificate holders to diploma level. However, those teachers could not be released to attend courses in conventional institutions without compromising primary school work progress (Nage-Sibande, 2005: 250). Sometimes work and family life are core determinants to furthering education. Universities provide opportunities for students to choose their mode of learning as well as setting their pace of study. The University of Botswana (UB) like many other universities around the globe offers students the option to study and carry out other life commitments at the same time. This is in realization of the fact that learning part-time is a very important alternative and an opportunity for people to continue learning while they go on with their normal workloads and family or community responsibilities (Nage-Sibande, 2005). This paper will focus on students pursuing Part-time Diploma in Accounting and Business Studies programme (DABS) based at different geographical locations in the country. It is intended to discuss the plight of these students with regards to their lack of participation in the information literacy skills programme (ILS) offered to full-time undergraduate students as well as the inadequate access to both Information and Communication Technology and library resources. The paper will also discuss how their lack of access to ICT resources continues to widen the digital divide between those having access and those without access. Based on the authors' past participation in the teaching of ILS to DABS students it will discuss the pivotal role played by UB staff in the teaching of Information Literacy Skills (ILS) to DABS students as well as the collaborations and partnerships between librarians and other stakeholders such as the Extra Mural Unit of the Center for Continuing Education (CCE); Communication and Study Skills Unit (CSSU) and Computer Science which made it possible for Librarians to actively participate in the teaching of ILS. Further, the paper will discuss the problems experienced regarding issues of student support and access to and provision of resources, which are essential to the successful provision of courses taken by part-time students. Lastly, the paper will discuss efforts made by the CCE, North branch library, in Francistown, which is the outreach arm of the Department of Library Services at UB, in ensuring that library materials are provided to satellite centers outside Francistown through Technical Colleges, and the challenges experienced in the process.

References

Nage-Sibande, B. (2005). Development of distance education in Botswana. *The Quarterly Review of Distance Education*, 6(3), 243–252.

Keywords: *part-time learners, librarians & information literacy skills, ICT & digital divide*

Developing Empowering Library Information Literacy Programs for Immigrant Families: U.S. Academic Librarian's Perspective

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The European continent is changing. With more than a million refugees and migrants having crossed into the area in the last year or so, its countries are becoming increasingly diversified. In response to such growing heterogeneity of the European society, this presentation offers a set of recommended practices for libraries striving to fulfil their role as promoters of equal access to information by developing programs targeting the information literacy skills of multicultural members of their immediate and extended communities. Research shows that while enhancing the information literacy skills of any population group results in its significant democratic empowerment, it is often with non-mainstream groups—such as immigrants—where program implementers are likely to make the most impact. Similar to any programming efforts, the development and delivery of workshops for immigrant populations poses its specific challenges. The presenter, utilizing her experience with family literacy workshops offered at Northern Illinois University Libraries for the socially marginalized Hispanic immigrants of DeKalb, Illinois (USA), outlines these challenges and proposes a set of recommendations for their successful resolution to assist librarians wishing to develop similar programs.

More specifically, the presenter planned, secured grants for, implemented, and assessed a repeated series of workshops to help immigrant Hispanic parents boost their young children's emerging literacy skills by demonstrating the value and techniques of parents expressively reading aloud to their children. Parents were also encouraged to enhance their skills for locating, evaluating, and using effectively all types of library resources, with special emphasis on the bilingual juvenile collection that the presenter established for this program's purpose. The presenter uses the stumbling blocks she encountered in the process and the set of solutions she applied to offer practical guidance to other potential planners of library information literacy programs for immigrants. She covers recommendations pertaining particularly to the following areas:

- Identifying the information needs of the targeted multicultural population;
- Employing a multigenerational approach to increase impact;
- Securing internal and/or external financing;
- Selecting an adequate program venue (on-site vs. off-site decisions);
- Identifying existing library resources benefiting the information needs of the immigrant population and establishing additional focused collections as needed;
- Developing partnerships with relevant constituencies;
- Utilizing the partnerships for the purposes of advertisement, recruitment/retention, and instructional support;
- Assessing program effectiveness for reports and future offerings.

It is the presenter's hope that this set of practices will encourage library practitioners to reach out actively to the newly arrived refugee and migrant populations and offer empowering information literacy programs for them.

By the end of the session, participants will:

- Understand that information literacy programs can serve as democratically empowering tools, especially in relation to underprivileged populations such as immigrants;
- Comprehend the libraries' social responsibility to participate in offering such programs when possible;
- Be able to predict specific challenges that developers of such programs face and address them successfully.

Keywords: *library information literacy programs, academic libraries, emergent literacy, immigrant populations, empowerment, multigenerational approach, best practices*

The Challenge of Information Literacy in Academic Libraries in the Republic of Moldova

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In many European countries, as well as North America and Australia, the need for information literacy training came as a result of the “information jungle” in academia when electronic information sources, journals and databases arrived in libraries. How would we plan for and develop information literacy courses and trainings for our students if we could do it in parallel?

From 2012 University of Bergen Library, Bergen, Norway, and the Library at the Academy of Economic Sciences of Moldova (ASEM), Chisinau, Republic of Moldova have collaborated in several library development projects funded by the Norwegian government through the Eurasia-programme. In the projects, the focus has been on supporting ASEM’s library in their development of new services for students and researchers, and from 2016: to cascade the knowledge to the remaining academic libraries in the republic.

The authors of this paper are in the situation of being able to test this out, and want to report of our plans and our efforts.

The data in this paper comes from a survey being conducted on students from the Academy of Economic Sciences of Moldova, Chisinau, Republic of Moldova. The survey was an electronic survey, done through Survey Monkey, with over 1000 respondents from all the study years. We designed information literacy curriculum and workshops, with several practical applications, according to the findings of the survey.

In this paper we will present a model of information literacy workshop regarding organisation, subject, assessment and results. The workshop is for the library staff, in order to develop courses for students.

References

- Budd, J., Elmborg, J., Lloyd, A., & Sundin, O. (2014). Theoretical foundations for information literacy: A plan for action. In A. Grove (Ed.), *Proceedings of the 77th ASIS&T Annual Meeting, vol. 51*. Copenhagen: University of Copenhagen.
- Corrall, S. (2008). Information literacy strategy development in higher education: An exploratory study. *International Journal of Information Management, 28*(1), 26–37.
- Limberg, L., Sundin, O., & Talja, S. (2013). Three theoretical perspectives on information literacy. *Journal for Information Technology Studies as a Human Science, 11*(2).

Keywords: Republic of Moldova, training, information literacy

Train the Trainer: Enhancing Information-Literacy Instruction of Distance Students

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Distance education is a significant trend in higher education. American distance-education courses have grown steadily from eight percent of undergraduate courses in 2000 to 25 percent in 2012 (National Center for Education Statistics, 2014). In 2012, 33 percent of US undergraduates enrolled in at least one distance education course (Allen & Seaman, 2014). In Europe, 80 percent of universities offer some distance education courses (Schneller & Holmberg, 2014).

In distance learning, instruction can be delivered by faculty traveling to off-campus instructional sites or through technology (Radford, 2011). Synchronous instruction allows students to receive instruction at the same time in a single location or in distributed locations via technology. Asynchronous instruction enables self-paced learning accessible at times of students' choosing.

Higher education is incorporating distance learning for a variety of reasons. Diversity initiatives are enhanced through the inclusion of geographically and socio-culturally diverse students. Additionally, distance learning affords educational opportunities for students lacking the resources to physically attend a traditional university. Distance education offers greater convenience and choice for on-campus students. Institutions also enjoy financial advantages, including lower costs of delivery, an enlarged student body, and reduced infrastructure requirements (Smith, 2013).

Supporting both traditional on-campus students and increasing numbers of distance-education students raises significant issues of scalability and sustainability for academic librarians. The presenters coordinate an information-literacy (IL) program spanning four required general-education courses. In Freshman Composition, students in on-campus sections receive hybrid instruction consisting of online IL lessons and two librarian-facilitated face-to-face (F2F) assignment-focused research sessions. Students at satellite campuses must complete the online lessons, but they receive one librarian-facilitated research session, due to constraints on time and travel. Online students receive instruction via the online lessons; they get no F2F research sessions due to the asynchronous delivery of instruction.

Distance students enrolled at satellite campuses or in online-only courses do not receive instruction comparable to that of on-campus students. This results in reduced IL or research skills, which disadvantages these students and complicates inclusivity efforts. Librarians' attempts to "push" the same kinds of instruction received by face-to-face learners to all distance learners are unscalable and unsustainable. A new model of distance IL instruction is needed.

This presentation sets forth a rationale for a train-the-trainer program to support distance-education faculty and students. Underlying this model is the inclusive assumption that teaching critical-thinking literacies, including IL, is everyone's responsibility and that equal access to critical-thinking literacy instruction is everyone's right. Librarians support course faculty by training them in IL pedagogies and instructional design. Faculty are empowered to provide IL instruction and research support in times and spaces when course instruction occurs, allowing them to support learners at their point of need. The paper ends with a discussion of additional advantages to instructors, students, and librarians that can be realized by implementing the train-the-trainer model.

References

- Allen, I. E., & Seaman, J. (2014). *Grade change: Tracking online education in the United States*. Babson Park, MA: Babson Survey Research Group.
- National Center for Education Statistics. (2014). *Enrollment in distance education courses by state: Fall 2012* (Report No. NCES 2014-023). Washington D. C.: United States Department of Education.
- Radford, A. W. (2011). *Learning at a distance: Undergraduate enrollment in distance education courses and degree programs* (Report No. NCES 2012F-154). Washington D.C.: United States Department of Education.
- Schneller, C., & Holmberg, C. (2014). *Distance education in European higher education – the offer* (Report No. 1 of the IDEAL project). Oslo, Norway: International Council for Open and Distance Education.
- Smith, B. (2013). Perspectives: Unconventional wisdom. *Change*, 45(1), 33–39.

Keywords: distance education, information literacy instruction, online education, train the trainer

Information as a Gate to Social Inclusion – Information Behavior in the Elderly: A Case Study on the Zika Virus

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Overview

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 society. It also prevents manipulation of elderly citizens. The novelty and scope of topics and increasing breadth of information resources represent a challenge for the application of information literacy skills by elderly population, especially in terms of its content and competency framework (Bruce, C. & Edwards, S. & Lupton, M. (2006)). The aim of our research was 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. We used these research outcomes to improve information literacy curriculum for elderly students at the University of the Third Age.

Target group and research

We carried out our research within the target group of elderly students attending the University of the Third Age at the Institute of Information Science and Librarianship, Prague. When compared to the wider population of the same age, the target group had above average competencies in language skills, ICT usage, as well as in the desire to learn. The primary tested topic we tested was the Zika virus. Respondents are neither doctors nor other experts in the area. We followed a qualitative research approach using questionnaires as well as observation techniques to monitor the students' information seeking behavior regarding the given topic. We paid particular attention to information resources they used and their prioritization, evaluation of information/resource, and preferred media/information type. In the second phase, we delivered a lecture on information literacy. In the third phase, we tested their knowledge and skills in locating information about a new topic: vaccination against varicella/influenza. The test examined the level of progress and improvement in the practical application of acquired knowledge. We will place the final outcomes and conclusions of our research into the context of similar research studies and their results in the field.

References

- Bracanović, Z., & Robida, J. (2014). Informational integration process of elderly people in daily modern communication. *Informatologia*, 47(2/3), 150–156.
- Bruce, C., Edwards, S., & Lupton, M. (2006). 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*, 5(1).
- Helsper, E., & Eynnon, R. (2011). Adults learning online: Digital choice and/or digital exclusion. *New Media & Society*, 13, 534–551.
- Mellor, D., Firth, L., & Moore, K. (2008). Can the Internet improve the well-being of the elderly? *Ageing International*, 32(1), 25–42. doi: 10.1007/s12126-008-9006-3
- Sourbati, M. (2012). Disabling communications? A capabilities perspective on media access, social inclusion and communication policy. *Media, Culture, Society*, 34, 571–587.

Keywords: *information behaviour, information literacy, information seeking, elderly, seniors, survey*

Not Doing Things Differently, but Doing Different Things: How the ACRL Framework for Information Literacy for Higher Education is Changing Information Literacy Practice and Perceptions

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The rapidly changing higher education environment and the increasingly complex and fluid information landscape are forcing us to rethink the very nature of teaching and learning and the roles of librarians, faculty, and students. The Framework for Information Literacy for Higher Education was launched by the Association of College & Research Libraries in February 2015 and, while many librarians have been debating and exploring how to use the Framework, there has not been a systematic analysis of the Framework in practice that would help address the following questions: How is the Framework being used in practice? How has the new approach to teaching and learning offered by the Framework changed the ways librarians think about and practice information literacy? How has the Framework fostered dialogue and collaborations with faculty and other educational partners?

This paper examines these questions based on data from a two-part study. The first part presents a profile of the use of the Framework in practice in North America since its launch in February 2015. Documented examples of the use of the Framework in practice, represented by conference abstracts and proceedings and published articles, were systematically reviewed to identify the instructional and institutional contexts and to chart the themes that illustrate how the Framework has impacted the way librarians teach and interact with academic faculty colleagues and students.

The data that contributed to creating this profile included the following variables: types of libraries and institutions; academic level (including first year, upper division, graduate level); range of academic disciplines; extent and nature of collaboration with academic faculty and other educational partners; innovations and applications in classroom instruction, curriculum design, and assessment; theoretical foundations that informed the practice; examples of practitioner research; opportunities for professional development; and linkages to institutional accreditation and student success outcomes.

For the second part of the study, a representative sample of the librarians from the profile participated in semi-structured interviews. Responses were coded to identify themes, especially those relating to challenges and successes. A primary focus was to explore the nature of the librarian-faculty dialogue and collaboration as an expansion of the teaching and learning conversations and collaborations emphasized in threshold concept research and the Scholarship of Teaching and Learning (Cousin, 2009; Gurung & Schwartz, 2010).

This study charts the evolution of Framework practice during its first year, offers an organized set of examples from the field for librarians to reflect upon and use in their own practice, points to professional development needs, and provides models for collaboration. While focused on North American practice, the examples and models can be compared and applied to information literacy practice in other regions of the world. The findings can be used to guide the development and assessment of the Framework and to further its potential and vision: that it will be actively and creatively used in research and practice to transform the role of librarians as educators and of the library as an integral partner in the teaching and learning mission of higher education.

References

- Cousin, G. (2009). *Researching learning in higher education: An introduction to contemporary methods and approaches*. New York: Routledge.
- Framework for information literacy for higher education*. (2015). Chicago: Association of College & Research Libraries. Retrieved February 15, 2016 from <http://www.ala.org/acrl/standards/ilframework>
- Gurung, R. A. R., & Schwartz, B. M. (2010). Riding the third wave of SoTL. *International Journal for the Scholarship of Teaching and Learning*, 4, 1–6.

Keywords: ACRL Framework for information literacy, collaboration, information literacy practice

A Week of Intercultural Activities at the Municipal Library of Prague

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This presentation will discuss the result of a week-long testing of intercultural activities at the Municipal Library of Prague. Six students and one tutor of the Institute of Library and Information Science will cooperate with the employees of a branch of the Municipal Library of Prague on the planning and delivery of a week of intercultural activities. The objective of programme is to provide activities that will help improve the lives of immigrants in the Czech Republic and ease their contacts with the majority society. The actual programme will take place in May 2016 at the Lužiny library branch which is located in a suburb of Prague. The program will be held on six consecutive days, over which time there will be more than 12 hours of activities. Each activity is designed to accommodate 10–20 participants while the closing ceremony will accomodate more than 50 participants.

Hosted activities during the week may include a language course, lectures, conversation groups, guided tours of the library, bilingual reading for children, homework assistance for children, and a Living Library. In addition, the library will launch some new continuing services. This includes translating the basic documents, such as registration form and library code of conduct, into simple Czech and selected foreign languages; using pictographs to facilitating patrons' navigation through the library space; and creating a list of recommended works of literature in a range of selected topics. Some of the activities of the programme are directly focused on enhancing information literacy. These include a special lecture for the general public on information literacy to assist participants in better understanding the current political situation in Europe. The speaker at this event is an expert in the analysis of social networks. He will try to explain where to get the reliable information and how to critically evaluate the information.

The topic of enhancing information literacy is also found in other activities, such as tour of the library, that will be customized to the participant's language skills. The tour will introduce the public to the library's information systems and how they might be used. An important part of the closing ceremony is an activity that we call The Migration Game. As part of this game, all age groups will be assigned tasks to complete that focus on searching for and evaluating information.

Prior to the start of the week's intercultural activities, we will gather data on the public's experience with individuals from diverse cultural and linguistic backgrounds. After the activities have taken place, we will assess whether the general public expresses a potential change in their attitudes toward migrants. We consider the collection of feedback information from the participants as an essential part of the overall evaluation of the programs. We will use evaluation results to design future activities of the Municipal Library of Prague. We will present these results at the 2016 ECIL conference.

Keywords: *public libraries, immigrants, intercultural library services, integration, Prague*

Learning to Organize a GLAM Wiki Editing Event

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Helsinki University Library organized a Wikipedia editing event in co-operation with ten Finnish galleries, libraries, archives and museums on the International Women's day 8.3.2016. The purpose was to increase the number of biographical articles on influential Finnish females and to learn to edit Wikipedia together. Helsinki University Library is centrally located, hosts over 7000 visitors daily, and offers an inviting space for a joint effort. In the library the reliable sources for editing are easily at hand both in print and online and also available for the general public.

Galleries, libraries, archives, and museums or, in short GLAM organizations are exceedingly making their collections available in digitized form. The GLAM Wiki movement tries to enhance the online visibility of these collections by linking it to relevant Wikipedia articles. Through creating Wikiprojects with GLAM institutions, the movement seeks to enhance the content of the Wiki as a reference work and also to bring forward the unique digital content the institutions are providing. GLAMs can work with Wikimedia, for example, by educating staff in memory organizations to edit Wikipedia on the topics of their expertise and by making content available with open licenses through Wiki platforms. Information seekers are then able to find links to the institutional webpages and museum collections in the reference section of Wikipedia articles.

Organizing a Wikipedia editing event with a cause motivates new people to contribute. Unfortunately, the Wikimedia community suffers from the same inequalities of society at large. There is a gender gap in Wikipedia both on the part of Wikipedia editors and in the content of biographical articles. Also, many editors remain white males residing in communities that are predominantly Christian by religion. There have been initiatives worldwide to balance this. A common practice is to arrange an edit-a-thon event that both offers help and guidance for new editors around a theme that complements the existing content.

The Helsinki University 2016 Women's day event was a success in terms of both public attendance and media coverage. It accomplished its main aim to produce quality content to the Finnish language Wikipedia.

We set the goal of a hundred new biographical articles of Finnish women. We neared that goal, starting 75 new articles started during the event, 29 new articles the following week and editing 12 existing articles. In terms of participants, there were over a hundred people enrolled and almost another hundred came by including general public, university students, museum and library professionals and Wikipedia volunteers. The Finnish Broadcasting company, YLE, reported the event on two radio channels, MTV3 TV Network provided coverage in their morning show, and several papers and magazines mentioned the event both before and after.

Editing Wikipedia in a Higher Education context can be contested. It clearly is not part of the scientific endeavor. However, if the concept of information literacy is taken to include understanding of the social nature of knowledge creation processes, then editing Wikipedia and reflecting on the writers of the articles and the possible biases in content is an excellent example of promoting such understanding. If the concept of information literacy is taken to include students developing expertise and learning to contribute to the body of knowledge and discussions in their field of study, rehearsing in the Wikipedia community serves this purpose without a doubt.

References

- ACRL. (2016). *ARCL Framework for information literacy*. Retrieved from <http://www.ala.org/acrl/standards/ilframework>
- Open Knowledge. (s. a.). Open GLAM. Retrieved from <http://openglam.org/>
- WHGI. (s. a.). Wikidata human gender indicators. Retrieved from <http://wigi.wmflabs.org/>
- Wikiprojekti Sata naista Wikipediaan. (s. a.). Retrieved from https://fi.wikipedia.org/wiki/Wikipedia:Wikiprojekti_Sata_naista_Wikipediaan

Keywords: *information literacy, higher education, wikipedia, networking, GLAM institutions, public outreach*

Information Literacy Contributions from Archives and Special Collections: Developing Information Literate Students in the Library Workplace

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Theories, methodologies, frameworks, and scholarship have been built around information literacy and libraries worldwide for over fifteen years. In academic libraries, information literacy experiences traditionally include instruction sessions and classes, activities in library learning spaces, and interactions with librarians. Often overlooked but equally as important to augmenting the student experience is employment in academic libraries and its relationship to information literacy in the workplace. This is particularly true with regards to the contribution of special collections and archives, as most scholarship associated with information literacy and special collections has been focused on instruction and teaching with primary sources.

My study builds on interviews with students and activity mapping to begin defining the various literacies associated with student work in archives, special collections, and digital initiatives. Specifically, the study includes qualitative interviews with students to learn about their needs and experiences, mapping major job responsibilities to a workplace readiness rubric, and mapping student worker activities to learning outcomes. Useful concepts from the ACRL's Framework for Information Literacy for Higher Education include contextual information, information as a creative process, scholarship as a conversation, and searching as strategic exploration. The ACRL Visual Literacy Competency Standards for Higher Education provide standards, performance indicators, and learning outcomes for visually literate students. While still in development, the SAA/ACRL/RBMS Joint Task Force on the Development of Guidelines for Primary Source Literacy provides a preliminary map between the core concepts in the framework and similar skills and understandings related to primary source literacy. Finally, looking at concepts recently identified by Hangen (2015) related to "historical digital literacy" and Carini (2016) on primary source information literacy standards related to "knowing, use, interpretation, access, and following ethical principles" can assist in mapping out learning outcomes specific to student employment in archival facilities.

My research suggests that student worker library experiences play a fundamental role in shaping lifelong information literacy skills. As libraries connect this new information literacy framework to departments that employ student workers, libraries can strategically communicate impacts on student learning, student retention, student success, and workplace readiness. By reframing and aligning activities of student workers to learning outcomes, academic libraries are better able to articulate their contribution to the overall information literacy lifecycle.

References

- Association of College & Research Libraries. (2011). *ACRL visual literacy competency standards for higher education*. Retrieved April 12, 2016 from <http://www.ala.org/acrl/standards/visualliteracy>
- Association of College & Research Libraries. (2016). *Framework for information literacy for higher education*. Retrieved February 13, 2016 from <http://www.ala.org/acrl/standards/ilframework>
- Carini, P. (2016). Information literacy for archives and special collections: Defining outcomes. *portal: Libraries and the Academy*, 16(1), 193–208. Retrieved from https://www.press.jhu.edu/journals/portal_libraries_and_the_academy/portal_pre_print/articles/16.1carini.pdf
- Hangen, T. (2015). Historical digital literacy, one classroom at a time. *Journal of American History*, 101(4), 1192–1203. doi: 10.1093/jahist/jav062
- Society of American Archivists. (2015). *SAA-ACRL/RBMS joint task force on primary source literacy*. Retrieved April 12, 2016 from <http://www2.archivists.org/groups/saa-acrlrbms-joint-task-force-on-primary-source-literacy#.VxETFJMrL-a>

Keywords: *information literacy, special collections, archives, digital literacy, primary sources, learning outcomes, students*

Digital Literacy's Role in Teaching Information Literacy Skills to Schoolchildren: A Maltese Perspective

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Introduction

When attempting to define digital literacy's role when teaching information literacy skills, it is easy to enter a territory which educationalist Zac Chase (2011) terms 'inherent squishiness'. This squishiness is caused by the fact that educators have trouble distinguishing whether a digitally literate person is one who has a working knowledge of digital hardware or one who puts digital skills into practice. When teaching the equally squishy information literacy skills, digital literacy's role is unclear.

Information Literacy Skills and Digital Literacy in the Maltese Primary and Secondary School Sectors

Since 2010 the Maltese primary and secondary school sectors have undergone structural changes. One change was to ensure that classrooms and teachers were kept up to date with the latest developments in information technology. State school classrooms had interactive whiteboards installed and teaching staff were equipped with laptops and were given in-service courses on how to use information technology for pedagogical purposes. Within the same year, church schools also strengthened information technologies components in their curriculum.

Currently there is a government plan to equip both primary and secondary students with tablets, thus a need for digital literacy is becoming important. Therefore, the need for defining digital literacy within the school context is becoming a must. However, the technological novelties were mostly introduced without any discussion and consideration of those skills and how/when they should be offered within the curricula

Objectives

The objectives of this paper are:

- To clearly define digital literacy's role when teaching information literacy skills within the Maltese educational context.
- To provide a brief history of the development of Maltese school libraries
- To differentiate the roles of a school librarian, that is, a librarian who has obtained a degree in librarianship and the teacher librarian, a teacher who has library related duties without the need of any prior degree or experience in librarianship.
- To examine whether school librarians or teacher librarians understand the importance of digital literacy.
- To examine the current practices within delivery of information literacy skills lessons.

Methodology

Methodology combines desk research with semi-structured interviews from a small sample of school librarians and teacher librarians from Maltese schools.

Outcomes

The outcomes of the paper will aim to clarify digital literacy's role when teaching information literacy skills within the Maltese school system and to clarify library professionals' understanding of this role and what has to be achieved in order for Maltese students to leave school equipped to face the challenges created by information technology.

Keywords: *digital literacy, information literacy skills, Malta, education*

Recommendations for Higher Education Libraries in Portugal: A Target Achieved

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This study describes the trends and expectations for Higher Education Libraries (HEL) in Portugal. It describes the recent activity of the Working Group of Higher Education Libraries of the Portuguese Association of Librarians, Archivists and Documentalists.

Guidelines emerge as the answer to the need to adapt libraries to changes. In Portugal, the professionals of this field have been sensitive to the changes which happen in higher education, in technologies and in forms of communicating and sharing information. The impact of these changes has been remarkable, especially in the skills librarians must develop, in the partnerships they have to promote, in different user needs, in the management of information systems, in the importance of information literacy, in new forms of publication and in everything that involves the management and dissemination of scientific and academic knowledge. The Working Group of Higher Education Libraries is committed to continue this updated debate through the lines of intervention set out for its mission, which cover: political and institutional intervention, transfer of knowledge (which includes information literacy instruction) and development of the professional community; innovative projects and development of Higher Education Libraries.

This is why, despite the achievements already attained and the projects under way, the group continues to base its activity on the following objectives: Promoting ways of cooperation between HEL professionals and institutions; Creating a transfer of knowledge for a deeper understanding of the realm of higher education libraries; Promoting technical development projects in the community; Closely monitoring the relevant projects in the field of science and teaching; Improving the contribution of higher education libraries and their social relevance; continuing to deliver information literacy instruction; Seeking new opportunities and innovative projects of public intervention.

This study has a particular focus on the reflection and debate regarding the production of a new guidance document: Recommendations for Higher Education Libraries, which we set forth herein. Thus, it seeks to meet the strategic objectives of generating knowledge, sharing experiences, promoting the transfer of knowledge and boosting the creation of policies regarding information and documentation, including information literacy.

References

- ALA. (2014). Guidelines for university library services to undergraduate students. *College & Research Libraries News*, 75(2), 93–100.
- Council on Library and Information Resources. (2008). *No brief candle: Reconceiving research libraries for the 21st century*. Washington, DC: CLIR.
- Denmark's Electronic Research Library. (2009). *The future of research and the research library*. Copenhagen: Danish Agency for Libraries and Media.
- Eden, B. L. (2015). *Creating research infrastructures in the 21st-century academic library: Conceiving, funding, and building new facilities and staff*. Lanham: Rowman & Littlefield Publishers.
- Grupo de Trabalho das Bibliotecas de Ensino Superior da BAD. (2014). *Relatório & conclusões: 2º Encontro bibliotecas do ensino superior: Partilha, criatividade e engenho*. Lisboa: BAD.
- Research Libraries UK. (2014). *Powering scholarship: RLUK Research Libraries UK strategy 2014-2017*. UK: RLUK.

Keywords: *higher education libraries, Portugal, guidelines, information policies, recommendations for higher education libraries*

Understanding Librarians' Experiences of Copyright: Initial Findings from a Phenomenographic Study of UK Librarians

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In 2014/15, two researchers undertook a survey to investigate the 'copyright literacy' of over 600 librarians in the UK (Morrison and Secker, 2015), following reform of copyright legislation. The survey highlighted gaps in librarians' knowledge, identified training requirements in the sector, and provided comparative data to a number of other countries. The research originated from a project funded by the Bulgarian Ministry of Education and Science, reported previously at ECIL (Todorova et al, 2014). This paper presents findings from several focus groups to explore copyright with academic librarians.

The survey results suggested that the confidence of UK librarians compared favourably to other countries in terms of their copyright knowledge and UK libraries were more likely to have a copyright officer. However, the level of knowledge about copyright across the sector was mixed; copyright played a small part in the role of many information professionals. The survey indicated that many respondents were keen to develop their knowledge but that librarians found copyright to be a source of anxiety. With this in mind, we decided to gather qualitative data to explore these issues further. Drawing on literature in the education (Akerlind, 2005) and information literacy fields (Yates, Partridge and Bruce, 2012), we decided to use phenomenography to explore variations in how librarians experience copyright. In early 2016, we undertook several focus groups with academic librarians to test out this methodology. Our interim findings suggest that librarians experience copyright in different ways dependent on their role. There are clear pockets of expertise. For example, research support librarians routinely advise academics about open access, whereas librarians supporting teaching often provide advice about copying under the UK's collective licence issued by the Copyright Licensing Agency. However, many librarians find copyright queries challenging. They appear to view copyright queries differently than other library enquiries and often feel giving a clear-cut answer can be more difficult. The ambiguity surrounding copyright and the need to make a risk assessment often causes them to doubt their knowledge, leading to anxiety. The research also considered the impact of a specialist copyright officer and whether having access to an in-house expert affects of librarians' confidence when dealing with copyright queries.

In our research we considered the value of library and information science qualifications and Continuing Professional Development to develop librarians' knowledge of copyright. Our findings suggest that many librarians rely on colleagues for advice and support. The key to understanding copyright and intellectual property rights is to embed learning within the librarian's specific work context. We will discuss how understanding the variation in experiences might enhance copyright education. Initial findings suggest that these variations impact on the ways information professionals interact with library users and shape conversations about copyright issues. We will also share their experience of using an interactive, games-based approach to copyright education, that aims to tackle issues of anxiety but also helps to build supportive communities of practice. Finally, we suggest ways to embed copyright more fully into information and digital literacy programmes.

References

- Åkerlind, G. S. (2005). Variation and commonality in phenomenographic research methods. *Higher Education Research & Development*, 24(4), 321–334.
- Morrison, C., & Secker, J. (2015). Copyright literacy survey. *Library and Information Research*, 39(121), 75–97. Retrieved from <http://www.lirjournal.org.uk/lir/ojs/index.php/lir/article/view/675>
- Todorova, T., Trencheva, T., Kurbanoğlu, S., Dogan G., & Horvat, A. (2014). *A multinational study on copyright literacy competencies of LIS professionals*. Retrieved March 13, 2015 from <http://ecil2014.ilconf.org/wp-content/uploads/2014/11/Todorova.pdf>

Keywords: *copyright, digital literacy, UK, phenomenography, copyright literacy*

Foundations for the Development of an Information Literacy Curriculum for Political Science Students

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Introduction

In the short 15-year history of the Singapore Management University since its inception in 2000, Reference and Instructional librarians and research librarians from the learning and information services team have offered routinely offer information literacy (IL) programmes to support undergraduate, postgraduate, and doctoral students. The typically 'one shot' sessions take multiple forms including 'mass' trainings at the library learning labs, advanced sessions focusing on single databases or software such as EndNote, as well as 'in class' sessions involving teaching a short IL module closely aligned to the deliverables of the course. More 'generic' IL sessions are managed by the librarians. Subject specialist research librarians offer 'in class' sessions as well as sessions focused on subject specific databases, citation software, and research skills classes that are tied to specific disciplines.

Methodology

In Academic Year 2015-2016, I collaborated with two faculty members to deliver IL sessions to undergraduate students who were enrolled in the module 'Introduction to Political Science and Policy Studies' – a foundational module for students majoring in Political Science. Out of a total of 134 students enrolled in the module, 102 students attended the one-hour session. Faculty members advertised it in their classes and encouraged students to sign up, which led to a high attendance rate.

I designed the lesson plan for this session after consultations and meetings with faculty members. I incorporated a thorough appraisal of the course outline with a focus on the deliverables expected of students. The learning outcomes of the session reflected the introductory nature of the module that is targeted primarily at freshmen. Content included basic searching of materials from a reading list, steps to a literature review, refining research topics to come up with a research question, basic and Boolean search skills, introduction to our discovery system as well as to a few subject specific databases, and an introduction to Research Guides (our LibGuides). I delivered content through a hands on activity and tested the retention of knowledge through an assessment quiz.

Outcomes

I delivered the session in a through a lecture demonstration style. I administered the quiz at the end of the session; questions focused primarily on assessing basic retention of information. One question probed the development of skills in creating search strings using simple Boolean operators while another asked students to recall names of subject specific information sources. An analysis of the quiz responses afforded me with many opportunities to further refine and fine tune the lesson plan, the learning outcomes, as well as the quiz itself. It also afforded the library with an opportunity to demonstrate value and to advocate for IL sessions with other faculty members.

The faculty members were appreciative of the contribution made by the library. To take this further, I am in negotiation with one of the faculty members to a study focusing on the impact of IL over time through examining in terms of grades on a term paper, final grades, and even the impact of the students' newly acquired research skills on other modules can be designed.

Contributions

This experience showcases how a simple assessment model can help us refine not only our course content but also delivery and ongoing assessment. Collaborations with faculty can be used to gain better 'buy in' by students. It also showcases how the typical one shot IL training programme can be used to build up a more comprehensive and deliberate IL curriculum. It also showcases the application of some aspects of the ACRL Framework for Information Literacy for Higher Education.

Keywords: *information literacy instruction, instructional design, librarian faculty collaboration*

Information Safety Lessons in the Library: An Example of Library and School Cooperation

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Cooperation of elementary schools and libraries has a long tradition and we can now see how important this cooperation has become. Based on the researches on the EUkids (EUkids, 2015) web pages and the results of the researches about children's behavior, we provide practical lessons for children following the information literacy standards. In my presentation I follow the research and lessons of information safety, first mentioned by Pavla Kovářová (Kovářová, 2013) and presented at ECIL 2014. Her paper presented the librarian's role in the process of information safety education and explained the practical aspect of the lessons for children ages 10 to 15 years in the library. The main focus was to prepare suitable lessons in the library and to teach children critical approaches to the Internet. Children relatively often engage in risk behavior (Kovarova, 2013), and by the age of 10, most know that bad situations can occur but have limited information about suitable behaviors or basic protection. As Martin and Rice (Martin and Rice, 2012) mentioned, the library is one of the elements cooperating with the school, and the activities of directors, teachers and librarians are considered essential to increase internet safety. We have already tested three basic lessons for libraries, each 90 minutes long, for children ages 10 and 11 years, 12-13 years and 14-15 years, offer both theory and practice. We created the lessons to renew and extend the subject "information technology", which is given as a base for students which and primarily includes information on how to use computer and basic knowledge about computer programs and applications. In the lessons I followed the methodology and didactic ideas tested in years 2013-2014 through the research of Pavla Kovářová (mentioned above) in cooperation with libraries and secondary schools in South Moravian Region. For beginners, it is really important to know basic internet terms. For the younger children ages of 10-11, the lessons are focused on basic safety principles of online communication, especially upon first contact with anonymous persons. In these lessons we use gamification. At the age of 12-13, some of the children are relatively well informed about internet safety behavior, but most of them do not know terms like sexting, stalking, happy slapping, and cyber-grooming, and thus the lesson for them are explanations. Pupils receive suitable information about these terms in practical exercises, basic ways of coping, and can discuss practical examples. Lessons for the 14-15 year olds are focused on situations from real life. They have to read and then repeat to other schoolmates a story based on true dangerous situations in Facebook. After the lessons, we used small emoticons for them to evaluate the program and they could write their opinions in a short paper. For lessons we used various worksheets, boards, movies, and computer applications to improve students' perception of using internet safely. All these lessons open new topics on information safety for them, and in all lessons they experienced an active approach to their own education. This is active learning, the librarian's role is not to stand in front the class and teach but to use several methods (including critical reading and writing, brainstorming, etc.) to motivate the students to improve their cyber behaviors. At the beginning of the 21st century, the library could be a partner for children, parents and schools in many areas. Information safety is one of the most important topics because children's behavior is being formed, and in our lessons we present ideas on how the library can provide information safety education to the children.

References

- EUKidsOnline.net. (2014). EU Kids Online: Findings, methods, recommendations. Retrieved from <https://usedesignunit.com/EUKidsOnline/index.html?r=64>
- Kovarova, P. (2014). Six views on information safety education in libraries In. S. Kurbanoglu et al. (Eds.), *Information Literacy, Lifelong Learning and Digital Citizenship in the 21st Century, Second European Conference on Information Literacy, ECIL 2014, Dubrovnik, Croatia, October 20–23, 2014: Proceedings. CCIS, vol. 492* (pp. 703–712). Cham: Springer International Publishing.
- Martin, N., & Rice, J. (2012). Children's cyber-safety and protection in Australia: An analysis of community stakeholder views. *Crime Prevention and Community Safety*, 3, 165–181.

Keywords: education, information safety, library lessons, cyber danger

Capturing Information Literacy at the Reference Desk

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To put it simply, we are what we measure. If libraries measure books, then libraries are about books. If libraries measure learning, then libraries are about learning. One area in libraries that often has significant a learning opportunity with patrons is found at the reference desk. Libraries often gather data about these interactions and traditionally categorize these transactions by question type, time spent answering the question, and time of day. Unfortunately, these traditional measures do little to connect to the learning aspect that may be occurring during these reference encounters. Without proper evidence, it is difficult for libraries to say that reference encounters might allow patrons to practice critical thinking skills, build information literacy competencies, or support any other aspect of learning that happens during these patron interactions.

This paper presents a case for using university or national learning outcomes, such as information literacy, as means to better articulate the impact reference services have with patrons. Assessments derived through such learning competencies offer a potentially rich framework for libraries to re-envision the measures they employ to describe themselves to their educational partners both at a local level, such as university administrators, as well as at a national level, such as accrediting agencies.

The objective of this research is to make the case for better measures at library service points to capture the library's impact on learning outcomes, technological proficiencies development, or other skills. These assessments will allow libraries to better articulate their contribution to desired learning outcomes in the communities they serve. This data will also better convey the value reference services have in supporting and enhancing information literacy.

The methodology for this project involved piloting a re-designed reference question intake form. This pilot project is inspired by the READ (Gerlich and Berard, 2010) and DART (Hudock, 2013) projects that explored more meaningful options for capturing transactions at the reference service point. Taking Dugan's and Hernon's (2002) charge to better connect academic libraries with learning goals, the researchers chose to emphasize learning outcomes in their reference in-take form redesign. This new form highlighted activities that supported student learning that often were not captured by traditional means, such as teaching patrons how to evaluate resources, correctly cite materials, or other information literacy-related skills. These activities were then mapped to university and national learning goals such as problem-solving, communication, and critical thinking.

The outcomes from this pilot have included an assessment instrument a better aligned to campus learning goals. This instrument now allows reference services to gather meaningful evidence to support statements to stakeholders about the time and effort they contribute to information literacy building skills.

References

- Dugan, R. E., & Hernon, P. (2002). Outcomes assessment: Not synonymous with inputs and outputs. *The Journal of Academic Librarianship*, 28(6), 376–380. doi:10.1016/s0099-1333(02)00339-7
- Gerlich, B. K., & Berard, G. L. (2010). Testing the viability of the READ scale (Reference Effort Assessment Data) (C): Qualitative statistics for academic reference services. *College & Research Libraries*, 71(2), 116–137. doi:10.5860/0710116
- Hudock, S., & Sullivan, D. (2011). Hit the reference transaction mark: Incorporating READ into DART. *Colorado Libraries*, 36(1). Retrieved from <http://www.coloradolibrariesjournal.org/content/hit-reference-transaction-mark-incorporating-read-dart>

Keywords: *information literacy, reference, learning goals, library assessment*

Integrating Data Literacy into Information Literacy E-Course for PhD Students

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The LIBER E-Science working group published its 'Final Report on Research Data Management' after the annual conference in Tartu in 2012 including 'Ten recommendations for libraries to get started with research data management' (Christensen-Dalsgaard et al, 2012). The University of Tartu Library complied with most of the recommendations in autumn 2014. To accomplish the tasks, data literacy as a crucial knowledge had to be brought to mind and taught to research staff of the university.

Subject librarians in the university have taught an elective credit-bearing e-course 'Introduction to Information Research' for doctoral students since 2008 (Lepik, Seiler, & Miil, 2014). Therefore, it was a logical step to proceed with the same model and target group by data librarians in 2015 and 2016. A Research Data Management (RDM) module with a specific assignment about RDM was embedded into the course.

Our goal was to introduce data literacy as a self-explanatory part of information literacy in the digital age and consistently update the e-course. We will discuss the syllabus and expected outcomes.

After completing the RDM module, students should:

- realise the importance of primary scientific data and the necessity of data management
- be able to find and use open data repositories
- know what is a digital object identifier (DOI)
- know how to get DataCite DOIs for their own datasets.

The final questionnaire covered the most important steps to be taken over the whole research data lifecycle.

Two sets of data (2015, 2016) were collected and analysed. The results of the questionnaire provided evaluation of the students' attitudes towards open data and their RDM practices so far.

Motivation for this analysis arose from the need to map the current situation of data literacy among PhD students in order to develop a full RDM course based on the 12 competencies of Data Information Literacy (Carlson, Fosmire, Miller, & Nelson, 2011).

In our presentation we will describe the RDM module and discuss the results of the analysis, lessons learned and next steps regarding data literacy courses.

The current study found that PhD students have a positive attitude towards opening up their research data, but poor knowledge about the importance of RDM and undefined practices in this area.

References

- Carlson, J., Fosmire, M., Miller, C. C., & Nelson, M. S. (2011). Determining data information literacy needs: A study of students and research faculty. *Portal: Libraries and the Academy*, 11(2), 629–657. Retrieved from <http://doi.org/10.1353/pla.2011.0022>
- Christensen-Dalsgaard, B. et al. (2012). *Ten recommendations for libraries to get started with research data management*. Retrieved from <http://libereurope.eu/blog/2012/08/24/ten-recommendations-for-libraries-to-get-started-with-research-data-management/>
- Lepik, K., Seiler, V., & Miil, K. (2014). The win-win game of information literacy education: Subject librarians tutoring information literacy online course for doctoral students. *Qualitative & Quantitative Methods in Libraries*, 4. Retrieved from http://www.qqml.net/papers/December_2014_Issue/346QQML_Journal_2014_LepikSeilerandMiil_Dec_843-856.pdf

Keywords: *data literacy, research data management, e-courses, PhD student*

Teaching Methods Focused on Working with Information Sources and Using Proper Bibliographic References at Secondary Schools

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Working with a bibliography and other information sources belongs to the basic competence of students at universities. It is one of the preconditions for students' publishing and writing professional-level texts. The problem concerning the issues in the Czech Republic is that students do not acquire the mentioned skills until their first semesters at universities. Moreover, they often lack even the basic of information literacy. The reason is a missing systematic training for the competence in secondary schools. Teachers usually do not know the issues either. Besides, they have no idea how to distil it into their instruction so that it would be comprehensible and interesting for students. Therefore, they prefer not to teach the issues at all. Unfortunately, it has an impact on the quality of written secondary school papers and also quite often, problems with plagiarism appear in the secondary school paper competition called Secondary School Skilled (SOČ).

In our contribution we are going to present teaching methods of bibliographic references and their related issues for secondary school students. We are going to draw on our experience which we acquired while carrying out courses in libraries and schools and which we also published in the book "Naučte (se) citovat" (Teach others / learn yourself how to use bibliographic references properly). We would like to mention some of the methods and activities which are applicable to the target group of secondary students and which we verified in practice.

At the end of our contribution we intend to introduce a project that is supposed to improve the quality of compiling a bibliography and bibliographic references in papers at secondary schools. It will include a vast network of libraries in the Czech Republic as well. The objective of the project is to intensify and deepen the cooperation of secondary schools with the library in their town or city. Finally, we would like to deal with the possibilities how to actively include libraries in the mentioned process.

Keywords: *teaching method, bibliography, bibliographic reference, information source, secondary school*

Using Rubric Assessment to Assess the Effectiveness of Flipped Information Literacy Classes

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In 2015, the library of the Amsterdam University of Applied Sciences (HvA) investigated the effectiveness of its flipped classroom courses in order to improve information literacy classes. This study showed there was no significant difference in effectiveness between flipped-classroom courses and traditional face-to-face workshops.

However, due to logistics reasons, the assessment instrument used to compare these two groups was knowledge-based. In order to assess information literacy skills in a better way additional research was needed. A commonly used method to measure skills is 'rubric assessment'. A rubric is a scoring tool that provides clear descriptions of the performance expectations for each part of a work, at varying levels of mastery (Lowe, Booth, Stone & Tagge, 2015).

Recently, the HvA library used such a scoring rubric to obtain a deeper understanding of the effectiveness of its flipped classroom classes and to verify the earlier conclusions.

Experimenting with a scoring card proved useful as well for general purposes in order to improve the assessment and quality of the library instructions.

Previous research and projects were helpful in developing and using a scoring rubric in a proper way. The HvA library made use of many recommendations provided by project RAILS (Belanger, Zou, Rushing Mills, Holmes & Oakleaf, 2015), project Muse (Lowe, Booth, Stone and Tague, 2015) and a research done by Jos van Helvoort (2010). The HvA library tailored existing rubrics and followed the official (and unofficial) rules for norming rubrics successfully (Holmes & Oakleaf, 2015).

This research shows the effectiveness of the flipped classroom method within the HvA library and the perception of students using this method. The first results will be shared and presented at ECIL 2016.

References

- Belanger, J., Zou, N., Mills, J. R., Holmes, C., & Oakleaf, M. (2015). Project RAILS: Lessons learned about rubric assessment of information literacy skills. *Portal: Libraries and the Academy*, 15(4), 623–644.
- Helvoort, J. van (2010). A scoring rubric for performance assessment of information literacy in Dutch higher education. *Journal of Information Literacy*, 4(1), 22–39.
- Holmes, C., & Oakleaf, M. (2013). The official (and unofficial) rules for norming rubrics successfully. *Journal of Academic Librarianship*, 39(6), 599–602.
- Lowe, M. S., Booth, C., Stone, S., & Tagge, N. (2015). Impacting information literacy learning in first-year seminars: A rubric-based evaluation. *Portal: Libraries and the Academy*, 15(3), 489–512.

Keywords: *flipping the classroom, flipped instruction, blended learning, information literacy*

Integrating an Information Literacy Course and Assessment in the Information Systems Curriculum: A Successful Collaboration of the Library and Faculty from Singapore Management University

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This presentation will showcase recent collaborative efforts by faculty and the librarian to develop an effective information literacy (IL) course and an assessment plan to measure the learning outcomes. The author collaborated with the School of Information Systems (SIS) to design a hands-on IL course to develop research skills in first-year students taking the IS101 (Information Systems Management) course. Some questions surfaced during the program review. What is the impact and value? Are the students really learning? Answers to those questions led to transformations of the IL course and assessment.

Course Design

Embedding IL skills in the school curriculum is the most effective way to deliver just-in-time courses. Before designing the course, the author and faculty analyzed the kinds of research skills the students were lacking, improvements faculty wanted to see in the assignments, and the school learning outcomes. LIB101 was designed as a customized library IL course to introduce students to search skills and the library resources. The learning outcomes, activities, and assessments were developed based on the School Learning Outcomes Framework and the detailed IS101 syllabus. LIB101 was taught in a hands-on format with activities and used a case study on a hot topic in the IT industry to teach students how to retrieve and evaluate information at an advanced level and use citations and reference lists. The presenter will highlight the value of the course syllabus and the School Learning Outcomes Framework in the effective course design.

Assessment Design

The value of an IL course cannot be measured simply on the basis of conventional students' feedback. The time and effort librarians spend in designing and delivering courses can be better justified through impact assessment. Impact assessment was introduced to measure whether learning outcomes were achieved. Embedding IL assessment into assignment rubrics is probably the most efficient and effective method. IS101 had two written assignments incorporating research components, group presentations and individual written assignments. Group presentations required students to share their research reference lists online before presentations. The librarian screened students' reference lists and provided comments on the quality of resources and references to each group. The comments were used by faculty to generate marks. Individual written assignments required students to use appropriate secondary sources and cite them appropriately. Two marks were allocated to assess the quality of research and citations used in the written assignments. Students' research skills were evaluated in both assignments and the marks were shared with the librarian. The importance of incorporating marks in the rubrics will be highlighted as a motivation for the students to demonstrate transfer of learning.

Outcomes

Faculty support was the key success factor throughout the course and assessment design. The inclusion of the IL components in the assignment rubrics contributed to the successful delivery of the IL course. The author and faculty measured the impact of the IL course by assessing students' assignments, resources and citations in particular. Significant improvement in students' research quality was noticed by faculty. Faculty valued the customized IL course and were satisfied with the achievement of learning outcomes. Students' feedback collectively showed that the research skills learnt were practical, relevant and helpful. This presentation will demonstrate a consistent pattern that students who received better feedback from the librarian on resources and citations, delivered better presentations or produced better written assignments. In conclusion, suggestions will be offered on how to make sure that students learn and apply the skills learnt to locate and cite resources.

Keywords: *information literacy, assessment, collaboration, value, impact*

Facilitation of Information Literacy and Development of a Cultural Education Environment for Youth in the National Library of Latvia

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The purpose of the paper is to describe the work of the National Library of Latvia (NLL) in the field of information literacy after opening the new library building – the Castle of Light. The paper also represents the current development activities that the library provides for youngsters.

Information literacy has been a library service since the mid-nineties. Starting with the presentations of library resources and learning tours in the reading rooms for the pupils of the secondary schools in the previous library building, the service changed considerably in the new library building. The perspective of the development of the service is linked with systematic cooperation with secondary schools and universities, as well as with the various institutions. The description and the form of application are available on-line on the library website www.lnb.lv. Current activities are related to the development of e-environment for learning service.

Educational activities in the library are carried out by the Training Centre, the Information and Reference Centre and branch reading rooms. The Training Centre provides non-formal education professional development sessions for different levels, including post-graduate education programmes for Latvian librarians. The post-graduate 240-hour and 960-hour education programmes for Latvian librarians are particularly important due to their content, which complies to the education competences set out by the EU.

The Information and Reference Centre of the National Library of Latvia provides training services for different target groups, including pupils, students, doctoral students, teachers, seniors and other library users. Learning activities are in-class lectures and workshops, facilitated by an instructor for groups and individual participants, and secondary school lessons or university lectures in the library. The staff of the branch library reading rooms provides specialized learning courses related to the particular subject or provide in-depth insight into specific library collections, such as music recordings, maps, posters, and ex libris. The classrooms are conveniently combined with reading rooms; therefore, training is enriched with library collections. We provide off-site training activities in the schools and the workplaces.

Many programs have been established, including training programme for teachers of the secondary schools, a program for school librarians, and a program for doctoral students. The content of each program varies according to the needs of the particular audience. In addition to information resource learning, we provide digitization skills focused on creating local history resources and its research.

In addition to information courses, we provide educational tours in the reading rooms, exhibition halls and in other event locations in the library.

The NLL has put a strong emphasis on youngsters. The library has opened special premises designated for youngsters starting from the age of 15. The objective of these premises is to make the visit to the library for youngsters as purposeful as possible. Accordingly, the library organizes several persistent activities, such as meetings with specialists of different fields and creative workshops.

Work with youngsters emphasizes development of their own professional growth in information literacy, choice of profession, and personality development as such. Here youngsters can carry out their own events, for example, the Riga Pupil's council created a workshop "Image without borders".

In cooperation with the State Education Development Agency and career consultants, the library started to adapt career education. These are regular activities held in the premises, especially for senior pupils. The aim is to raise awareness concerning the future careers of young people, and to broaden their knowledge about options among general, vocational and higher education institutions.

The diversity and quality of the collection of the NLL as well as the entrance of media, as well as the environment of the NLL, have become comprehensive, and the development of competence skills of new media usage and information skills is an actual library service for information consumers.

Keywords: *information literacy, target groups, library services, youngsters*

PECHA KUCHA

Sentiment Analysis on Information Literacy: Perspectives of the Instruction Librarians

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Purpose

Social media provides a platform for the people to share opinions and expressions even if they are living in a conservative society where females cannot express their views openly. The purpose of this ongoing study is to determine the attitudes of female instruction librarians towards information literacy and professional development using a sentiment analysis technique. Our aim is to determine whether respondents' expressions and opinions about professional development through information literacy is positive, negative, or neutral.

Design/Methodology

We collected primary data from conversations on Facebook including wall posts, comments, and group chats among the Pakistani library and information science (LIS) community. We also collected and analyzed publicly shared emails on a yahoo mailing group. We stored the data in a text editor and used an online sentiment analysis tool to conduct a computational study of the affect, opinions, and sentiments expressed in these texts in order to identify the respondents' positive, negative, and neutral emotions. We used Nvivo software to facilitate categorizing the opinions and emotions.

Findings

Respondents of this study are female instruction librarians who are involved in information literacy activities at their respective organizations working within or outside Pakistan. The study is in progress. However, we will focus the data analysis to extract perceptions of the respondents in two dimensions. One focus will be on assessing the potential relationship between information literacy and professional development. Our second focus will be to categorize the insights of the respondents regarding change in the information behavior of their clients.

Keywords: *sentiment analysis, information literacy, information behavior, Facebook analysis, professional development*

Cognitive Styles of Diabetics and Caregivers during Health Information Appraisal - A Qualitative Study

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Objective

In health research, critical health literacy has been conceptualised and operationalised as an individual level construct. However, there are limited studies on what cognitive strategies chronically ill patients and caregivers apply to appraise health information for disease self-management. This is an overlooked gap in research on critical health literacy. In this study, we investigated diabetics and their homecare providers' cognitive styles when confronting conflicting or overloaded health information during cognitive exercises that were mostly done at home and unregulated by medical expertise.

Methodology

Twenty-five diabetes patients and nine homecare providers attended five focus group discussions held in Singapore from May to July 2015. We analysed qualitative data through open coding and inductive theme recognition using QSR NVivo 10.

Findings

Our analysis revealed three major themes. First, patients and homecare providers have cognitive dependence on stereotypically "authoritative" sources such as doctors. This allows them to sift through information overload at minimal cognition costs. Second, patients and homecare providers still question these "authoritative" sources when there is no normative fit between their set of beliefs and newly acquired information. They do this questioning through activating their gut-feelings, intuition, and self-defined home-based experiments. Third, due to the lack of source triangulation during health information processing, patients and homecare providers demonstrated below average to modest capacity for reproduction health literacy.

Conclusion

The study added to the current pool of health literacy research through understanding the diabetics and homecare providers' cognitive styles during information processing. This approach was different from traditional clinical research that reduces critical health literacy to quantifiable measures. Our study calls for the development of thorough learning curricula for all age groups that also cover and extend self-defined criteria such as gut-feelings, intuition, and experiments. Through this, learners may be able to appraise health information within the objective standards of competency, comprehensiveness, applicability, authority, purpose, and reliability. This is possible in clinical practice if education on health literacy is an imposed standard in healthcare practice especially among chronically ill patients such as diabetics. These learning interventions need to be age- and ethnicity-appropriate and not structured templates that provide limited accommodations for developmental and cultural differences.

References

- Chinn, D. (2011). Critical health literacy: A review and critical analysis. *Social Science and Medicine*, 73(1), 60–67. doi: 10.1016/j.socscimed.2011.04.004.
- Genuis, S. K. (2013). Social positioning theory as a lens for exploring health information seeking and decision making. *Qualitative Health Research*, 23(4), 555–567. doi: 10.1177/1049732312470029
- McKenzie, P. J. (2003). Justifying cognitive authority decisions: Discursive strategies of information seekers. *The Library Quarterly*, 73(3), 261–288.
- Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15(3), 259–267.

Keywords: *critical health literacy, health information appraisal, diabetes, Singapore, qualitative study*

Everyday Health Information Literacy of Older People in Finland – The GASEL Project

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Introduction

The concept of everyday health information literacy (EHIL) refers to competencies to find, evaluate and understand health-related information in everyday life situations. Niemelä et al. (2012) developed a 10-item screening tool to identify the differences in individuals' EHIL. Previous studies indicated differences in individual's HIL based on such factors as age, education, economic situation, and health status. However, research in this area is still scarce.

Methods

The Multidisciplinary GASEL (Gamified Services for Elderly) study, funded from 2014-2016 by the Finnish Funding Agency for Innovation, examines tailored and gamified remote services in promoting wellbeing and health of older individuals. We collected information about the target group with a paper questionnaire posted to a random sample of 1500 subjects aged 65 or older who were home dwellers living in the Oulu area. The questionnaire addressed a variety of themes, including a shorter four item version of the EHIL scale. The response rate was 61 percent (n= 918) with women representing 57.5 percent of the respondents. The mean age was 73.4 ±6.8 years.

Results

Most (67 percent) of the older people strongly or moderately agreed with the statement “I like to get health information from a variety of sources”. The older the respondents the more likely they were to agree. Almost equal amount were unsure (40 percent) or disagreed (32 percent) with the statement “it is easy to assess the reliability of health information from the Internet”. The youngest among the older people were more likely to disagree. Terms and sentences of health information were considered difficult to understand by 58 percent of the respondents. Younger and women were more likely to disagree. From the respondents 60 percent (and especially the oldest) agreed with the statement “it is difficult to know who to believe in health issues”.

Conclusions

Problems related to difficulties to assess the reliability of health information, understanding terms used and knowing who to believe as a source of health information. Above all these problems apply to those 80 years or older. The differences we observed could be used as a basis of health information tailoring and counselling. The EHIL screening tool may reflect confidence rather than actual skills, but even the 4-item scale can be beneficial for screening differences amongst older individuals.

References

Niemelä, R., Ek., S., Eriksson-Backa, K., & Huotari, M.-L. (2012). A screening tool for assessing everyday health information literacy. *Libri*, 62(2), 125–134.

Keywords: *health information literacy, older adults, gender, age*

The Heart of a School District: Cultivating the Virtual Learning Commons Model for Library Program Inclusion

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Dr. David Loertscher described the new vision of school libraries, or learning commons, as the “heart of the school community” (Kahout & Gavigan, 2015, p. 18). Learning commons pedagogy is constructivist where students independently or collaboratively, explore, experiment, and innovate in a flexibly appointed shared area. Thus, student use of school libraries/learning commons become central to their acquisition of information literacy learning competencies. Loertscher and Koechlin (2015) suggested that these practices, when applied virtually, offered students and school communities, a holistic approach to digital learning. The adage that a library is the heart of the school strengthens when a virtual learning commons (VLC) model is implemented. This form of online pedagogy integrates traditional school webpage resources with social networking tools in order for real-time, shared learning to occur across a library or the world. The components of a VLC are: information center – links to the catalog, databases and relevant websites; literacy culture - a school community book, reading and literature appreciation place; knowledge building center – where students publically present learning with one another and experts; experimental learning center – where teachers share best practices; and school culture – the go to place for school-wide events (Loertscher & Koechlin, 2015). A VLC implementation centralizes an intra-school presence and creates an interactive, global presence.

Might this model be applied on a larger scale? Might a multi-school library services program function as the heart of a school district? My presentation, based upon the-heart-of-the-school adage, applies VLC components to explore and demonstrate how a district-wide school library services program (SLDP) is central to a district’s operations. Like a school library, an SLDP can be viewed as an active partner in teaching and learning decisions, practices, and policies across a school district.

The VLC model provided a structure for SLDP integrations across a large, urban public school system. I served as the SLDP director in this setting? for less than one year. My presentation organizes SLDP practices around VLC components. Examples of these practices include: the information center – that curates online content and develops VLCs for the district’s school libraries; the case where the SLDP director collaborates with reading and writing program directors to foster a literacy culture; consistent academic structures furthering college and career learning skills and scholarship by fostering knowledge building center practices that include individualized learning (AASL, 2014) and differentiation (Tomlinson, 2014); the SLDP as a central player in teacher professional development that provides venues for the experimental learning.

The glue holding an SLDP together is a leadership team of strong librarians who participate in programming across the district. My presentation also integrates program evaluation, librarian steering committee participation, and creative partnerships using the VLC model. As the SLDP director, I incorporated departmental and city initiatives such as high school redesign, strategic planning, and public library collaborations. VLC practices served as an inclusion model for ensuring school library services within the schools and across the city to strengthen and become the heart of each student’s education.

References

- American Association of School Libraries – AASL. (2014). *CLASS causality, school libraries and student success*. Retrieved from <http://www.ala.org/aasl/sites/ala.org.aasl/files/content/researchandstatistics/CLASSWhitePaperFINAL.pdf>
- Kouhout, J., & Gavigan, K. (2015). The years of our learning commons. *Teacher Librarian*, 43(2), 18–23.
- Loertscher, D., & Koechlin, C. (2012). Theory and research as foundational elements of a learning commons. *Teacher Librarian*, 39(3), 48–51.
- Loertscher, D., & C. Koechlin. (2015). Virtual learning commons model. *Teacher Librarian*. Retrieved October 25, 2015 from <http://www.teacherlibrarian.com/2012/10/11/october-2012-poster-the-virtual-learning-commons/>
- Tomlinson, C. (2014). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: ASCD.

Keywords: *school libraries, learning commons, digital learning, information literacy pedagogy, school districts*

Global English and/or Local Language: Implications for the Internationalization of Information Literacy

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As information and media literacy emerged as an international consideration over the past two decades, higher education has also undergone a period of internationalization. Regardless of whether English is the local language, universities throughout the world are increasingly offering degree programs, at both the undergraduate and postgraduate levels, in English. A recent study documented that there are almost 8,000 courses taught in English in non-English speaking countries at top universities (Mitchell, 2016). Within Europe, this represents more than a 300 percent increase over the past seven years (Mitchell, 2016). Arguments related to employability, mobility, and competitiveness underscore the claims of the importance of English-language instruction and competency (Paul, 2016). In other countries, universities are implementing dual-language programs, combining instruction in English and native languages (Osipian, 2016). Likewise, even in countries where English is the official language, that fact may be due to historic colonialism and, in many cases, local languages thrive alongside the official English language.

Little scholarship has documented or theorized the impact of this wide-scale adopt of English as the medium of instruction on academic libraries. Bridges and McElroy (2015) is a notable contribution address the impact on access of the concentration of scholarly publishing in English. Likewise, Pilerot and Lindberg (2011) analyze information literacy policy-making and find evidence of Western imperialism and oppression. Research on individual conceptions of information literacy is beginning to document that English language ability is a component of information literacy, particularly in countries where English is not the native language, for example Dokphrom (2013).

This pecha-kucha will detail the questions surrounding the impact of English as the medium of instruction in countries where English is not the native and/or official language on information literacy instruction and the implications for how information literacy is conceptualized. In addition, I will suggest ways in which native English speaking librarians might position themselves as instructors and colleagues in order to not perpetuate colonial and oppressive language practices. I will end my presentation with a call for reflection and discussion of the troubling and problematic status of English language in the internationalization of information literacy.

References

- Dokphrom, P. (2013). Information literacy of undergraduate students in Thailand: A case of the Faculty of Arts, Silpakorn University, Thailand. In Hepworth, M., & Walton, G. (Eds.), *Developing People's Information Capabilities: Fostering Information Literacy in Educational, Workplace and Community Contexts* (pp. 111–126). Bingley, UK: Emerald.
- McElroy, K., & Bridges, L. M. (2015). Access to information is (not) a universal right in higher education: Librarian ethics and advocacy. *International Review of Information Ethics*, 23, 35–46.
- Mitchell, N. (2016). *Universities compete by teaching in English*. Retrieved February 14, 2016 from <http://www.bbc.com/news/business-35429233>
- Osipian, A. (2016). Is English the new Latin? *University World News*. Retrieved February 14, 2016 from <http://www.universityworldnews.com/article.php?story=20160209155952590#.VsCIUMS3N5w.twitter>
- Paul, M. (2016). World insight: The use of English in universities will not kill off Dutch. *Times Higher Education*. Retrieved February 14, 2016 from <https://www.timeshighereducation.com/blog/world-insight-use-english-universities-will-not-kill-dutch>
- Pilerot, O., & Lindberg, J. (2011). The concept of information literacy in policy-making texts: An imperialistic project? *Library Trends*, 60, 338–360. Retrieved February 14, 2016 from <http://hdl.handle.net/2142/31880>

Keywords: *information literacy, English, colonialism*

Implementing Management Theories to Enhance Information Literacy

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Equipping students to be information literate is a major institution-wide task of the Learning Centre and Library at Oslo and Akershus University College (HiOA). For many years, the embedding of information literacy into the disciplines has been the responsibility of each department's subject librarian. However, these librarians have to deal with the "siloeed" nature of the faculties, and the work can therefore be dependent on personal working relationships with academics, and academics' receptiveness to this important work.

In response, HiOA has developed the Model for Service Management, based on theories of strategic planning and change management, in particular the work of Derek F. Abell and John Kotter. In Abell's Three Dimensional Business Definition model (1980) 'service' is defined by 1) who we serve, 2) what their needs are and 3) how we fulfill these needs. From Kotter (2014) we draw on the theory of dual operating systems; how making the old hierarchical and the new networked side of large organizations work together to create and accelerate change.

This approach has led to the Information Literate Students Service, introduced in 2015 as an antidote to the "siloeed" learning environment. It gives the Library legitimacy to cut across faculties and departments and draw resources from the most appropriate parts of the institution. It is network-based working, calling on academics, administrative staff and even students, institution-wide, as both users and deliverers of information literacy teaching. One example is our work with developing an online 'starter's package' (in the form of a MOOC) in information literacy, study skills and academic writing, much inspired by the Library Online Workbook at the University of the West of England⁸. This is a three-year project involving the resources of academics and students in the Department of Journalism and Media Studies (source criticism), the Department of Archivistics, Library and Information Sciences (information seeking skills and source reference) and the Department of Information Technology (technological development and user surveys). In addition, students from our Business school and Department of Vocational Teacher Education will try out the package.

This Pecha Kucha will present the ways in which this new organizational model can help us achieve our goals for information literacy. This network-based model also has benefits in engaging staff to agree on academic standards, and in finding best practices on how to embed the teaching of information literacy into subject teaching, so a reflection on these aspects will also be included.

References

- Abell, D. F. (1980). *Three dimensional business definition model*. Englewood Cliffs, N.J: Prentice-Hall.
Kotter, J. P. (2014). *Accelerate (XLR8)*. Boston, Massachusetts: Harvard Business School Publishing.

Keywords: *information literacy, management theories*

⁸ see http://www.uwe.ac.uk/library/resources/FET_LOW/index.html

Information Needs and Behaviour of PhD students at Chalmers University of Technology: A Survey

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This PechaKucha presents the initial findings of a research project which attempts to map PhD students' information needs and behaviour at Chalmers University of Technology in Gothenburg, Sweden. The outcome of the project will help us redesign and update our Information Literacy course in collaboration with the Innovation Office on campus. The library has a long tradition of offering Information Literacy courses for its PhD students and has done so since the early 1990s. However, as the course is now part of a Generic Transferable Skills course package which is offered to all PhD students, an update of the course to fit the new context is necessary.

The basis for our presentation is an online survey (Dilek-Kayaoglu, 2014; Rafique and Mahmood, 2015) targeting all currently enrolled PhD students. The method used for the data analysis is the compiling and comparison of descriptive statistics involving variables relevant for this target group. More specifically, the survey questions concerned information behaviour (Wilson, 2000) in connection with:

- literature reviews/thesis writing
- resources and information-seeking methods such as databases, books and e-books, web search engines, patents, data visualisations, informal channels, text mining
- bibliometrics, strategic publishing and open access
- reference managing
- library use
- information ethics and copyright
- scholarly information needs for the profession.

In our PechaKucha we will present the most significant outcomes from the questionnaire with the aid of animations, tables and graphs. The statistical significance of variables such as research areas, years of study, previous attendance at our information literacy course and at the research utilisation course, have also been taken into account in the data analysis (Heinström, 2002).

Based on the initial survey, we will proceed later in 2016 with the second part of this research project, a qualitative study with focus groups involving 10-12 PhD students. From the semi-structured interviews with the focus groups we will create personas, which will guide the design and development for our course while keeping the needs of the doctoral students at the forefront.

References

- Dilek-Kayaoglu, H. (2014). Information-seeking behavior of undergraduate, graduate, and doctoral students: A survey of Istanbul University, Turkey. In J. N. Gathegi, Y. Tonta, S. Kurbanoglu, U. Al, & Z. Taskin (Eds.), *Challenges of Information Management Beyond the Cloud, Communications in Computer and Information Science*, 423 (pp. 123–136). Berlin: Springer-Verlag.
- Heinström, J. E. (2002). *Fast surfers, broad scanners and deep divers: Personality and information-seeking behavior* (Doctoral dissertation). Åbo: Åbo University.
- Rafique, A., & Mahmood, K. (2015). Information literacy skills of engineering students: A survey. *Pakistan Library & Information Science Journal*, 46(4), 34–41.
- Wilson, T. D. (2000). Human information behaviour. *Informing Science*, 3(2), 49–55. Retrieved from <http://inform.nu/Articles/Vol3/v3n2p49-56.pdf>

Keywords: *scholarly information literacy, PhD students, survey*

The Librarian's Role in the Systematic Review Process

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Systematic review is the highest level of evidence in medicine and related disciplines and increasingly, it is also the preferred form of presentation of research. Evidence based medicine replaced traditional medical practices and defines the concept of such access as “the conscientious, explicit and judicious use of current evidence in making decisions about the care of individual patients” (Sackett, 1996). The role of the librarian in teaching information literacy is necessary. But few studies have been published to date about the librarian's role in the process of creating systematic review (Beverly, 2003; Harris, 2005; Blackwood, 2013; Cooper, 2013; Gore, & Jones, 2015). I will present how the librarian can help, by using an example of collaboration with The Czech Republic Centre for Evidence-Based Health Care – an affiliated center of the JBI in Olomouc. This center was formed at the Department of Social Medicine and Public Health at Palacký University in Olomouc.

During the process of preparing a systematic review, the librarian must interact with the physician or investigator to develop a relevant search query that is based on PICO (Patients, Intervention, Comparator, Outcomes) strategy. As an expert searcher librarian must require a comprehensive search strategy in multiple sources in three main steps:

- primary search (initial search in MEDLINE, EMBASE or CINAHL followed by analysis of text words in abstract and title);
- secondary search (all identified key words across the range of databases that are relevant to finding expert opinion based literature such as PubMed, Ovid databases and so on);
- tertiary search (references of identified studies, unpublished studies, grey literature, opinion and so on).

The librarian must be extremely careful, because the length of the search strategy depends on the scope and complexity of the review. The librarian must know indexing conventions, online record formats of multiple databases, and also the appropriateness of individual databases to particular clinical questions. If it is necessary, the librarian must use also use ‘hedges’ (search filters for the experimental design of the study) to identify levels of evidence (randomized controlled trials, observational studies and so on). The librarian must effectively manage all articles and document the search, retrieval and archival processes so that anyone can duplicate the search strategy in a systematic review and gain the same results, as search strategy is part of the appendixes of a published systematic review. The librarian enters the data from databases into the EndNote Web citation manager. Physicians or investigators identify the articles which have initial eligibility criteria and mark them in EndNote Web. The librarian starts to search for the full-text of relevant articles.

As you can see real -life systematic reviews require the librarian's skills and responsibilities at each stage. As a member of the affiliated centre of the JBI, I realized that the librarian can be a valuable research partner. And this leads to higher visibility and credibility of the entire library.

References

- Beverly, C. A., Booth, A., & Bath, P. A. (2003). The role of the information specialist in the systematic review process: A health information case study. *Health Information & Libraries Journal*, 20, 65–74.
- Blackwood, D. (2013). *Systematic reviews: The health librarian's role in providing faculty support*. Paper presented at LIANZA Conference 2013, 20-23 October, Hamilton, New Zealand.
- Cooper, I. D., & Crum, J. A. M. (2013). New activities and changing roles of health sciences librarians: A systematic review, 1990-2012. *Journal of the Medical Library Association*, 101(4), 268–277.
- Gore, G. C., & Jones, J. (2015). Systematic reviews and librarians: A primer for managers. *The Canadian Journal of Library and Information Practice and Research*, 10(1).
- Harris, M. (2005). The librarian's roles in the systematic review process: A case study. *Journal of Medical Library Association*, 93(1), 81–87.
- Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: What it is and what it isn't. *BMJ*, 312(7023), 71–72.

Keywords: evidence-based medicine, librarian, systematic review, expert search, databases, health professionals

Research on User Needs in the University Library of CULS: Improving Our Services, Innovation and Vision

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In the spring of 2015 we conducted a large survey of user needs among students of Czech University of Life Sciences. We tried to ensure the validity of the research using a triangulation method. One of the methods was a classic questionnaire survey with large participation (1154 respondents). The research was focused on user satisfaction with existing services of the university library as well as user wishes associated with the changing role of libraries.

The second method was a playful way to gain insight into user needs and ideas related to space and the building of the Study and Information Centre. On certain days each visitor who entered the building of Study and Information Centre received red and green “post-it” sticky office papers, together with an information leaflet about the ongoing research. Visitors were asked to stick green papers on things in the building that they liked and red papers on things they do not like. It was also possible to write an explanatory comment on the sticky papers.

The third method by which we verified and clarified the results of the previous two methods has been mystery shopping and in-depth interviews with selected users.

The research was promoted through Facebook pages of SIC and also through articles in the official university magazine as well as the alternative student magazine. For obtaining mystery shoppers from students of the Czech University of Agriculture we used the Facebook page of SIC and student online magazine iZUN.

Based on the results of all three methods of research we acquired the data for the creation of personas of a “typical student of bachelor’s degree and his needs,” a “typical student of engineering studies” and a “typical student of doctoral studies”.

From the research we also received a number of suggestions for slight changes and innovations that we managed to implement in the subsequent year. These include free registration to the library, the possibility of returning books 24 hours, 18 new sockets for laptops in the SIC building lobby, creating a new comfortable chill-out zone where food and drink are allowed, a more open and accessible counter for circulation services. and also new topics for seminars focused on information literacy such as the basics of scientific writing or presentation skills.

Keywords: *user needs, survey, library services, innovation*

Two-way Learning with LibQuizzes at UCL Institute of Education

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At the UCL Institute of Education Library, we information literacy librarians are just beginning to use online quizzes to help better understand users' skills, knowledge and needs. We want to know what students know and whether the way we explain things really makes sense to them. Ideally, we are aiming for a two-way exchange where students learn from us and we learn from them.

Since 2012, we have used the survey function in LibGuides (Springshare, 2016) for user feedback, recommendations and bookings. In the past year, we have also used surveys for quick quizzes to summarise key concepts in selected guides.

Objectives and Methods

By using online quizzes, we aim to provide support for users and feedback for librarians. We also wish to lay the foundation for more open learning where learners can take "more control over the time, place and pace of their learning..." (Beetham, 2013, p.38). Our objectives are influenced by good practice which suggests that quizzes can engage users (McMunn-Tetangco, 2015), reinforce understanding (Lê, 2012) and promote independent exploration (Eades and Rizvi 2016). In addition, results can be collated through LibGuides and analysed which can help librarians to improve the content of online guides.

In 2015, I created four quizzes for students and a private murder mystery quiz for staff (Sakarya, 2016). All quizzes were designed to be non-threatening and quick reviews of LibGuide information (eight- en multiple choice questions). Quizzes were used in a variety of ways: before library sessions, in sessions, after sessions and freely online. Some quizzes included options for open feedback. In 2015, 400 quizzes were completed either individually or collaboratively.

Work in progress

IOE LibQuizzes are a work in progress. The first step was creating and naming LibQuizzes. The second step is to embed more quizzes as pre- and post-guidance for library sessions and to highlight and use more quizzes throughout the year. The third step will happen after we migrate to LibGuides version 2. Surveys will be replaced by LibWizard which promises to help us build more interactive quizzes and tutorials and better two-way learning experiences for librarians and students.

References

- Beetham, H. (2013). Designing for active learning in technology-rich contexts. In H. Beetham, & R. Sharpe (Eds.), *Rethinking pedagogy for a digital age: Designing for 21st century learning* (pp. 31–48). Abingdon, Oxon: Routledge.
- Eades, V., & Rizvi, M. (2016). Reflections on using iSpring quizzes for information literacy training at Middlesex University. *ALISS Quarterly*, 11(2), 6–8.
- Lê, M.-L. (2012). The use of anonymous pop-quizzes (APQs) as a tool to reinforce learning. *Journal of the Medical Library Association*, 100(4), 316–19.
- McMunn-Tetangco, E. (2015). Where (in the library) do you belong? Using an informal quiz to engage prospective new students. *College and Research Libraries News*, 76(11), 582–585.
- Sakarya, B. (2016). *LibQuizzes and games*. Retrieved from <http://libguides.ioe.ac.uk/quizzes>
- Springshare. (2016). Retrieved from <http://springshare.com/>

Keywords: *information literacy, quizzes, games, online learning, LibGuides*

The Contribution of Positive Psychology to the Management of Academic Libraries and Information Literacy

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A change can be observed in the traditional organization of libraries. It is visible in the management of collections, spaces and the skills professionals of this area need. Nowadays, the technological axis is acknowledged as the basis for a new expression and reconfiguration of these institutions.

Methodologically, an in-depth literature review was carried out on the theoretical framework of positive psychology, to highlight its reflections on library management and on information literacy theory and practice. This paper seeks to observe this change and promote a shift in the attitude of professionals in their relationship with users. Their attitude should take into consideration the virtualization of information, as well as the development of new practices, services and resources of information management.

We are faced with organizational challenges that need to be addressed: accelerated globalization, a greater tendency towards consumption, the immediacy of user needs, growing concerns with social inclusion and the urgent need to develop information literacy in a digital cultural. Librarians encounter both challenges and opportunities regarding what makes a difference for the user. Much of this activity is centered on learning, both by providing users with the appropriate means and respective training in those means, and by empowering themselves with new and different skills. Positive psychology can make a contribution here. The more a job inherently resembles a game – with variety, appropriate and flexible challenges, clear goals and immediate feedback – the more enjoyable it will be, regardless of the worker's level of development (Csikszentmihalyi, 2002). This also means we can improve students' anxiety levels, improving their search capabilities, maintaining the experience of information discovery within the feeling of flow: the challenge of research is combined with the skill to search, leading to a sense of achievement.

Positive Psychology uses themes such as optimism, hope, happiness and creativity in a structured, scientific perspective, for study and intervention. It focuses especially on strengths and virtues, rather than on problems and pathologies. Based on the theoretical framework of positive psychology, we propose that libraries adopt management strategies inspired by it, finding more efficient and adaptive manners of reaching their goals. The aim is thus to reflect upon library management, focusing on the related technological factors which influence professional practices, in the light of concepts proposed by positive psychology.

References

- Alina, L. (2012). Developing and proposing a conceptual model of the flow experience during online information search. *Annals of Faculty of Economics*, 1(1), 1154–1160.
- Baumann, N. (2012). Autotelic personality. In S. Engeser (Ed.), *Advances in flow research* (pp. 165–186). New York: Springer.
- Csikszentmihalyi, M. (2002). *Fluir: A psicologia da experiência ótima*. Lisboa: Relógio D'Água.
- Csikszentmihalyi, M. (2013). Flow. In S. J. Lopez (Ed.), *The Encyclopedia of Positive Psychology* (pp. 394–400). Chichester: Wiley-Blackwell.
- Engeser, S. (Ed.) (2012). *Advances in flow research*. Trier: Springer.
- Levy, P., & Roberts, S. (Eds.) (2005). *Developing the new learning environment: The changing role of the academic librarian*. London: Facet.

Keywords: *academic libraries, library management, positive psychology, information behavior, information literacy*

The Survey of the Information Literacy among Students and Teachers

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Information literacy in Japan

Recently, school teachers have taken an interest in Information Literacy according to the policy of the Ministry of the Education in Japan. Their discussion concurrently focuses on the development of computer technologies and an increase of resources on websites. Unfortunately, they rather disregard the definition of information literacy even though they often cope with the cross curriculum introduced in 2003. This occurs because they generally rely on textbooks in teaching their subjects in classrooms and reluctantly agreed to do the cross curriculum.

In Japan more than 200 universities and colleges offer training courses for teacher librarians. In addition, 45 universities and the Open University of Japan provide summer sessions for teachers who do not have the title of teacher librarian. Students and trainees, who will be teacher librarians, do not grasp the definition of information literacy as well. The Course programs are so short that they cannot understand information literacy sufficiently. There are five subjects and ten credits during 150 hours in the teacher librarian course. The training course consists of subjects such as:

- School management and the school library
- Learning with the school library
- Reading activities
- Organization of resources in the school library
- Utilization of information media.

We especially teach information literacy in two subject areas, learning with the school library and utilization of information media.

The survey of information literacy

I added up the questionnaires among 50 students of three universities and 20 teachers of a junior high school. The questionnaire consisted of three questions.

- Question 1; What did they think of information literacy before the training course or the practical training?
- Question 2; Which skills would they themselves like to acquire?
- Question 3; Which skills will they teach their students?

The results indicated that prior to the training course, most of the students considered information literacy to be something associated with the computer except school library. Similarly, prior to the practical training, teachers also regarded information literacy as computer skills. They did not think of the school library. After the training course and the practical training, both students and teachers regarded information literacy as a range of skills associated with libraries, computer and the internet.

The analyses indicated that students and teachers preferred information skills included in the curriculum. But they might have ignored the nature of information literacy. In the questionnaire I adopted the information skills James Herring (1996) described. Olivier Le Deuff (2011), a French researcher, discusses the fact that information literacy is associated with computer literacy, critical literacy, library literacy, media literacy, network literacy, digital literacy, visual literacy and social literacy.

References

Herring, J. E. (1996). *Teaching information literacy skills in schools*. London: Library Association.

Le Deuff, O. (2011). *La formation aux cultures numériques: Une nouvelle pédagogie pour une culture de l'information à l'heure du numérique*. (Limoges): FYP.

Keywords: *survey, information skills, teacher, student*

Cinema Audience and Media Literacy

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This study on cinema audience and media literacy is one of four segments of a research named Cultural Audience and Media Literacy that also deals with theatre (segment presented at ECIL 2014 in Dubrovnik), museums and concerts. The main objective of this research is to define how the cultural audience of today receives information about cultural events and screenings and how media literacy affects this process. In this case study the quantitative research method was used. A questionnaire was used to question 300 cinema visitors in different Zagreb cinemas. Zagreb was used as a case study and the results were compared to those of other researches in this field, but we also wished to compare these results with the data from questioning theatre audiences.

A detailed questionnaire with numerous and precise questions about the users and the way they get the information about the films served to obtain the answers that helped us to determine what media is most important for their decisions: printed newspapers, magazines, radio, television, organizers' web sites, news portals, Facebook, YouTube or e-newsletters. It also showed how the reviews affect the visitors, that is, whether they read reviews, trust the critics and to what extent critical opinion is relevant for their decision to see a certain film. On the basis of this research an evaluation model will be established, applicable to other cities.

The study will show how many Facebook users like the cinemas' Facebook and YouTube pages, how often they comment on the films, and how age and education of cinema visitors is relevant for the use of media through which they receive the information on films.

Qualitative research methods were also used, with interviews with cinemas' public relations (PR) and sales managers in order to see what their audience strategies are, what methods they use to reach the audience and how they evaluate their sector's work.

In analysing and commenting on the results of this research, apart from similar studies, the works of renowned researchers in this field were consulted: Sonia Livingstone, Renne Hobbs and Robert Marich.

This study will show how different aspects of media literacy affect ways in which cinemas reach their visitors and attract them to their screenings and hence will determine the importance of different media in this process. Therefore we believe that this research will give relevant scientific results, and an input to the better understanding of information and media literacy.

References

Hobbs, R. (2011). *Digital and media literacy: Connecting culture and classroom*. Twelve Oaks: Corwin.

Livingstone, S. (2004). The challenge of changing audiences or, what is the researcher to do in the age of the internet? *European Journal of Communication*, 19(1), 75–86.

Marich, R. (2013) *Marketing to moviegoers: A handbook of strategies and tactics*. Carbondale: Southern Illinois University Press.

Keywords: *film, cinema, cinema audience, media literacy, media*

Information Literacy and Reading Literacy Competences Cannot Develop Without Good School Libraries

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Children acquire information literacy (IL) and reading literacy (RL) competences in many situations but most systematically in formal schooling. Here the role of a good school library is essential. In Slovenia each school must have a library by law, but their quality has not been systematically monitored, so their contribution to the development of IL and RL competences is unknown. The objective of this paper is to set up and verify the methodology for evaluation of school libraries. Our starting point is a study by CISSL (Center for International Scholarship and School Libraries) (Todd and Kuhlthau, s. a., 2005a and 2005b), which has already been replicated in Australia (Hay, 2005, 2006); we are exploring the possibilities for adapting it to the Slovenian context. Replicating studies in a different context brings many methodological dilemmas, some of which were tackled by Vilar and Stricevic (2014), and stem from differences that include cultural, historical background, legislative and educational context, and the status of school librarians. The original CISSL study was two-fold: The purpose of the first phase (done with a web survey) was identification of the best libraries. The second phase included only the best libraries which were assessed regarding their helpfulness to students (using surveys and focus groups and investigating teachers, students, school management, and librarians). In Australia, the methodology was adapted to include only the libraries which were willing to participate and used only web surveys.

We will use an adapted form of a Delphi method to elicit the opinions of experienced school librarians coming from different school libraries (four primary and four secondary schools), and of the school library advisor at the National Education Institute, the national body responsible for education. In the first round, the experts will receive three to four open questions regarding their opinions on topics such as the quality of school libraries, manifestations of this quality, role of school libraries in the development of RL and IL competences. In the second round, their opinions will be classified and used in the translation and adaptation of the original CISSL first phase questionnaire. Then it will be sent to these experts to get their feedback on the content and method, and they will also be asked about their opinions regarding areas such as content, methodology, respondents, regarding the second phase of the study.

This Delphi study aims to adapt the original study to a national context, based on opinions of experts. The content analysis of their opinions will enable us to find answers such as, which questions can be kept, which need adaptation, and which are not appropriate. We expect that the experts will point out the cultural, system, historical and other specifics to be taken into account. The aim is to shape the methodological framework for a first time nationwide study in which we intend to gather, data on how school libraries contribute to students' IL and RL competences, which will also be comparable to the findings in other countries.

References

- Hay, L. (2005). Student learning through Australian school libraries. Part 1: A statistical analysis of student perceptions. *Synergy*, 3(2), 17–30. Retrieved January 10, 2016 from www.slav.schools.net.au/synergy/vol3num2/hay.pdf
- Hay, L. (2006). Student learning through Australian school libraries. Part 2: What students define and value as school library support. *Synergy*, 4(2), 27–38. Retrieved January 10, 2016 from www.slav.schools.net.au/synergy/vol4num2/hay_pt2.pdf
- Todd, R., & Kuhlthau, C. (2005a). Student learning through Ohio school libraries, Part 1: How effective school libraries help students. *School Libraries Worldwide*, 11(1), 89–110.
- Todd, R., & Kuhlthau, C. (2005b). Student learning through Ohio school libraries, Part 2: Faculty perceptions of effective school libraries. *School Libraries Worldwide*, 11(1), 89–110.
- Todd, R., & Kuhlthau, C. (s. a.). Student learning through Ohio school libraries: Background, methodology and report of findings. OELMA. Retrieved January 10, 2016 from <http://webfiles.rbe.sk.ca/rps/terrance.pon/OELMAReportofFindings.pdf>
- Vilar, P., & Stričević, I. (2014). Quality school library - how do we find out? In *Libraries in the digital age (LIDA): Proceedings: Zadar, Croatia, 16.–20.6.2014*. Zadar: University of Zadar. Retrieved January 10, 2016 from <http://ozk.unizd.hr/proceedings/index.php/lida/article/view/112>

Keywords: school libraries, quality assessment, methodology, information literacy, reading literacy, Slovenia

POSTERS

Support of Health Information Literacy for Public Libraries in the Czech Republic

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Introduction

National strategy of health protection and support and disease prevention Health 2020 is a framework summary of actions for public health development in the Czech Republic. The aim of the strategy is primarily to stabilize the system of disease prevention and health support and protection, and to initiate efficient and sustainable mechanisms for improvement of the population's state of health. The National Medical Library (NML), as a specialized library offering access to high-quality information resources, has gotten involved in the activities of this strategy in order to improve the health literacy of Czech citizens.

Health literacy includes people's knowledge, motivation and competencies to acquire, understand, evaluate and use relevant health information so they can consider and decide upon healthcare, disease prevention and health support. The definition of health information literacy goes further, and states, that health information literacy is the set of abilities needed to:

- recognize a health information need
- identify likely information sources and use them to retrieve relevant information
- assess the quality of the information and its applicability to a specific situation
- analyze, understand, and use the information to make good health decisions (Schardt, 2011).

Aims and scope

The role of public libraries in providing health information to various type of users has been already studied in several countries (e.g. Dalmer, 2013, Harris, 2012), and special education programs for public librarians have been developed (Noh, 2013).

In the Czech Republic there are more than 6000 public libraries. In the field of health information literacy, there exist no coordinated activities and the situation has not yet been thoroughly analyzed.

We present a curriculum of a programme that NML prepares for support of health information literacy, and that is intended for regional libraries in the Czech public libraries network. The curriculum focuses on trustworthy health information resources, optimal search strategy and standards of health information quality evaluation.

References

- Dalmer, N. (2013). Health literacy promotion: Contemporary conceptualizations and current implementations in Canadian health librarianship. *Journal of the Canadian Health Libraries Association (JCHLA)*, 34(1), 12–16.
- Harris, R. (2012). I'm not sure if that's what their job is": Consumer health information and emerging "Healthwork" roles in the public library. *Reference*, 49(3), 239–252.
- Noh, Y. (2013). The development and performance measurements of educational programs to improve consumer health information (CHI) literacy. *Reference*, 53(2), 140–154.
- Schardt, C. (2011). Health information literacy meets evidence-based practice. *Journal of the Medical Library Association: JMLA*, 99(1), 1–2. Retrieved from <http://doi.org/10.3163/1536-5050.99.1.001>

Keywords: *health information literacy, health literacy, public libraries, education*

Web 2.0 Information Sources and Tools in Academic Writing: The Impact of Students' Digital Competence on Information Management

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In this contribution we aim at presenting research on the use of information and communication technologies (ICTs) in academic writing conducted by the Research Group in Linguistic Mediation (GIML) at the University of Lleida. It is based on the theoretical hypothesis of the New Literacy Studies (NLS) (Coiro et al., 2008) that examined the processes of reading and writing from a sociocultural perspective.

Recent studies concluded that technologies clearly influence the way we communicate and reshape our reading and writing habits (Barton and Lee, 2013). In order to document these changes, the GIML designed a questionnaire entitled "Project CODI" ("Competències Digitals", from the project's acronym in Catalan). The GIML administered the questionnaire to students beginning their studies in all the degrees offered by the University to approximately 1500 freshmen students. The questionnaire included the usual initial profile questions and was divided into five parts. For this analysis we have focused on the third ("Information Management") and fourth ("Digital Reading and Writing Habits") parts of the questionnaire.

Some issues emerged during our analysis of the data. Firstly, when it comes to the use of Internet as a tool for finding information, it seems that, as many authors indicated (Monereo and Fuentes, 2005), students first resorted to the search system that they would normally use in their daily lives, without adapting it to the purpose of their academic work. Students simply transferred their day-to-day search skills to the academic field and failed to develop specific strategies.

Secondly, students' search for information tools and sources was superficial since they rarely looked beyond the first page of the results shown by the search engine. The majority assumed that is where relevant information laid. Thirdly, students failed to contrast the information they found and they did not worry about the reliability of the sources.

These elements may show that university students were not expert ICT users in an academic field and were not able to transfer their expertise from the social context to the academic one. From our point of view, specific training in this field is a must when defining tertiary education programs.

References

- Barton, D., & Lee, C. (2013). *Language online: Investigating digital texts and practices*. N. Y.: Routledge.
- Coiro, J. et al. (2008). Central issues in new literacies and new literacies research. In J. Coiro; M. Knobel; C. Lankshear, & D. J. Leu, (Eds.), *Handbook of research on new literacies* (pp. 1–21). N. Y /London: Routledge, Taylor & Francis Group.
- Monereo, C., & Fuentes, M. (2005). Aprender a buscar y seleccionar en Internet. In C. Monero (Ed.), *Internet y Competencias Básicas. Aprender a Colaborar, a Comunicarse, a Participar, a Aprender*. Barcelona: Graó.

Keywords: *digital competence, research skills, university students, academic writing, online tools*

Inclusion and Education – Tri-dimensional Aspects and Interdisciplinarity in Scientific Production in Brazil

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The construction of an inclusive society requires an understanding of the tri-dimensional aspects of the concept of inclusion, which encompasses digital, social and special needs-related aspects. This paper presents the results of a survey about the different approaches to inclusion in Brazilian scientific production over the span of 1994 until 2014 in two academic settings: the Graduate Program in Information Science (PPGCINF) of the University of Brasília (UnB) and the National Seminar of Information Science Research (ENANCIB), the main Information Science academic event in Brazil, organized by the National Association of Information Science Research and Graduate Studies (ANCIB). The survey analyzed scientific communications presented at ENANCIB throughout fifteen editions of the event and analyzes theses and dissertations defended at PPGCINF since the creation of the Master degree in Information Science. The objectives of the survey were the characterization of academic production in terms of methodologies employed; the identification of the concept of inclusion considering its tripartite nature – social inclusion, digital inclusion and the inclusion of people with special needs; and identification of discourse that leans closer to Education, especially regarding teacher training. The analysis of the selected material was based in a quality-quantity descriptive approach methodology influenced by Ginzburg's Evidential Paradigm. Data was parsed using conceptual maps, tag cloud platforms (Manyeyes) as well as Word and Excel spreadsheets to produce charts and data tables. Content analysis premises were adopted, following a routine of pre-analysis, development of data, and interpretation. The most relevant results indicated that, over the timespan in question, less than 1 percent of academic work was related to the inclusion of people with special needs and only 2 percent of academic work was broadly related to inclusion. The surveyed material touches on issues of education (ranging from training of information professionals and researchers until the universalization of Basic Education practices); to expography (which may influence the formulation of culture and tourism public policies, for instance); to technology, with the possibility of expanding and improving services and products geared toward the specificities of minorities with special needs, whether physical or digital. The study shows that the low percentage of academic output about the inclusion of people with special needs indicates the pressing need to insert this subject into academic curricula so as to foster the debate about an inclusive society beyond the domain of technologies and oriented toward a truly inclusive education. It ends with an exhortation on the expansion of discursive spaces that contemplate inclusion in the academic agendas of Information Science, as well as the extension of an interdisciplinary relationship with Education as a plausible alternative for the construction of an inclusive society.

Keywords: *social inclusion, digital inclusion, information literacy, education, special needs*

Health Information Literacy at School to Create Awareness on Planetary Health: The Pilot Project of School-work Alternating System in Italy

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Planetary health and information literacy

Planetary health, a new science including individual, community and environmental health, depends on the interrelation of different factors (physical, biological, chemical, socio-cultural, economic) and determines the state of health and well-being of the population and the environment in which we live (Rockefeller Foundation, 2015). The safeguard of planetary health requires a multidisciplinary approach where knowledge management and information literacy play an important role (Horton, 2015; Sørensen et al., 2012). In this framework, schools are a privileged place to start life-long learning health information literacy programs (WHO, 2012). The researchers of the Istituto Superiore di Sanità (ISS, the National Institute of Health in Italy) are approaching this issue (De Castro et al., 2013).

Objective

To show how researchers can work together with schools to increase awareness of the responsibilities associated with planetary health and contribute achieving better health for the population and the environment worldwide.

Methodology

In 2015 a new law introduced in Italy the concept of school-work alternating systems which makes it compulsory for high school students to spend a period of time in a workplace (Italy, 2015). The ISS researchers considered it as an opportunity to make students aware of planetary health issues through practical activities: a pilot project was developed to define an appealing offer of training modules for students to become aware of the main challenges and responsibilities associated with planetary health and how research can contribute to tackle them.

Outcome

24 modules were designed within four areas: Environment and health; Biology and clinics; Prevention and life styles; Communication and science. The training offer received enthusiastic response from both students and teachers. Four high schools were selected to test the program (pilot project: April-July 2016). The content of the modules, organizational model and results achieved will be presented and evaluated with the objective to develop a nationwide program for the coming school year 2016-2017.

Discussion

The major difficulties encountered in the pilot project design, implementation and evaluation will be analysed to improve the organizational model and further stress the links between planetary health, school education and health literacy in a life-long learning perspective.

References

- De Castro, P. et al. (2013). Information and health literacy for school students: The e-Bug experience in Italy. *Journal of EAHIL*, 9(1).
- Horton, R. (2015). Planetary health: A new science for exceptional action. *Lancet*, 386, 2921–2922.
- Italy. Legge 13 luglio 2015, n. 107. Riforma del sistema nazionale di istruzione e formazione e delega per il riordino delle disposizioni legislative vigenti. *Gazzetta Ufficiale - Serie Generale*, 162, 15/7/2015.
- Sørensen, K. et al. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 12, 80.
- The Rockefeller Foundation – Lancet Commission on planetary health. (2015). Safeguarding human health in the Anthropocene epoch: Report of The Rockefeller Foundation – Lancet Commission on planetary health. *Lancet*, 386, 1973–2028.
- World Health Organization. (2012). *Health literacy. The solid facts*. Copenhagen, Denmark: WHO.

Keywords: *health literacy, planetary health, school-work alternating system, Italy*

Information Literacy: Libraries and Librarians as Key Players in the Ecology Configured by Information Communication Technology

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This study presents a panorama of efforts made by library and information professionals, including in Albania, to fulfil their mission of Information Literacy education and training for different users groups, in their role as key players in developing Information Literacy within the Lifelong Learning Process. This process includes learning to navigate the arenas of digital knowledge, multimedia society, and large amounts of information. Information literacy is essential in this time of technological revolution when webography is actually a world-wide phenomenon and society is changing rapidly; when the Internet connects citizens with online services, and the adaptation of new technologies such as i-phones, i-pods, and tablets, is becoming more and more indispensable in everyday life. The need to make it possible for all citizens to utilize the 'magic' that new technological trends offer is a high priority task for all librarians.

This paper considers recent developments in Albania, the National Library New Information Literacy Strategy, and results from questionnaires to present a synthesis of how the Albanian librarian community has promoted Information Literacy and organized different user groups' education. The first part provides information about the national tsunami of technological trends, - including trends in public institutions, public administration, culture, heritage, education, health, businesses, and libraries' services - that has raised awareness of the knowledge society and increased the potential role of libraries. Librarians have become leaders in helping bridge the digital divide by identifying and embracing unstoppable trends (e.g. automation of library operations and services, e-users/citizens public services, e-portal, online services etc.), by monitoring users groups' needs (statistical website's indicators), and embedding IL into academic curricula. But where Albania demonstrates day by day developments in the Information Communication Technology sector and Albanian citizens are more and more aware of the newest and latest technologies, knowing what is trending is very essential for each librarian. Only in this way, can we understand which library users need instruction to learn new skills, what to teach in everyday work, and what Information Literacy competences can be provided in training different groups.

The second part relates to the National Library Information Literacy Strategy in the New Millennium. The paper focuses on different pilot projects that aim to train different groups, including librarians, teachers, library users, students and children (10-15 years), as well as make evident different methods starting from individual consultation to open courses and training sessions for using the web, digital services, digital content, and digital reference.

In the age where the users, - old or young, - are going to live with technology Information Literacy is a challenge for Albania. Information Literacy is becoming more and more present in library education curricula as well as in everyday training to the younger generation by teaching new skills to our future clients.

Keywords: *information literacy, librarian, users, ITC, technological trends*

Preparing Library and Information Science Graduate Students for Information Literacy Instruction Roles

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Generalizations are often made about recent library and information science graduates feeling unprepared for providing information literacy instruction in a real-world library environment, but what evidence do we have to make those statements?

This poster presentation addresses the conference theme of “planning strategies for information literacy instruction and training.” Teaching tomorrow’s information literacy instruction librarians to develop strong teaching practices is essential for successful instruction sessions, and in turn, essential for well-educated students. The poster will first summarize the results of a literature review examining instruction education in library and information science graduate curricula. The literature review will consider what kinds of courses are required and how instructional practices are covered, whether through practicums or from a more theory-based perspective. The review will examine what kinds of topics are covered—basic instructional design, delivery methods, successful instructional strategies, tips for classroom presentation, and so forth. The review will consider how real world practice for in-person instruction is addressed in online courses, as the number of library and information science graduate courses online continues to increase. What challenges are there in teaching and practicing real-world skills in an online course, and how are successful courses helping future information literacy instruction librarians develop these skills?

Based upon the literature review, the poster will share findings from a series of interviews conducted with recent (less than three years) graduates of library and information science graduate programs. These interviews will seek out what was helpful and what was not in their respective library and information science graduate curricula. Specifically, the interviews will focus on what practical experiences were most helpful in preparing these new librarians for instructional roles. The interviews will ask these recent graduates to consider what instructional elements were most helpful to them; for example, were certain textbooks or articles useful enough that these recent graduates turned to them later in their new instruction librarian roles?

This poster will present a summary of the literature review and findings from the original research with the goal to provide library and information science graduate instructors with specific practices and resources to help students feel better prepared providing information literacy instruction in their first professional librarian positions.

Keywords: *information literacy instruction, instructional design, library and information science education, instructional practices, instructional training*

Mapping Our Values across the Curriculum: A Social Justice Oriented Program at a Liberal Arts University

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In 2016, the Association of College and Research Libraries (ACRL, 2015) officially adopted the Framework for Information Literacy for Higher Education. Our presentation documents a response to the Framework manifested as curricular change at a small, liberal arts university in the United States. Specifically, we reframed our own information literacy program to take into consideration critical pedagogical discussions ongoing among librarians in the critical information literacy movement (Elmborg, 2006; Samek, 2007; Accardi, Drabinski, & Kumbier, 2010; Schroeder & Hollister, 2014; Tewell, 2015). Since the goal of critical information literacy is social justice (Gregory & Higgins, 2013), the American Library Association's (ALA, 2004) Core Values of Librarianship, which describe historical aims toward a socially responsible practice, were a relevant place for us to begin reframing curriculum (Jacobs & Berg, 2011).

In this poster we visually map ALA's Core Values to ACRL's Framework, including intellectual freedom, democratizing knowledge, the diversity of information and communities, serving the public good, and a commitment to social responsibility. Furthermore, we applied an instructional scaffolding approach as a means to better facilitate learning from an emerging to a mastering level or, in our local context, from the first year seminar to the senior capstone experience. When we mapped the core values across the curriculum this resulted in reorienting an information literacy program toward social justice. We will share learning outcomes and example lesson plans that may appeal to conference attendees interested in social justice oriented curricular change.

References

- Accardi, M. T., Drabinski, E., & Kumbier, A. (2010). *Critical library instruction: Theories and methods*. Duluth, MN: Library Juice Press.
- American Library Association. (2004). *Core values of librarianship*. Retrieved from <http://www.ala.org/advocacy/intfreedom/statementspols/corevalues>
- Association of College and Research Libraries. (2015). *Framework for information literacy for higher education*. Retrieved from <http://www.ala.org/acrl/standards/ilframework>
- Elmborg, J. (2006). Critical information literacy: Implications for instructional practice. *The Journal of Academic Librarianship*, 32(2), 192–199. doi: 10.1016/j.acalib.2005.12.004.
- Gregory, L., & Higgins, S. (2013). *Information literacy and social justice: Radical professional praxis*. Sacramento, CA: Library Juice Press.
- Jacobs, H. L., & Berg, S. (2011). Reconnecting information literacy policy with the core values of librarianship. *Library Trends*, 60(2), 383–394. doi: 10.1353/lib.2011.0043.
- Samek, T. (2007). *Librarianship and human rights: A twenty-first century guide*. Oxford, England: Chandos Publishing.
- Schroeder, R., & Hollister, C. V. (2014). Librarians' views on critical theories and critical practices. *Behavioral and Social Sciences Librarian*, 33(2), 91–119.
- Tewell, E. (2015). A decade of critical information literacy: A review of the literature. *Communications in Information Literacy*, 9(1), 24–43.

Keywords: *critical information literacy, social justice, information literacy programs, curricular change*

Information Literacy Competences in the Workplace: Social Practices and Workers' Empowerment

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Information literacy has become an essential concern for public institutions and organizations within knowledge societies. Technology-supported and distant teamwork have recently become widespread trends in the world of work.

Our work-in-progress research on digital and media literacy is aimed to understand how office workers cope with these new work practices and how mobilizing information literacy competences support efficient, meaningful, and inclusive ways of working. As part of a larger project, we aim at mapping and defining, from the point of view of office workers, the competences called for and developed by these new ICT-supported distant teamwork practices.

To investigate these issues, we introduce a theoretical framework specifying the transversal dimensions of digital, media, and information literacy competences and a taxonomy of activities implied by technologically-mediated teamwork that we developed based on computer-supported cooperative work literature. Our method involves in-depth semi-structured interviews within public and private Belgian organizations, including a guided tour of the interviewees work environment(s), based on the aforementioned taxonomy of activities, and on-site ethnographic observation.

Our objective is to map the competences related to distant teamwork onto the description of our informants' practices, using the competence dimensions from our theoretical framework. Our analyses will consider both the nature of interactions between the workers and their working tools and the social context where the competences are expected to appear. Two issues are of particular relevance at this point. On one hand, when the information and the workers are decentralized, how do information literacy competences support an effective and stimulating teamwork dynamic? On the other hand, how do the team's activities foster the development of its members' competences and how can this process be a lever for the workers' self-empowerment? In this context, our data, combined with those of our team's larger research project, will contribute to our investigation of two key issue regarding "learning organizations" in information societies: (1) the influence of distant collaborative work practices on learning organizations and, (2) the means used by organizations to nurture their workers' information literacy competences and consider them as lifelong learners.

Our findings will consist of defining the competences related to the informational, technical, and social dimensions of remote collaborative work practices in a digital era. Finally, our analyses will explore how information literacy can foster inclusion by improving worker's participation within the organization and how the professional world can be a development vector of information literacy.

References

- Andriessen, J. H. E. (2012). Working with groupware: Understanding and evaluating collaboration technology. *Springer Science & Business Media*, 3–18.
- Bruce, C. S. (1999). Workplace experiences of information literacy. *International Journal of Information Management*, 19(1), 33–47.
- Lloyd, A. (2011). Trapped between a rock and a hard place: What counts as information literacy in the workplace and how is it conceptualized? *Library Trends*, 60(2), 277–296.

Keywords: *information literacy, digital and media competences, distant teamwork, information and communication technologies*

The Intersection between Professor Expectations and Student Interpretations of Academic Skills: A Multi-Disciplinary Approach

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Introduction

Through a cross-unit research project, we identified a series of disconnects between the learning, writing and information literacy skills professors expect students to possess and the skills students think they possess when they enter the course, and between professor and student understandings of where students should develop these skills.

Literature Review

Numerous studies exist on how and to what extent course instructors in higher education are teaching writing, learning and research skills (Cilliers, 2011; Crosthwaite et al., 2006; Mager and Sproken-Smith, 2014). Preliminary research has also revealed that professor communication of expected or required student skills is often limited or unclear (McGuinness, 2006).

Research Questions

Is there a gap between the professor and student expectation of academic skill possession?

Which skills do professors explicitly articulate to students and do they indicate which will be taught in class and which students are expected to develop outside of the course?

Which skills do students seek to develop and where do they believe they will develop these skills?

Research Study Design and Methodology

Three surveys were conducted in 2015 in 24 third-year university courses. In survey one, 24 instructors identified which skills they believe students required to be successful in their course. In the two student surveys, conducted in 24 classes during the first two weeks of class and final two weeks, students identified the skills they believed were necessary to be successful, whether they possessed that skill and, if not, where they believed they should learn that skill. There were 1029 respondents to the first survey and 629 to the second. The second student survey included self-reflective questions and confidence ratings for research, writing and learning skills.

Conclusion

This study found a discrepancy rate of approximately 63% between instructor and student responses. The skills with the highest degree of discrepancy included the ability to analyze and present data, problem solve and select an appropriate writing style. Affective skills such as motivation, concentration and confidence were also frequently cited. The most common discrepancy found that when students indicated they already had a skill, instructors indicated it would be taught during course time. The researchers recommend clear faculty articulation of expectations of required skills in course outlines and resources for developing these. We suggest a curriculum-based approach to understanding skill development needs and addressing these through instruction and resources.

References

- Cilliers, C. B. (2011). Student perception of academic writing skills activities in a traditional programming course. *Computers & Education*, 58, 1028–1041.
- Crosthwaite, C., Cameron, I., Lant, P., & Litster, J. (2006). Balancing curriculum processes and content in a project centred curriculum: In pursuit of graduate attributes. *Education for Chemical Engineers*, 1(1), 39–48.
- Mager, S., & Spronken-Smith, R. (2014). Graduate attribute attainment in a multi-level undergraduate geography course. *Journal of Geography in Higher Education*, 38(2), 238–250.
- McGuinness, C. (2006). What faculty think – Exploring the barriers to information literacy development in undergraduate education. *The Journal of Academic Librarianship*, 32(6): 573–582.

Keywords: *student perceptions, graduate attributes, writing, information literacy, learning*

“Bibliostory – Educational Comic Stories”. A Case-based Media and Information Literacy for Children and Youths

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Our goal is to present the background and the creation process of a Polish comic book “Bibliostory—educational comic stories” (Pl. *Bibliostory – edukacyjne historie komiksowe*) as well as the sample pages of the book, translated into English. The comic book was financed by the Ministry of Culture and National Heritage Program “Education. Media and Information Education” and published in 2015. The Regional Public Library and Culture Animation Centre in Poznan was the coordinator of this project. *Bibliostory* is an example of a professional open educational resource (OER) that Polish libraries may apply in teaching media and information (MIL) competences for children and youths.

The comic book consists of 24 stories. It targets children between 9 and 12 years of age and youths from 13 to 16 years of age. Each story illustrates one issue, such as information searching, organization of information, plagiarism, and information problem solving strategy. One page is dedicated to one story only. The latter allows instructors to display the comic stories as mini-posters in libraries. In this manner, the stories may serve as ready-to-use teaching materials for MIL courses. The libraries are major partners in the distribution of *Bibliostory*. They play an important role in promoting the comic book among parents and supporting MIL education at home.

The intent of the comic book’s authors was to create materials supporting a constructivist approach to MIL and case-based MIL learning, including differences in the cognitive development of children aged 9–12 and those aged 13–16 years. *Bibliostory* cases discuss particular problems as stories (see Spackman & Camacho, 2009). Each story has its character who must solve a problem related to information. Each solution requires an action such as application of an adequate source of information or understanding the effects of a presented action. The comic book aims to prompt learners’ reflection on the illustrated cases. It encourages learners to evaluate their own knowledge and reflect on their new knowledge construction. Further, it focuses on developing informational problems solving skills. The tools, language and graphics, the authors of *Bibliostory* chose aim to trigger the interest of an audience of independent (not compulsory) readers. The stories for example include elements of pop culture that are part of day-to-day life of children and youth (e.g. use of Minecraft game motives). *Bibliostory* is conceived to be a starting point for the discussions on information related problems during library education courses.

We believe the way *Bibliostory* has been created, including its theoretical framework, may inspire those who are planning to create open educational resources for MIL in different countries.

References

- Rozkosz, E. A., & Matraś, A. (2015). *Bibliostory – Edukacyjne historie komiksowe*. Poznań: Wojewódzka Biblioteka Publiczna i Centrum Animacji Kultury w Poznaniu.
- Spackman, A., & Camacho, L. (2009). Rendering information literacy relevant: A case-based pedagogy. *The Journal of Academic Librarianship*, 35(6), 548–554. Retrieved from <http://doi.org/10.1016/j.acalib.2009.08.005>

Keywords: *Bibliostory, case-based learning, open educational resources, Poland*

Online Coaching for Information Needs

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Introduction

The Library of Satakunta University of Applied Sciences (SAMK) has considerably increased its online material during the past years. Digitization is changing society, education and the employment market. The ongoing process challenges libraries to create new services and improve their work processes.

Services in the digital age

Online coaching involves interaction between the information specialist and the information user in an online learning environment. A client-centred Huittinen Interactive Lecture and Learning environment (HILL) environment is a unique technical and pedagogic approach to learning. The technical application of HILL is based on solutions developed by Cisco, IBM and AKG in cooperation with SAMK. The WebEx-based HILL can be used to share materials, to seek information, to edit documents and to transfer voice and image. Online lectures and coaching situations can be recorded. The students replay the recordings when it suits them best.

Coaching in a personal online room

The SAMK library created a personalized digital service eINFOpoint. The customer and information specialist seek information together at the HILL environment. The students make an appointment when they need to find material for an assignment or thesis. The client can make an appointment at the service desk, by e-mail or in the on-call appointment room online. The system sends a confirmation e-mail to the student who can enter the online room by simply clicking a link.

Online coaching takes place between the information specialist and the student. Also the teacher of the course can join the meeting. Even several professionals can participate in the coaching session to share their knowledge. Coaching can also be delivered to a student group.

Available to all students

Online coaching is available to adult and young students as well as Master's and open UAS students. So far mostly adult and open UAS students have used this service. Beginning in Autumn 2015, new students receive training in the use of HILL as they start their studies. Hence the online environment with its possibilities becomes a natural part of the students' learning skills.

Conclusions

The online learning environment provides coaching independent of place and creates flexibility in the use of services. Online meetings can take place in the evenings or weekends depending on the customer's needs. This new way of working means that library workers need to have an opportunity for remote work and flexibility in working hours. Digital services extend the library services to the customer's home and workplace.

Keywords: *e-learning, online coaching, information literacy, tailored services, digital services*

Information Behavior of Meteorology Professionals: An Exploratory Study in a Brazilian Institution and a Portuguese

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Meteorology - scientifically framed as one of the areas responsible for the study of Earth's atmosphere - has among its study objectives the development of technologies for the preparation of technical and scientific research as well as dissemination of weather information as precisely as possible. Both are possible from the work of professionals working in this field of knowledge. Certain aspects related to it, which can influence the information behavior of professional meteorologists, stand out: (1) the interdisciplinary nature, which can influence the fragmentation and dispersion of meteorological information in various sources of information; (2) the outdatedness of weather information; (3) the urgency of the information demand for user's action; and (4) the fact that every area of knowledge has its own characteristics with respect to the information behavior of individuals who compose it. Based on these assumptions, this study intends to analyze the information searching behaviors and how information is used by professionals at two public institutions - the National Institute of Meteorology (INMET), in Brazil, and Sea and the Atmosphere Portuguese Institute (IPMA) in Portugal - in order to support the creation of an informational role model for the area. An information behavior model is understood as the schematic representation of the search process, access, use, and retrieval of information by users of a certain field. To achieve the overall objective, this research has the following specific objectives: (A) describe the weather information, including its historical and current aspects within the context of Brazil and Portugal; (B) outline the informational profile of meteorologists' audience in respect to the two institutions mentioned above; (C) identify the search and use habits as well as the meteorologists' information needs; and (D) identify the sources of information considered essential for these professionals. Regarding the methodologic aspects this research is characterized as exploratory, in a qualitative and quantitative approach, supported by the literature, and the subjects will be eighty-nine meteorology professionals, distributed between INMET and IPMA. The collected data will be done by the application of a specific questionnaire and the technical implementation of systematic observation, both performed in the environments in which professionals work. A first visit was made in 2015 to both institutions, where it was found that the collection of meteorological information is standardized, being generated daily reports with forecast times. It is worth noting that the INMET and the IPMA are partner institutions in regard with the exchange of information and the development of technologies for the meteorology field. As final remark, the creation of the proposed model in this research as well as its optimization is conditioned by the precise identification of the information needs and the correct characterization of the users' behavior.

References

- Gasque, K. C. G. D., & Costa, S. M. de S. (2010). Evolução teórico-metodológica dos estudos de comportamento informacional de usuários. *Ciência da Informação*, 39(1), 21–32.
- Hallmark, J. (2001). Information-seeking behavior of academic meteorologists and the role of information specialists. *Science & Technology Libraries*, 21(1/2), 57–59.
- Lopatovska, I., & Smiley, B. (2014). *Proposed model of information behaviour in crisis: The case of Hurricane Sandy*. *Information Research*, 19(1), 1–13.
- Murgatroyd, P., & Calvert, P. (2013). Information-seeking and information-sharing behavior in the climate change community of practice in the pacific. *Science & Technology Libraries*, 32(4), 379–401.
- Wilson, T. D. (1999). Models in information behaviour research. *Journal of Documentation*, 55(3), 249–270.

Keywords: meteorology, information behavior, Brazil, Portugal, search model, meteorologists

WORKSHOPS

Metaphor and Critical Reflective Practice: A Cross-Cultural Workshop

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Background and objectives

Humans everywhere use metaphor to help make sense of the world, and metaphors are an essential part of the way we communicate. Metaphors are all around us. For many of us, metaphor is so intertwined with the way we think, write and talk that we do not always use it intentionally. Our metaphors can reflect our biases and the unspoken assumptions we make about our lives and our work. Because of this, critically examining and understanding the metaphors we use – what they mean to us and what they mean to those around us – is a crucial part of reflective learning.

Metaphor permeates our professional discourse (the ACRL Framework for Information Literacy; threshold concepts, scholarship is a conversation, the Seven Pillars of Information Literacy). Metaphors help us understand concepts and experiences that are often difficult to apprehend, such as teaching and learning. When we teach, metaphors help us understand our definitions of learning – a journey to enlightenment, a marathon not a sprint, filling an empty vessel. They help us define our roles as teachers: guide, coach, or gardener. Metaphor, analogy and other forms of representative language are so ingrained in our discourse about teaching and learning that we do not even notice it. Some metaphors are so deeply embedded in our language and our thinking that they become invisible to us. Research suggests that metaphors are more than communication devices; they are also conceptual, shaping the ways we think and act. In other words, metaphor does not just help us communicate what we think, it also shapes how we think. And this is critical, because metaphor is also socially and culturally specific. Metaphors only have meaning when we have a shared body of experiences or knowledge to draw upon.

This matters in our professional conversations, in our classrooms, and in the documents we use to define our practice. Used intentionally, metaphor can be a powerful tool in teaching and learning in an inclusive society -- to reveal where we differ and to build new shared meanings. But when we use metaphor without critical reflection, without examining the assumptions embedded within, they can be confusing, exclusionary and frustrating.

Outcomes

In this hands-on workshop we will explore metaphor as a tool for critical reflection. We will examine the metaphors we use in our professional conversations through a cross-cultural lens. We will collaboratively uncover the assumptions embedded in shared documents like the Framework for Information Literacy in Higher Education, bringing personal experience, inside information from the document's creation, and theoretical perspectives to the conversation. We will find points of common understanding, reveal diverse perspectives and work together to find useful ways to talk about the work we do.

Participants will take away:

- An understanding of metaphor, grounded in research, as a tool in teaching and learning.
- Experience using metaphor to think and reflect on their own teaching, using metaphor to work through instructional “problems” and deepen understanding.

Resources needed

A projector to display slides, and flip charts and markers.

Keywords: *metaphor, reflective practice, cross-cultural communication, metacognition, critical reflection*

Critical Thinking and Active Learning: Definitions, Examples, and Exercises

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Before the Internet helped equalize information access, librarians were gatekeepers, trained to find answers to questions. Who are the information gatekeepers today? Two people sitting next to each other using their own computers to search Google may get very different results, as Google personalizes their searches. So, do we still need to think critically about tools like Google, as well as the materials themselves? Yes, as it can be extremely difficult to determine points of view, and whether or not someone is trying educate, persuade, or sell something. Learning to pose key questions, listen well, and seek answers to those questions will help people participate knowledgeably and respectfully in decision-making for themselves and for their communities. Those habits of mind also help with workplace problem-solving, an essential lifelong skill.

Objectives & Methodology

Attendees will participate in interactive exercises where they will:

- describe several different means of turning a passive learning experience into active learning;
- practice active learning techniques with partners;
- provide feedback on the effectiveness of active learning techniques;
- plan to utilize several means of reinvigorating one-shot sessions/workshops.

Outcomes

Attendees will:

- list three active learning techniques that could be utilized to teach a concept;
- describe how they will use active learning techniques to turn teaching into participatory experience;
- describe the pros and cons of utilizing active learning techniques;
- explain how they might adjust or replace those techniques for different audiences;
- consider how CATs could be adapted and utilized in engaging and participatory ILI.

The target audience is librarians who teach or train at any educational level or age.

Equipment and other requirements

Computer with Microsoft PowerPoint and Internet connection, data projector, large screen. Note: Maximum time: 2 hours; minimum time: 1 1/2 hours).

References

- Angelo, T. A., & Cross, J. P. (1993) *Classroom assessment techniques*. San Francisco, CA: Jossey-Bass, Publishers.
- Bowles-Terry, M., & Kvenild, C. 2015. *Classroom assessment techniques for librarians*. Chicago: ACRL.
- Cohen, L., & Jacobson, T. (2008). *Evaluating web content*. Retrieved March 15, 2015 from <https://web.archive.org/web/20150118051143/http://library.albany.edu/usered/eval/evalweb/>
- Grassian, E. (2014). *Thinking critically about Web 2.0 & beyond*. Retrieved March 15, 2015 from <http://goo.gl/B0H6m>
- Grassian, E. S., & Kaplowitz, J. R. (2009). *Information literacy instruction. Chapters 3-6*. N.Y.: Neal-Schuman Publishers, Inc.
- Mycoted, Inc. (2011). *Creativity and innovation techniques – an A to Z*. Retrieved March 5, 2014 from http://www.mycoted.com/Category:Creativity_Techniques
- Schrock, K. (2015). *Critical evaluation of information*. Retrieved March 15, 2015 from <http://goo.gl/RRZUg>

Keywords: *critical thinking, active learning, creativity methods, classroom assessment techniques, information literacy instruction*

A Facilitated Dialogue on the Perceptions and Understandings of the ACRL Framework for Information Literacy for Higher Education

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Background and Objectives

In 2016, the Association for College and Research Libraries (ACRL) officially approved the Framework for Information Literacy in Higher Education (Framework) as one of a “constellation” of documents including the Information Literacy Competency Standards for Higher Education, 2000 (Standards). The Framework is designed around several learning theories including threshold concepts, metaliteracy, and essential concepts. The development of the Framework by ACRL has generated significant discourse – and criticism – in the United States (US) as librarians are challenged to grapple with and unpack their attitudes to and perceptions of information literacy in higher education. The co-authors of this study, both members of the ACRL Information Literacy Standards Review Task Force charged with developing the Framework, sought to bring focus and transparency to these formative conversations within the profession around the Framework. In October 2015, they administered a survey to information literacy librarians in the US that focused on perceptions and understandings of both the Standards and the Framework, in addition to benchmarking how librarians are (or are not) implementing the Framework within the context of their own institutions or instructional programs.

This first part of the workshop I will share the results of the study. The survey yielded 356 responses that touched on both the past and present use of the Standards, attitudes towards the development of the Framework, and the many interconnected facets of the Framework, including the new definition for information literacy, the frames, and the use of learning theories. Additionally, the survey probed for specific uses of the Framework, both within an instructional design and teaching context, and also as a mechanism for outreach, professional development, and scholarship. ECIL delegates will gain an in-depth understanding of both the qualitative and quantitative results stemming from this survey in order to advance our collective understanding of the Framework within the profession.

In the second part of the workshop I will facilitate a discussion on how the Framework builds upon, complements, and differs from librarians’ understanding of other definitions, interpretations, or models for information literacy around the world. As information literacy exists both locally and globally, it is essential for teaching librarians to not only recognize but build upon the knowledge of models constructed within different countries and cultures. Facilitated questions will include: How do the frames contribute to your current understanding of information literacy? How do we balance the pragmatic and philosophical orientations of information literacy? Is there space for a singular, universal understanding of information literacy? What are the connections between information literacy and global citizenry?

Participants will take away an understanding of how the Framework is currently understood and perceived, and how it is initially being implemented, among librarians in the US. They will also engage in conversation for how the Framework informs and complements alternate visions of information literacy around the world.

Resources needed

A projector to display slides, flip charts and markers.

References

Association for College and Research Libraries. (2015). *Framework for information literacy for higher education*. Retrieved February 14, 2016 from <http://www.ala.org/acrl/standards/ilframework>

Keywords: *information literacy, global education, internationalization, ACRL framework, higher education*

How to Keep the Research Paper from Killing Curiosity: Collaborating with Faculty to Support Learning and Exploration

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Librarians and faculty alike struggle to help students see academic research as a creative, exciting process of discovery and exploration. In the high-pressure world of college, many students are afraid to try new things. They cling to the same research topics, tools, and resources they've always used. In this workshop we will show how a deeper understanding of curiosity can help faculty create activities and instructional strategies that encourage curiosity and learning. Librarian attendees will leave with a variety of activities, concepts, and tools they can use in the classroom, and in their work with teaching faculty, to help learners solve evolving information problems.

All of our students are curious, but traditional research assignments privilege certain types of curiosity over others, leaving some students disengaged and disinterested. College students have many competing interests; sometimes research assignments are not their highest priority. But sometimes it is the university classroom environment that does not provide sufficient opportunities for students to learn how to safely explore their topics through the lens of curiosity.

As librarians, we focus deeply on the research process in all of its dimensions -- affective, cognitive, and technical -- this gives us a unique perspective on why and how students make the choices they do in research. We use that understanding to share our expertise about academic research with students. However, we have increasingly come to believe that sharing that expertise with instructors and teaching faculty is just as (or even more) important.

In this workshop we will explore the ways that a deeper understanding of curiosity can help instructors create an environment that fosters exploratory research. We will demonstrate the value of recognizing and encouraging a variety of types of curiosity in the research process. We will lead participants through classroom and workshop exercises we developed to help students and instructors engage with research ideas within the framework of curiosity. And we will talk about some of the barriers students face as they practice entering the research conversation, and the role librarians can play in advocating for students' needs.

This workshop will be appropriate for librarians who work directly with students, as well as for those librarians who work with teaching faculty as part of their liaison responsibilities. No special technology is needed beyond a projector and a screen, but a room with small tables for discussion would be helpful.

Keywords: *curiosity, collaboration, train-the-trainer, research assignments*

The K-16 Connection: Exploring the High School to College Transition from an IL Perspective

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It is a common concern in Higher Education in the United States that incoming students are not academically prepared for the rigor of college-level work, including in the area of information literacy. Instructors in higher education tend to blame the K-12 education system for not adequately preparing students in these areas, evidently assuming that gaps in incoming student knowledge reflect gaps in their previous education. But in fact, common core standards reflect language related to information literacy, stating an expectation that students can “delineate and evaluate the argument and specific claims in a text, including ... the relevance and sufficiency of the evidence” (Common Core State Standards Initiative, 2016a), and “integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem,” (Common Core State Standards Initiative, 2016b). This leads to the question of whether K-12 schools are addressing IL skills and, if indeed such skills are being taught, why do incoming college students seem under-prepared for college work? Is there a discrepancy between what instructors in higher education are expecting, and what is being taught in previous grades? Or is it that students are not retaining the learning, or are having trouble transferring the skills from one setting to another?

This interactive workshop, geared toward academic and high school librarians as well as library science faculty, will explore the current state of IL education for rising college students. The workshop coordinators will share results from a set of studies exploring what the expectations for information literacy abilities are at the college level, and what students are taught in high school. An initial survey to academic librarians asked which information literacy skills they believe to be most important for incoming college students, and which competencies they believe to be most lacking, as well as which information literacy competencies they would most like to see taught at the high school level. The responses from this survey informed the design of a parallel survey sent to high school librarians asking them which competencies they actually teach. In this workshop we will explore how well IL instruction in high school aligns with the expectations and demands of college curricula. Building on these findings, participants will work in large and small groups to develop and identify approaches for building on and improving that education.

Learning outcomes for this session include:

1. Examining the extent to which current instructional practices for information literacy adequately address the high school to college transition.
2. Exploring high school and college instructors’ understanding of each other’s expectations for and approaches to IL for their students
3. Identifying approaches to improve the high school to college transition with regard to information literacy.

References

- Common Core State Standards Initiative. (2016a). Retrieved from <http://www.corestandards.org/ELA-Literacy/CCRA/R/8/>
Common Core State Standards Initiative. (2016b). Retrieved from <http://www.corestandards.org/ELA-Literacy/RI/11-12/7/>

Keywords: *information literacy, high school, college, academic libraries, library instruction, assessment*

Addressing Diversity, Oppression, and Inclusion in Information Literacy Instruction

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Information is not neutral, nor are the systems and structures through which people find and access that information. Information sources are often limited in scope or perspective, or biased in other ways. Authors and publishers might overtly or covertly promote a certain agenda, and advertisers and funding bodies can influence and impact the sharing and presentation of information. Further, libraries and archives organize and classify information using systems largely created by and reflective of white, middle-class, heteronormative values. For instance, Bourg (2015) relates an anecdote in which a student of color was trying to conduct research for her thesis on the Young Lords. After failing to find any information on the group when searching them as a political organization, the student finally realized that writings about this group had been classified under gangs. This story raises the question of how might such an experience influence the user's understanding of the information she is finding, and whether users are taught to critically evaluate not only the information they find, but also the systems and structures within which that information exists.

In fact, attention to information literacy tends to focus on physical access to information, with much less attention to aspects of cognitive or intellectual access (Jaeger, Greene Taylor, & Gorham, 2015). Within library instruction sessions, significantly more time seems to be devoted to finding resources than to understanding, evaluating, and learning how to use information within those sources (Saunders, 2013). As professional librarians and archivists, or as library and archives educators, we should consider how to address the issues of racism, sexism, whiteness, and oppression within our systems, services, and collections, in order for their instruction to be inclusive and not perpetuating of oppressive structures. How do we teach people not only to navigate these systems, but also critique them, and perhaps even work to change them? Or, at the very least, how can we help people to recognize the inherent biases in these systems and consider their impacts?

This workshop will explore these questions through interactive discussions and activities. The presenters, an LIS faculty member and an LIS Master student, will frame the discussion by providing examples of inherent structural biases from a range of LIS services and systems, including cataloging practices, reference services, and collection development. These examples will serve as a springboard for small and large group discussions and activities in which workshop participants will identify potential learning outcomes for information literacy instruction for inclusiveness, and design sample activities and examples for addressing these outcomes.

References

- Bourg, C. (2015). Never neutral: Libraries, technology and inclusion. *The Feral Librarian*. Retrieved from <https://chrisbourg.wordpress.com/2015/01/28/never-neutral-libraries-technology-and-inclusion/>
- Jaeger, P. T., Greene Taylor, N., & Gorham, U. (2015). *Libraries, human rights, and social justice: Enabling access and promoting inclusion*. Lanham, MD: Rowman & Littlefield.
- Saunders, L. (2013). Culture and collaboration: Fostering integration of information literacy by speaking the language of faculty. In D. Mueller (Ed.), *Imagine, Innovate, Inspire: The Proceedings of the 2013 ACRL Conference* (pp. 137–147). Chicago, IL: ACRL.

Keywords: *information literacy, ACRL framework, social justice, human rights*

Making Games for Library Instruction

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Play is not just for children. It brings a freedom to explore and innovate, creating ‘safe’ ways of developing information, digital, and political literacies for adults. It can effectively support the development of higher level, transferable skills that library users can apply to their lifelong learning journeys. Examples of games used in libraries can be found in the literature, though these often emphasise engagement rather than quality of learning, which can be problematic.

This workshop challenges attendees to work in small groups to create an outline of a library game that meets a challenge defined by the group. Based on experiences gained through running day-long “Making games for libraries” workshops (<http://gamesforlibraries.blogspot.co.uk/>), the workshop is structured to allow attendees to work through the basic steps of creating a non-digital library game. Games-making materials will be provided and the overwhelming majority of the session will be spent “hands on” creating games, operating within the scaffolding provided. Further materials showing the benefits of using play and games in libraries will be provided for attendees to read afterwards, along with examples of games and resources to help them create their own games and playful activities in their own library settings. While the formal process described will drive the session, the final outcomes will depend on who turns up to play on the day, with the creative activity driven by the attendees.

By the end of the session, participants will be able to construct a basic library game using the scaffolding approach demonstrated and understand the key benefits of using a game-based approach for library instruction.

The target audience is librarians who currently train or teach students in any subject area, across any library sector, whether in “one off” sessions or as part of a teaching team across a module or course.

Keywords: *game based learning, play, information literacy, librarians*

Using the 4C/ID-Model to Design Information Literacy Instruction in Higher Education

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Objective

Based on the Four-Component Instructional Design (4C/ID) model (Van Merriënboer & Kirschner, 2013), this workshop will provide its participants with the theory and hands-on experience that is needed to develop high-quality information literacy instruction. The participants will learn how to systematically design an educational program that fully integrates information literacy skills instruction with domain specific and/or other generic skills instruction.

Content

During the workshop, the following topics will be covered:

- needs and task analysis
- sequencing decisions
- design of problems or learning tasks
- design of supportive information
- design of procedural information
- design of part-task practice.

At the end of the workshop the participants will have a global blueprint for an information literacy integrated course or educational program, ready for further development.

Organization

This workshop starts with the presentation of a modelling example which is described in Wopereis, Frerejean, and Brand-Gruwel (2015). This example is based on earlier studies in higher education (Brand-Gruwel & Wopereis, 2006, Brand-Gruwel, Wopereis, & Vermetten, 2005, Wopereis, Brand-Gruwel & Vermetten, 2008) and describes the integration of information literacy skill instruction in the premaster curriculum Educational Sciences of the Open University of the Netherlands. Participants will discuss the example and focus on the strengths and weaknesses of the design, development, and implementation of the course. Subsequently the participants will redesign (parts of) the course and create in group an instructional blueprint for an integrated information literacy track for a master curriculum. Solutions will be presented and discussed.

References

- Brand-Gruwel, S., & Wopereis, I. (2006). Integration of the information problem-solving skill in an educational programme: The effects of learning with authentic tasks. *Technology, Instruction, Cognition and Learning*, 4, 243–263.
- Brand-Gruwel, S., Wopereis, I., & Vermetten, Y. (2005). Information problem solving by experts and novices: Analysis of a complex cognitive skill. *Computers in Human Behavior*, 21, 487–508.
- Van Merriënboer, J. J. G., & Kirschner, P. A. (2013). *Ten steps to complex learning: A systematic approach to four-component instructional design*. New York, NY: Routledge.
- Wopereis, I., Brand-Gruwel, S., & Vermetten, Y. (2008). The effect of embedded instruction on solving information problems. *Computers in Human Behavior*, 24, 738–752. doi:10.1016/j.chb.2007.01.024
- Wopereis, I., Frerejean, J., & Brand-Gruwel, S. (2015). Information problem solving instruction in higher education: A case study on instructional design. In S. Kurbanoglu et al. (Eds.), *Information Literacy: Moving Toward Sustainability, Third European Conference on Information Literacy, ECIL 2015, Tallinn, Estonia, October 19–22, 2015: Revised Selected Papers*. CCIS, vol. 552 (pp. 293–302). Cham: Springer International Publishing. doi:10.1007/978-3-319-28197-1_30

Keywords: 4C/ID-model, information literacy instruction, instructional design, whole-task models

PANELS

Information Literacy and Digital Inclusion: From Advocacy to Action

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Background

Drawing from experience in the UK, this panel will allow for a discussion on how information literacy (IL) contributes to digital inclusion fostered by public libraries. It will provide an update of recent advocacy work from the CILIP Information Literacy Group (ILG) in the UK, in partnership with the Tinder Foundation.

In its Digital Inclusion Strategy, the UK government recognises the importance of digital inclusion and how digital skills can help tackle wider social issues, support economic growth and close equality gaps. The relationship with economic prosperity was further underlined by recent research quantifying the economic benefits that would stem from citizens having basic digital skills, amounting to a contribution of over £14 billion to the UK economy by 2025.

Public libraries are key players in the effort to achieve greater digital inclusion. They help people – including those from the most disadvantaged sectors of society – develop their digital know-how: from basic skills to get online, pay their bills or claim welfare benefits, to developing their digital literacies, finding, evaluating and using information for job seeking and for their daily lives. Public libraries' work in this area also spans the age spectrum, from code clubs for young people to support for older citizens in the use of tablet devices.

Issues for the ECIL panel session

The panel will seek to demonstrate the value of partnership between the library sector and other agencies in advancing digital inclusion. In February 2016, ILG and the Tinder Foundation jointly organised two workshops aimed at (i) encouraging shared practice and learning on fostering digital inclusion and (ii) developing a network and facilitating collaboration between librarians in the public library sector. The events, held in London and Leeds, attracted over 70 participants. The topics that were discussed illustrated a range of issues addressed by public libraries such as basic digital skills for the over 50s; using social media effectively; making use of volunteers to support the work of library staff with users; digital skills for making sense of and using the welfare benefits system; using different digital devices that are brought into libraries; and keeping library staff up to date with new apps and digital services.

The discussions are continuing and being supported online using a community platform, the Tinder Foundation's Digital Libraries Hub. The panel will present the lessons drawn from this initiative; on that basis, ECIL delegates will be able to:

- consider the merits and/or usefulness of a collaborative approach between public libraries, academic libraries and other players wishing to foster digital inclusion;
- learn from the experience of joint work between ILG and the Tinder Foundation;
- reflect on how librarians' experience of IL can contribute to addressing digital inclusion;
- compare the collaboration with developments in their own environments and countries;
- propose ideas for refining or improving the collaboration;
- reflect on whether the collaboration provides an example for encouraging similar initiatives elsewhere.

The panel session will allow ample time for feedback from delegates and discussion.

Keywords: *advocacy, research, digital literacy, digital inclusion, national perspective*

Radical, Critical? Exploring Discourse around Information Literacy

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Topic to be covered and objectives

Potentially, concepts of radical information literacy (IL) and critical IL give more validity to the notion of IL as empowering, challenging and transformative. In order to build on this potential it is essential to explore and extend key terms. This is particularly important if theory is to be carried through to practice as well as advocacy.

In this panel we engage with the ideas of a radical IL (e.g. Whitworth, 2014) and critical IL (e.g. Tewell, 2015) that have emerged in the literature and in social media discussion. We aim to identify and critique characteristics of the discourse that emerges when using these terms, and to stimulate discussion amongst ECIL participants.

Papers and panelists

The four panelists will reflect on:

- how radical IL and critical IL are defined, and by whom;
- how the notions of radical IL and critical IL relate to each other;
- how radical IL and critical IL has been, and could be, enacted by library and information professionals in their practice, in different sectors;
- how the panelists themselves conceive of radical IL and critical IL and relate them to a socio-cultural perspective on IL.

They will then open up debate to the floor, for people to propose their own definitions and critiques of these terms, together with their views on the implications for their sector of the IL world.

References

Tewell, E. (2015). A decade of critical information literacy: A review of the literature. *Communications in Information Literacy*, 9(1). Retrieved February 15, 2016 from <http://www.comminfolit.org/index.php?journal=cil&page=article&op=view&path%5B%5D=v9i1p24>

Whitworth, A. (2014). *Radical information literacy: Reclaiming the political heart of the IL movement*. London, England: Chandos.

Keywords: *information literacy, radical, critical*

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