

Information Literacy Association



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Editors: S. Špiranec, S. Kurbanoğlu, D. Kos, J. Boustany, M. Wójcik



The Eight European Conference on Information Literacy (ECIL)

October 9th-12th, 2023, Kraków, Poland

Abstracts

Paris, 2023

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Sonja Špiranec, Serap Kurbanoğlu, Denis Kos, Joumana Boustany, Magdalena Wójcik

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The Eight European Conference on Information Literacy (ECIL) was co-organized by the Department of Information Management of Hacettepe University (Turkey), the Department of Information and Communication Sciences of the University of Zagreb (Croatia), the Information Literacy Association (InLitAs) in Paris (France) and the Institute of Information Studies of the Jagiellonian University in Kraków (Poland).

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Foreword

Dear participants of ECIL 2023, dear colleagues and friends,

once again, we are proud to present our latest publication - the Abstract Book of the 8th European Conference on Information Literacy!

This eighth installment of the conference series, ECIL 2023, is co-organized by the Department of Information Management of Hacettepe University (Turkey), the Department of Information and Communication Sciences of Zagreb University (Croatia), the Information Literacy Association (InLitAs) (France) and the Jagiellonian University (Poland).

Can you believe that it has already been 10 years!? Ten wonderful years of dedicated academic work, open collegial deliberations and beautiful friendships are behind us. The challenges of recent years are still with us and their echoes resound in the contributions presented in this publication. The pandemic and the crisis of trust in information are now reflected upon from a distance, with greater clarity and viewed against the backdrop of the new geopolitical landscape.

We are very happy that we will be able to meet once again in person and this year the theme that unites us is "Experiencing Information and Information Literacy". After venturing into topics influenced by the currents of contemporary social dynamics we return to the academic arena. Here, we employ and further develop established concepts like *information experience* to offer substantial insights into the issues we have been contending with.

This year we had 182 original submitted proposals, of which 138 were finally accepted for presentation and are included in the Book of Abstracts. Among these there are 76 papers and three doctoral forum contributions, 25 best practices contributions, nine workshops, 10 posters, 11 PechaKucha presentations and four panels.

We have two keynote speakers, one invited speaker and one invited panel. Tim Gorichanaz, author of "Information experience in theory and design" presents the implications current work in ethics of information and technology has on information literacy through the lense of virtue ethics. Alison Hicks draws upon the academic legacy in the field as well as her own research experience to debate achievements of the sociocultural turn in information literacy. As an invited speaker Jenna Hartel explores and presents the *archipelago* of Library and Information Science in an innovative multimedial presentation. This year a special invited panel features Local Organizing Committee members, Sabina Cisek and Monika Krakówska, as they debate a proposal to define and formalize the processes of experiencing information and the formation of information culture in interdisciplinary and methodological terms.

In conclusion, a heartfelt expression of gratitude is extended to all those who played a role in organizing the 8th European Conference on Information Literacy. The accomplishment of ECIL's successful organization is a testament to the dedication of its community of authors and participants, as well as the diligent efforts of the Standing, Programme, and Organizing Committees.

We are looking forward to meeting you all in Kraków!

On behalf of the Organizing Committee,

Sonja Špiranec and Denis Kos

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KEYNOTES

A Compass for What Matters: Virtue Ethics and Information Literacy

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As we foray further into the digital information age, we seem to be searching for moral guidance. In recent years, discussions of information ethics have proliferated along with emerging fields of ethics regarding specific technologies (e.g., AI ethics); and increasingly, this work in the ethics of information and technology has implications for information literacy. Of the three main traditions in ethics (deontology, consequentialism and virtue ethics), deontology and consequentialism have been the focus of the majority of work. But I suggest that of these three, virtue ethics is uniquely well suited as a moral guide in the digital age, given the pace of sociotechnical change and the complexity of society. That is because virtue ethics focuses on the traits, situations and actions of moral agents, rather than on rules (as in deontology) or outcomes (consequentialism). In this talk, I provide an overview of virtue ethics as relevant to information literacy, I discuss existing work that is already compatible with virtue ethics, and I suggest a future vision of a virtue-oriented information literacy.

Keywords: virtue ethics, information literacy

Sociocultural Approaches to Information Literacy: Space Races, Wish-Cycling and Squabbling Siblings

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Sociocultural approaches to information literacy, which recognise that information literacy is shaped through dialogue and debate, have not always been welcomed within our field, being variously critiqued as 'fashionable,' of no interest to practitioners or as irrelevant given the availability of other conceptual work. Yet, it could be argued that these ideas have irrevocably changed the direction of information literacy research and practice, not least by challenging ingrained assumptions about ways of knowing- and how we teach for these ideas. This keynote presentation critically analyses the legacy of information literacy's sociocultural turn by reflecting on how these ideas have been developed since the early 2000s, how they have been integrated into information literacy discourse and narratives and their contributions to information literacy research and practice. In further examining gaps and silences, or the places where sociocultural ideas are sidelined, this presentation also reflects on future challenges for both research and practice, including the risk of stagnation, the lure of aspiration and the responsibilities of progress. In effect, where have sociocultural approaches to information literacy been, where might they be going and why does it matter to our field?

Keywords: information literacy, socicultural turn

INVITED SPEECHES

An Archipelago of Library and Information Science

Jenna Hartel

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Professor Jenna Hartel loves to survey the landscape of ideas in Library and Information Science. To that end, over her career, she has employed metaphors, performance, and multimedia to take students, educators, scholars, and practitioners to new places of understanding in our field. Jenna will bring this same adventurous spirit to her invited talk at the 2023 European Conference on Information Literacy. This time, she guides the audience across a recently surfaced and linked island chain of ideas that extend from the Library and Information Science mainland. The trip explores information experience, embodiment, contemplative practice, a multispecies perspective, and one additional (surprise!) destination. In an accessible manner, each conceptual islet will be defined simply, placed into historical context, and then related to research, pedagogy, and practice in Library and Information Science. Professor Hartel's goal is to give all attendees an intriguing set of potentially uncharted notions to enliven conference conversations. There will be many souvenirs to take home! An avid video-maker and creator of the YouTube channel, INFIDEOS, the presentation will include a few original multimedia snippets on these topics.

Keywords: library and information science, new perspectives

Interdisciplinary and Methodological Aspects of Diagnosing the Experience of Information and the Formation of Information Culture

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Our intention will be to present a proposal for defining and concretising both the processes of experiencing information and the formation of information culture in interdisciplinary and methodological terms. The aim of our deliberations will be to point out the potential of a multifaceted and diverse understanding, investigation and conceptual construction of human information activities constituting the experience of information in the contemporary world. The panel will also attempt to present research methodologies, selected and most frequently undertaken ways of investigating these evolutionarily, biologically, psychologically and cognitively and socially determined activities constituting responses to information (including stimuli), always occurring in context. It will also be necessary to consider the concept and phenomenon of the human experience of information through the prism of generated information competences, which simultaneously affect the processes of experiencing and practising information.

On the basis of an analysis and critique of the literature on the subject, as well as a conceptual analysis, the key interdisciplinary subject and methodological conditions of experiencing information and information culture and the application of interdisciplinary research methods in this area of information science will be characterised. We will try to show that the analysed research field represents a great potential for exploring the specificity, the diversity of human information behaviour and information culture, as well as the context, including the experience of information in the virtual world, in social media as well as in everyday life.

Keywords: information experience, methodological perspectives, information culture

PAPERS

Early-Career School Librarians' Use of Information Literacy Skills to Master their Information Needs

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Information literacy is a tenet of school librarianship (ALA & AECT, 1988, 1998; AASL, 2018a, 2018b). Although most school librarians were once classroom teachers, these individuals do not always possess adequate information literacy skills (Burchard & Myers, 2019) even though it has been shown that the students of teachers, who possess these skills, have higher levels of information literacy themselves (Solmaz, 2017).

Do students leave library school with the skills to answer their own information needs? Does preparation for the profession encompass essential skills necessary for success (Whitton, 2019)? In this paper, authors will provide a holistic view of the responsibilities and information necessary to meet those responsibilities while sharing selected results from a recent study exploring the professional information needs of early-career school librarians and library school students wishing to become school librarians. Utilizing a mixed-method approach, we used surveys and interviews to explore and understand the information needs of participants as well as ways they met those information needs.

Initial results revealed the source of support for these early career professionals resided in participation in professional learning communities and networks, whether ad hoc or more formal. Early-career school librarians relied on the mentoring found in these groups to ensure their success. Responsibility lied with the employer and preparation program to build on students' and early-career school librarians' inherent and emerging information literacy skills to foster expertise. We anticipate that additional analysis will aid school library preparation programs and school administrators in developing a more strategic approach to supporting the success of the future and early-career school librarian.

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Keywords: school librarian information need, information literacy, school librarianship, information needs

Information Literacy Practices of Hospital Librarians in an Era of Evidence-Based Medicine

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In today's healthcare there is a strong focus on evidence-based scientific information. The evidence-based movement states that healthcare should be based on scientific research. Hospital librarians have a role as key actors when it comes to facilitating information seeking and use of scientific evidence within healthcare (Chaturvedi, 2017; Egeland, 2015). In recent years, with demands for evidence-based practice, the main role of hospital libraries has gradually shifted from serving patients with literature to becoming medical libraries for healthcare professionals. This change has transformed the role of hospital librarians into specialists focused on clinical librarianship and research support. This paper is part of a research project started in 2020 on information practices of hospital librarians, with previous studies focusing on information work of hospital librarians (Hanell & Ahlryd, 2023) and documentary practices in evidencebased medicine (Ahlryd & Hanell, 2021). The often invisible information practices of hospital librarians can be visualized through the application of the concept of information work (Hanell & Ahlrvd, 2023). Lloyd (2013) frames information literacy practices, such as facilitating access to information, as critical for solving workplace problems and consequently as a critical practice of information work. For healthcare professionals there is a need for specialized information literacy. Previous research shows how information practices in healthcare connect to both a scienceoriented medical discourse and a holistically oriented nursing discourse (Johannisson & Sundin, 2007), and that information literacy practices of hospital librarians need to balance between an understanding of information literacy as either generic or embedded (Sundin, Limberg & Lundh, 2008). Against this background, this paper investigates the information literacy enacted and developed by hospital librarians as they work to support evidence-based practice. The main research question guiding this investigation is: what is the nature of information literacy practices constructed, negotiated, and enacted by hospital librarians as part of their information work? This study is informed by a practiceoriented perspective framing information literacy as a situated practice (e.g. Lloyd, 2013) and includes 20 semistructured interviews conducted with hospital librarians and hospital library managers between 2020 and 2022. The analysis shows how information literacy practices of hospital librarians are situated within a multi-polar discursive field and characterized by three main hospital library practices: clinical practices, information seeking practices, and a health technology assessment practice (cf. Hanell & Ahlryd, 2023). Within the healthcare sector, hospital librarians need to navigate between generic and situated views on information literacy as well as epistemologically conflicting understandings concerning the nature of scientific evidence. The different views on information literacy make it possible to discuss different epistemological approaches within healthcare and how hospital librarians respond to these. With the growing importance of evidence-based medicine, we find that information literacy practices of hospital librarians tend to be positioned and shaped by a science-oriented epistemology. Drawing on this analysis, possible future directions for information literacy practices within hospital librarianship are elaborated.

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Keywords: information literacy, hospital librarians, hospital libraries, healthcare, evidence-based medicine

Information Literacy at School: What Post-Pandemic Uses of Online Video by Primary School Teachers in France?

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The consumption of online video keeps growing, especially during the Covid crisis and the "emergency remote education" time (Bozkurt et al., 2020) when pedagogical continuity had to be organized with the available means and resources online. The studies of primary school teachers' information seeking behavior (ISB) and information literacy (IL) are still scarce (Virkus & Mathiesen, 2019) even though ISB and IL of teaching staff has been reported to have a strong impact on students' information literacy (Godwin, 2005).

Objectives

The present study focuses on French elementary school teachers' uses of online video resources. We define online video as an audiovisual resource that can be reached online asynchronously (possibly downloaded and/or modified by the user) and that was not necessarily initially designed for learning purposes. We focus here on 3 research questions: What is the place of online video in the participants' information habits (Q1)? What learning potentialities do they attribute to online video (Q2)? What does it say about the IL of these teachers and the media and information literacy (MIL) they may provide (Q3)?

Methodology

We adopted a qualitative approach: 15 individual semi-directed interviews (6 men and 11 women, teaching from first to fifth grade in different schools). Inspired by Flanagan's Critical Incident Technique (1954) relevant in the IL field (Cisek, 2016), each interview is based on a retrospective analysis by the teacher of a learning situation involving online video.

Outcomes

Q1: Our results show effective, albeit disparate, use of online video. Our participants locate videos mainly through other teachers' blogs and thanks to textbooks. Their main motivation in selecting a video is that it fits their learning objectives. It seems that the primary source of a video makes no difference. The search for online videos has however an impact on their preparation work: the selection process is described as rather difficult and time-consuming.

Q2: Online video is part of these teachers' information habits as one type of media among others. The learning objectives for using online videos in class are described in an ambivalent manner (a means to maintain students' attention and the very reason why children's attention fluctuates). Specific learning potentialities are associated with online video: mainly "to show", to "emotionally impact" learners to improve their understanding and memorization. The fact that an online video can be watched at a desired pace is appreciated. As such, online video is mainly used to introduce or summarize a learning point. Q3: The videos used are tightly linked to school programs. The video rarely seems to be sought or even less studied in class for itself. Nor does it appear as an objective of MIL.

These findings inform recommendations for teacher training (to select and validate online audiovisual resources) as well as for designers and publishers of resources (for a design closer to teachers' pedagogical needs and better visibility of resources).

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Keywords: online video, primary education, information literacy

A Bibliographic Mapping Study: Concepts and Their Relationships in Information Literacy before and after COVID 19 Pandemic

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The American Library Association defines Information Literacy (IL) as "...a set of abilities requiring individuals to 'recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (ALA, 1989). The Association of College and Research Libraries (ACRL) (2000) underlined information literacy as the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.

Information literacy is more important than ever. The outbreak of COVID-19 poses new challenges to concepts of information literacy. Research trends studies have emerged in Information Literacy (IL) to determine research manner and changes before and after COVID-19. The aim of this study was to reveal the IL concept and relationship between the concept of IL before and after the pandemic. Also, common keywords were examined. The period between 2016-11-01 and 2019-12-31 was considered as pre-pandemic, and between 2020-01-01 - 2022-11-26 as post-pandemic, in both groups. Trend analysis on the information literacy pre- and post-pandemic period was performed by VOS viewer software and in-app algorithms thereby visualizing ISI database on the related concept (van Eck & Waltman, 2010). The co-occurrence analysis of the keywords of articles conducted to reveal common concepts and the most associated concepts.

The data set was extracted from ISI Web of Science databases and included 3141 articles published between 2016 and 2022. While 1701 of the articles were from pre COVID-19, 1440 articles were from post COVID-19.

Using a bibliographic mapping method, we pursued two research questions listed below

- What are the common concepts on maps before and after COVID-19?
- What are the most associated concepts with information literacy in both maps?

Results

After the bibliographic analysis of common keywords of the sample articles, 25 most common concepts before and after the pandemic were obtained and visualized. Some prominent concepts before the pandemic were digital literacy, assessment and collaboration, while misinformation, digital divide and disinformation were observed in the post-pandemic period. Also link strengths showed, health literacy, critical thinking and misinformation were the most associated concepts revealed from the maps. Detailed findings about the concepts and the implications of the results will be discussed in light of the IL - COVID-19 relationship.

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Keywords: COVID-19 pandemic, bibliographic mapping study, information literacy

Developing Online Research Skills in a Lower Secondary School: The Viewpoint of Students

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In my dissertation (Alamettälä, 2022), I investigated how lower secondary school teachers (n=3) developed their instruction practices of online research skills after having been introduced to a pedagogical framework, Guided Inquiry Design (Kuhlthau, Manioites & Caspari, 2015), and examined the short- and long-term effects of the intervention on students (n=58). It was a longitudinal study: I followed the same students from 7th to 8th grade. During these two years, the students participated three teaching intervention courses that focused on different subtasks of online research: information search, evaluation, and use. The control group received standard instruction based on the curriculum. The results showed that the intervention had a positive effect immediately after the intervention, but this effect did not last until the following year (Alamettälä, 2022). Therefore, it is important to investigate how the students themselves experienced the intervention and how they reflected on their own working and learning after the intervention courses.

There are only a few intervention studies related to teaching of online research skills or information literacy skills in lower secondary schools and even fewer investigated students' experiences. My study provided students' perspective on the topic. In this paper, I focused on how the students themselves experienced the intervention and their own actions during the intervention courses.

The research questions are:

- 1. What kind of new competencies did the students feel they achieved during the intervention?
- 2. How did the students indicate they worked during the intervention?
- 3. What kind of challenges did the students report that they had during the intervention?
- 4. How do students' learning experiences, classwork, and challenges correlate?

I collected the data between 2015 and 2017. Through the questionnaire I surveyed students' learning experiences, classwork, and challenges during the intervention courses. I analysed the data using quantitative methods.

The results showed that, concerning online research skills, the students reported most learning during the first intervention course. However, the students reported learning more than online research skills in that they also learned subject content and working practices. According to the students, their classwork was quite exemplary; they felt that they had followed teacher's instructions. The students did not report about any major problems. Most challenging for them was planning the work and using the inquiry log.

Correlation analysis show that good classwork was linked to positive learning experiences. A negative correlation was found between classwork and perceived challenges: the better the classwork, the fewer the challenges. There was no significant correlation between learning experiences and challenges in either direction. The same results were observed after each intervention course.

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Keywords: information literacy instruction, guided inquiry, online research, students, lower secondary education

Alarming Literacy Rates in One of America's Largest Cities: What Can Be Done in the City of Detroit?

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If most papers in conference settings present success stories, I propose to share with the ECIL participants a continuing alarming situation which occurs in one of America's largest urban areas, the City of Detroit, where the literacy rate is one of the lowest in the United States, amounting to only 47% (The Detroit News, 2022). The 2020 US Census counted 639,111 inhabitants in the City of Detroit, the largest in the State of Michigan, ranking it the 18th largest in the country. The racial makeup of Detroit is 77.17% blacks, 9.51% whites, 8.02% Hispanics, 3% multiracial, 1.58 Asian, and .72% other. The education level of Detroit's population age 25+ consists of 82.6% being graduates of a high school and 16.2% holding a bachelor's degree. The median household income in the City of Detroit is \$34,762 as opposed to almost double in the state of Michigan, where it amounts to \$63,202 (US Census Bureau, 2023).

Despite of highlights one can find in tourist guides where Detroit is presented as a major cultural center, known for its contributions to music, art, architecture and design, in addition to its historical automotive background, several higher learning institutions, a national research university with medical and law schools, the City has been facing a continued exodus of population which led to the closing of many public schools. With 48,615 students enrolled, the graduation rate for Detroit's 107 public schools is 76%, with reading proficiency of only 18% for the 2020/21 academic year (Public School Review, 2023). Traditional public and charter school students in the City have performed poorly on standardized tests. Circa 2009 and 2011, Detroit traditional public schools scored a record low on national tests.

Based on the corroboration of census data and the examination of socio-economic factors, the paper seeks to determine the root causes which have led to the declining of literacy rates in Detroit (neighborhood disinvestment, politics of abandonment, crime dynamics, high incarceration rates, unemployment, low median house income) and to discuss rescue efforts several types of organizations and agencies along with policy makers have been engaging in to address the endemic issue of illiteracy in Detroit and to provide solutions for better access to information literacy programs through classes, library services and even financial incentives aimed at attracting disadvantaged groups.

The **Detroit Literacy Project Coalition** (DLPC) was born out of a desire to create a hub for all kinds of resources that aid reading learners of all ages and backgrounds. DLPC is a constantly evolving and growing network of organizations with the same mission: to improve literacy and foster love of reading for all Detroiters. **ModEL Detroit** is a project aimed at sharing tools and resources to support teachers in implementing English Language education. Additionally, the project seeks to prepare students enrolled in the Detroit Public School system to be successful in their studies, career, and life. Starting from the premises that 60% of the unemployed lack the necessary skills to train for high-tech jobs, the **Pro-Literacy Detroit** offers programs that address the severity of this issue. The non-profit organization aims to assist adults 16 and over to become independent readers, writers, and speakers of English, with the ultimate goal to solve adult illiteracy in Detroit. The **Detroit Future Media** (DFM) program is an intensive digital literacy training program to support the revitalization of Detroit *Future Media Guide to Digital Literacy* is an open-source handbook to be used by community members to enhance their media literacy skills alongside entrepreneurship and community organizing competencies. The **Siena Literacy Center** is a non-profit organization with a mission to improve the lives of families in metropolitan Detroit by providing reading, math, English language, and digital literacy programming for adult learners.

With private and government support from local and national entities, programs like those mentioned above aim to address the disparities and the challenges of illiteracy in Detroit and to bring the City to par with other American cities. The efforts of diverse entities engaged in improving literacy *per se* to be followed by developing basic information literacy skills in Detroit could serve as a model for other parts of the world facing similar challenges.

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Keywords: illiteracy, literacy rates, literacy education, Detroit

Media and Information Literacy in Portuguese School Libraries: A Longitudinal Study with Elementary School Students

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The evaluation process of school libraries, developed by the Portuguese School Libraries Network (RBE), has been carried out through the application of a self-evaluation model (MABE). This evaluation seeks to establish a relationship between processes, the impact or value they generate, and the prospects for future development (Bastos, Martins & Conde, 2011). The model contemplates four domains, which constitute parts of analysis and evaluation in harmony with the main axes of work of the school library (SL). The instrument used by teacher librarians (TL) is based on a set of elements, including the collection of data through questionnaires applied to students of different schooling levels.

Therefore, in the framework of an agreement between Universidade Aberta with the RBE for research purposes, we examine the responses obtained through the surveys carried out in that context, to students from the Portuguese districts of Évora, Leiria, Setúbal and Vila Real, in 2015, 2017 and 2019. The analysis is focused on activities related to MIL, considering that primarily it concerns with competencies and skills, but can also be devised as the basis for a democratic society in which all citizens can participate (Haider & Sundin, 2022, p. 15). According to the orientations published by RBE (2017), students need to critically engage with media and information, namely in digital settings, and it is of the utmost importance to identify how students evaluate SL's action and to realize whether the SL is achieving its goals in this area.

This study is based on a mixed methods approach and crosses the four regions (representative of different geographic and social contexts) and the three indicated time periods, verifying the incidences and contrasts in the dimensions studied in the observed universe. We want to understand how students face the contributions of the school library in the development of their skills in information and media literacy by means of a statistical analysis of the answers given to MABE surveys. These data are crossed with the Improvement Reports, from 2016 and 2018, in particular the strengths and weaknesses pointed out by the TLs. From this analysis it is possible to identify what has been the role of SL in the development of MIL skills, as well as the constraints and improvements in the action of libraries during this period of time. Being widely considered that MIL is the answer to today's information crisis and that schools have an important role to play in this context, we think that SLs are right at the center of this process. This study is particularly relevant as it analyzes unpublished data collected by RBE, especially considering that the SL evaluation model has become an instrument to guide good practices, monitoring and evaluating the different intervention areas, certifying processes and results, and informing decision-making.

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Keywords: *information and media literacy, school libraries, school libraries network, evaluation, elementary school students, Portugal*

Dictionary Literacy, Information Literacy, and Information Behaviour in the E-Environment

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Introduction

Extensive research has been done on information literacy and information behaviour (e.g., Case & Given, 2016, Wilson, 2022), but less on dictionary literacy (e.g., Lew, 2013). The interrelationship between and interdependence of these fields have, however, not been addressed extensively. An interdisciplinary view of the three fields forms the topic of this paper.

Objectives

The paper intends to show that dictionary literacy forms a subset of information literacy. We contend that a user's attitude towards both fields are influenced by their information need in a specific context, the tools available to resolve the information need and, ultimately, depends on their level of information literacy skills and critical thinking skills, from the perspective of their information behaviour. We focus on text reception, viz., understanding the meaning of a word within its context when reading a text. (Text reception and text production are aspects of the communicative function in the Function Theory of Lexicography (Tarp, 2008).)

Methodology

We discuss, at a theoretical level, why we hold the opinion expressed in the objectives. We illustrate this with examples from texts in e-readers (such as Kindle) and on the web, linked to e-dictionaries, with drill-down options on demand to further resources.

Outcomes

The advantages and limitations of such linking are briefly discussed at the hand of examples. It will also show that the information contained in the dictionary is often not sufficient to resolve a user's information need satisfactorily and that access to additional information sources is often required. It furthermore confirms that the user should always critically evaluate the outcome of their consultation of their information sources to ensure that the meaning or sense assigned to a word is valid in context.

Conclusion

e-Dictionaries provide easy and fast access to dictionary articles, either in stand-alone e-dictionaries (apps or web), or in e-dictionaries linked to e-texts. A user is, however, still required to evaluate the results to ensure the information is valid in context, and may often be required to consult further resources. To enable the user to obtain the required information successfully in such a consultation requires a proper understanding of dictionary and information literacy and a knowledge of other potentially relevant resources, as well as critical thinking skills, and to adapt their information behaviour to use various information sources optimally.

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Keywords: dictionary literacy, information literacy, information behaviour, e-environment, lexicography

Visualizing Online Search Processes for Information Literacy Education

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Nowadays, the web is where we most often search for information, and generalist search engines are the access point and filter that lead us in the overwhelming ocean of digital documents. One key challenge for current Information Literacy (IL) education is understanding how young people search online and interact with search engines. While algorithms grow more and more complex and efficient, research suggests that online search practices can take many different forms depending on topic, situation and searcher's expertise. When teaching IL and online search, teachers grapple with a compelling difficulty: while search *results* can be made tangible as a report or a presentation, the search *process* remains often confined to individual screens and hidden from the teacher's eye (Botturi et al., 2022b). Research evidence also indicates that users are often unaware of their own actual search process, and post-search accounts are mostly inaccurate (Teevan, 2008). This prevents teachers from capturing "teachable moments" (Hansen, 1998) and and providing effective process-oriented feedback, which is important for the development of self-awareness and selfregulatory skills (Corral, 2017; Bruce, Edwards & Lupton, 2006). The invisibility of the search process also hinders learning from peers, as search behaviors cannot be compared and discussed.

In a research project funded by the Swiss National Research Foundation we investigated online search behaviors, and developed techniques to capture and analyze *search stories*. Search story is the digital record of the actions that a user performs to solve an online search task (Botturi et al., 2022a). We developed a system to generate graphic and interactive visualizations of search stories to allow researchers and teachers to inspect them (Botturi et al., in press).

Between November 2022 and March 2023, 29 lower and upper secondary school classes (involving 535 students aged 12-18 and 16 teachers) participated in a two-phase IL education activity aimed at developing online search awareness and self-regulatory skills. In the first phase (1 contact hour or at home), students engaged in 3 pre-defined online search tasks. Their navigation actions were captured and visual search stories generated. The second phase (2 contact hours) started with an analysis of their own search stories in order to discuss a selection of relevant topics (e.g., the use of queries, reading time, search strategies) and included the solution of a new search task.

The activity was evaluated through an online post-session questionnaire with both closed and open items. Results so far indicate that students found the activity useful (average score 8/10); the content analysis of open answers reveals that the most appreciated learnings included reflecting on the reliability of online information, and the increased awareness that searching online is not so easy or "natural" as one might think.

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Keywords: reflective education, secondary school, process-oriented feedback, visualization, IL education
Information Literacy as a Key Challenge to Improve Social Protection in France through New Uses of Collaborative Information

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Objectives

From an Information Literacy perspective to improve existing or create new services, we propose to study the development of individual and collective informational skills, both for employees and users, in order to contribute to transform Social Protection Organizations in France in learning organizations in a new collective intelligence and organizational intelligence) dynamic. For us, these organizations correspond to new digital territories, approached as new informational spaces of cooperation and innovation for new services co-constructed with users. Communication is also a lever for understanding the change in organizations which are built through projects and narratives while trying to discern the invisible and hidden side of work. We will insist on the development of new information and communication skills both of employees and users with the role of socio-technical devices in a global context of digital transformation and the Internet of Things.

Methodology

We qualify our global positioning as ICCOE: Information & Communication and Confidence for Organizing Ecosystems. We also insist on resilience and reliance aspects on territories. Within the interdisciplinary field of information and communication sciences, we position in a collaborative action research perspective in Information Literacy, considering organizations as new informational and communicational spaces to produce validated knowledge for action based on cooperation between academics and local actors. We have developed this approach in Social Protection Organizations:

- In the Family Allowance Funds (CAF), in particular in Seine-et-Marne department, with the observation of the platform « caf.fr » to build « the Caf of future ».
- In Health Territorial Professional Communities or CPTS (hospitals, retired people establishments or EHPAD, doctors, nurses, pharmacies, local authorities, etc.), through the analysis of a new intermediation platform: Conex santé (https://telemedecine.conexsante.com).

The data were obtained through interviews with the actors of these organizations and through participatory observation sequences with the support of the digital tools mentioned: caf.fr or Conex santé.

Outcomes

We propose new approaches to service organizations of the Social Protection sector as spaces of cooperation and innovation. We will especially work to develop new uses of cooperative data to promote a new contributive evaluation way of these organizations, in a perspective of co-innovation involving all the actors around new co-constructed services. So we may also try to analyze the evolution of informational and communicational skills of main actors to improve existing or develop new services, in an idea of new « learning organizations ». In particular, we will analyze how the studied organizations rely on the associative sector in their territory to train a wider public in the new uses of digital technology We will also try to better mobilize the specificity of the informational and communicational skills of the actors in order to reveal obscure sides of their activity (idea of "iceberg of activity").

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Keywords: challenge, social protection, uses, collaborative information, health, services

Who are Physicians Talking to on Social Media? Data Literacy and Visual Literacy of the Assumed Audience(s) of COVID-19 Vaccination Posts

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Objectives

The presentation will focus on the partial results of a project on the effectiveness of social media (SM) posts by medical experts to encourage people to be vaccinated against COVID-19 that I conducted within the "New Ideas" grant, no. 622-62/2021, financed by the University of Warsaw. In this presentation I will demonstrate how the authors of the posts used scientific data to present visualizations and cite sources of information they used. I conducted a quantitative and qualitative analysis of the material and the results are discussed within the perspective of the data literacy and visual literacy dimensions of the assumed audience. Data literacy is defined as "a suite of data acquisition-, evaluation, handling-, analysis- and interpretation-related competencies" (Prado & Marzal, 2013, p. 124), while "visual literacy" as "a set of abilities that enables an individual to effectively find, interpret, evaluate, use, and create images and visual media" (ACRL 2022).

Methodology

The project involved the triangulation of research methods and was implemented in three stages:

- 1. Mapping experts (physicians) active in SM and aggregating their posts on vaccinations;
- 2. Analysis and typology of posts in terms of content and form; and,
- 3. Experiments using surveys, eye tracking, and face tracking measurements.

Mypresentation will focus on the partial results of stages 1 and 2. Thus, I will answering RQ1. How, in terms of form and content, are the physicians' messages on vaccination against COVID-19 in social media structured? The sample selection was purposive: I selected posts in Polish by doctors in 2021 on Facebook, Instagram and Twitter containing the key term "vaccination" or "vaccine" used in the context of COVID-19. Following these criteria, the sample consisted of 220 posts from 49 medical doctors.

I examined the collected posts using a content analysis technique with narrative and rhetorical analysis elements in a codebook of 53 categories. During my presentation I will show the results obtained for the following categories:

- visuals included in the posts (photos, infographics, videos, memes, and others);
- quoted data and its source(s);
- quoted statements and theirs source(s),
- linked profiles; and
- external links.

Outcomes

The study enabled conclusions to be drawn, to some extent, regarding the projected audience of health content on social media in Poland. I used the analysis of the collected data, juxtaposed with the literature, to determine the level of digital literacy that the audience should be able to find, properly decode, and interpret. In particular, I defined the dimensions of digital literacy to encompass visual literacy and data literacy.

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Keywords: digital literacy, data literacy, visual literacy, vaccine hesitancy, content analysis

Digital and Media Literacy: Voices of the Teachers. Dilemmas During the Pandemic and Reflections for the Future

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Even before the outbreak of COVID-19, agendas worldwide had been emphasizing the need for the 21st century citizen to develop a wide array of competences and literacies. Hence, digital literacy is an urgency in schools, particularly for teachers, who need to be aware of the advantages and challenges posed by these new contexts, namely those emerging from the digital world. To these ends, national policies in many countries follow and connect to European guidelines. In Portugal, the European Framework for the Digital Competence of Educators (DigCompEdu) is largely used in teacher training. Therefore, it is important to highlight it as a key tool in the process of the capacity building for the digital transformation of the teaching and learning (Redecker, 2017).

Another transversal topic in educational contexts relates to information and media literacy, drawing from the premise that the school has an important role to play with regard to the challenges of the information society. Bearing this in mind, several authors consider that we are in an era where different competences are converging (Ala-Mutka, 2011). Moreover, Hobbs (2010) also emphasizes this diversity of interconnected concepts, which have different starting points, proposing the term "digital and media literacy" as the one that best designates the set of life skills that are necessary for full participation in a media-saturated society and simultaneously rich in information; we adopt it as an analytical category in the research put forward within the Erasmus+ project RAPIDE, Reimagining a Positive Direction for Education (2020-1-UK01-KA226-SCH-094495). For this purpose, the data were collected by all the partners, in their national contexts, namely involving teachers; in this paper, we focus on the Portuguese data, thus presenting part of the wider research.

Our study took a qualitative and interpretive approach, "attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2005, p. 3). The complexity of the teachers' personal experiences evidences significant insights about the role of digital and information literacy during the pandemic, besides the impact of these competencies for teaching and learning. The 20 participating teachers were invited to describe, in a written document, (1) a major challenge in their teaching practice, (2) how they responded to it, (3) how they reflected on their actions, and (4) what new insights this brought to them. The aim was to start from real situations, leading teachers to reflect on these situations in order to foster them to envision new pedagogical and didactic paths for the future. The situations experienced during the pandemic, often implying strong constraints in the teaching and learning processes, but also demanding the rapid learning of digital skills, emerge as contexts that provide scenarios that enhance a deeper reflection for the teachers' professional development. The information gathered was analyzed with the goal of identifying issues related to digital and media literacies, stemming from the teachers' dilemmas, as well as mapping possible lessons learned and good practices to sustain in the future.

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Keywords: teachers, digital literacy, media literacy, Portuguese schools

Information Horizons of Undergraduate students: Assessing Health Information Channels During Post-Pandemic

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During the COVID-19 pandemic, health literacy and information behavior issues became especially important as people were searching and using information on health and its maintenance as well as on topics related to illness and diseases. In explaining the meaning of "information behavior" we put emphasis on an individual's activity (or lack of it) when facing a need for information. Only a few theoretical models help to understand people's information activities in high-risk or crises conditions. Diane Sonnenwald, Emerita Professor at the School of Information and Communication Studies at UCD, Dublin, Ireland, (1999) proposed the information horizon to describe an imaginary field wherepeople sort their information sources according to theirvalued importance or preferences. The three main concepts in this framework of information horizons are contexts, situations, and social networks (Sonnenwald, 1999). During the COVID-19 pandemic, Professor Margaret S. Zimmerman at Florida State University used this relatively novel theoretical approach for investigating user information behaviorin the study "Health information-seeking behavior in the time of COVID-19: information horizons methodology to decipher source path during a global pandemic" (Zimmerman, 2020). The results of the study showed that trust in traditional channels of information, including verified news websites and television, has increased almost by 16%, especially among respondents between 35 and 54 years old. Despite the rapid rise of traditional media's authority, interpersonal communication still serves as the primary source (17.8%) for obtaining information (Zimmerman, 2020). Recent studies where the information horizon theoretical framework was implemented targeting undergraduate students, showed that students are more active in collecting and utilizing information sources rather than organizing information. They are more dedicated to academic and personal resources than health resources. Specific behaviors appear significantly differently in active performing and information searching contexts (Sinn et al., 2019). We may overlook important implications if we aggregate specific behaviors, such as those associated with the actions of collect, organize, and utilize, simply as "information behaviors" since they show different patterns, in studies, (Sinn et al., 2019).

The novelty of our planned study is the use of D. Sonnenwald's theory on information horizons to explore undergraduate students' habits of using health information. This will be the first study in the library and information science in Latvia that analyzes health information seeking by using the method of information horizon mapping. The information horizon mapping method involves a multi-step process in which, during interviews, participants are asked to describe information-seeking experiences in a given context and to illustrate a map of the actions they take to find information. Some studies suggest using questionnaires other than interviews and map-drawing as an alternative method for information horizon research (Tsai, 2010; Sinn et al., 2019). The novelty of our planned study is to use a quantitative approach to find general patterns in undergraduate students' health information horizons. We will ask students about how they would do specific information activities with certain information sources in four specific situations and contexts:

- healthy lifestyle as part of well-being;
- health improvement during ordinary illness;
- visiting a doctor in a health context; and
- facing COVID-19.

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Keywords: health information horizons, undergraduate students, post-pandemic experience

Digital Literacy Training and Workplace Empowerment: What Happens after Graduation?

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Objectives

Across the globe, competencies that facilitate critical thinking, problem-solving, communication, and fluency with digital tools that support these competencies, top the inventories of employability skills (Klegeris, 2021; Matuszewska-Kubicz, 2021). Humanities and social science (HSS) programs appear to generate effective employees for the growing business services sector (BSS), which seeks job candidates with interpersonal and communication skills to address the various needs of clients and to work in sustainable multidisciplinary teams (Muller & Doloreux, 2009; Multan, 2020). Digital literacy skills appear to constitute some of the learning outcomes (Sparks et al., 2016) that the business sector expects university graduates to attain and to feel empowered in as they enter the labor market. Our study examines the psychological empowerment of recent HSS alumni after attending four different digital literacy courses at the Jagiellonian University in Poland. The goal was to examine the extent to which this empowerment differed depending on the type of digital literacy skill training—information, data, visual, or communication and collaboration—these alumni completed.

Methodology

Six months after graduation, HSS alumni who in their final year of study completed a digital skills course designed to support their entrance into the labor market, and who were employed in business services, completed a psychological empowerment survey based on Spreitzer's (2007) framework. The sample for this quasi-experiment consisted of 202 responses (information literacy, n = 52; data literacy, n = 54, communication and collaboration, n = 54; visual literacy, n = 42). Bayesian statistics were used to examine differences in empowerment self-reports between alumni who completed the four digital literacy courses.

Outcomes

Students who completed courses in information literacy and data literacy reported higher workplace empowerment compared to those who completed courses in visual literacy, and communication and collaboration. Despite the study's limitations concerning the Polish context, the research findings suggest curricular design implications that are relevant to a wider, international workplace context. Firstly, students would benefit from digital skills training opportunities provided within HSS programs. Secondly, certain digital skills appear to be more advantageous for students pursuing careers in the business services sector than others.

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Keywords: alumni, business services sector, data literacy, digital literacy, information literacy, visual literacy

Undergraduate Students' Information Literacy in Relation to their ICT Proficiency and Psychological Characteristics

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Research Background and Methodology

The study investigated how students' personal characteristics and information and communication technology (ICT) skills relate to their level of information literacy (IL), with the aim of identifying the ICT/psychological concepts that are most closely related to IL and could help in planning future IL education in terms of focus, methods and timing. The study determined the IL level of 498 undergraduate students using a 40-item knowledge test (Boh et al., 2016), examined the influence of demographic parameters (gender, study major, year of study), compared the IL with two aspects of ICT literacy measured by the 26-item questionnaire (Šorgo et al., 2016), and examined IL's relation to seven psychological characteristics, using a 70-item questionnaire (Juriševič et al., 2016).

Results

Students demonstrated moderate IL knowledge (M=67.3%, SD =12.3%). Gender and study major type (science vs. social science) were not significant factors, unlike year of study. Factor analysis revealed three areas of ICT tool use: a) general (e.g., search engines, social media, videos), b) learning (office tools, virtual classrooms, bibliographic databases), c) working (image/video editing, programming). IL correlated best with general use (r=0.16). Factor analysis revealed three areas of Internet confidence: a) general (e.g., search engines, social media), b) advanced (forums, presenting work), and c) specialized (scientific databases). General factor correlated best with IL (r=0.23). Of the seven psychological characteristics (PSY), self-concepts about learning (r=0.25) and problem solving (r=0.23) correlated best with IL. Factor analysis on PSY revealed three factors: a) learning/motivation, b) problem solving/self-efficacy, c) external motivation. Factors a) and b) correlated best with IL (r=0.23 and 0.17, respectively).

Conclusions

Our results offer some suggestions for IL practice. Although studies often show that digital natives are not necessarily information literate, we found that students' IL was associated with both frequency and confidence of search engine use and confidence using social media. Therefore, ICT skills conducive to IL should be emphasized in IL education. Students' problem-solving ability correlated positively with both IL and ICT literacy, implying that IL education would benefit from incorporating a problem-based approach wherever possible. External motivation did not have a significant effect on IL in our study, so students' autonomous motivation should be addressed more during IL instruction. The characteristics of the curriculum combined with small differences in IL between 1st and 2nd year students suggest that the 2nd year of study may be optimal for introducing an IL course.

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Keywords: information literacy, higher education, ICT proficiency, psychological characteristics

"A Personal Doctor Will Not Be Replaced By Any Robot Service!" -Older Adults' Experiences with Personal Health Information and E-health Services

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Background

Personal health and medical information can be textual, numerical, and visual. Medical information is preserved and managed in professionally maintained medical records, but also privately by patients. The ways of preservations vary, from digital to paper-based approaches, but increasingly, medical records and health services overall have turned digital. However, not all favor digital services, especially when it comes to older adults. Negative attitudes towards digital health services can reflect attitudes towards digital technology (Knapova, Klocek & Elavsky, 2020) or appreciation of direct interaction with healthcare professionals. Moreover, patient-accessible services shape people's personal health information management behavior (Huvila et al., 2018). This study contributes to filling the gap observed in a systematic review indicating that relatively little attention has been paid to examining people's experiences on eHealth services, including their benefits (Hirvonen et al., 2020).

Methods and Data Collection

A postal survey was mailed to a random population sample of 1,500 individuals aged 55-70 obtained from the national Population Information System of Finland. A total of 373 completed surveys (25%) were received. The mean age of the final study population was 63.2 (SD 4.7) years and 225 (60.6%) identified themselves as women. This study focuses specifically on the open-ended questions of the questionnaire. These focused on personal health information management and views of current and future eHealth services. Qualitative data were analyzed using content analysis.

Findings and Conclusions

Older adults' experiences of personal health information management and the use of and attitudes towards the role of digital health services are divided. Fears, trust, and motivation, as well as general everyday life information practices and routines, guide their experiences and behavior with digital health records. Without any limits in resources or available technologies when developing a digital health service, according to respondents, the best possible service would contain versatile health information and combine information from different sectors of healthcare. It would be easy to use, clear and up to date, but would also allow the possibility to contact a real human being, a healthcare professional, for instance, via video connection.

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Keywords: eHealth, health information, information experience, older adults, personal information management

Abilities Needed for Evaluation and Use of Open Data Sources in Urban Planning Processes

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Background

Cities are pioneers in opening data. Moreover, the phenomena of smart cities, open cities, and open government are strongly based on open data. Finnish open data includes information relating to households, energy use, transport, and infrastructure (Avoindata.fi, 2022). In addition, many research institutes provide open information and data that relate to our urban living environments.

Large open data sets have changed the way cities are investigated (Ruoxi, Xinyuan & Nan, 2022) and designed (Ying & Lun, 2016). Therefore, openness of information and data has an impact on the information sources used by those involved in planning processes. The information sources are utilized in a very multi-professional information-intensive work. Consequently, new capabilities are needed in evaluating this kind of information sources. According to the Framework for Information Literacy for Higher Education (Association of College and Research Libraries, 2015) the abilities of an information literate individual include detection and evaluation of issues relating to access to information and information sources.

Methods and Data Collection

We based this study on the theme interviews and a small-scale survey we carried out in a large multidisciplinary research project. In Spring 2022 we conducted fifteen interviews among Finnish city employees involved in urban planning processes. We used the Microsoft Teams videoconferencing platform and transcribed the interviews verbatim. We focused on multi-professionality of the urban planning process. Furthermore, we examined information practices and use of information sources relating to the urban planning process. We followed an inductive approach to investigate the role and value of openness of information and data, as well as abilities needed. We will further untangle the practices through a small-scale questionnaire survey targeting the interviewees.

Preliminary Results and Discussion

According to preliminary results of the interview data, we emphasized the openness of data and the important role of different kinds of openly reported surveys and statistics. On the other hand, we found it difficult to evaluate and use the large amount of information and data in the decision-making processes of urban planning. The information literacy related abilities and information practices of participants of urban planning processes have not received a lot of attention in literature, except for some rare exceptions (e.g., Serola, 2006) and this study partly fills in the research gap.

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Keywords: information sources, information evaluation, open data, urban planning

Artificial Intelligence and Information Literacy: Hazards and Opportunities

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ChatGPT and other artificial intelligence (AI) software and tools are already changing the world. ChatGPT can pass an MBA exam from an Ivy League Institution (Terwiesch, 2023). It can also create disinformation on topics like "vaccines, COVID-19, the Jan. 6, 2021, insurrection at the U.S. Capitol, immigration and China's treatment of its Uyghur minority" (Associated Press, 2023). Current AIs have the ability to provide *seemingly* valid information that is, in fact, devoid of any relationship with reality.

Consider a state actor who uses a propaganda model leveraging the fact that "information overload leads people to take shortcuts" in deciding on the trustworthiness of information (Rand, 2016). New AI systems can more cheaply and easily than ever before create plausible, yet ultimately false, information about healthcare choices or a political candidate. It is not difficult to imagine a deluge of mis- or dis-information that becomes extremely difficult, time-consuming, and expensive to separate the true from the mostly true from the blatantly false.

Information Literacy (IL) theorists and practitioners are uniquely positioned to lead and facilitate important discussions around these topics as there are real implications for healthcare, education, and democracy. Yet existing IL theory, practices, and research are not currently adequate to address the challenges new developments in AI pose. Accordingly, this conceptual paper will identify three specific areas IL professionals can devote time and resources to address some of these problems.

First, we can advocate for new *kinds* of AI systems designed with specific limitations and parameters. Similarly, we can further explainable AI (XAI) research that aims to help users "understand, trust, and manage" AI applications (Gunning et al., 2019). Secondly, we must reconsider IL and higher education instruction in light of the new ability for students to easily create AI-generated text. Embracing certain elements of AI tools intentionally could lead to pedagogical innovation yielding new ways to teach and learn—including new strategies to sift through a tremendous glut of AI-generated content of unknown veracity. Lastly, information professionals have the opportunity to refine or develop IL theory that can provide holistic, strategic thinking and justification for how educators, policy-makers, and the general public should treat and approach AI systems.

The future of AI is uncertain. What is clear is that without intentional forethought for how we design and use such systems we invite serious, and likely deleterious, consequences.

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Keywords: artificial intelligence, misinformation, disinformation

Bridging Skills and Thresholds: Exploring Instructors' Definitions of Information Literacy Using Bloom's Revised Taxonomy

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Not quite 20 years ago, Simmons (2005) positioned academic librarians as information literacy discourse mediators between instructors, who are expert researchers within their disciplines, and students, who are typically scholarly and disciplinary novices. This positioning puts librarians in a potentially powerful role in bridging the gap between instructors' expectations and students' performance on information literacy-related assignments, such as research assignments. Indeed, previous research provides evidence of this expectations gap. Even though much of academic librarianship was still subscribing to a skills-based conceptualization of information literacy when Simmons (2005) wrote her seminal article, elements of the second-wave constructivist conceptualization of information literacy (Hicks & Lloyd, 2021) are evident in her argument that librarians could and should help students to identify and understand the ways of thinking and knowing that are valued in disciplines and higher education more generally.

Existing research has provided some insight into how instructors perceive or define information literacy, and this research is foundational for considering how academic librarians can serve as discourse mediators. However, most of these studies predate the second-wave shift to a constructivist perspective of information literacy emphasizing "conceptual ideas rather than teaching practices" (Hicks & Lloyd, 2021, p. 569). Because of this shift, the role of academic librarians as discourse mediators might be more relevant now than ever. For example, the ACRL *Framework*, a second-wave document, is rooted in threshold concept theory, which is the idea that students must cross particular conceptual thresholds to begin understanding the ways of thinking, knowing, and acting with respect to information use and knowledge creation within academic and disciplinary communities.

In this paper, we describe a qualitative study that employs a novel approach to exploring the information literacy perceptions of 51 instructors across a range of disciplines at a research university in the United States. We used Bloom's Revised Taxonomy, which is a commonly used framework for the development of learning outcomes related to the complexity of cognition required to meet instructors' expectations, to bridge the second-wave abstract conceptualizations of information literacy, such as those found in the *Framework*, and the practical needs of the classroom that were addressed in first-wave documents like the *Information Literacy Competency Standards for Higher Education*. As a result, we have developed a draft model of an information literacy taxonomy that accounts for both foundational information literacy skills and ways of thinking and knowing. We believe that this model has implications for how we approach the development of students' information literacy with intentionality, in collaboration with instructors, and as we consider our own classroom teaching practices.

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Keywords: academic libraries, instructor development, equitable learning, inclusive learning, Bloom's taxonomy, instructional design

Instructors' Perceptions of An Information Literacy-Centered Professional Development Workshop

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Problem Statement

One avenue through which academic librarians may be able to have a significant impact, both in supporting student information literacy learning and shifting the teaching culture at their institutions, is adopting the "teach the teacher" model and taking on the role of educational developer. The model has often been described as an alternative to the one-shot approach to information literacy instruction, which has been significantly criticized as an ineffective method for achieving the integration of information literacy into the curriculum. There are examples of librarians leading information literacy-centered instructor development initiatives, including workshops, courses, and faculty learning communities, and there are some indications that this approach does support changes in faculty teaching practices related to information literacy and research assignment design (Hammons, 2020; Jumonville, 2014; Wishkoski et al., 2019). However, more evidence is needed to establish the effectiveness of this approach. Adopting the "teach the teachers" model as a more primary means of teaching information literacy would require a major shift in thinking and practice for many librarians, so it is vital to better understand the effectiveness of these types of interventions and their impact on faculty teaching practices.

Purpose

In this paper, we examine instructors' perceptions of a five-module teaching professional development workshop that promotes the transparent and equitable integration of information literacy into courses. The workshop situates information literacy within a common academic practice – the research assignment – and provides a framework for thinking about what equity means within the context of higher education and outlines teaching strategies instructors can use to make their research assignments more inclusive, equitable, and transparent. Upon completion of the workshop, participants should be able to (1) describe the potential relationship between students' social identity characteristics, research assignments, and overall academic success, (2) describe the information literacy threshold concepts as outlined in the Framework for Information Literacy for Higher Education, (3) apply Decoding the Disciplines and Transparency in Learning and Teaching (TILT Higher Ed) to their teaching, and (4) identify practical ways in which they can design assignments to increase students' motivation.

For our examination, we analyze data collected through pre- and post-workshop surveys administered to nine cohorts of participants between August 2019 and August 2022 (n=61, 75% response rate). This study provides insight into how instructors perceive information literacy and how librarians can strengthen their understanding of information literacy through faculty-focused professional development programming.

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Keywords: academic libraries, instructor development, equitable learning, inclusive learning, information literacy

Information Literacy Skills of Children in The Early School Years

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The basis of all learning is information. The notion of learning lies at the heart of information literacy. For example, information literacy is sometimes promoted as an approach to learning, or a way of learning. Very often the exercise for children in early school age is to investigate beyond the textbook about an item or subject, a phenomenon or a term. They are usually aware that they are unable to fulfil the exercise by themselves and ask their parents or siblings for help. Children learn through experiences and in the preschool age they begin to develop their independence, but they are aware they still need the parents' help when they want to know or do something, especially when they obtain information about something from unknown or new sources (Shenton & Dixon, 2004). The idea of informed learning was developed to direct attention toward those interpretations of information literacy that involve using information to learn (Bruce, Hughes & Somerville, 2012, p. 524). Therefore, in order for an individual to be able to participate promptly and actively in a world saturated with information, it is necessary to work from an early age on the development of information skills that deal with proper procedures in the sea of information. However, the authors mostly focus on the development of information skills in adults or older children, but very few authors decide to explore information skills in young children through library services (Barriage, 2021). It is suggested that children can engage in evaluation and application of knowledge which influences their academic outcomes (Greene, Cartiff & Duke, 2018). Eisenberg and Berkowitz (1999) dedicated part of their work to the youngest users of the library, including preschool children. In their work, they designed the Super3 program specially for information literacy of preschool and early school age children. Eisenberg and Berkowitz in the extended version of Big6 single out the skills that need to be acquired in order for an individual to be an information literate person, but for children these skills are simplified to: plan, do and review, also called as Super3 (https://thebig6.org). The aim of this research is to investigate the basic knowledge of children, age 5 to 8 years old in Croatia, about information and sources of information and about their basic information literacy skills. The research questions are: 1. What does the concept of information mean to early school-age children?; 2. What kind of sources of information do early school-age children use?; 3. How do early school-age children actively seek information by themselves?; and 4. Are workshops based on Super 3 an appropriate method to teach information literacy skills of early school-age children? Methods applied in this research are survey, in-depth interviews and action research - with carefully designed materials and workshop for teaching information skills using Super 3. Results of this research show that children in the early school years have poorly developed information literacy skills, due to their age, this was to be expected. Furthermore, they hardly understand the meaning of the term *information*, where the information came from and how one can find them. The problem lies in the fact that children are expected to already be familiar with the concept of information at the entering school and know how to handle it for the purpose of completing school assignments, without prior training in this field. After this workshop we can conclude children's knowledge and skills are improved. The workshops within this action research serve as a kind of guidelines for the organization and implementation of such workshops for intentional teaching information skills of children in the early school years. Furthermore, it plays on a basic approach to supporting planning and implementation school library programs for developing and improvement of information literacy skills of children from early school age.

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Keywords: children, early school years, information literacy, Super 3, action research, survey

What Shapes Our Trust in Scientific Information? A Review of Factors Influencing Perceived Scientificness and Credibility

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Information literacy is crucial in our digitalised society, where access to information is easier and more abundant than ever before. It empowers us to locate, evaluate, and effectively, as well as ethically, use information in private and professional contexts. Without information literacy, individuals may struggle to make informed decisions or, even worse, fall prey to misinformation.

Science literacy, which we consider a part of information literacy, refers to an individual's understanding of science and its methods, as well as their ability to critically evaluate scientific information and arguments (Liu, 2009). Science literacy is an important aspect of being an informed citizen in a democratic society, as it allows individuals to understand and engage with scientific issues that have an impact on their lives or even society as a whole (National Research Council et al., 2007, p. 34). This is especially essential during a pandemic, when misinformation can have serious consequences for public health and safety (Loomba et al., 2021).

The COVID-19 pandemic is a prime example of the importance of science literacy for everyone. The ongoing pandemic has highlighted the need for individuals to be able to critically evaluate and understand scientific information, as well as navigate the vast amount of information that is available on the internet and social media. The lack of science literacy skills can result in confusion, misinformation, and a lack of trust in scientific authorities and experts.

The concept of "scientificness" refers to the degree to which something is perceived as scientific or having characteristics of science (Thomm & Bromme, 2012). Scientificness and credibility are closely linked. People who associate a high level of scientificness with, for example, a specific style of documents are likely to rate their credibility higher as well (Zaboski & Therriault, 2020). However, something that appears to be scientific does not necessarily have to be accurate or true. In fact, a scientific appearance might be used to "claim" the categories of scientificness and credibility for something that is not: This is called pseudoscience (O'Brien et al., 2021).

Our paper focuses on perceived scientificness and credibility of information. We conducted a scoping review of scientific literature to summarise the various factors that can mislead individuals into thinking information is credible or scientific, even when it is not. Furthermore, we discuss different types and ways of emergence of scientific misinformation or pseudoscience. Critically evaluating scientific health information is a challenging task, but with the help of information literacy, it is possible to become more discerning consumers of scientific information and better equipped to make informed decisions. By understanding the various factors that can mislead us, we can then build greater resilience to misinformation and pseudoscience.

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Keywords: information literacy, science literacy, pseudoscience, misinformation

Algorithms, Digital Literacies and Democratic Practices: Perceptions of Academic Librarians

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Yuval Harari proposes the dystopian view that an algorithm can understand us and our thoughts and feelings better than our mothers, without us even recognising that this is happening, and that this can lead to a threat to democracy (Harari in Thompson, 2018). Questions of responsibility for overcoming the power vested in technologies abound in the literature, with calls for regulation by technology companies and by nation-states through legislation. Although many people are resigned to the unregulated media environment, informed citizens can also take on some responsibility, through maintaining a high level of digital literacy. As Henninger (2021) notes, this is not new information. Lloyd (2019) calls for information literacy scholars and librarians to consider how they address the impact of algorithms on everyday activities. This study aims to heed this call, drawing on accounts of the information literacy practices of librarians.

Objectives

Algorithms influence our online interactions and have real impacts on individuals and on society, in ways that are rarely apparent and which can be detrimental to a democratic society. Librarians claim to have a significant responsibility for developing information and digital literacies, through which a level of algorithmic literacy might develop, but little is known about the professional processes through which they achieve this. The purpose of this study is to position the development of algorithmic literacy in the context of an inclusive and democratic society.

Methodology

Using a practice theory approach, this study has interviewed more than twenty academic librarians who provide programs and services in information literacy services to university students in New South Wales, Australia, in order to identify how they talk about these processes and interactions (Schatzki, 2012). The transcripts of the interviews, as well as resources relevant to their practices, were analysed using thematic analysis to identify elements of algorithmic and digital literacies, considerations of democratic practices, active citizenship and wider societal implications.

Outcomes

There was little evidence of a focus on algorithmic culture. Librarians' understanding of algorithmic literacy ranged from the naïve to passive acquaintance especially through social media, with few claiming conceptual or practical expertise. Perceptions of the relationship between information and digital literacies and active citizenship were influenced by the ethos of the university, presenting a fragmented perspective on the role of these literacies. Responsibilities for regulating the effects of algorithms on citizens in their everyday lives were mostly seen to lie beyond the scope of librarians, vested in government, in technology companies and the institutions of education from earliest childhood. Taken together, these factors are likely to weaken further the position of librarians as arbiters of authoritative sources of information in a society.

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Keywords: digital literacies, algorithms, university libraries, democratic practices

Teaching Students to Navigate Externalist and Internalist Approaches in the History of Science

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Information literacy supports higher education learners in becoming conversant in scholarship, including "sources of evidence, methods, and modes of discourse" (ACRL, 2015, p. 20). Grounded in their own expert practices, academics often have difficulty identifying challenges faced by students (Riegler, 2020), including engaging with disciplinary information. Drawing from research on publishing practices, this paper identifies specific information challenges encountered by students studying the history of science and outlines learning activities that may enable them to successfully navigate history of science scholarship.

History of science, including history of medicine, and history of technology, are burgeoning subdisciplines of history. Engaging with these fields can present information challenges for students encountering publications in these scholarly specializations. Pursuing published research in history of science and its attendant specializations requires students to, among other things, ascertain the dualistic externalist and internalist approaches in history of science. An *externalist* approach is concerned with larger contexts, such as social, political, and cultural issues and phenomena, whereas the *internalist* approach is concerned less so with context outside of the phenomena itself (Shapin, 1982).

The *externalist* versus *internalist* debate among historians in these fields results in two overarching approaches in their publications (Shapin, 1992; Yturbe, 1995). Examining these approaches informed the development of an educational model that can be used with undergraduates to focus their attention on the interpretation of the *externalist* versus *internalist* debate. Novice students' ability to navigate this problematic space is crucial for their learning in these specializations. Students understanding the difference between both approaches can inform their information seeking, interpretation, and efforts in producing responsive and valid history of science research projects.

Hypothetically, this model can be applied with undergraduates in an introductory history of science course by introducing students to both approaches theoretically, and critically, though an examination of scholarly articles from a spectrum of history journals, including humanities and social science journals not generally associated with historical scholarship per se, but publishing historical research. *Historical Abstracts* and *America: History and Life* databases provide target databases for information triage. Utilizing a template of questions, students would be asked to categorize journal articles according to the *externalist/internalist* paradigm. Students further embed their categorizations within the context of historiographic best practices explicating the choices they made. Knowledge of *externalist* and *internalist* approaches equips history of science students to identify critical information aspects necessary to assess the scholarship.

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Keywords: disciplinary information practices, history of science, externalist vs. internalist

Using Early Responses to Wikipedia and Google to Consider ChatGPT

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Generative artificial intelligence tools such as ChatGPT are transforming how people interact with information, with significant implications for information literacy. Using ChatGPT and similar tools as information retrieval challenges many core ideas of information literacy, as it generates often quite adequate topic overviews, while claiming neither copyright nor any authority other than having been trained on a huge corpus of texts. While this disruption is unique, it is not unprecedented. Twenty-five years ago, general purpose web search engines blurred formats and authorship on the Web, which itself had just reached a critical mass to make it a worthwhile starting point for general information needs. A few years later, Wikipedia explicitly challenged traditional notions of expertise. How librarians, and others interested in information literacy, responded to these tools, both in terms of how they thought about they discussed them among themselves and how they addressed them while teaching information literacy, can help us anticipate and understand our reactions to the use of AI today. In this paper, I review the historical scholarly and trade literature, as well as less formal sources such as social media and email listservs, for discussions of Wikipedia, Google, and earlier dominant search engines as new tools that impact information literacy, looking for themes and approaches that might inform our response to ChatGPT and similar tools.

Broadly speaking, early analysis shows three broad categories of responses:

- Reinforcing, in other words, incorporating Wikipedia and Google into the pre-existing models of information behavior. For example, presenting Wikipedia as an encyclopedia that you might use to initially learn about a topic, but would not cite as a source.
- Rejecting or taking the stance that Google or Wikipedia are not appropriate tools and should not be used. For example, emphasizing the questionable quality of information in these sources.
- Revolutionizing or exploiting features of the tool that allow for new ways of engaging with information literacy. For example, presenting editing Wikipedia as a low stakes opportunity for learners to engage with concepts of scholarship as conversation, authority, and so on.

I discuss the strengths and weaknesses of all three responses, considering both the benefits of hindsight as well as the implications for how we approach artificial intelligence and other future disruptive tools.

Keywords: artificial intelligence, transformative technology, instruction, history

Measuring The Effect of Teachers' Health Information Literacy Skills on their Psychological Distress During COVID-19

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Background

Health information literacy has a profound impact on the psychological well-being and physical health of people.

Objectives

The study aims at predicting the effect of health information literacy skills on psychological distress among college teachers during the COVID-19 pandemic. This study also measured the level of health information literacy skills of three health-related domains; healthcare, disease prevention and health promotion literacy skills and COVID-19 caused everyday life psychological distress among respondents.

Methodology

The study adopted a cross-sectional survey design and data were collected from 315 college teachers of Faisalabad District through an e-questionnaire. For data collection purpose, well developed scales of HLS-EU-Q16 and COVID Stress Scales were adopted. Descriptive and simple linear regression analysis was performed by using SSPS-22 to analyze the research data.

Findings

The findings revealed that health information literacy skills: healthcare, disease prevention and health promotion literacy were sufficient, but a majority of the respondents found difficulty in managing information regarding mental health problems and finding information regarding treatments for their health conditions. The results of the study revealed that healthcare literacy and disease prevention literacy skills are not significant predictors of psychological distress during the COVID-19 pandemic. Conversely, the respondents of the study with sufficient health promotion literacy skills faced more psychological distress during the COVID-19 pandemic.

Conclusion

The study concludes based on the findings that health promotion literacy skills and psychological distress among college teachers should be a top prior agenda to be addressed urgently. The study findings necessitate the in-depth exploration of health promotion information literacy and the mental health of teachers in the post-pandemic era. Arrangements to enhance health promotion literacy and measures to develop stress coping strategies to respond to uncertain situations are needed for college teachers.

Implications

The findings proposed that academic librarians and information professionals should design library services to enhance the competencies of teachers on how to find and evaluate health information sources to maintain health, transform health behaviour, and adopt a healthy lifestyle. The study suggested the integration of health promotion literacy into general education and in-service trainings of academic leaders.

Future Research Recommendations

Teachers are role models; their health behaviours and lifestyles can affect the health knowledge and health behaviour of students. Teachers' role as an instructor could produce well-informed citizens, but the research instrument used in this study could only measure the health information literacy skills of teachers as consumers rather than as providers. Further studies are needed to investigate teachers' health information literacy skills as instructors to produce health-literate citizens.

Keywords: health information literacy, COVID-19 depression, teachers, psychological distress, Pakistan

Algorithmic Literacy of Polish Students in Social Sciences and Humanities

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The widespread use and impact of algorithms on almost every aspect of the individual and society is a significant challenge to the modern world. For effective and informed functioning in today's societies, we need to develop algorithmic literacy (Iwasiński & Furman, 2022). So far there have been several studies aimed at defining and operationalizing this notion, but only few at developing standardized measures of algorithmic literacy (Latzer et al., 2020). In 2022 Dogruel, Masur, and Joeckel (Dogruel et al., 2022) constructed and validated a 22-item scale for measuring algorithmic literacy. It consists of two interrelated dimensions: awareness of algorithms use (11 items), and knowledge about algorithms (11 items). The first dimension relates to the awareness of the purposes for which algorithms are being used and awareness of areas and applications or devices, in which algorithms are actually used. The second dimension focuses on a more advanced understanding of the mechanisms of action of algorithmic systems and their consequences. The correlation between results in both dimensions, and the practical ability to interact with algorithms has been confirmed.

In our study, we apply this scale to measure and compare the algorithmic literacy of Polish students of several faculties. We also want to test the scale in the Polish context. Authors of the scale declare: "our original scale was developed in German (...) Items worked in the context of our study, but item length or use of words to increase or decrease item difficulty might be critical in other languages". Our pilot research indicated that respondents had trouble understanding the intentions behind some of the items.

Our research has two main goals:

- Testing the scale in the Polish context
- Assessing algorithmic literacy among Polish students of selected faculties.

We regard our research as exploratory. Our sample is purposive. We have selected courses from Polish universities, which are available to us, and as we assume, include some form of algorithmic education in their curricula. These are: Architecture of Information Spaces at the University of Warsaw, Sociology of Media and Communication at the University of Warsaw, and Philosophy of New Media at the University of Silesia. All students of the last (third) year will be studied. We also intend to check if the items are understandable, using interviews. Moreover, we plan to study and compare the syllabuses of the above programmes, to find out if they include courses that sensitize students to the knowledge of algorithms.

We adopted two working hypotheses:

- 1. Not all items in the questionnaire are clear and understandable to our respondents.
- 2. Students of different faculties have different levels of algorithmic literacy.

The study combines elements of quantitative analysis (Algorithmic Literacy Scale) and qualitative analysis (interviews with students, sylabuses analysis). This is, to our knowledge, the first empirical research on algorithmic literacy in Poland. Furthermore, we are not aware of any other studies that use the scale developed by Dogruel, Masur, and Joeckel worldwide.

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Keywords: algorithmic literacy, awareness of algorithms use, knowledge about algorithms, Polish students

LIS Students' Receptivity to the Concept of Turquoise Organization

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Background & Objectives

A turquoise organization is a concept crafted by Belgian business practitioner Frédéric Laloux. It is a rarely implemented, high maturity demanding model based on three pillars: sense of mission; wholeness of humanity; self-management (Bartosiewicz, 2017; Laloux, 2014; Tabaszewska-Zajbert & Sokołowska-Durkalec, 2019; Wasiluk, 2022). Accumulating information and collective transforming it into knowledge is considered to be its fundamental success factor (Januszko-Szakiel, 2020). Despite scarce evidence on this point, it may reasonably be inferred that, in practice, this flexible and individually empowering model, invests every employee with an equal load of responsibility for the organization's prosperity. It engenders specific information needs and patterns of information behaviors as well as requires a particular form of information literacy. The authors, one of whom runs an information brokering company based on the turquoise scheme, inspected LIS students' receptivity to the very idea of a turquoise organization and, subsequently, their readiness to develop skills needed to work with? such an entity.

Our objectives are defined as follows: 1) to measure, using mixed-method approach, LIS students' receptivity to key principles of turquoise organizations. We define receptivity as capacity, grounded in already acquired knowledge, to project oneself in the turquoise settings and anticipate the type of information work and skills to be mobilized; 2) to assess mental and operational readiness of LIS students to integrate turquoise entities once graduated. In other words, to assess whether students demonstrate competences such as autonomous and self-responsible information sharing, discovering and encoding tacit knowledge within organizations, self-managing and improving the quality of data and information generated, sustainably archiving, and preserving information resources of the company for further reuse; 3) to suggest adding relevant content to existing LIS academic curricula in order to better equip future employees of turquoise organizations.

Methodology & Outcomes

For the study we used both quantitative and qualitative approach, the former being an online survey questionnaire. For he latter we conducted a series of individual semi-structured in-depth interviews, the full transcripts of which we analyzed conjointly by the prism of the affordance theory and the actor-network theory. We administered the survey to a group of 90 students of master in information management, from which we recruited 12 volunteer interviewees.

Results showed that students exposed ambivalent attitudes towards turquoise organizations, ranging from naïve approval to acute suspiciousness. Their nearly unanimous declarations of readiness to be hired by a turquoise entity, are mitigated, if not contradicted, by the results of individual interviews. Students showed some difficulties in properly identifying information affordances and networking connections (ANT theory) in turquoise settings. They seemed to be intimidated by the high level of autonomy and responsible personal involvement in information management processes embedded in the turquoise model. Since information is the major asset in turquoise organizations, LIS graduates are, a priori, predisposed to seek employment in such environments and there is merit in verifying their capacity to be actually recruited and to deliver proper work. These preliminary outcomes still need to be nuanced and processed in view of transforming them into actual proposals of curricula enrichment.

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Keywords: affordance theory, actor-network theory, LIS students, receptivity, turquoise organization

Social Project of Media And Information Literacy Knowledge Improvement among Academic and School Librarians in Kazakhstan

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In the information age, media and information literacy (MIL) has become crucial for work and study. Despite the growing number of various projects and initiatives in the field of MIL, this area of social development is still a relatively new concept for the educational policy of Kazakhstan. The information literacy standards have been developed by the ACRL and adopted worldwide, but there is little information as to what extent the current society is MIL trained and competent. In particular, there are no compulsory educational programs on MIL in Kazakhstan. The situation is complicated by the lack of a sufficient number of high-quality educational and methodological materials in the Kazakh language. Thus, most of the teachers, librarians, and students in Kazakhstan experience a shortage of relevant knowledge and skills. This paper reports the results of the "SauattyKeleshek" social project on MIL awarded by the Nazarbayev University Social Development Fund. "SauattyKeleshek" program aimed to improve MIL knowledge, skills, and abilities among academic and school librarians in Kazakhstan. The project included educational training developed and introduced to the target group, both online and onsite. The target audience of the project was academic and school librarians of Kazakhstan. The objectives of this research paper are to identify the MIL competencies of project participants and ways to improve their MIL knowledge. In this study, researchers will answer the following questions: what are the information needs of the target audience; how does MIL training improve the MIL knowledge of participants; how does MIL training program content respond to the information needs of the learners? Specifically, researchers applied the qualitative research method by analysing the results of primary data from an online survey conducted before the training, and the MIL training program developed on the basis of the preliminary survey analysis. The study found that respondents defined the MIL term incorrectly although initially, they confirmed familiarity with the MIL concept. Also, survey results showed that no MIL seminars and training were provided to users at their home institutions. Learners admitted the usage of educational materials without proper citation and copyright. Overall 391 participants attended 24 online and 7 onsite educational trainings within the framework of the project. The MIL curriculum taught participants to:

- manage information flows;
- search, use, and disseminate reliable information;
- select and organize digital content, identify necessary and high-quality online materials;
- understand copyright issues;
- apply critical thinking strategy.

The learners pointed out the usefulness and intensity of the training which responded to their information needs with the availability of further implementation. The effectiveness of the course is proved by the fact that participants with good results passed the final test and disclosed key MIL competencies. Participants developed and conducted various activities dedicated to the MIL concept, which demonstrate the improvement of academic and school librarians' MIL knowledge and skills. The researchers state that the project results can be a driving force to achieve success in MIL learning and teaching in Kazakhstan.

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Keywords: Kazakhstan, media and information literacy, school librarian, social project, MIL

Information Overload as a Burden and a Challenge. What Can We Learn for Information Literacy?

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Objectives

People all over the world are experiencing information overload (IO). Its definition has long focused on a large amount of information (Bawden & Robinson, 2009). Today, we can see that the problem is not only the quantity of information but also its reliability. The authors of the Information Overload Scale (IOS) defined it as "a distress associated with the perception that there is too much information" (Williamson, Eaker, & Lounsbury, 2012, p. 1). Due to the emotional burden of the situation, the emotional aspects of IO become more critical. Specifically, COVID-19 is the factor that increases the number of information and its evaluation (e.g., de Bruin, 2021) or fake news (Bermes, 2021). IO has also been the subject of research focusing on information literacy (e.g., Lauri & Virkus, 2018).

The aim of the study was to indicate the challenges and recommendations for information literacy, based on the results of national surveys on IO, providing an insight into different experiences, attitudes, emotions,, and/or education needs based on the specifics of demographic characteristics (such as age or level of education), or other potential correlation phenomena (e.g., problematic use of social media or FOMO).

Methodology

The Information Overload Scale (Williamson, Eaker, & Lounsbury, 2012) was used in two waves of representative surveys of Polish Internet users aged 15 and older. IOS focuses on emotional aspects and subjective perceptions of information overload, thus revealing individual perceptions of one's information skills.

Outcomes

The results do not confirm the differences in IO perception between sexes. Instead, they show a reduction in perceived burdens between 2021 and 2022, which can be linked to a suspension of lockdowns and the termination of online work. The way to respond to the elements of perceived IO may be a tip for information literacy education that is tailored to a specific social group and reflects the challenges of time and circumstances.

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Keywords: *information literacy, information overload, Information Overload Scale, quantitative nationwide survey, training recommendations*

New Information Literacy Skills for Instructor Librarians in Higher Education

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The paper aims to explore new contexts of Information Literacy (IL) from the perspective of liaison librarians, based on their experience at the Cyprus University of Technology Library (CUT). The authors start with the literature review, positioning the concepts of upskilling and reskilling in order to upgrade current skills and acquire skills to improve support for the university community members as appropriate to the current trends of the new era. They present initiatives and various actions that liaison librarians of the CUT apply in cooperation with entities within the organization such as IL instructions, in addition to their participation in an Erasmus+ project regarding information and related literacies.

Furthermore, the authors evaluate two IL instruction models; the IL course in the faculty curriculum, and courseintegrated IL instruction, applied at the CUT using a mixed methods approach. More specifically, this study used a post-course survey, as well as in-depth interviews to explore how the IL instruction models impact students' research skills and grades for their course assignments and how the faculty evaluate the librarian's contribution to their courses. Results reveal that research participants believe that the contribution of liaison librarians and their support is valuable to acquire basic research skills.

Keywords: information literacy instruction, Cyprus, liaison librarians, academic libraries, new era skills

Exploring Information Needs of a Polish Academic Law Library Users

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Background

The Library of the Law and Administration Faculty of the Jagiellonian University in Kraków is currently preparing a complex reform of its website and profiles in social media in order to comply with the best benchmarks in this domain. This operation has been preceded by a two-stage study of Library's users' information needs and expectations concerning the website's future architecture and design. We purposefully limited the target group to active scholars and academic teachers only. The paper exposes the results of the study and possible practical implementations of its empirical findings. The research project discussed herein is the first large scale mixed-method survey conducted in our Library.

Objectives

We defined the objectives as follows:

- 1) discover, with the utmost precision achievable, actual needs of faculty members staff regarding the offer of resources and services displayed by the Library via its website and social media profiles;
- 2) assess the concordance of discovered user's needs with the best benchmarks as recognized optimal models of law libraries website design and organization;
- 3) compare obtained findings with similar studies (e.g. McAllister & Brown, 2020; Uwaechina & Eze-Onwuzuruike, 2019) and identify potential particularities of local law scholars; and
- 4) assess the feasibility of implementing modifications recommended by faculty members.

Methodology

The study is a mixed-method research relying on the application of: 1) a large scale online survey addressed to the whole community of the faculty members and 2) a focus group interview with 10 scholars, fully transcribed and explored via discourse analysis conducted according to the principles of the cognitive imaging method.

Outcomes

The main outcome generated by the study is an accurate panorama of information needs and expectations expressed by the faculty members with respect to the Library's website and social media profiles. Indications emerging from this first-of-this-kind research will guide modifications and extensions introduced in the Library's website so as to better address and anticipate scholars' requests. The study is in line with current research trends that stress the utility of improving libraries' communication via digital media in order to sustain users' satisfaction (McCaffrey, 2019; Indrák & Pokorná, 2021; Fu, 2021; Mărginean & Kifor, 2021).

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Keywords: academic law library, faculty members, information needs, library website

Information Mourning Among Retired Faculty Members

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Initially, the purpose of this study had been only to explore information behavior of freshly retired scholars from a wide range of Polish university faculties. However, as the research progressed, it appeared that information practices, along with their affective background, described by former faculty members followed an astonishingly salient pattern resembling mourning. Following this path, I adjusted the research goals to provide the answers to the following questions: a) in scholar's everyday life, is retirement a triggering event likely to provoke an information mourning? and, b) if so, what are the behavioral manifestations and consequences of such an information mourning process? This study pursues four goals: 1) to identify and describe retired scholars' information behaviors that mightconstitute information mourning; 2) to assess the harmfulness/neutrality of these behaviors for ex faculty members' wellbeing and, in cases of observed negative impact, reflect on possible remedies; 3) to identify and describe constant and individually variable coping strategies applied by scholars in order to mitigate information losses(see Williamson, 2005; Israeli, 2020); and 4) to interpret the findings in the light of information ecology.

The study consisted of a series of 12 individual in-depth interviews conducted with researchers in the humanities and sciences who had retired from Polish universities within the last 2 years., The interviews were treated and processed en bloc as a set of narratives and submitted to discourse analysis using the method of cognitive metaphor mapping. Based on this textual material only, I extracted simple and ramified metaphors and interpreted them following a nomothetic approach without any preconceived assumptions (Massey & Ehrensberger-Dow, 2017; Csatár, 2014). Interviewed scholars tended to consider their retirement from university as a colossal personal loss, often described in terms such as banishment, amputation, and orphancy. The majority of the interviewees felt outcast from their familiar identity-shaping information ecosystem. The scale of experienced loss seems to set off a regular process of mourning with its typical stages of rebellion, anger, resignment, and so forth. Based on key assumptions of information ecology, as theorized inter alia by Fidel, Nardi and O'Day (Fidel, 2012; Nardi & O'Day, 2000) and research findings on information behavior of seniors (Williamson, 2005; Kim et al. 2016), combined with the conceptual framework of information horizons by Diane H. Sonnenwald (2005), information mourning could be defined as morbidly prolonged, harmful disturbance of individual information space caused by a loss of physical and immaterial connections with a larger community. Caught in the spiral of grief, the individual does not have enough agency left to recover without aid. It appears, however, that the affective heaviness of being cut off from the university information ecosystem might by relieved, and coping mechanism enhanced, by putting in place some simple practical remedies. The aim of these remedies should be to restore the sense of belonging and rebuild broken attachments with the academic community and, hence, accelerate readaptation. I will describe these remedies in the paper.

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Keywords: retired scholars, information behavior, information loss, information mourning, information ecology

Information Experience of Emerging LIS Professionals during the COVID-19 Pandemic

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The impact of the COVID-19 pandemic on information phenomena is being actively researched in information sciences (e.g. Lloyd & Hicks, 2020; see Montesi, 2021 for a review). The pandemic created unique possibilities to study different populations in extreme circumstances and unique crisis situations. One such unique situation emerged on the Faculty of humanities and social science at the University of Zagreb, Croatia. There, a group of 20 library and information science (LIS) students in an online information literacy course were faced with the task of reflecting about their information experience at the height of the pandemic. The material they submitted showed authentic and deep free reflection on a subject of interest related to the real, lived experiences of participating students. In this report we will show how emerging Croatian LIS professionals experienced the pandemic.

The task created what Bruce et al. (2014) frame as the intersection of the experience of information using and experience of learning. This assignment offered a unique research opportunity to study an information experience through student-created media. Students were asked to create a video log during the semester about the problems they faced because of the pandemic and the global health crisis. They reflected upon the impact of those events on experiences of information and their information practices. Through a subset of questions they were asked to consider how practices have changed, ways in which they encountered information, strategies they used to resolve their information needs, and how they responded to information they were exposed to sought themselves.

We provided the students with some technical information how to create their video logs. Out of 20 undergraduate students attending the course in their final (third) year of study, 18 students gave permission to use their video logs for research purposes, thus creating a unique convenience sample of rich content about the information student experience during the pandemic. The resulting videos were 4 minutes and 17 seconds long, on average. Together the films totaled an hour and twenty-five minutes of filmed material. This study used an intepretivist grounded theory approach in studying the films. We focused on a systematic exploration of the diversity of students' information experience during the COVID-19 pandemic as the basic phenomena of interest. We also sought to portray the kinds of information needs, behaviors, and practices they found relevant to their information experience during the pandemic. We will map examples and contexts of the students' information experience, illustrating the phenomena relations, strategies, and consequences about which the students freely reflected. We also considered the students' stances and chosen approaches to video creation. This included taking account of the students' personal experience, their attempts at expert analyses, their artistic expression of experience, and so forth.

We transcribed and coded the video logs in accordance with the grounded theory approach (following Strauss & Corbin, 1990). We organized the coding process as an inductive qualitative research process involving a stage of open coding. This was followed by an axial coding stage where elicited codes were combined into more general categories. These general categories defined aspects of students' information experiences and formed the basis for a deeper understanding of the diversity of students' information experience. We interpreted the results in the context of Croatia and related phenomena as perceived by emerging LIS professionals. We will explore whether the applied pedagogical method created authentic learning experiences for LIS students and whether it can, on the methodological level, be used as a basis for information experience research. Since this research emphasized information experience, future research needs to explore the same learning experience as an informed learning event.

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Keywords: information experience, Croatia, COVID-19, pandemic, grounded theory, student-created media

Animal Bioethics and Information Literacy: Does IL include Moral Reflection?

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In this article I provided a framework for the discussion of ethical repercussions of concepts and technologies created or used in information sciences upon animal life. The information super highway (the internet) made the dissemination of "content" on all possible topics easily accessible. These new "informational liberties" opened the way for various interdisciplinary research avenues between fields of interest we might never had considered compatible in the past. One of these discursive possibilities presents itself within the analysis of information sciences and its link to animal life. This link extends to broader ecological issues that arise from the application of technologies created or used in information sciences.

As a starting point, I presented possible issues that arise for information professionals, specifically while dealing with preservation, organization, and dissemination of information. Traditionally, information professionals deal with print material. Contemporary society's needs demand new approaches in view of the fact that electronic, visual, audio, and other digital media dictate a different mode of data storage than conventional libraries. Animal welfare is conditioned by human impact in the biosphere. In this concrete example I talked about the data and information infrastructure. Taking data storage facilities as the first example, I discussed how the overheating issue and carbon emissions of these facilities change the biodiversity of the surrounding areas. For example, while the cooler fans are struggling to keep the various machines from overheating they have a secondary pollutant: constant noise. These examples served as an introduction to the discussion of other possible negative effects that practices in information sciences have on animals.

As these examples opened up the debate, I moved from the idea of green libraries (Aulisio, 2013) to possible issues with the most self-reflective part of information sciences: information literacy. I analyzed current research on green information literacy (Kurbanoğlu & Boustany, 2014) to address the key question: What is the status of moral reflection in green information literacy conceptualizations? I used the ethical framework of contemporary bioethics to access the issue. While bioethics are a developing field with various definitions and approaches to problem resolution, they are also most compatible with interdisciplinary research. Thus, bioethics had a greater potential than particular ethical positions such as consequentialism, different narrative ethics, contractualist or other approaches. The main question in this debate was whether critical capacity of information literacy included value judgments, especially morally sound judgments. In other words, I explored whether the normative dimension of contemporary information literacy definitions and models included moral reflection of the impact their procedures and products had upon animal life.

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Keywords: information literacy, moral judgment, information sciences, animal bioethics

Information Literacy as the Basis for Design of ESP Classroom Material at Technical Universities

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Information literacy is a significant prerequisite for any member of the Academic Community, including university students. Because of the rapid technological changes and increasing complexity of the current world, it is of vital importance that students can efficiently search for, evaluate and apply the necessary information.

Objectives

This paper presents preliminary findings of research aimed at gaining insights into the following highly needed areas: a) aspects and strategies for developing information literacy in an ESP class including evaluating the relevance of the class content, efficient information searching strategies, assessing the studied sources for purpose, audience, content, and accuracy, as well as learning about principles and laws of copyright, Creative Commons, and ethical standards in sharing information; b) the role, position and importance of individual tasks within the framework of the educational material following the principles, characteristics and significance of education of ESP at the university level; and c) concrete methods of assessing the student's performance (e.g., a portfolio and specific project-based assignments).

Methodology

The data collection was conducted through three-fold resources. The first came from the final student course evaluation surveys (200). The second was from interviews with 10 members of educators of ESP at the University of Žilina. The third was from interviews with future employers from the region focused on needs in terms of technical English language competence of their staff members.

Outcomes

In this article, we provide not only strategies for the design of ESP classroom material implementing information literacy techniques, but, at the same time, we provide a concrete example of such material. The applied materials are specifically focused on developing information search techniques, logical reasoning, common fallacies, and ethical standards for using and processing information. We also define processes for and how ESP and Information Literacy must be and are intertwined and thus support the development of graduates' profile needed by future employers, community and society.

Keywords: information literacy, critical thinking, revised Bloom's taxonomy, ESP, technical universities

Supporting Students' Digital Literacy

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In September 2021 the Norwegian government launched its "Strategy for digital transformation in higher education 2021-2025" (Strategy, 2021), and in November 2022 the Action plan building on this strategy was launched (Action plan, 2022). The strategy and action plan are closely related to various European Union initiatives (Digital education action plan, 2021; A Europe fit for the digital age, 2019), and also links to the overall plan for digitalization of the Norwegian society (A digital public sector, 2019).

The strategy and action plan focus on students and academics, and their need for more competencies and enhanced practical knowledge in information technology. The end goal is a more digitally competent workforce.

Neither the strategy nor the action plan mentions academic libraries specifically, but within the actions, there is room for relevant interventions where academic libraries can take a leading role.

In this paper, we would like to share some experiences from development work in this field, from the University of Bergen and the University Library, and from the University Library at UiT The Arctic University of Norway. To meet the increasing demands from the Ministry of Education and Research, the University of Bergen decided to develop a program in digital competencies and digital skills, and the library was invited to participate in the development of this program. The library's contribution is called Digital source criticism/information evaluation. A short online course primarily targeting first years students teaches them to navigate more critically in a world of facts, opinions and arguments shared in everything from social media to academic textbooks. The three-module course follows a case regarding the increasing amount of plastic waste in the sea, and how research about this finds its way to the debate.

University of Tromsø Library has developed iKomp, a free and open online course for anyone interested in learning more about source use and learning strategies. The main purpose of the course is to make students well equipped to meet the demands and expectations of universities and colleges regarding learning, academic integrity, and use of sources. The course can be taken in its entirety with a final exam and therefore works well as a work requirement for undergraduates. A similar course for sixth form pupils has also been developed, aiming to prepare this group both for higher education and for handling information at work or at home.

In conclusion, we will compare the two approaches through a qualitative cross case-comparison of the two aformentioned courses, investigating scope, learning goals and other relevant aspects, and reflect on the strengths and weaknesses of the courses (Yin, 2018). We will also give recommendations for development of second-generation information literacy training.

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Keywords: Norway, university, academic libraries, training, digital literacy

Students' Perceptions of Using Artificial Intelligence in Written Assignments – Is Information Literacy Still Needed?

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Writing a short literature review at university can be a useful assignment to develop a variety of academic (Sharples, 2022) and information literacy (IL) skills. However, recent technological developments have provided students with a new shortcut, artificial intelligence (AI), which can provide a coherent, albeit somewhat technical and stilted output (Sharples, 2022, p. 1122). As "AI-assisted writing is already deeply embedded into practices that students already use" (Fyfe, 2022, p. 2), the faculty and librarians at universities face numerous questions that challenge traditional practices of teaching students academic writing and supporting IL skills. The issues of plagiarism and bias (Fyfe, 2022), fake references (Sharples, 2022), opacity of algorithms (Lloyd, 2019), and questions about trust and neutrality (Haider & Sundin, 2022) are but a few of these questions.

This presentation focuses on an intervention of applying the GPT-3 in the process of writing students' short literature reviews. Writing a short literature review has been a traditional task to support Information Management students' IL skills during 'Information Behavior Theories and Practices' course at University of Tartu. During the spring semester of the 2022-23 academic year, this task was enhanced by adding a request to use GPT-3 (such as OpenAI playground) in the writing process and reflect upon using the new technology. Of particular interest in the reflections was the students' perceived usage of AI, hence the research questions:

- How do students evaluate the usability of AI in terms of searching, evaluating, and presenting information?
- What are the benefits and problems related to using AI in process of writing?

During the introduction of this assignment, the usage of reflections in research was covered, including the possibility to opt-out at any time without any negative consequences. The students' reflections (N=26) were analyzed using thematic analysis to identify themes related to using AI in academic writing process. Despite the initial excitement, the students presented critical attitudes toward the results provided by GPT-3. Nevertheless, AI provided help with translations, and sometimes finding new perspectives. In line with Dinneen & Buginger (2021), this study contributes to the discussions around the usage of AI in academic tasks that have predominantly benefitted from the domain of information literacy.

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Keywords: information literacy, artificial intelligence, creative writing

Information Culture: An Assessment of CETYS University Strategy (2010-2020)

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This research outcome is the result of an assessment of an information culture (IC) decade, 2010-2020, developments at CETYS University, a private institution located in Mexico, with the goal of establishing an institutional culture on access, evaluation, and use of information. A holistic approach of IC placed the institution as a leader in this matter at the national level (Martinez-Rocha, 2022, p, 379). The study is based on primary unpublished data and information generally reserved for internal use of the university, such as reports that were only submitted to national and international accrediting agencies. Secondary sources included multiple papers (Machin, Beltran, & Lau, 2014; Martinez-Rocha, Lau, & Diaz, 2017) and theses written by librarians and faculty, including two of the authors of this paper, who were actors in CETYS information culture deployment process. The study included a brief analysis of the educational system of Mexico, where the main historical factors that influence current IC are highlighted. Some of these factors have caused a low level of literacy and information understanding in pre-university educational generations that in turn impact their higher studies. The main research source document was the Institutional Plan 2020 (CETYS Universidad, 2011), whose objectives specifically included the library system and its librarians in the planning, execution, and documentation of the IC process. CETYS University (2011, p. 40) conceived IC as a social construct where information skills (IS) were at the core for the institutional community, mainly students. As part of the study information sources were also the IS tests required to first year students. These assessments generated the IS indicators of students at the start of their undergraduate studies (Lau, Machin, Gárate, & Tagliapietra 2016); likewise, a diagnosis and a survey were used to test the same IS variables (Information access - evaluation - use) in faculty who faced the challenge of facilitating these IS to learners. Finally, the compiled data were assigned values, allowing the use of Wilcoxon Sing Range Test (1992), it is a non-parametric tool that allows to assign values in relation to the success of the actions, therefore it allows to compare different and small samples, achieving a holistic analysis to have a compressive overview of IC. The study results identified that there were actions that were crucial in IC deployment, such as the recruitment of international experts. All datasets contributed to valuable IC findings, for example the level of IS that populations analyzed had, where most students showed improved skills. According to the Wilcoxon Test, there were significant IC advances between the values before and after, that is, at the beginning of the IC process and until the end of it during the evaluated decade.

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Keywords: information culture, information literacy, information skills, higher education, CETYS Universidad

'Maddie Is Online': Embedding Creative Audio-Visual Resources to The Teaching of Information Literacy in an Elementary School in Greece

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There is a growing need to design creative teaching methods early in the school curriculum to empower children with information literacy (IL) skills. This will prepare them for battling mis/disinformation, so that they can be safe, understand the value of critical engagement with online information, and express their perspectives while opening dialogue about their experiences. Previous research in the U.K. has found that children lack the critical IL skills for identifying fake information and are least likely to speak to their teachers (National Literacy Trust, 2018, p. 4). Connecting online happens at an increasingly younger age, with UK research estimating that up to half of children 8-12 years have set up their own online profile, while a third include a false date of birth (Ofcom, 2022). After surveying 25, 101 children, the EU Kids Online project identified a significant increase in screen time, which had almost doubled in some EU countries (Smahel et al., 2020). This project empowered young people with IL skills by means of opening dialogue around the phenomenon of mis/disinformation and the ethics of online connectivity. We followed the principles of the United Nations Convention of the 'Rights of the Child' that extend to the online environment where digital technologies should "adopt the principles of privacy, resilience and harm reduction" (Scottish Government, 2022) and where programmes should incorporate children's "rights to seek, receive and impart information" (OHCHR, 2021, p. 3). The project took the form of a collaboration between the educational project, 'Maddie is Online,' and the Modiano Elementary Library of Anatolia College (a private non-for-profit organisation in Greece). 'Maddie is Online' is an innovative community-led project, funded by the Scottish Government and the Scottish Library and Information Council (SLIC). Ituses creative storytelling, with an emphasis on opening dialogue around experiences of online connectivity, using video animated stories with children's voice overs, digital lesson plans, and reflective exercises. We incorporated 'Maddie is Online' resources into the library IL program, aimed at Year 5 students (10 years old), with a total of 90 pupils from 3 classes. The lessons were delivered by the Elementary Librarian in collaboration with teachers. We collected qualitative data from pupils who, after watching the video stories and completing the toolkit exercises engaged in discussion in small groups, reflecting on their own experiences and exploring how they would address the challenges that Maddie encountered. This allowed opportunities for dialogue and exploring skills for information searching, evaluation, and critical judgement. Pupils submitted anonymous data via question-and-answer home quizzes that tested their comprehension. We explored the learning experiences of pupils and their perceptions of misinformation through an online survey while we collected qualitative feedback on experiences around delivering the sessions from staff.

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Keywords: information literacy, schools, primary, digital literacy, media literacy, misinformation, open education, youth empowerment

Walking, Meeting Things, Tinkering with Objects and Materials, Being with Information: Some Experiences in Information Culture

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This article explores the potential of experiential education for students in the field of information culture. Specifically, it investigates experiences using information for learning and knowledge building, focusing on the materiality and sensory/sensitive dimensions of these experiences: giving equal attention to things, objects, materials, and sensory experiences (Thrift, 2008; Savolainen, 2020). In this view, information is understood in a broad sense, as "related to becoming informed": something is information if it is informative (Bukland, 1991). The idea is that students are not disembodied cognitive beings (Bruner, 1986, p. 5), they are active beings who learn through action and experiences (Dewey, 1925), active agents in the historical process of constructing their own world (Bruner, 1986); and that in this process, the body has an active, productive and sensuous role, throughout the information activities: each object, each material constitutes a path towards knowledge, each gesture expresses a becoming in service to its construction (Ingold, 2018). Field experience is inductive, it is both a voyage of world discovery and of self-discovery.

In this perspective, referring to an active self, articulating the sensitive and the social (Laplantine, 2009), the experience is creative. From primary experience, in its subjective version, a way of experiencing the world, to secondary experience, more reflective, which clarifies it by organizing it, experience is formative and transformative; it participates in the creation of useful knowledge (Dewey, 1925). Knowledge is thus constructed in the flow of experiences, with phases of self-reflection and distancing; it is not a linear and mechanical process. Culture – like information culture as "culture" - is alive, context-sensitive and emergent (Bruner, 1986).

We propose investigating and questioning here these different relationships to materials, objects and information, involved in the learning process and knowledge construction, by considering how knowledge is informed by experience, putting the body and the mind on alert in a same movement. In addition, we propose conducting this investigation and questioning from an anthropo-social perspective, by focusing on the dynamics that emerge, paying attention to the ordinary, the banal, as well as to the unexpected or the event, to what "happens and becomes" (Laplantine, 2022).

The empirical data that informs this article is drawn from a research project in school context, still ongoing in its qualitative part (2019; 2020; 2021). They are ethnographic data, collected over time, in immersion, closely to the actors, without an a priori grid (which would orient towards an interpretative system), but with a requirement of globality (rich observations, interviews, informal conversations, documents, photographs). Consistent with this approach, the references to an interpretative universe remain open: functioning as starting points, theoretical levers (vs. framework), they form a space open to reflection, intuition and the uncovering of meanings.

For this article, we focus on three projects observed in secondary schools, aiming at opening the school to the world, beyond the school space, and in which the sensitive/sensory dimensions play an important role (walking, as a learning path; creative production using the five senses; tinkering and making in fablabs/libraries). The passage through the material, the sensitive, the sensory is of great heuristic potential in the construction of knowledge and culture.

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Keywords: information culture, experience, sensitive experience, knowledge building, materiality, body, senses

The Information Literacy Practices of LGBTQ+ Students' Self-Tracking: Attitudes to Data Collection, Data Privacy and Data Sharing

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This paper reports on a study that aimed to understand what self-tracking practices LGBTQ+ students engage in and why; and to reveal how these information literacy practices connect with their LGBTQ+ identities. LGBTQ+ refers to the lesbian, gay, bisexual, transgender, and queer community, with the plus standing in for a wide range of other identities such as pansexual, asexual and aromantic, and intersex. People with LGBTQ+ identities can have specific challenges with mental and physical wellbeing, combined with a fear of discrimination when accessing formal healthcare (Bachmann and Gooch, 2018). An information literacy practice is understood to be a contextual, socially constructed and embodied way of knowing in an information landscape (Lloyd, 2017).

The discourse on self-tracking identifies that it can engender a sense of empowerment and control through the collection of data that builds knowledge about oneself (Lupton, 2016). This can lead to a sense of positive change and improvement and the achievement of health goals (Lunde et al., 2018). Previous research identified four dimensions to information literacy in self-tracking: understanding the value of quality in data inputs, the ability to interpret tracked information in the context of the limitations of the app or device; awareness of privacy and data ownership and the nuances of sharing tracked data (Cox et al., 2017; McKinney et al., 2019). Participatory surveillance from health apps, particularly around gendered issues such as menstruation is a concern (Healy, 2021). There is little research on the distinctive nature of self-tracking in the LGBTQ+ community and the nature of information literacy in this landscape, and this small exploratory study makes an important contribution to the research in this field.

This study adopted an interpretivist, qualitative methodology: six semi-structured interviews were conducted and transcribed by a student researcher as part of a paid research internship. The research team then carried out coding and thematic analysis.

Key findings are that participants track to manage and monitor their health; experiencing tracking as a way to support mental health was emphasised. While they felt distrust about the way apps used their data, they simply accepted the risk. This was typically because the convenience of the app outweighed their concerns about privacy. Data sharing was nuanced: often restricted because of self-consciousness or fear of being judged, but embraced when there was a feeling of working towards a shared goal. There was some connection between app use and LGBTQ+ identity. The presentation concludes with some observations about the empowering nature of information literacy in this landscape in relation to data quality, interpretation, sharing and privacy, and LGBTQ+ identities.

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Keywords: LGBTQ+, transgender, self-tracking, data collection, data privacy, data sharing

Fearing for Their Lives: Implications of Children and Youth as Generators of Informational Texts and Literacy

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In 1974, Paul Zurowski coined the term "information literacy" (IL) (Badke, 2010, p. 48) and brought attention to the burgeoning production and complexity of information and the need to study and understand it, given its power and possibilities for shaping/influencing daily life. Writing in 2013, Zurkowski made clear that "[w]ays must be found to enable ordinary[,] every day citizens [to] produce and wield countervailing power to effectively restrain" "special interest money" (p. 2). For Zurkowski, "a combination of IL and a Direct Democracy movement, offer the library community such an opportunity to remodel itself while building, along what [he called] "The Direct Democracy Coalition for Citizen Rights and Responsibilities," the power to address ... [the] "issues" he identified then. Quite clearly, Zurkowski had deep ethical concerns about the socio-economic and political life of citizens around the world. He identified IL and information professionals including librarians, as significant to creating a more just and equitable world for all. My paper is embedded in critical, sociocultural/sociohistorical perspectives (Freire, 1970) and informed by Zurkowski's vision, and Lloyd's (2012) "people-in-practice" perspective about IL. I highlight contemporary examples of children and youth in the practice of "generating" (Zurkowski, 1974), and simultaneously using informational texts and literacies to agentically 'speak truth to police power,' thereby alerting society of their lived realties of fear and injustice. The Canadian information landscape is characterized by "a range of state statistics and figures related to the disappearance and death of Indigenous women and girls..." (Scribe, 2018, p. 48). Jonnie et al.'s (2019) compelling work of youth advocacy is provoked by fear of going missing and winding up dead through misrepresentation/dehumanization, absence, and need for information, and desire for safety. This takes place in the face of what Amnesty International (2021) describes as "appalling statistics ... consistent with previous estimates from sources such as Statistics Canada that have long pointed to a greatly disproportionate level of violence against First Nations, Inuit and Métis women and girls" (para. 4) in Canada. My presentation employs "description, analysis, and understanding of experiences" to illustrate their value in understanding the "life worlds" of those we serve as information professionals (Bruce, 2013, p. 12), in places marked by ongoing colonial oppression. I was guided by theory of phenomenography (1981) and Bruce's (2013) application of it to IL research. I feature epistolary writing of adolescents along with relevant interpretive/theoretical frameworks, such as Indigenous feminism (Joyce, 2020) and reader response theory (Rosenblatt, 1978). This work instantiates critical youth agency/IL practices through centering multimodal literature produced by youth for the purposes of sharing information about life-threatening phenomena characterizing their life-worlds. Thereby, illustrating youths' critical awareness of, and need for the "transformative and empowering" possibilities of IL itself, in and beyond their contexts (Bruce, 2013). Furthermore, my presentation offers insights about IL practices for youth in underserved populations and their resistance to indifference and argues for, and contributes to scholarship about the phenomenographic, "experiential [and relational] perspective" (Ibid).

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Keywords: children and youth, information literacy, phenomenography, Canada

Information and Digital Literacies as Written Culture: The Case of a Digital Creative Writing Device

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This communication is the result of an ethnographic research about a digital device created by a French publishing house to make pupils and students write, read and print short stories: the "Cub'Edito". I count this device as an action apparatus (Barrère, 2013), a tool made to support selected cultural practices.

Objectives

The analysis of such an apparatus by studying how it is used by teachers and students is one way to question links between written culture and information literacy in a digital era. I am trying to critique "digital dualism" (Gourlay, et al., 2015) and demonstrate that there is a practice's and skill's continuity between written culture and digital culture. I seek to show that digital devices are both communication and documentation machineries. Digital information literacy could be regarded as a reconfiguration and amplification of written literacy because digital devices are textualization devices (Després-Lonnet & Cotte, 2007), technologies to make, share and record documents.

Methodology

Analysis of the digital device and pupils' works employed a semiotic approach. I observed training sessions, pedagogical projects with pupils, and evaluation meetings concerning those projects and this apparatus. Semistructured interviews with teachers, librarians, and teenagers' focus groups were also conducted.

Outcomes

Uses of Cub'Édito appears like a way to practice and understand computers and Internet as document technologies. The Cub'Edito interfaces set ways to access, read and publish texts: it depicts text's visibility and readability at a digital era. This device re-enacts written culture (digital or not) by introducing terminology and injunctions about literary genres, collections, authors, indexation, editing, approval and print processes. Moreover, most of the observed pedagogical projects play with textual materialities and genres by relying on the device's platicity. Thus, they participate in the covenant between a long-term written culture and digital textual practices and norms. They show the cultural and skills' continuity between writing and reading, the cultural poaching (De Certeau, 1990) between ordinary written culture and school written culture, and between literacy, information literacy and digital literacy. I count this device, its uses and its escort discourses as an apparatus (Foucault, 2001) to regulate writing and reading practices.

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Keywords: information literacy, media literacy, written culture, digital culture, creative writing

The Impact of COVID-19 on Students' Academic Reading Format Attitudes and Behaviors

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Over the last twenty years, studies have shown that most university students prefer reading their academic texts in print format over electronic (e.g., Dilevko & Gottlieb, 2002; Liu, 2006; Li et.al., 2011; Mizrachi et al., 2021). But when the COVID-19 pandemic struck in 2020, institutions worldwide were forced to close their campuses and move to remote learning. Libraries closed to the public and curtailed their services severely. Suddenly students had no reading format choice and had to use e-format. This study investigated how the COVID restrictions affected their reading format attitudes and behaviors. We addressed these research questions:

- What is the impact of forced remote learning on students' academic reading format attitudes and preferences?
- Do students report changes in their reading and learning engagement strategies?
- How do students' collective reading format preferences and behaviors compare to those documented before COVID?

We defined academic texts as textbooks, scholarly books, book chapters, and journal articles in different formats used for coursework or academic projects. Print format included texts originating on paper and printouts from an electronic source. Electronic reading was reading on any digital device.

The survey contained some original questions and others adapted from the previously validated ARFIS survey (Mizrachi, et.al., 2018). It was distributed to students at a North American research university in March 2021, at the height of the pandemic. 234 responses were received and analyzed. Descriptive analysis was generated with SPSS and Excel programs.

Results showed an increased dislike towards e-format, and that most students still believed print to be the best medium for focusing and remembering information. However, we cannot generalize that the increased dislike is a permanent condition. It may just be a temporary outcome of the exclusive remote learning mode during this unprecedented time. As students become more accustomed to digital learning, it is possible that comfort levels and confidence in their ability to learn using e-readings will increase; and as instructional modalities move back towards pre-pandemic norms, it is possible that students' attitudes towards e-reading will become more favorable.

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Keywords: print reading, electronic reading, COVID-19 restriction effects
Collaboration between Academics and Librarians at Aalto University Following Library Reorganisation in 2018

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Introduction

Whereas previous studies interpret collaboration between academics and librarians in higher education from a perspective of information sharing (e.g. Pham & Williamson, 2018), few studies include social networks. Since 'social network structures play a role in how easily information circulates' (Haythornthwaite, 2017), investigating how social networks are configured contributes to understanding how academics and librarians collaborate. This study aims to explore the collaboration in information literacy settings for first year students from a perspective in which information sharing and social networks are combined, based on a case study of Aalto University in Finland.

Method & Results

A qualitative case study approach was adopted. Aalto University was selected because of its library reorganisation. The library was divided into eight teams embedded in four institutional service sections, and librarians were allocated across these teams in 2018. Then, information literacy instructional services were divided into two teams: the learning services team responsible for first year students and the research services team responsible for graduation theses (Nagasawa, 2022). This study focuses on the learning services team after the reorganisation. The data were collected between June and December 2021 through semi-structured interviews, using Zoom, with librarians and academics at Aalto University. For this study, data was collected from a total of three interviews of two librarians in the learning services team-one group interview with both librarians and then two individual interviews. The material was analysed via thematic analysis. Findings were identified in relation to the types of information sharing proposed by Talja (2002).

Following the reorganisation, no cohesive ties between academics and librarians were formed although new ties were built between librarians and various learning service teams including units within schools. One of the librarians allocated to the learning services team was asked to deliver library orientation for first year students across all schools of the university. As a result of this, the librarian started to participate in the institutional orientation group meetings, which were composed of various learning service team members. Although information around orientation, including in the various departments of schools, began to be shared with the librarian, the librarian independently prepared library orientation materials based on previously listed basic information from the schools because the sessions' input and outcomes were basic and universal enough to be designed without further information. Since this task is accomplished based on indirectly sharing routine information with schools rather than with academics, the information sharing between academics and librarians identified in this study is categorised as 'nonsharing'.

Conclusions

This study finds that the library reorganisation built no cohesive networks between academics and librarians but did develop institutional learning service networks which include librarians and staff in the schools. The information literacy instructional task for first year students is carried out based not on sharing information between academics and librarians but based on routine information indirectly from schools and transmitted through the expanded learning service networks.

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Keywords: faculty-librarian collaboration, information literacy instruction, information sharing, social networks, Aalto University

Maturity Model as the Tool For Information/Data Literacy Assessment

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Introduction

To assess the development level of an information system, the so-called maturity models (MM) are commonly used. In (Anderson & Jessen, 2003), maturity is defined as a state in which an organization is able to perfectly achieve the goals it sets for itself. The MM is understood as a set of successive levels that together form the expected or required logical path from the initial state to the final state of maturity (Pöppelbuß & Röglinger, 2011). MM is often a matrix of three to five maturity levels and several to a dozen evaluation criteria (dimensions) of the capability framework. This is a tool similar to one of the methods used to assess the information/data literacy (IL/DL) of information users, the so-called rubrics (Oakleaf, 2008). Rubrics for IL assessment are a tool that describes parts and levels of a specific task, product, or service (Hafner & Hafner, 2003). They are "descriptive scoring schemes" created by educators to improve the analysis of students' work (Moskal, 2000). They include target indicators or "criteria" in rows and levels of performance in columns of the matrix or grid of benchmarks. This brief comparison of the two tools shows the need and likelihood of their interaction.

Objectives

This article describes the way of presenting DL problems in selected MMs for research data management services (RDMS). RDMS MM, especially their DL dimensions are therefore the subject of research. The correctness of the hypothesis on the inclusion of DL problems as one of the dimensions of RDMS MMs was tested. Answers to the following questions were sought: Do the authors of RDMS MMs recognize the role of DL problems? What DL issues are present in selected MMs? At which MM levels are DL problems placed? To what extent can DL rubrics be used in creating MMs?

Methodology

Content analysis of six RDMS MMs (all found in the literature) was performed with the aim of searching for matrix elements to evaluate data-literacy (DL)-related problems. RDMS MM were chosen because of their topicality (they were created in recent years, from 2014 to 2021) and the large enough number of existing MMs of this type. This choice resulted in the research also taking into account the problems of DL.

Outcomes

IL/DL problems are represented in most MM for RDMS, which means that the hypothesis has been confirmed. They are placed in dimensions defined as leadership, services, support services, users and stakeholders, accessibility, usability. The rubrics used in the DL assessment should be included in the construction of the MM for RDMS because they contain agreed values and descriptive, yet easily digestible, data.

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Keywords: maturity models, information literacy assessment, information system maturity, rubrics

Understanding the Development of Information Literacy in Higher Education

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I completed a PhD in Information Literacy (IL) at UiT The Arctic University of Norway in November, 2022. Two of my research questions were:

- 1. How can we measure students' IL knowledge (*know*), skills (*do*), and interest in being or becoming information literate (*feel*)?
- 2. In which ways do students develop as information literate individuals over their first three years as undergraduates?

I developed four tools to quantitatively measure students' IL knowledge, skills, and interest. In addition, I interviewed students to gain insight into their perceptions of their development as information literate individuals. The use of mixed methods allowed me to better explore the totality of their growth. I paid special attention to possible transformative IL learning or changes in their identity as information literate people. In this presentation, I briefly introduce the IL tools and present main findings from my research.

I evaluated the tools I developed for this research for reliability and validity; the tools are freely available for others to use. To measure IL knowledge (*knowing*), I used the 21-item test, TILT (Nierenberg, Låg, & Dahl, 2021). TILT measures students' knowledge of three main facets of IL: finding, evaluating, and using information sources. To assess students' IL skills in practice (*doing*), I employed two assignment-based measures. One measure assesses the ability to evaluate sources and the other measures the ability to use sources correctly when writing. I developed the questionnaire, TRIQ, to measure students' interest in being or becoming information literate people (*feeling*) In developing TRIQ I was informed by Hidi and Renninger's (2006) four-phase model of interest development (Dahl & Nierenberg, 2021). TRIQ is composed of several subscales, including the Meaningfulness and Competence level, and I designed it to measure how interest changes over time.

I utilized this suite of four tools to measure students' *knowing*, *doing*, and *feeling* at several points during the first three years of their undergraduate education. Results revealed that their IL knowledge and skills increased with time, as expected, while findings from TRIQ's interest subscales showed varied results. Interestingly, correlations between *knowing*, *doing*, and *feeling* scores also increased with time, possibly indicating an integration of knowledge, skills, and interest, and thereby a deeper kind of learning.

Regarding the second research question, students' perceptions of themselves as information literate people clearly evolved during their three years of higher education. Interview findings indicate that some students experienced glimmers of transformative IL learning and changes in identity as information literate individuals (Nierenberg, 2022). By employing mixed methods, where quantitative and qualitative findings are integrated, I found the evidence for transformative learning was strengthened. This research lays the foundation for subsequent research by identifying specific qualities of the student experience in capturing IL growth, transformation, and identity change.

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Keywords: *information literacy, undergraduates, measuring information literacy, transformative learning, interest, mixed methods, identity*

Challenges to Information Literacy Online Learning in Higher Education: Libraries, Archives and Museums Digital Strategic Convergence

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Discussing the impacts of COVID-19 pandemic requires both critical and reflective thinking. One approach is to introduce the idea of digital maturity (Dwivedi et al, 2020). This implies that a strategy must be developed in such a way to deal with complexity and a hybrid thinking. This approach might enable us to create the digital future of cultural institutions– (Levi et al, 2019). Our paper aims to synthesize international research and debates around the impact of the digital transition in two aspects:

- in competences, strategies and practices of information literacy in the area of digital convergence of libraries, archives, and museums; and
- in the forms of best practice and innovation in library and information science (LIS) Education by presenting the epistemological and pedagogical formats developed in new collaborative lines of action.

There is still little knowledge among the various stakeholders about the necessary changes needed to develop and update skills in information literacy for professionals employed or seeking employment in emerging markets in the cultural sector. It is up to the universities to promote the emergence of courses suitable for introducing digital skills that are needed in the redefinition of disciplinary boundaries. To meet these needs, the Lisbon Region Consortium of the Universities Portugal Project - Connecting Knowledge, the Open University and the Universidade Nova de Lisboa structured, in 2022/23, two different types of LLL courses:

- "Specialization Course in Culture and Digital Communication in Archives, Libraries and Museum (3 months); and
- "Post-graduation Degree in Digital Information Management for Libraries, Archives and Museums" (2 semesters).

The courses adopted the advantages of distance and online learning based on the methodological pillars and outcomes of the Virtual Pedagogical Model (VPM) of the Open University (Mendes et al, 2018). Thus, the courses incorportedstudent-centered learning, following the construction of the European Higher Education Area (Bologna Process); the primacy of flexibility, allowing the student to carry out his learning; the primacy of interaction, as the student is not understood as simple content receiver, but as an active element of a collaborative network of learning, where information literacy is the result; and the principle of digital literacy as a factor of social inclusion.

This cooperative experience in higher education, especially in the LIS scientific field, represents a strategical focus on the link between knowledge management and information and digital literacy in Portugal.

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Keywords: *e-learning LIS education, information literacy, digital literacy, digital convergence, COVID-19 cultural impacts, Portugal*

Improving STEM Competences by Using Artificial Intelligence to Generate Video Games Based on Student Written Stories

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Due to a rapid development of digital services and digital transformation in a wide range of disciplines, new challenges have emerged seeking out to acquire digital skills and gain digital competence (Vuorikari et. al., DigiCompEdu 2.2, 2022). Learning about information technology can be quite challenging for STEM-oriented students, and it's even more challenging for non-STEM students (May, 2022). However, new possibilities to teach non-STEM students about fundaments of information technology have emerged as a result of new developments in the fields of artificial intelligence, gaming, virtual reality, etc. In order to provide an effective education approach for non-STEM students a model that uses advanced artificial technology has been formed. In this model students learn about a non-STEM subject by using information technology paired with artificial intelligence. More precisely, students boost their literacy skills by writing a story that will be used as a scenario. This scenario has to be structured well-enough to be processed by algorithms based on artificial intelligence that generate a video game based on a created scenario. Regarding the scenario, technics and methods, students learn more about both structured writing and literacy, and information technology at the same time.

Gamification as a method, among others, describes a social context by game-elements such as awards, rule structures, and interfaces that are inspired by video games. Mathias Fuchs et. al. (2014) analyses the role and impact of gamification method in business and wide society suggesting revising the question of re-thinking the method by applying it in a number of other fields (e. g. education, business, health, wide society, etc.) (Hartmann, 2022).

By integrating literacy and creativity fostered by gamification method, non-STEM students learn about literacy and coding simultaneously and boost-up their STEM skills. They get more familiar with STEM aspects by mapping information literacy in the field, and their motivation is increased since they are provided with engaging and assisted environment. This process has been based on the gamification method with an aim to support process of strengthening four different competences 1) literary competences, 2) writing in a foreign language, 3) coding and STEM skills and 4) lifelong learning competences.

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Keywords: STEM competences, gamification, literary competences, video game

Changes in Older Adult's Attitudes and Use of Health Information and Communication Technology from 2019 to 2022

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Objectives

It is crucial that people have access to quality information about their health and about healthy behaviour. Health information is increasingly being disseminated digitally, which creates a requirement for people to adapt to the information environment and take new technologies in use. The Prague Declaration describes the ability to make effective use of the information environment to enhance one's knowledge throughout life as a basic human right of lifelong learning. To be able to benefit from digital health information demands that people possess the informational and technological competence which is required to take advantage of the digital information environment (Bol, et al., 2016). Older adults have been found to adopt new information and communication technology (ICT) at a slower rate than those who are younger (Anderson & Perrin, 2017; Statistics [country], 2014; Vorrink, et al., 2017). However, although they lag behind those who are younger there has been a substantial growth in older people's use of digital sources. This includes the use of the internet, as well as mobile technology such as smartphones and tablet computers (Anderson & Perrin, 2017; Statistics [country], 2014; Loos & Ivan, 2022), and the same goes for the use of social media (Faverio, 2022). Thus, to examine the adoption of health ICT by older people in more detail, it was decided to focus specifically people aged 56 years and older and examine changes in their attitudes to and use of health ICT in the period 2019 to 2022.

Methodology

Quantitative methods were used and data for the studies were gathered by surveys. Random samples from the National Register of Persons in [country] were used. In 2019 the total sample size was 1.500 people, response rate was 39%, and in 2022 the sample size was 1,200 people, response rate was 45%. Because of the response rates, the data for both surveys were weighed by gender, age, place of residence and education, so that it corresponded with the distribution in the population. Reference figures for age, gender and place of residence were obtained from the National Registry of [country] and for level of education from Statistics [country]. The focus of the paper is only on people that are 56 years or older only. In 2019 the number of participants in that age group was 173 and in 2022 it was 214. In addition, the emphasis was on questions that measure the use of health information and communication technology and their perceived possibilities of doing so, and attitudes towards it. The measurements consisted of two sets of questions: 1. Frequency of the use of health ICT was examined by two questions about the participants use of the system "Heilsuvera": a) to communicate with doctors or to get information about their health, for example to book appointments, view drug prescriptions, or send messages to their doctor; b) to seek information about healthy lifestyle, such as nutrition or exercise. A five-point response scale was used (Very often – Never). 2. Possibilities of taking new health ICT in use was examined by two questions in the form of statements. The first asked if the participants found it difficult to begin to use new technology; and the second, how easy it was for them to get help at using technology when they were in need for it. A five-point response scale was used (Strongly agree - Strongly disagree). The analysis of the data is descriptive. All analysis is based on weighed data. Survey results from 2019 and 2022 will be compared.

Outcomes

The purpose of addressing this is to understand better how older adults can benefit from development in information and communication technology and enhance their abilities to adopting healthier lifestyles through health information. An improved awareness of the issue may help to identify their needs for support at using health information and communication technology and increase the efficiency of providing them with digital health information.

Keywords: health information, information and communication technology, older adults

Information Literacy of Polish Ph.D. Students: The Learning Outcomes Approach

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Objectives

Students are arguably one of the most-researched populations, including in the context of information literacy (IL). However there is significantly less research on Ph.D. students. Nevertheless, the information competences of doctoral students are crucial factors that impact the efficiency and validity of their research and future career prospects. We will discuss the development of an ILDoc questionnaire dedicated to researching IL of Ph.D. students.

Methodology

The first step was to refer to well-known and verified tools such as ILSES (Kurbanoglu, Akkoyunlu and Umay, 2006), IL-HUMASS (Pinto and Sales, 2010; Pinto, 2012), PKIM (Świgoń, 2013), and ALFINVES (Pinto et al., 2013). The other step was to include the learning outcomes approach into the questionnaire. Quantitative data from the survey allowed for statistical analyses to identify potentially core variables. The CAWI technique was used due to its applicability in the case of a dispersed group such as Ph.D. students. The survey was conducted between September 2022 and January 2023 among Ph.D. students from five Polish universities. The selection of universities was dictated by a pragmatic approach in which we focused on easy access to the sample. Due to the important context of systemic changes, we chose only research universities which we knew offered the unique perspective of doctoral schools. The population of Ph.D. students at Polish universities is about 12,000, therefore the required number of people to take part in the survey amounted to 261. Responses were collected from 294 students of various disciplines using snowball sampling - the survey was distributed via peers from selected institutions. Data was analysed using internal consistency reliability tests, exploratory and confirmatory factor analysis, as well as structural equation modelling.

Outcomes

This paper describes the development of the ILDoc questionnaire and the results of a preliminary study. Using factor analysis, we identified 14 core variables that reflect four theoretically consistent factors. Based on the findings, we propose that these identified latent factors could form the basis for determining the variables in the SEM analysis. The presented approach provides valuable insights into the key factors that shape the information literacy of Ph.D. students in Poland, grounded in their self-assessment of skills, knowledge, and attitudes.

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Keywords: doctoral students, information literacy, learning outcomes, Ph.D. students, research competences

Clicks, Queries, and Searches: Uncovering User Behavior through Transaction Log Analysis

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DLSU Libraries is composed of one main library and five satellite libraries located at four campuses, serving more than 25,000 patrons. In September 2020, the Libraries launched AnimoSearch, a next-generation discovery service powered by Ex Libris Primo that offers a unified search interface for accessing diverse library resources. AnimoSearch allows users to find relevant materials quickly and easily, utilizing multiple databases and advanced search features like relevance ranking, filtering, and saving searches.

In thi study I investigated the use of transaction log analysis to study the information behavior of AnimoSearch users. My goal was to learn how users interacted with the service as well as what information needs and behaviors they exhibited during the information-seeking process. Specifically, I attempted to answer the following questions:

- What are the most commonly used search terms in a discovery service?
- What are the most frequently used facets and how do they affect the success of a user's search? and,
- How do users' search behavior and resource access patterns vary by user segment?

I utilized transaction log analysis to investigate user behavior and information needs. Analysis of transaction logs is a non-obtrusive approach to gather data from a significant number of users with the aim of comprehending the behavior of online users (Jansen, 2006; Philip, 2004). Log studies take the most natural observations of how people use systems without experimenters or observers changing what people do. In Primo, transaction logs refer to a record of all the activities that occur within the system such as searches, clicks on search results, and access to specific resources. I quantitatively and qualitatively analyzed the transaction logs from the academic year 2021-2022, with an emphasis on identifying patterns of user behavior as a way to understand the context and motivations behind these behaviors. I obtained relevant data from the Primo usage reports such as actions, devices, facets, sessions, and popular searches as well as zero result searches. I used descriptive statistics to calculate frequency counts, means, and standard deviations to summarize the characteristics of the user population, such as their search behavior and the sorts of resources accessed. I also analyzed various user segments to identify common patterns in user activity. In addition, I undertook a content analysis of the search queries to discover prevalent themes and subjects sought by users. These data will aid in identifying popular subject areas and informing collection development decisions.

The study's findings provided important insights into the information behavior of AnimoSearch users. Results reveal users typically conducted a large number of searches and interacted with a wide range of different resources during a single search session. Most initial searches were conducted in the "Everything" category, while the "resource type" filter was the most commonly utilized for refining results. In contrast, filtering by author was the least frequently employed. Zero search results often occurred when users entered a long string of keywords in the search box. According to the logs, users frequently modified their search queries and employed a variety of search strategies to find the information they required. The study's findings had important implications for the design of discovery services. It emphasized the importance of systems that support complex and iterative search processes, provide users with a variety of relevant resources, and ensure the reliability and relevance of search results.

This study added to the growing body of research on transaction log analysis as a method of studying information behavior. This approach can provide valuable insights into users' information needs, behaviors, and preferences by analyzing interactions between users and information systems. The study also emphasized the significance of taking into account the context of use when designing and evaluating information systems. Results of the study will also help developers and vendors to gain insights into how users engage with the system that can be used to improve the design and functionality of the service to better meet user needs.

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Keywords: transaction log analysis, discovery service, information-seeking behavior

The Role of Contemporary Educational Technologies and Programs in Developing Information Literacy of "University 4.0"

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The main goal of the current study is the construction of a model and criteria for the management of educational programs in University 4.0 to support the development of information literacy.

To achieve the goal, this paper sets the following tasks:

- to develop a model for managing an educational program;
- to define the role and place of the educational program in University 4.0;
- to develop criteria for evaluating the effectiveness of the management of educational programs for the development of information literacy at the university.

The paper examines the conditions for interaction between science and education through the lens of the University 4.0 development model, which differentiates universities based on the functions performed by them: University 1.0 - education, University 2.0 - research work, University 3.0 - innovation and commercialization, University 4.0 - innovation creation center.

The paper also presents the researched interrelationships in the communication between student and teacher, as well as between business and society. This includes the relationship between the components of research, innovation, digitization and artificial intelligence, and how they affect the communication of individual groups. Special attention is paid to the specifics of information literacy in Generation Z, highlighting the fact that the innate digital literacy of this generation, as well as its descendants, is smoothly changing the educational architecture of the university of the future – from standard learning to a digital educational environment with artificial intelligence.

The studies and conclusions are based on real research conducted at the University of Library Studies and Information Technologies, Sofia, Bulgaria, the so-called an architectural approach, for which not only theory but also practice shows that it most adequately meets the research objectives.

The proposed scientific analysis presents an example of building an educational strategy aimed at the formation of information literacy in a university environment by adapting educational programs so that they are tailored to the individual characteristics and capabilities of students. The analysis of the results of the survey puts the focus on the development of the individual information literacy of each student, through trainings that support cooperation and teamwork. This type of learning builds students' real-world problem-solving skills and is specifically aimed at developing creative and critical thinking.

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Keywords: information literacy, educational technologies, digital competencies, soft skills, University 4.0.

Information Literacy in the Design Thinking process – A Preliminary Research

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Objectives

The process of Design Thinking (DT) is widely used in various areas of human activity, including information activities. According to Rak (2022), there are three areas where DT processes can take place. The first and most general and universal applies to entities whose activities are related to broadly understood information activities and information management (institutional area). The next one refers to individual and group information management and includes tools supporting activities among participants of the DT process (operational area). The third and last area is related to the use of DT in the implementation of practical subjects in the field of information management and related fields (didactic area). The aim of the paper is to explore and capture the relationship between DT and information diteracy (IL) in the context of the didactic process. In this perspective, DT can be understood as a manifestation of collective intelligence (Lévy, 1997) of great importance for didactic processes (Fisher, Oon & Benson, 2018), in which students undertake both practical activities of designers (Kimbell, 2011) and users of innovations (Kimbel, 2012). It is innovation design (Soukalová, 2017) that is the main core of activities undertaken by students in the didactic area where specific information competences are also needed. IL is understood as undertaking information behaviors that allow obtaining information tailored to information needs and their ethical use (Johnston & Webber, 2003).

Methodology & Outcomes

The main problem of the research study is to explore and capture the relationship between ILand Design Thinking processes in the context of didactic processes. The main research questions are: What information competences should students have in order to actively participate in the DT process? What information management tools do they use in the DT process? The study will be carried out in two groups of students who participated in classes where DT was used. The first group is represented by people studying at the first-cycle studies in the field of electronic information processing (humanities and information technology studies). Their curriculum does not include subjects directly related to IL. The second group consists of students from second-cycle studies in the field of information management (studies in the field of social sciences). The study program provides for participation in many subjects related to IL. In both groups, the author of the paper conducted classes and moderated the DT process. The study will be conducted using the survey method. Survey research will be supplemented by a critical analysis of the literature, comparative analysis, and statistical methods.

The expected outcomes of the research are to show what information skills are needed and preferred in the process of DT and what differences in IL exist among students in information-related fields of study.

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Keywords: design thinking, information literacy, higher education, collective intelligence, didactic process

To Find the "Rotten Apple" – Information Ethical Requirements for the Information Literacy of Autonomous Writing Engines

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Since the availability of the chatbot ChatGPT in 2022, there has been a heated discussion, especially in didactics and media education science, about what conclusions should be drawn (Baidoo-Anu & Owusu Ansah, 2023) from letting students complete tasks through the chatbot. In this paper, we will turn this idea ethically. Namely, not only the writer's truthfulness but also the source's truthfulness and accuracy is an information ethical requirement. Therefore, there is a claim on the author to account for the sources' quality. However, the realization of this claim is bound to an explicit competence, in this case, information literacy. When using autonomous writing engines, however, this competence is shared: The user of this machines usually does not apply his information literacy but leaves the source responsibility to the AI. This delegation of information literacy can only succeed when the machine can possess information literacy itself. This has information ethical consequences for the use and for the development of such technology: autonomous writing machines must be information literate to meaningfully and efficiently find information that it has been trained to use, for example, from the Internet, according to a given task or question, and then combine it according to the given task or question.

Let us imagine that such machines like ChatGPT will be increased or even widely used in the future. Applications creating research reports or journalistic reports are already a reality today (Pavlik, 2023). In the future, machines will independently search for information online to process multiple queries. It is important to remember that not only correct and up-to-date information can be found on the web, but also intentionally or accidentally incorrect, tendentious, or falsified sources are also widely available. It is part of successful information literacy to constantly check the sources for their truthfulness and reliability. If the old phrase "one bad apple spoils the whole barrel" is true, then the ability to distinguish good apples from bad is an information core competency. After all, if the increasingly used autonomous machines take over rotten apples and incorporate them into their texts, not only will these texts become rotten and wrong, but the net itself will become infested with this rot since, because of increasing digitization, machine texts will be increasingly present.

This paper discusses what information ethical requirements must be placed on design, programming, and use of autonomous writing machines so that they themselves can actively seek out and avoid the rotten apples. It is not about technology but more fundamentally about explicitly normative demands on the development and use of autonomous writing machines.

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Keywords: ChatGPT, information ethics, information literacy, autonomous writing engine

Research and Conclusions Regarding Using Problem-Based-Learning in Teaching

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Background

Problem-based learning (PBL) is a method of instruction where students are given a real or realistic problem, such as a case study or hypothetical situation, and asked to use inductive reasoning to learn both information about the topic and how to think critically about it (Repanovici & Koukourakis, 2021).

Literature Review by Scientometric Methods

Scientometric methods helps us review literature quickly, using algorithms to automatically select the most relevant articles. Scientometric methods help us create an image of a certain field within a certain database. Using the research question "problem-based learning", we obtained 7,137 results in the Web of Science database. We downloaded the database in a tab-delimited file format withfull records and cited references. We analyzed the data with VOS Viewer, a software for scientometric analysis. One of the key features of VOS viewer is its ability to identify clusters of related research based on co-occurrence of keywords in article titles, abstracts, or keywords. These clusters represent groups of articles that are highly related to each other in terms of their content and can provide valuable insights into the structure of a research field or discipline. We analyzed keywords used by authors. Three hundred and twenty seven terms used in the document descriptions occurred at least ten times. The software calculates the relevance, and identified 196 terms. The term map was generated and four clusters were identified: Teaching methods using PBL; PBL in medicine; PBL effects on students; and PBL in engineering education.

Objectives, Methodology & Outcomes

Within the EU project 2021-1-IE02-KA220-HED-000035812, (Developing Information and Research Skills for Business, Innovation and Entrepreneurship) modern teaching methods based on PBL are implemented at Transilvania University. There, a PBL model was implemented in the *Digital Repository Management* course for students in the *Digital Media* specialization. Starting from the hypothesis that PBL was no longer used in teaching, we introduced his method and measured the impact of the change in the pedagogical approach for students.

PBL is a student-centered and constructivist educational method that emphasizes the development of problem-solving skills and critical thinking. The students were introduced to the PBL model, througha pedagogical model that also explained the differences between the inverted pedagogy and classical pedagogy. Students carried out activitieswhere a problem was defined. They then, saw how specialists work in practice and they made practical applications after the theoretical model was presented to them. We as the researchers designed a questionnaire to measure the impact of the PBL method on the students. We followed the students' positive and negative opinions about the method. In the end, we released an online questionnaire with 21 questions in Survey Monkey. All 61 students completed the survey. The students appreciated the results of the implementation of the PBL method and were satisfied with the knowledge they gained. Qualitative research demonstrates the need to change the classical learning method by applying interactive, intuitive methods to engage the student more in the teaching process. Especially in the field of LIS, this method is much more appreciated considering the dynamics of changing technology and the mentality of students. This model and its associated activities can be implemented to other courses.

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Keywords: PBL-problem based learning, teaching, European project, Digi tools, digital repository

Information Literacy Impact Framework

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Introduction and Objectives

Information literacy (IL) is an essential capability for modern life, including education, work and leisure. IL interventions are thought to impact on society by facilitating meaningful engagements with information (Khan & Idris, 2019; Sundin et al., 2008).

There has been much research into IL interventions in higher education. However, the impact of IL interventions in other settings is not well understood. One factor is the lack of an agreed definition of IL intervention impact and parameters to guide impact assessments, including whether these encompass both positive and negative effects; intended and unintended consequences; social, economic, cultural, environmental, or technological dynamics; and short-term and long-term processes.

There is thus a rift between the assumed value of IL in different areas of society, and what can be evidenced. This was addressed in this project by posing two research questions : (1) 'How is impact defined in IL interventions?'; (2) 'What are the success factors behind impactful IL interventions?

Methodology

A literature review of research published in English was undertaken using the databases LISTA and Web of Science, and search-terms developed from the research aims: assess, benefit, effect, evaluat*, impact, indicator*, measur*, monitor*, outcome, output, result. Results without 'information literac' in the title or abstract were removed, as were duplicate results and all results predating 2005. This led to 3707 items. A longlist of 170 items was created by independent reading of titles and abstracts, with discussion between the researchers in cases of disagreement. A shortlist of 26 items was created by independent assessment of each longlist item's significance, quality and rigour. Shortlisted items were then examined for references to impact assessment methods and the types of IL impact reported.

Outcomes

RQ1: Impact is evaluated (hence defined) in terms of immediate activities, not longer-term benefits. Examples include (a) use of IL skills by students after participating in an IL project, but not effect on grades; (b) use of library facilities by student nurses, not impact on nursing capability.

RQ2: While not all shortlisted papers report how projects generated impacts, nor how these were evaluated, the emergent components of impactful IL interventions are: evaluation of effectiveness and outcomes; choice of clear frameworks and structures to measure impact; ensuring integration and relevance of the intervention; collaboration between stakeholders; design of content and delivery methods; management buy-in and budget; repetition and follow-up.

All of these components apply to any project, but 'repetition and follow-up' is worthy of further study in the IL context, e.g. when and how this should be delivered.

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Keywords: information literacy, impact, impact evaluation

Public Libraries Fighting Disinformation: An Analysis of Knowledge, Resources, and Actions of Portuguese Librarians

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Public librarians play a significant role, as they are responsible for mediating access to information, which desirably includes training the population in information literacy. In the current context, the problems with fake news and disinformation make their action even more urgent, requiring a solid position in tackling this phenomenon, primarily through clarification and training to the population. In the case of academic libraries, few studies show the commitment of professionals in deepening actions and projects to fight disinformation (Antunes et al., 2021), even though, in Portugal, there are no studies on public libraries' activities.

The literature highlights following advantages of developing these projects in public libraries:

- the importance of increasing the evaluation skills of information sources;
- the development of critical thinking to combat disinformation;
- strengthening citizenship and autonomy of individuals and their creative potential;
- the training of proactive critical thinkers based on validated information literacy strategies;

and urges decision-makers to put intentions and actions on their policy agenda (European Commission, 2016). However, it requires public library information professionals to be aware of the problem (Sayers, 2006), empowered with these skills and competencies (Matteson & Gersch, 2020), and committed to a culture of sharing resources and knowledge around the issue (Harding, 2008). But how can we know if and how they develop these actions? This exploratory study aims to better understand the level of knowledge, practices, and resources available in Portuguese public libraries to tackle disinformation. To this end, a questionnaire composed of 12 questions was designed and distributed via social networks of public libraries and by email. Seventy answers were obtained, and distributed throughout the national territory, representing about one-quarter of total of 303 municipal public libraries in Portugal. The results show the librarians' consistent knowledge of the topic but still incipient actions about fighting disinformation. The practices that directly address the fight against disinformation and fake news through training in information literacy are scarce and lack guidance for their application. The fight against disinformation is global and urgent (European Commission, 2022), making it very relevant to train the librarians themselves to use their multiplier effect in training strategies with the population, contributing to the implementation of a more attentive, integrated, and critical citizen culture.

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Keywords: information literacy, public libraries, disinformation, Portugal

Perceptions of LIS Professionals on ACRL Framework: Understanding and Fostering Concepts, Skills and Attitudes in Academic Students

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A few years after the publication of the Framework for Information Literacy for Higher Education (Association of College and Research Libraries, 2016), its impact has been studied at different levels and in several regions (Guth et al., 2018; H. Julien et al., 2020; H. E. Julien et al., 2020). However, it was only very recently that this main document was Portuguese-translated (ACRL et al., 2022), which poses a challenge for information professionals in Portugal. Regardless, this shift has brought renewed energy and a new level of discussion around the training provided by academic information professionals, who pay increasing attention to teaching and learning methodologies. The pedagogical role of librarians becomes more pressing as teaching becomes more researched, with pedagogical methods, constructivist learning, multiplying research techniques, and information literacy as fundamental learning elements (Caffrey et al., 2022). How do Portuguese professionals react to the opportunity to know it deeply and objectively and to the possibility of applying the orientations emanating from this document? This study is part of a national project on information literacy applied to academic students and aims to analyze the perceptions of LIS professionals about the knowledge and practical applicability of the six conceptual frames that make up the ACRL Framework for Information Literacy in Higher Education. From an extensive literature review and the creation of an online survey of academic librarians' perceptions of the ACRL Framework, conducted in January 2023, the survey used a 5-point Likert scale on aspects of understanding the frames, knowledge practices, and dispositions that students can develop in an academic context with the support of LIS professionals. The results show librarians' initial knowledge of the topic but a solid will to proceed with actions regarding it. Therefore, based on the translation of the Framework into Portuguese, a set of activities associated with each of the frames and the creation of pedagogical materials (e.g., open PowerPoints) and training spaces (e.g., webinars, conferences), to support the informal training provided by the LIS professionals, were promoted. As information literacy programs continue to be integrated, implemented, reflected, and reviewed in libraries (informal education) and integrated into academic curricula (formal education), the Framework is a reference document on which information professionals and teachers can find and support inspiration. In this context, and if we want more and better information to pass through higher education, we need to optimize and make valuable access to it. Given the proliferation of (dis)information, librarians must urgently assume the task of training in this area, developing their skills at the pedagogical level.

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Keywords: information literacy, ACRL Framework, librarians actions, learning, higher education, Portugal

Telling Data Stories, the Way Averroes Wrote His Commentaries – A Three-Level Approach to Facilitate Data-Driven Decision Making

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Data stories are a way of presenting data and information in a narrative format that is easy for people to understand and engage with (Li, 2018). They can be used to promote information literacy by helping people to understand and critically evaluate data and its sources. They can also be used to help people become more informed by helping them understand and make sense of the data that increasingly shapes our world.

Following Averroes' principle of writing three general types of commentary based on Aristotle's works (Adamson & Di Giovanni, 2018), namely literal, metaphysical and political, we propose a similar methodology that separates the data from the possible narratives and allows the promotion of data literacy at different levels by tailoring it to different audiences of different expertise and age.

We explored this topic in two projects carried out by the Department of Information Science at the Haute Ecole de Gestion, HES//SO-Geneva. With the VIDAS (VIsualisation of DAta Stories) project, we provided a comparative indepth study of the distinctive nature of data stories (VIDAS, 2023). In MIDAS (MIcroclimate DAta Stories), we then put the concepts into practice and developed three data stories based on the same dataset and developed at three different levels (MIDAS, 2023), targeting scientists, policy makers and children.

We started our study with a thorough literature review seeking to find a clear definition of the term data story. As a result, data stories encompass various types of elements that need to be considered when telling a story: the data, the visual form, and the narrative component. The balanced combination of these elements is intended to drive behavioral change through the integration of narrative into the data presentation, and last but not least to lead to a call to action (Duarte, 2019).

While looking for ideas of relevant data stories relevant, we came across the history of a local chestnut tree, located in the old town of Geneva. Since 1818, the date of the first leaf hatching has been observed and recorded as a marker of the arrival of spring. This subject seemed particularly relevant to us because it is rooted in local history and it provides a tangible illustration of the impact of climate change on our environment. Data Stories developed on this topic seemed to us an appropriate communication tool to raise awareness among different audiences (children, adults, decision makers) about the impacts of global warming. The time shift of the first leaf hatching date of the chestnut tree to earlier and earlier dates could be put in parallel with the warming in Geneva due to climate change. In the paper we will present the genesis of the three data stories developed on this subject.

Our study shows that data stories can be used to help people make informed decisions by providing them with a clear and concise representation of the data. This can help people understand the implications of different choices and make decisions based on evidence rather than intuition. So far, data stories have been created for two datasets using the principle of Averroesian commentary. After creating the first set of data stories, self-evaluation procedures were used to gain insights that were subsequently applied to the second data set.

It is worth noting that the impact of data stories on data literacy will vary depending on the audience, the type of data presented and the way the story is presented. Overall, however, data stories can be a powerful tool to promote data literacy and help people become more informed and engaged citizens.

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Keywords: data stories, data literacy, data visualization, stepwise vulgarisation

The Delphi Method in Information Literacy Research

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Introduction

Information literacy (IL) has been one of the most extensively researched concepts within Library and Information Science (LIS), interrogated as a phenomenon and practice, through a range of methods. Numerous bibliometric studies have been conducted to map the field, and they indicate the overwhelming use of quantitative methods (e.g., Kolle, 2017). However, these mapping studies, especially until more recently, have not focused on the content of IL research, and have restricted analysis to a short time span and a narrow range of databases.

A relatively popular research method, introduced in IL research by Doyle (1992) to develop an IL definition and competence outcomes, is the Delphi method. Delphi is employed for facilitating structured group communication and soliciting expert opinions via rounds of surveys. It applies particularly well to complex issues and exploratory studies in emerging research areas, and can contribute to theory and practice. Therefore, it is well suited to IL research, including potentially to information (literacy) experience since it allows qualitative exploration of subjective judgments and individual experiences. By integrating views from different disciplines – thus bridging the theory-practice gap and silos within IL – Delphi can be beneficial to IL coherence and progress. Several studies have explored Delphi in LIS (e.g., Lund, 2020); however, they have not focused on its application to IL research.

Objectives

This research aims to develop a critical understanding of how IL research is operationalised and executed by means of the Delphi method and its current state of usage in IL research. Specifically, it seeks to determine what IL issues and which research contexts are studied using Delphi. It also explores the key characteristics of IL Delphi studies: the types of Delphi utilised; the profile and ways of recruiting experts; the number of rounds and of experts in each round; and the types of findings.

Methodology

A systematic review of IL research studies that have utilised Delphi was undertaken, using studies retrieved from five databases (Web of Science, Scopus, Library and Information Science Source, ProQuest Library and Information Science Collection, and LISTA). 799 articles were retrieved by querying the databases for peer-reviewed articles in English, with a non-defined temporal span, vetted for relevance to IL research and actual usage of Delphi. 38 articles were identified for analysis, using critical literature review and descriptive statistical analysis.

Outcomes

While Delphi is not a common research method for IL studies (averaging 2 studies per year), it was used to study various issues, including digital literacy, health IL, and IL standards, models and concepts, mainly in the contexts of education, health care and librarianship. Modified Delphi was the most common type, and information experts and information science researchers the most common populations, recruited through employment and publication in scholarly journals. Studies with 2 rounds were most frequent, averaging 17 panelists. The most common finding retrieved is competence and skill framework, followed by opinion and tool development. The paper may serve as a useful base for IL theory and practice, providing guidance for future IL research, both content- and methodology-wise.

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Keywords: Delphi method, information literacy research

Information Literacy as an Ethical Experience

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Introduction

The purpose of this paper is to present the main ethical challenges of information literacy as an ethical experience based on analyses of selected theoretical concepts of information literacy, information experience and on the results of a Delphi study focused on information ethics. The main research question is articulated as follows: Which ethical components can be decisive for developing the concept of ethical information literacy as a human experience?

Methodology and Related Research

Selected models of ethical issues of information literacy have been analysed, including moral literacy (Tuana, 2007), ethical strands of ANCIL (Secker & Coonan, 2013), metaliteracy (Mackey & Jacobson, 2019) and others. The background is related to qualitative innovative studies of information as experience (Bruce et al., 2014, Lloyd, 2021) and to the concepts of information ethics (Floridi, 2013), context (Agarwal, 2020) and value-sensitive design (Friedman & Hendry, 2019). A Delphi study focused on information ethics in digital environment was undertaken in 2021-2022 with selected experts from the Czech Republic and Slovakia (19 experts: 1st round, 6 experts: an online discussion: 2nd round). The disciplines included information science, computer science, media sciences, psychology, political science, management, or social informatics. The data was analysed using the content analyses, discourse analysis and conceptual modelling.

Findings

Findings of the Delphi study are visualized in three conceptual models representing the ethical challenges of information literacy. A final model is interpreted as an ethical information literacy experience in the academic context. The ethical components include social rules, epistemic and social values of information, and intercultural differences. Results confirmed the interconnected strata of the ethical information literacy experience based on social rules, personal characteristics, value tensions (ICT bias and social contexts), education and values of utility and truth.

Conclusions

We recommend including ethical components based on the findings of the Delphi study into innovative frameworks of academic information literacy, namely personal experience in ethically informed information use and production, social and intercultural rules, value tensions and epistemic and social values of information, (e.g. the utility and truth). The proposed model and recommendations can be used for further qualitative research of ethical information literacy experience, value-sensitive design of digital services and information literacy courses. We stress moral imagination, affective background, metaliteracy, metacognitive and participatory factors, context and accountability. Information literacy needs further conceptual development based on related experiential ethical dimensions.

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Keywords: *ethical information literacy, information ethics, a Delphi study, ethical information literacy experience, value-sensitive design*

How Students Seek Information in the Context of Fitness and Physical Exercise

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Introduction

In the last decades, our society evolved from information scarcity to information abundance. For the many things that we need to do in everyday life, we often find ourselves overloaded with information on how to do things. A visit to an Internet search engine (e.g., Google) or a visit to an online video library (e.g., YouTube) can often lead to multiple results on how to do the same thing. The problem of information seeking often turns into a filtering and evaluation problem.

In the context of information abundance, Information Literacy becomes a vital competence so that individuals can filter information (Abdallah, 2013) in everyday life. This is important in order to achieve desirable outcomes.

In this research, we built upon extant theory on information literacy (Sample, 2020), rich media (Ishii, et al. 2019) and information seeking in everyday life (Savolainen, 2017) in the context of students' fitness and physical exercise. This is important as student practices of fitness and physical exercise can lead to desirable outcomes such as health and well-being, or negative outcomes such as pain and injury. In a world where so much information is available in multiple formats, it matters to understand how students seek information for the practice of fitness and physical exercise.

Method

This qualitative study addresses "how students seek information in the context of fitness and physical exercise". This work-in-progress research is based on eight interviews and in-situ observations on the premises of a Nordic University that provides sports services to its students. We cover different fitness modalities such as calisthenics, basketball, weightlifting, stretching, and foam rolling.

Preliminary Findings

We found that even if students exhibited elevated levels of literacy in academic issues, they sought and evaluated the information pertaining to their fitness and physical exercise in a quite different way from their study and academic issues. As expected, students preferred rich media information in digital format, but it is striking how every student consumed information in a completely unique way – most of them consumed very different content even if practicing the same modality. This is explained by the high personalization, high interactivity, and high intrusiveness of the information providers' platforms. Students valued the corporeal landscape of information literacy. Also, they consumed published research on sports science, but only indirectly. Some often provided information to others as well.

We will discuss the integration of our findings with information literacy theory, rich media theory, and information seeking in everyday life. Furthermore, we will also suggest avenues for future research that should engage in cooperation with other disciplines (e.g., media studies, sports science, artificial intelligence).

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Keywords: information literacy, fitness, exercise

Copyright Awareness among Future Media Specialists: Survey Results in Bulgaria

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An essential component of the information society is intellectual property (IP) knowledge, in particular copyright and related rights. IP has become even more relevant with the increasing openings allowing people to create and promote their work in online media.

There are a lot of different versions of copyright surveys in Social Sciences in Bulgaria because the specialists in this field find their spheres of realization in different public institutions. As cultural and information institutions where using or producing information resources is the basis of their activity, specialists need to be well informed on IP protection, especially copyright (Trencheva & Denchev, 2016; Todorova & Trencheva, 2014; Todorova et al. 2014). However, a survey dedicated to copyright awareness among future media specialist had not been performed.

The paper presents the methodology and results of a survey which aims to establish, systematize, and analyse the current level of awareness about copyright issues among trainees in the media field.

The survey instrument was developed by the authors in order to collect data, regarding students' knowledge, awareness levels and attitude of copyright issues. The questionnaire consists of 40 main questions in four panels.

The survey was conducted in nine universities in Bulgaria, among students in the public communications and information sciences, with specialties such as journalism, media, public relations, arts, and creativity. It was conducted from 1st April – 26th May 2021. The general aggregation, consists of 449 effectively surveyed Bulgarian students in Bachelor, Master and Ph.D degree programs. The study was done on the principle of systematic random selection with stratification to 10% of the students in the mentioned professional field. Data collection was carried out by Google survey.

The survey provides information on copyright literacy and the attitudes of young people to IP and was conducted at a time when the rights of authors and journalists were in focus and their value emphasized. In this sense, it can be assumed that the answers of the respondents indirectly influence the public debate on the IP topic. The analyzed information serves as a starting point for a model for increasing copyright literacy among future media specialists.

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Keywords: intellectual property, copyright literacy, media industry, social sciences

A Picture Paints a Thousand Words, Digital Media Makes for A Lived Experience

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Globally academic libraries exert great efforts towards enhancing information literacy among higher education students. Academic Libraries in the United States of America boast several examples of the use of digital storytelling in libraries. One such example is the University of Reno, where librarians are deeply embedded into the process of digital storytelling. There various instructors in the college have begun incorporating digital storytelling into instruction in response to a broader push towards strengthening students' communication skills. In Africa and southern Africa information literacy workshops still concentrate mainly on text, while visual media must also be used accurately and ethically. Regrettably, in many instances visual literacy is rarely addressed in greater depth. Visual literacy entails experiences, attitudes and orientations and are shared via images, video, and other forms of multimedia. Digital storytelling requires high levels of visual literacy. The American Library Association (ALA), the Association of College and Research Libraries (ACRL) as well as the International Association of Visual Literacy (IVLA) describe and explain visual literacy. Visual literacy skills equip a learner to understand and analyse the contextual, cultural, ethical, aesthetic, intellectual, and technical components involved in the production and use of visual materials. The research question is what is the current utilisation of visuals among academic library services in the target group? This study sets out to explore the perceptions, challenges, and experiences of academic information specialists in enhancing visual literacy as a sub-literacy. Through the lens of a critical digital literacy frameworks and informed by recent research, the study looks at the potential value of visual literacy skills to the support of active learning in diverse student communities The study consists of three case studies in three South African higher HEIs. The three selected HEI Library and Information Services all responded and participated fully. Qualitative data were collected from semistructured survey questionnaires and follow up interviews sent to three institutions of higher learning in southern Africa. Thematic analysis was conducted to code and analyse collected data. The focus of the questionnaire was on their current use of DST in facilitating a range of literacies. Follow-up interviews were conducted at the selected HEIs. Thematic analysis was conducted to code and analyse collected data. In total three (3) participants from each HEI responded in answering the online survey questionnaire, making the total sample size nine (9) participants. When prompted about the Seven Steps of designing and creating a digital story, all participants conceded to lacking the foundational skills, knowledge and understanding of designing and using a digital story. They further shared that their HEIs all have instructional designers responsible for creating storyboards and digital content, but that these were mainly used for discipline-specific instruction only. None of the HEIs had a grounded understanding of metaliteracies and admitted guidelines towards best practice models in enhancing visual literacy. The value of the study lies in adding new knowledge of visual literacy skills, since they are still conducting information literacy training unchanged these past two decades, utilising PowerPoint presentation with limited use of digital storytelling techniques. The study offers communication and literacy awareness pertaining to an unexplored area and to propose best practice models.

Keywords: visual literacy, metacognition, digital storytelling, multiliteracies, new literacies, cultural literacy

Correlation between Film Criticism, Social Issues and Student Audience Reception

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The main objective of this research is to define the correlation between film criticism, social issues in films and student audience reception, and how media literacy affects this process. In this case study the quantitative research will be used as a main method. A questionnaire will be used to question 400 students in 4 different Croatian universities. Croatia will be used as a case study and the results will be compared to those of other researches in this field.

A detailed questionnaire will be used with questions about the students (age, gender, etc.), how many of them read film reviews and where (printed media, online written media, video blogs, social networks, etc.), and the way the film reviews and different social issues in the films affect their decision to watch the film and its reception. We will also ask them how and which film books from university and public libraries they read influenced their choice and reception of films, and how the film courses they attended at their universities affected their choice and reception of films.

Qualitative research methods will also be used, with in-depth interviews with film professors at these 4 universities, in order to see how they present the importance of film criticism to students, what social issues in films they discuss with students, how the students react to film reviews and to films that deal with different social issues in their discussions on classes and in written papers.

In analyzing and commenting on the results of this research, the works of renowned researchers in these fields will be consulted. Eliashberg and Shugan (1997) empirically researched the correlation of critical reviews and box office; Livingstone (2004) considered how far existing theories and methods for researching audiences can be extended to new media; McDonald (2007) emphasizes the need of critical evaluation of films challenged by cultural studies and media democratization; Hobbs (2011) demonstrates how to incorporate media literacy into the classroom, providing the tools teachers need to effectively foster students' critical thinking and communication skills; Gillespie (2012) claims that criticism is opposing the consumerist approach to culture and resisting the monetization logic of the cultural market; Frey (2014) writes about the challenges of film criticism in the age the new media and Eagan (2020) proved the influence of contemporary film reviews, especially negative ones.

This study will show how different aspects of media literacy affect the ways in which students choose and evaluate films. On the basis of this research an evaluation model will be established, applicable to other countries, and could have a wider impact on film literacy researches at universities. It should also be emphasized that the proposed research model, taking into account the specifics of theatrical and literary works, could be applied to theatrical and literary criticism. Therefore we believe that this research will give relevant scientific results, inspire new studies in mentioned similar contexts and give valuable input to a better understanding of information and media literacy.

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Keywords: media literacy, film criticism, social issues, film books, film education

Introducing and Verifying the Model of Quality School Library (MQSL)

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The Model of Quality School Library (MQSL) is a result of multiphase applicative research (Vilar & Zabukovec, 2022). According to many authors (e.g. Todd & Kuhlthau, 2005; Todd, 2012; Vilar & Stričević, 2014; Vilar & Zabukovec, 2016, 2020, 2022), quality school libraries (SL) are one of fundamental prerequisites for systematic development of information literacy (IL) skills that are essential in our information society. SL have important tasks in formal education and are the only libraries to be potentially visited by everyone. While, according to Slovenian legislation, SL, including formally educated librarians (L), are a compulsory part of formal pre-school, primary and secondary education, the legislation lacks addressing the foundations for professional development and work. The formation of MQSL (the 1st part of this paper), started with a draft model (Vilar & Zabukovec, 2020), that was tested using various methods, to form the MQSL. It consists of 3 interdependent layers: Basic Conditions (work conditions, L, development strategy); Quality Traits (interactive, accessible, integrated); and Outcomes (important and popular, effective) - presented in detail in Vilar & Zabukovec (2022). With MQSL, as shown in the 2nd part of the paper, we offer SL an empirically verified theoretical base for use in practice. It is useful in preparation of strategic foundations, such as a national SL development strategy, standards, and guidelines; normative acts, and in everyday work. It offers SL a foundation for firmly establishing themselves as invaluable integrated educational partners in building information literate users, since findings indicate: 1) IL skills of Slovenian pupils, and even teachers, often need strengthening; and 2) the position of the Slovenian SL should be strengthened, too, especially due to formal/systemic restraints and competence-related obstacles, often resulting in poor approaches and solutions. Both findings are tightly linked with all 3 layers of MQSL. Users' IL skills (shown through the 'Effective' element of the Outcomes layer) can only be systematically and wholistically developed with firstly providing SL with adequate Basic Conditions (layer 1 in MQSL). This assures all elements of the Quality Traits layer and the perception of importance and popularity of the SL in all educational partners. We started pilot MQSL verification and validation, also reported in this paper. In December 2022 we interviewed 9 experienced school L on 3 topics: 1) Their opinions on MOSL in light of their experience: a) How does it function in practice?; b) Which additions or changes would it need?; 2) The functioning of MQSL or its particular segments: The L were asked to give examples from their practice; 3) Operationalizing MQSL into professional recommendations and official requirements: We asked the L how to use the pilot findings to plan nationwide verification of MQSL. Initial analyses indicate that MQSL points out important areas for quality work and the development of SL. Areas in need of further development include competences, assessment, strategic planning, organization, proactivity, and training. In order to firmly act as proactive and systemically integrated agents of IL development, Slovenian SL must be provided with professional standards, regulated work norms, their own financial resources, and training. We plan to enhance this pilot study with a larger sample and to give the findings wider validity by addressing these topics in more detail.

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Keywords: school libraries, information literacy, quality, Model of Quality School Library

"Who Cares?" Defining Citation Style in Scholarly Journals

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According to Zotero Style Repository, one may choose from 10,377 different citation style languages (Zotero Style Repository, 2023). Although only a limited number of citation styles are widely used, especially in individual disciplines, authors may encounter a further expansion of the number of styles because some journals create their own or modified styles. Such a quantity represents a significant barrier for authors. They are not specialists in citation styles to create flawless entries in different citation styles themselves (many have trouble creating perfect references even in one style). Creating the references flawlessly (preferably in a citation style supported by databases and services such as Crossref) is essential to meet the requirements for publication and raise their usability and citation impact. Therefore, authors can use citation managers, so they do not have to manually rewrite references according to the templates, which, moreover, are not offered by every journal. In practice, that creates a set of challenges for authors: (1) to identify the correct citation style for the journal, (2) to try to find the style in their citation management system, (3) to create the references in the system or manually. It follows that a critical factor for referencing is which citation style the journal defines and how it facilitates the named challenges for authors by choosing a widely-used citation style that it describes appropriately.

The research aims to describe how scholarly journals define the required citation styles. We will analyze a sample of journals available in the Scopus database, thereby including only high-quality journals that meet the criteria for inclusion in this database (Content Policy and Selection, 2021). However, Scopus does not impose any requirements on citation styles. Therefore, they depend only on the journal's policies. We will create the research dataset manually in early 2023. The sample size will be approximately 400 journals. Our task is to identify how widespread individual citation styles are; to which extent journals use the various procedures for defining citation style requirements (e.g., naming, citing examples, referencing the interpretation); and whether there are any errors in the requirements description. Scopus includes both open and closed-access journals, journals in different languages, from different countries, and various scientific fields. In the second part of our analysis, we will compare the journals according to their discipline (scientific domain), openness, and rank in Scopus. We also want to compare the country specifics of Lithuania and the Czech Republic, which are small countries with local languages, and a general international group (the three groups will be of comparable size). The potential influence of these factors will be discussed. Information literacy practitioners and educators can consider the research results in academic writing courses, guidance offered to academics and doctoral students, and in supporting scholarly journals in setting the publishing rules to amplify the impact of articles.

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Keywords: citation styles, scholarly journals, quantitative analysis, scientific communication

Teaching Healthcare Students to Deal with Information Sources: Implementing the HUMAN Framework

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Our contribution aims to summarise the results of evaluating information literacy instruction focusing on plagiarism prevention and appropriate work with scientific information sources using the HUMAN framework. A team from Technische Hochschule Ingolstadt presented this frameworkat ECIL 2021 (Baldarelli et al., 2022) as a tool for developing the information literacy competencies of German engineering students. We followed up on this initiative by further adapting the framework to the context of healthcare studies in a Czech university.

Czech law mandates that midwives and paramedics receive a bachelor's degree to perform their work (Act on nonmedical health professions, 2004). This entails a requirement to master academic writing, including proper use of information sources. However, these claims usually do not meet the interests and expectations of healthcare students, who are rather practically oriented and, hence, consider the requirement of these academic competencies unjustified. In this situation, we were looking for a way to convince them that it is necessary to address this problem by adopting a different perspective. The HUMAN framework, which had been previously successfully piloted with similarly practically oriented engineering students (Baldarelli et al., 2022) and in a practical-oriented international management course (Trefer, 2022), provided us with such a solution.

In cooperation with the framework's authors, we created self-study materials (including a video presentation), exercises (consisting of categorisation of the sources used in a preselected scientific article), and a workshop using the HUMAN framework. We subsequently tested and evaluated the materials in class with 27 students of midwifery and emergency medical services study programs. To improve the reliability of the research, we used a combination of research methods: an analysis of students' outputs from the exercise and a self-assessment questionnaire.

The effect of the teaching method proved to be considerable. Before the lesson, more than half of the students assessed their ability to work with sources as poor or very poor. While after completing, all but one rated their ability as rather good or somewhat good (the average increase was 1.3 steps on a five-point scale). The evaluation of the framework as a teaching method showed that the students appreciated the video presentation but would welcome more examples of the application on specific scientific texts. Another finding highlighted the importance of choosing an appropriate article for student assessment. The analysis of the students' outputs showed that the findability of full texts of the sources cited in the assessed article played an essential role in their correct categorisation according to the HUMAN framework.

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Keywords: plagiarism, information literacy instruction, higher education, healthcare students, HUMAN framework

Comparative Studies of the Educational Opportunities of Professional Pages on the Facebook Network

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Recently, the global information and educational space has been constantly and intensively enriched with new phenomena and forms of their presentation that needs to be comprehended and analyzed. Over the past few months the authors of the article have chosen a specific segment of Facebook network and have tracked a small part of this global phenomenon. In our first publication we pre sented a content analysis of individual information and educational Facebook Pages. That study aroused public interest, prompting us to conduct a comparative analysis of related objects and phenomena. It should be noted that all educational pages on Facebook are professionally oriented and serve to develop the professional and medical competence of the interested educational community.

We attempted to compare thematic pages created or moderated by authors by means of content analysis. We give for comparison the statistical data of two author multi-thematic FB-pages.

"Mediaшкола професора Ганни Онкович", "Media School of Professor Ganna Onkovych" had 2,000 registered participants, URL: https://www.facebook.com/groups/898909013519964/about). Освіта за спеціальністю "Haфтогазова інженерія та технології", Education by profession "Oil and Gas Engineering and Technology", had registered 1,200 participants (URL: https:// www.facebook.com/groups/145315129579851/about). They are led by professors G.V. Onkovych from the department of Ukrainian and Latin languages of Kyiv Medical University, where a special course "Professional-oriented media education" is offered , and V.S. Beletsky, professor of the department "Oil, Gas and Condensate Extraction" of the National Technical University "Kharkiv Polytechnic Institute".

Every page has associated statistics, that are automatically updated continuously. A comparative analysis of Facebook informational and educational pages provides opportunities for obtaining versatile information that can be useful in the processes of monitoring and regulating information flows and in particular, professional information.

Keywords: information and educational space, Facebook network, media education technologies, media didactics, media competence, content analysis, comparative analysis, information flow

Data Literacy in Public Libraries in Croatia: An Empirical Study

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Introduction

Data literacy is defined as "a specific skill set and knowledge base, which empowers individuals to transform data into information and into actionable knowledge by enabling them to access, interpret, critically assess, manage, and ethically use data" (Koltay, 2017, p. 10). It has become an important professional as well as civic skill necessary for functioning in the society of the 21st century (Nayek & Sen, 2015; Bowler, Acker & Chi, 2019). Data literacy has also become part of daily library programs designed for local community in effort to minimize the shortcomings of digital divide in society (Shafiq, Bhatti & Naeem, 2020). On the professional level, data literacy has become necessary in management of public libraries as directors' decisions are frequently based on growing quantities of data collected during daily library operations. In addition to library programs for users and data managerial decision making based on data, public libraries have an opportunity to devise partnerships with data-sharing and data-using organizations and strengthen the perception about them as a key information hubs (Enis, 2020). This would make them interesting to users who want to become familiar with data literacy but don't have a place or whom to ask about it.

Research

The paper presents results from the nation-wide empirical research study in public libraries in Croatia about recognition of the term data literacy and its characteristics. The paper also aims to contribute to the advancement of data literacy in public libraries in Croatia. Literature review showed that previous research studies worldwide have most frequently had their focal point on academic libraries while public libraries have been neglected in this matter. In Croatia there were no recent research studies in public libraries about data literacy. The goal of this research study is therefore to collect data about the data literacy and its recognizable characteristics. The hypothesis of the research study is that heads of public libraries are still not fully acquainted with the term data literacy, and they lack more thorough education about it. A questionnaire was chosen as the principal research non probabilistic quantitative method as it provided the ability to reach many respondents scattered over large geographical region. It was distributed by e-mail to heads of all public libraries officially registered at the National and university library in Zagreb. The results of the research indicated strong use of data by managers in public libraries in decisions making process. At the same time, library managers lacked more extensive knowledge of math, statistics, data visualization and logic. On the positive side, they were aware about the elements of data life cycle and recognized important characteristics of data literacy. The results also showed recognition of data literacy related competencies necessary for successful public library management. Not a single public library employed a data librarian, but they defined clearly what activities such a person should do if employed. The public libraries used data mostly for library management and for user-oriented analyses and studies. When acquiring basic or additional knowledge about data literacy public library heads preferred short courses and webinars but they also liked for future librarians to acquire such knowledge during their university studies. Finally, they perceived data literacy important for development of public libraries in future.

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Keywords: digital literacy, public libraries, Croatia, library management, research study

The Age-Friendly Media and Information Literate City post COVID-19

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This presentation reviews current perspectives on the Media and Information Literacy (MIL) of ageing populations including socio-economic contexts, countering ageism, empowering older people, and the prospects for citywide strategies to support older people's MIL. The focus of the presentation is on mechanisms to estimate what life is like for older people in a city, including the concept of a *lifestyle check*, and how that can be applied to Webber & Johnston's (2019) #AFMIL (Age-Friendly MIL) City model. This model draws on international guidelines and reports including UNESCO (2019).

Ageing remains an international concern (World Health Organization (WHO), 2021; European Union Agency for Fundamental Rights, 2022). A common theme is that older people's access to rights and services have been compromised by the pandemic, requiring renewed action to protect those rights. For example England's Centre for Ageing Better (2022b) provides evidence that COVID-19 has exacerbated longer-term negative trends for older people in employment and housing, with implications for health and social care. In response, the Centre for Ageing Better (2022b) produced a guide for developing local 'State of Ageing' reports for use by local authorities, voluntary groups, and community leaders. The guide utilises the WHO's (2017) eight domains of community life, one of which is Information and Communication, and draws on work in Leeds (Centre for Ageing Better, 2021).

Scotland's Common Weal has produced an overview of population ageing in the Scottish context (Johnston & Dalzell, 2021) considering factors such as neoliberalism, demographics, ageism, pensions, housing, employment, and health. They propose a *lifestyle check*, which can be implemented across society to give people greater control of their ageing process. This strategy includes reliance on good MIL. However, for example, in Glasgow's (2022) Strategic Plan 2022-27 issues relating to population ageing, including MIL opportunities, must be teased out from broader socio-economic policy and value statements. This is a challenge to prioritisation of MIL at city level.

We will draw on the #AFMIL City model, Johnston &Dalzell's (2021) lifestyle check, the work by the Centre for Ageing Better and the Leeds and Glasgow eqalities outcomes examples to (1) critique indicators of a MIL City (Yanaze & Chibas, 2020) which neglect older people, and (2) propose more positive ways of enabling older people, and city authorities, to audit a city's response to MIL, and to develop more creative age-friendly media and information literate environments.

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Keywords: older people, media and information literacy, cities, communities

The Relationship between Game Literacy and Information Literacy

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The aim of this paper is to identify the relationship between game literacy (GL) and information literacy (IL), in order to provide cross-disciplinary insight as a foundation for future research. This will be done:

- By examining the origins, definition and treatment of the two literacies in scholarly literature in the disciplines of Games Studies and of IL, and;
- By using examples drawn from two recent mixed methods research studies of information behaviour and information literacy in video games, to illustrate the connections between GL and IL.

Previous studies investigating video games and IL have tended to focus on the elements of IL used in gaming (e.g. Beutelspacher, & Henkel, 2021), rather than, as in this paper, the conceptual intersection between IL and GL. IL and GL developed in different disciplinary contexts. Whilst the concept of IL emerged from the field of librarianship and the online information industry (Nazari, & Webber, 2012), GL emerged in the field of literacy studies, influenced by the New Literacies movement's focus on multimodality and social practice, and stimulated by a desire to include cultural media popular with young people (Squire, 2008). Initially, definitions and frameworks of IL focused on practical skills applied to published print or digital material. However, more recently IL experts have identified IL as socially situated, involving production as well as consumption, and engaging with multimodal information, for example in Mackey & Jacobsen's (2022) definition of metaliteracy. This brings IL ontologically closer to Hayes & Gee's (2010, p. 69) conception of GL as "a family of different practices engaged in by different social groups with a variety of cross-cutting similarities and differences".

Despite this, the information literacy component of GL is not surfaced in GL definitions, and nor does engagement with games feature explicitly in IL definitions and frameworks. This paper aims to fill this research gap by (1) drawing on the scholarly literature to compare and relate definitions of GL and IL, and (2) illustrating the connections between GL and IL with findings from two investigations supervised by the author (both of which received ethics approval). Wang (2022) used questionnaires (n=600) and six interviews with Chinese gamers to investigate information behaviour in the ban-pick phase of *League of Legends* (an internationally popular Multiplayer Online Battle Arena game). Using similar methods (164 questionnaires; six interviews) Meng (2022) researched Chinese gamers' IL in playing the social deduction game *Dread Hunger*. The three dimensions of Bourgonjon's (2014) model of game literacy (i.e. operational, critical and cultural) will be used to identify how IL is interviewed with GL. For example in compiling and analysing clues that indicate whether a player is the traitor in Dread Hunger IL and GL are required in both operational and cultural dimensions. Further examples will be given in the final paper.

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Keywords: literacies, information literacy, games, gaming

Project Management Literacy for Librarians and Information Professionals. New Challenges in the European Union and Beyond

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Introduction

For at least two decades the workflow of higher education (HE) institutions in Europe has been driven by the project approach. The European Union (EU) supports HE financially and aims at maximal internationalization and cooperation among European countries.

The European Universities Initiative (EUI) was established in 2017. Its ambition is to strengthen strategic partnerships across the EU between higher education institutions by building networks of universities across the EU. In 2019, EUI opened its first call for HE institutions' alliances. At the end of 2022, 41 European University Alliances were already gathering 340 HE institutions (European Education Area, n.d.).

Rationale

Members of such alliances are forced to change a lot in their daily work practice and acquire specific project knowledge and skills. For the majority of libraries as members of those alliances, this is the first time they have participated in joint, international (so also multicultural) projects with specific requirements, terminology, and workflows driven by grant agreement requirements and expected outcomes.

Methodology

An in-depth analysis of the skills and competencies rooted in information literacy (understood here as an umbrella concept, thus gathering many related 'literacies') needed for successful project management was conducted. It was based on 1) a review of literature on knowledge and project management (e.g., Bartlett, 2021; Mounir, 2018) and on new job requirements for librarians (e.g. Wojciechowska, 2018) as well as 2) the work experience on the TRAIN4EU project, co-lead by the academic librarians from the University of Warsaw Library (Poland), run by 4EU+ universities in the framework of Horizon 2020 (4EU+, n.d.).

Outcomes

The analysis resulted in a map of competencies that are useful and needed to work on international projects funded by the EU. The analysis showed that the skills traditionally associated with librarians' and information professionals' jobs, such as fluency in metadata, information literacy, information management, or research data management are crucial while working with EU-funded projects. Hence, on the one hand, librarians and academic professionals may already become important actors on the scene of a project-based workflow; on the other hand, there are some competency gaps that should be filled not only to support the researchers comprehensively but also to be able to conduct projects independently. The map of competencies may be useful not only for the staff of European University Alliances but also for other librarians and information professionals who would like to become members of project teams and for the library management who hire them.

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Keywords: EUI, European universities, information literacy, project management

DOCTORAL PAPERS

'New Clicks' - Developing User-Led Digital Literacies in Older Adults within Scottish Public Libraries

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Background

Research details that our present 'digital-by-default' society structurally supports inequalities, where users without the requisite skills to enable meaningful engagement in the digital world are at an increasingly severe disadvantage (Eynon & Malmberg, 2021). These disparities are particularly felt by older adults, who while already challenged by structural issues related to their age cohort (e.g socioeconomic status, health problems, a mistrust of technology) see the quality of their tangible access to digital resources negatively impacted by such deficits (Hunsaker & Hargittai, 2018).

Scottish public policy currently focuses on developing digital literacies from economic and school-based educational perspectives (Scottish Government, 2021), despite research suggesting that around 22% of adults in the UK still lack the basic digital skills needed for everyday life (Lloyds Bank, 2022). Older adults are disproportionately affected herein, and there are no existing equivalent policies or actions that focus on developing their particular strategic needs.

Public libraries are uniquely placed to respond to these challenges, given their centrality in public life and the high levels of trust they enjoy (Barrie et al., 2021). Public libraries can also address the compound sociological issues faced by older adults in holistic, inclusive and participatory ways, and as 'leaders in community digital skills training' (Detlor et al., 2022) can be the vehicle to progress new user-led approaches to digital literacies.

Objectives

This project will utilise a Participatory Action Research methodology to examine the CILIP Information Literacy Model (CILIP, 2018) in developing user-led interventions aimed at improving digital literacies in older adults. It will do this through longitudinal engagement with an established 60-plus age group of older adults comprising around 40 participants from within the Scottish public library sector. The project will focus development on user-led principles to ensure that areas of relevant concern are addressed with sustainable and scalable solutions presented.

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Keywords: digital, literacies, older, adults, public, libraries

Understanding Internet & Social Media Exposure, Health Anxiety, Literacy, and Information Seeking as Determinants of Self-Care Behavior: Neural Network Analysis Approach

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Objective

Healthy lifestyles and self-care behaviors are key to quality of life. Literature has identified several factors that influence self-care behavior, such as individual's knowledge (Ajani et al., 2021), access to information sources, and use of those sources (Tang & Zou, 2021), information seeking skills (Jo et al., 2020), and cognitive state (Grafiggna et al., 2017). However, internet and social media exposure, health anxiety, health information literacy, and health information-seeking behavior have not been examined collectively as predictors of self-care behavior in the past. There is a scarcity of literature related to the general public as a unit of analysis, as the available research addresses chronic patients mostly. Also, general self-care (SC) behavior and its predictors remained less explored in the Pakistani context (Soroya et al., 2020).

Methodology & Outcomes

The study used questionnaire-based survey research design. Data were collected from 384 respondents. To ensure heterogeneity, the general public, both male and females with different ages, academic qualifications and occupations were approached on a convenience basis. A survey-based questionnaire was adapted for the study, including items of the five key variables: HISB and Internet and Social Media use (Soroya et al., 2021), HA (Fergus et al., 2014), HL (Emiral et al., 2018), and SCB (Mahdizadeh and Solhi, 2018). Artificial neural network analysis (ANN) was performed to examine the possible linkage between variables. ANN analysis not only has the competency to address complex relationships among predictors (Sim et al. 2014) but also allows the factors prioritization based on their relative importance. Therefore, it was decided to run ANN to check the prediction accuracy of the proposed model and to prioritize the predictors of self-care behavior.

The results indicate that health information literacy, Internet and social media use, and health information-seeking behavior have a positive impact, whereas health anxiety impacts negatively on the self-care behavior of individuals. Health anxiety followed by health-related internet and social media use were the strong predictors of health information seeking behavior. Whereas health-related internet and social media exposure was the strongest predictor of health information literacy. Then, health information seeking behavior followed by health information literacy remained strongest predictors of selfcare. Thus, the relationships and strength among the studied variables clearly confirm the strong role of health information literacy and information seeking behavior in self-care practices. Being a very first study of this magnitude, the findings may help government agencies, health care professionals and health-related information literate society.

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Keywords: internet, media use, health information-seeking behavior, self-care, Pakistan

Information Worlds of Women Engineering Students

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The aim of this doctoral research is to explore in depth the information worlds (Jaeger & Burnett, 2010) of female undergraduate engineering students. Although the information behaviour of engineers has been extensively studied, with some studies focusing on students in particular (Mercer et al., 2019), the female perspective is under-researched. There is a lack of research on the impact of marginalised identities on information behaviour, including variables such as gender, race, and class (Julien, 2005).

The research will explore how female engineering students use information as part of their learning process, and how the gender balance and social norms in the learning environment affect the information behaviour of minoritized genders. The research will use a phenomenological approach (Denscombe, 2021) to explore, through in-depth interviews, research questions including: how women engineering students acquire information for their learning needs; the aims and motivations of female students when engaging with information; and the role of affect in women engineering students' information behaviour.

This paper will present a critical review of the literature. It will outline some theoretical approaches currently being explored, in particular an intersectional feminist approach (Hill Collins & Bilge, 2020; Lennon & Alsop, 2020; Olesen, 2018), and the model of epistemological development among women known as Women's Ways of Knowing (Belenky et al., 1997/1986).

Intersectional feminism will be used as an underpinning philosophy, to explore the ways in which women are structurally disadvantaged in the highly masculinised field of engineering education (Faulkner, 2005) and the impact this may have on their information behaviours. This paper will review relevant literature related to information behaviours of minoritised genders, particularly within STEM education.

Women's Ways of Knowing (WWK) will be explored as a lens through which to examine women's information behaviour. This paper will review how WWK has been applied in library and information science research, since being identified by Julien (2005) as having potential applications for researching information behaviour.

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Keywords: information behaviour, women's ways of knowing, undergraduate engineering, feminist research

BEST PRACTICE

Durban University of Technology Student Experiences with Information Literacy Through Game-Based Learning

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The Durban University of Technology has been exploring new ways of teaching information literacy. Students' learning preferences have evolved; thus, it is critical to experiment with new teaching strategies to stay current and hold their interest. Research shows that for many students, a didactic approach to teaching information literacy can be extremely boring and ineffective. By introducing educational games with predetermined learning objectives into the information literacy curriculum, game-based learning might be the answer. Wilson et al. (2017) state that the effectiveness of games in teaching and learning has been thoroughly proven in educational studies. The use of games as a medium for learning is not a new concept. Games can benefit the learning process regardless of their complexity or whether they incorporate technology. Today's students have grown up playing computer and video games, which has influenced how they receive information and learn (Aziz et al. 2018). Games-based learning can help to speed up knowledge transfer and application for students to actively participate in class activities alongside their peers, which benefits their ability to learn new material. Games can be used to uncover learning gaps in students and to promote engagement without concern about criticism (Chesley & Anantachai, 2019). The objective of this paper was to identify the effectiveness of game-based learning whilst adding value to the student learning experience. The ADDIE model guided the design and development of the game. This model consists of five phases: Analysis, Design, Development, Implementation, and Evaluation. To design the game the learning objectives were used as a guideline. The game was designed for students to complete within the time limit and to make them feel proud of finding solutions. During preand post-game conversations, the learning outcomes were clarified and reinforced. Semi-structured interviews and focus groups were used to collect data and measure the effectiveness of game-based learning. This paper investigates students' experiences with information literacy through game-based learning.

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Keywords: information literacy, game-based learning
An Innovative Learning Platform for Information Problem Solving

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Introduction

The ability to solve information problems is a critical skill that all students in higher education must possess, regardless of their field of study. While educators in higher education recognize the importance of this skill, they often struggle to allocate sufficient time for its development in their lectures. To address this challenge, we have developed a digital learning platform called Edubook, designed to help students develop information literacy skills through independent learning. The Edubook in its final form has been created by an experienced digital publisher and is made available to students at the cost of a traditional textbook.

Design

The structure of the Edubook follows the information problem-solving process, as outlined in for instance the Big Six Skills model (Berkowitz & Eisenberg, 1990). The platform includes chapters on task definition, information-seeking strategies, results selection, information analysis, information use, feedback processing and reflection. A key feature of the Edubook is its high degree of interactivity. Each chapter includes a combination of theory and explanations, as well as questions and assignments for students to complete, with immediate feedback provided by the system. Theory is presented in text as well as image and video formats, with the chapter on information-seeking strategies, for example, featuring screencasts that demonstrate key techniques for forward and backward chaining. Additionally, the Edubook aims to alleviate the workload of subject teachers while still providing students with the opportunity to learn how to effectively explore digital resources relevant to their studies. To achieve this, the platform incorporates a variety of exercises, such as drag-and-drop, labeling tasks, fill-in-the-blank questions and multiple-choice questions, all derived from various professional contexts, including nursing, human resource management, primary education, leisure management, and product design.

Results and Limitations

The Edubook on Information Problem Solving is currently scheduled for completion in May 2023 and will be available for use in the 2023-2024 academic year. A pilot study involving a group of students from the Bachelor of ICT at The Hague University of Applied Sciences will be conducted in April-May, with results presented at the ECIL 2023 conference. The target audience for the Edubook is Dutch and Flemish students in universities of applied sciences. The possibility of creating an English version of the platform has yet to be discussed with the publisher.

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Keywords: information problem solving, higher education, Edubooks

Transfer Students, Transferring Skills: Continuing Library Information Literacy Among Students From College to University Environments

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Published research regarding the differences in the impact of services, resources, methods, and tools between the college and university library environment in the United States is, overall, lacking. The methods for transferring knowledge of information literacy practices between smaller, often two-year, college institutions and the progression through the remaining four-year environment of the university brings shifts in approaches to information literacy instruction. Additionally, the expansive changes brought by the 2020 global biological crisis formed the basis for the vast expansion of remote and asynchronous instructional methods. I aim to present examples of the differences and similarities between the styles utilized in different higher education environments for the purposes of expanding knowledge regarding practices suitable for students developing information literacy skills in higher education between academic environments serving different purposes. Kennette and McIntosh (2022) promote an analytical approach to the means of assessing the effects of library information literacy instruction. Assessment is critical in both the college and university environments, simultaneously the discussion regards academia as a whole with the subtleties between two- and four-year academic institutions. Shi, Peng, and Sun (2022) promote a multi-pronged approach in the methodology of deploying a heuristic space, yet the work does not differentiate with depth the variety of methods deployed between teaching and research institutions. Anders (2021) takes the approach of focusing solely on graduate students and leaves the issue of undergraduate two-year students, separate from the conversation entirely, while the scholarly conversation regarding information literacy surrounding university library research begins with first-year undergraduates, a view Valenza, et al. (2022), promote. Finally, Bennedbaek and George (2021) take the steps needed when seeking common ground between similar sized colleges and universities, though this approach does not cover consistency and longer-term planning when creating information literacy instruction between institutions of vastly different scales. Though the research grapples with aspects of the information literacy via library instruction across multiple institutional models there lacks a common thread illustrating the differences between types of academic institutions and the pathways available to support students in the transfer from college to university learning spaces. Though the community college environment is arguable a rather uniquely North American institution, planning for the successful deployment of library information literacy instruction between varying academic spaces, online, in-person, and synchronously and asynchronously is of benefit to scholars and teachers across geographies and disciplines. I have been both a college library director and a university faculty research librarian and seeing the scope and scale between two institutions serving different roles, but often with the same students continuing from one school to another, the need for collaboration and deployment of impactful information literacy strategies is critical. I propose to present on the differences between such institutions, the lack of representation in the research literature regarding the nuances between two- and four-year schools, and the means through which teaching and research schools promote, deploy, and evaluate the means of successfully enacting impactful information literacy instruction through library services.

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Keywords: colleges, universities, academic libraries, information literacy instruction

Surfing is Not Enough: An Information Literacy Course for Academic Students

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Information literacy is extremely relevant in academic education for prospective researchers, teachers and future enterpreneurs. DigComp 2.2 (Vuorikari et al., 2022) offers many examples of knowledge, skills and attitudes desirable for information and data literate citizens and workers, many related to the retrieval and management of documents, both analogic and digital. Such competences should be part of the learning goals at the end of any academic path; they mark students' individual growth and foster their future careers, especially if certified. Open badges are a useful assessment tool enabling students to spend those competences in the job market.

Academic libraries that contribute to building these competences may become more visible within their institutions, advocating for themselves.

The University of Trieste Library system took advantage of the pandemic-related closures in 2021 to build an online, self-paced and self-learning information literacy course for students. The project was run at no extra cost, employing the time of librarians during the lockdown. The final product was hosted on the institutional Moodle platform. The course goals aim at increasing information literacy skills, including the ability to "recognize information needs and to locate, evaluate, apply and create information" (IFLA, 2005) including "how to use it in an ethical way" (IFLA, 2011). An expected side-effect of the course would be to enhance knowledge about and use of library services and resources of any format among students, for whom the library is not always the first port of call.

The first edition, developed by the Science and Technology Library in academic year (A.A.) 2021/22, was tailored to the needs of STEM students. In A.A. 2022/2023 the course underwent a restyling. The materials were reorganized and expanded to meet multidisciplinary needs.

Participants who pass the final test earn a digital Open badge, the international standard to valorize individual competencies. Open badges are easily shareable on individual portfolios, CVs, social media accounts, personal websites. Officially announced in October 2022, the second edition of the course, by the 8th of March 2023, had released 432 badges, the highest number among the 8 badges granted by the University of Trieste.

This report sets such experience within the information literacy framework: it describes the genesis of the course, its learning goals (compliant with UN SDGs 4,10,17), and analyses the progress from the first to the second edition. It reports how it became an open-badge course and the resources underlying its development. Analysing the feedback of the participants of the current edition, it discusses lessons learned and ideas for further improvements.

Moreover, the paper puts in question the limits of such experiences: how far are they able to produce a deep change? Can they be defined as "information literacy" or simply "library instruction"? Are they flagships to advocate for the role of libraries themselves?

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Keywords: *information literacy, digital literacy, academic libraries, user education, self-learning courses, open badges, online learning*

IL Governance – How the Teaching of Information Literacy is Organized in University Libraries in Germany

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The promotion of information literacy is a standard task in many university libraries in Germany and an important part of their range of services. Ten years ago, the German Rectors' Conference (2012) called in its resolution "Higher education institutions in a digital age: rethinking information competency – redirecting processes" for standardizing the teaching of information literacy and changing structures to strengthen information literacy within the framework of internal university governance. This contribution analyzes which organizational structures libraries have set up to teach information literacy and which standards they use. I will present the results of a survey that will provide answers to two main questions:

- 1. Was a a library department, a working group, or individuals responsible for teaching information literacy? and,
- 2. Which tasks are carried out and which management structures exist in libraries for teaching information literacy?

It became clear that no organizational model has prevailed in Germany to date and that many libraries work with inhouse standards or without any standardized specifications at all.

The contribution discusses which form of IL governance the teaching librarians saw as successful and which organizational and management structures they considered sensible. Finally, I will discuss successes and failures, opportunities and challenges of the various models.

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Keywords: information literacy, teaching library, governance, university libraries, Germany

What do First-Year Students Want to Know: Analysis of Anonymous Questions in a First-Year Writing Course

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One of the key questions of information literacy instruction is tailoring the content of sessions to the students' needs and interests. While we can get information from the faculty members, we rarely hear from the students themselves. In this study I aim to contribute to filling this gap. This case study is situated in an R-1 U.S. university with a first-year writing course that has an embedded information literacy curriculum. One of the instructors assigned students an activity where they anonymously submitted their questions about information literacy topics including questions regarding use of libraries, finding sources, academic integrity, and so forth. The course librarian answered the questions and posted the answers to the course management system.

I looked at three semesters' worth of questions with a total of approximately 100 questions and took a mostly qualitative approach, focusing on thematic and sentiment analysis. The results showed the themes of the questions and the emotions expressed in them, such as an expressed fear of accidentally breaching academic integrity policies. In my presentation I will show the changing and stable levels of interest in topics across the semesters and will map the students' questions on the information literacy curriculum to discuss common and differing areas. I will conclude the presentation with discussing implications and possible future actions.

Keywords: first year writing, information literacy instruction, assessment

Social Media and Information Literacy: Reaching Students Where They Are

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Information literacy is something that all libraries strive to provide for their patrons, students, and community members. What most people don't think about is that information literacy is something that we all do every day, whether it is watching television or getting information from social media, we consume information constantly. While we constantly consume, we often also do not think of how to accurately assess information through the lens of information literacy. Though social media has been something people have used for several years, it can be argued that within the last couple of years the ability to understand and digest information through social media has become crucial for internet users. In their paper "Investigating the Relationship Between Information Literacy and Social Media Competence Among University Students" Zhu et al discuss how social media has changed information literacy stating, "The growing use of social media, such as microblogs, social networks, bookmarking sites, community blogs, or video sharing sites, has not only changed the way people communicate, but has also triggered considerable changes in peoples' information behavior". It is only through adjusting the way we teach and explain information literacy that people's ability to discern credible information via social media can be improved. They go on to explore information literacy through three stages. 1. The "germination stage" which was before the 1970's where library skills were a type of information literacy. 2. From the 1970's to the late 1980's where the idea of information literacy "shifted from simply emphasizing literature retrieval...to encouraging the use of information tools" and 3. From the 1980's to the end of the 1990's where the "ability to criticize and evaluate information was valued" (Zhu et al., 2021). It can be argued that from the 2010's to now, a new type of information literacy is needed, that of competent information gathering skills where credible information is emphasized. Zhu et al. discuss this need stating "due to a lack of relevant legislation, social media have witnessed an increase in problematic behaviors, such as sharing misinformation, which might be disguised as 'breaking news' or factual information" (Zhu et al., 2021). This emphasis on credibility and misinformation is something that libraries should focus on, especially university libraries.

This presentation looks at social media and explores students behaviors towards it and information gathering through a class presentation assignment. Each student should use TikTok, Instagram Stories, Facebook Reels, or YouTube shorts to explore the idea of credible information relating to their desired topic. Through this assignment, students needed to explore social media that they use every day (mainly TikTok) and should be able to articulate whether the information presented to them is credible or not. This assignment not only allows for gathering information on how students think about information literacy without being exposed to formal information literacy training, but it also allows for talk about how we consume media and information literacy from a social standpoint instead of purely from an academic standpoint. It allows for better discussion of information and social media, and how we navigate the rocky road of information literacy.

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Keywords: social media, information literacy

Embedding Equality in Education – A Collaborative Project

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The KTH Library performed a project funded by the Vice President for Gender Equality and Values and Vice President for Sustainable Development during 2021 that aimed to support teachers in their work for embedding equality in education at KTH. The project was managed by the library's Education team and designed in collaboration with team Arena, team Collections, and the Learning Department. The overall aim of the project was to support teachers in embedding equality by focusing on critical information literacy and develop activities that could, over time, foster a sustainable and systematic way of working with gender and equality. Activities that were performed within the frame of the project were exhibitions, book discussions with a gender perspective, a workshop on bias for PhD students, journal clubs within the Education team (Accardi, Drabinski & Kumbier, 2010; Carstensen, 2006), and a workshop for library staff.

The Swedish Higher Education Authority made an assessment that showed the need to improve gender and equality in several education al areas. This led to the University's funding of projects that supported teachers to embed gender and equality. The library staff developed the project based on theory and strategies found in:

- literature at the Gender Theory and Gender Equality in Technical Higher Education course at KTH;
- literature read and discussed by the Education team (Accardi, Drabinski & Kumbier, 2010; Carstensen, 2006); and the United Nations global goals (https://www.globalgoals.org/).

The outcome of the project was in many ways successful but several parts remain on which to reflect. One challenge was how to reach an audience that is busy with teaching and research. Another challenge was how to ensure that the content you provide is relevant. It was also challenging to consider how perspectives on gender and equality can be embedded in daily work after the project is formally ended. We found that the reactions and assessment after the different activities showed that the book discussions were much appreciated as it gave opportunities to talk about and share experiences on both texts and society from a gender and equality perspective. We held these after the project was finished. The journal clubs within the teaching team were considered valuable as competency development and resulted in updates of the policy for equality in the library's teaching. As an effect of the project, the library's policy for acquisition was modified to take gender and equality in consideration when new media is purchased. Another effect was a workshop performed among the staff that aimed to enhance the consciousness within the organization regarding issues of gender and equality.

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Keywords: equality, higher education, critical information literacy, collaboration, university library

The Academic Library Service Desk as a Pedagogical Tool

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The academic library service desk has the potential to be more of a pedagogical tool than it is today. This is our opinion after having conducted two studies to gather knowledge about the personal meeting at the library desk. In one of the studies, we investigated the meeting at the physical service desk, and the other aimed to explore our digital library desk. Both projects are in part financially supported by the National Library of Norway.

The first project we launched, in 2017, was "TREFF – towards a new platform for the desk services at the University Library of the Norwegian University of Science and Technology (NTNU)" (TREFF means "meeting"). The main goal of the project was to learn more about the personal meeting between students and library staff at the physical library service desk. In TREFF we used different research methods to collect data: mapping of service desk activity, focus group and individual interviews with students and a survey to the library staff.

Some of the main findings in TREFF were that the students in our interviews lacked knowledge about the library staff's competencies and they did not know what kind of help they could get at the library desk. Although they might need it, they did not necessarily turn to the library desk to get help with their study needs. They preferred to ask short questions about practical things and did not wish to disturb or make a queue.

During the pandemic, The NTNU University Library established a digital library service desk, reference service, courses and writing activities on Zoom - The virtual library. The virtual library now continues to exist along with the traditional physical library services. In an ongoing project, SkjermTREFF (SkjermTREFF means "screen meeting") we examined the meeting in the digital library desk, to find out more about which user groups visit the virtual library desk, how they experience the meeting and why a digital channel is chosen instead of physical attendance. The project lasted two years (2021-2023) and data was collected through different types of individual interviews, focus group interviews and statistics. Preliminary findings indicated that some of the things the informants appreciated most in the digital meeting were the focus, undisturbedness, and the experience of not having to rush, in contrast to the situation at a physical desk.

In our presentation we will discuss the findings from TREFF and SkjermTREFF and how we can use the knowledge to improve both the physical and digital library desks as pedagogical tools to help our users towards broadened information literacy skills. We also aim to learn about similar digital services, and what experiences and discoveries have been made in other libraries.

Keywords: academic library, digital library, academic library service desk

Data Literacy for Master Level in University of Helsinki

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If students are doing independent research projects for their thesis, basic data management skills should be part of their curricula. Also reusing existing data requires understanding of data citation and management. Both Bauder (2021) and Marzal and Prado (2013) consider data literacy as part of information literacy. Bauder continues that data related skills are a good fit in the 2016 ALA Information Literacy Framework even more substantially than textual literacies. Data literacy as part of information literacy is important as so-called transferable skill that will greatly benefit those students that leave academia and enter the workforce. Smits and Teperek (2020) noticed in their study of Master students that data management often comes up piecemeal, for example, in the context of method studies or thesis seminars, but was not treated in a coherent manner. There is a need for systematic data management guidance also on the undergraduate and graduate or Master level.

Helsinki University is a multidisciplinary research university, largest in Finland and ranked 110 in the THE University Ranking. Helsinki University Library has had a data management team since 2009 and has been teaching data management planning and other skills for researchers since 2017. The education so far has reached researchers and administrative staff, but not bachelor and master students. Also, since the changes in the data privacy legislation namely the EU GDPR, the demand for timely data management education for all levels is genuine.

When teaching undergraduates an obvious challenge will be the sheer scale of students that need to be addressed. How to address the right group of students at the right time? Who will teach? Could data management teaching for undergraduate level be embedded in thesis seminars or will the academics be reluctant to take on new responsibilities? It is vital MA students know how to handle personal data according to GDPR requirements before they start their projects, so that they don't just start collecting data and forget to inform the research participants correctly. Students also need to know what the special categories of personal data are and how not to cause risks to these vulnerable groups with how they handle this kind of data.

In Helsinki University Library we figured that we need more than one approach to reach the students. As starting points we are preparing a short self-study guide in simple language on data management for undergraduates and a test form for personal data – "Do I handle personal data in my thesis?" To deepen the learning more in context of the thesis seminars we concluded a pilot with a Master program together with the responsible University Lecturers. With simple exercises aimed at first just recognizing data features in publications of selected research groups the students took the first steps in learning the different dimensions of data management. Our data management team is also developing a data management introductory wizard tool with CS students. Data Support team is working together with the library Pedagogical Team responsible for Information Literacy teaching to further embed data themes into student resources.

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Keywords: data literacy, master students, teaching solutions, privacy legislation

Media Literacy Interactively and for All

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As a result of the growing number of alternative media, the rise of distrust in the media, and fears of possible hybrid attacks, gaps in media literacy have become a societal problem (Haider & Sundin, 2022). Media literacy development is both increasingly important and highly underestimated in the Czech Republic's educational system.

Interactive Courses for Secondary School Students and Senior Citizens

The paper will present the project "Media Literacy Interactively and for All" (https://medgram.cz/), which is being developed in cooperation with the Library of the Czech University of Life Sciences, the Faculty of Education of Charles University, and the University of South-Eastern Norway. The project focuses on the two most vulnerable groups regarding media literacy levels – high school students (jsns.cz, 2018) and senior citizens (Moore & Hancock, 2022). The project also connects them and tries to increase understanding between generations.

A Synergy of Knowledge and Potential of Several Universities

Libraries, in general, are a natural environment to educate the public in media literacy. This education has also been declared as a key theme for Czech libraries for 2022 - 2024. University libraries in the Czech Republic have great opportunities to contribute to the promotion of media literacy. However, they have not yet made much use of it. This paper will present how we have taken advantage of the opportunities provided by inter-university cooperation and present outcomes that can be used in more than just the Czech Republic.

In the project, we use not only the contacts we have as universities through a network of cooperating secondary schools and a network of centres for lifelong learning but also modern teaching methods and software tools. The main core consists of two MOOC courses designed to meet the needs of each group. The courses use a newly developed system of interactive electronic learning e-books and come with detailed methodologies and tutor guides. In addition, we create an escape game that links general media literacy topics with real-life examples.

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Keywords: media literacy, lifelong learning, high school students, escape game, MOOC course

"Name it to Tame it": IREX for Media Literacy in Lithuania

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Objectives and Aims

Modern media landscape today requires high quality skills and knowledge to navigate and use critically tremendous information flows. Media literacy knowledge and skills help individuals evaluate the information content in daily life and equips them with the necessary competences to recognize disinformation and propaganda (Terzis et al., 2020).

Our *goals for this paper* are to analyse and present the main activities and results of the 2022 Media Literacy in the Baltics project at Vilnius University and share best practices. The project is part of the Media Literacy in the Baltics program that aims to enable better engagement of critical dealing with multiple forms of media. It leverages the IREX Learn to Discern (L2D) media literacy training curriculum and approach implemented by International Research & Exchanges Board (IREX) organization with the assistance of the U.S. Department of State and the U.S. Agency for International Development (USAID). It is a part of coordinated international effort to help people acquire knowledge and develop the skills strongly needed in the post-truth media and information era. It aims to prevent the spread of the manipulative information, disinformation, hate speech, and propaganda that appears across multiple information sources and content (Learn to discern. Media literacy: trainer's manual, 2020).

Outcomes

We developed the main activities and products of the *Media Literacy in the Baltics* project at the Vilnius University Faculty of Communication. In our roleas a partner in this project, we analysed results usingstatistical data andfeedback from attendees. To do this, we created forms targeting university students, academics, information specialists, and schoolchildren. We conducted media literacy seminars and workshops for other than Lithuanian speaking students as well at partner high schools. We arranged seminars/workshops during summer school for Vilnius University students and academics. And we prepared an article for academic research and literature review on media literacy. Vilnius University accepted the general university course, "Media and Information Literacy," we created.. We adapted and integrated the JEDI (Journalism in the Era of Disinformation) method into this course. The aim of this course wass to develop students' abilities to understand the information sphere and its processes in the media and to gain skills that are essential for conscious and critical consumption of the media content. Students completing the course should be able to evaluate and manage all daily information flows as well as to discern between reliable and unreliable information sources, credible content and disinformation, misinformation, and fake news. Finally, Vilnius University Faculty of Communication acted as an organizer of the international students' conference, SOLUTION2022, on media literacy https://www.kf.vu.lt/dokumentai/Programme-Final-Public.pdf in cooperation with Vytautas Magnus University in Kaunas (Lithuania).

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Keywords: media literacy, disinformation, misinformation, IREX, Lithuania

Breaking the Vicious Circle: Mapping and Addressing Gaps in Information Literacy across the Educational Cycle

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This paper describes how the Czech National Library of Technology in Prague (NTK) maps the information needs of its patrons and how it addresses the gaps in information literacy (IL) that (re-)appear in successive educational stages. In the past five years, NTK information specialists have provided individual consultations to 644 students and researchers and organized 230 IL workshops/webinars attended by 5,396 students and researchers. By combining qualitative and quantitative content analyses of these activities, we managed to identify structural IL gaps that extend from high school students to doctoral researchers:

- insufficient knowledge of searching tools and suitable search engines;
- insufficient ability to evaluate information found online;
- misapprehension of the main principles of referencing sources;
- lack of knowledge about citation managers;
- and difficulties with writing academic texts as such.

These findings point to the benefits of closing the IL gap earlier rather than later, as already suggested by other examples of best practice (Dolničar, Podgornik, Bartol & Šorgo, 2020; McPherson & Dube, 2016). We will illustrate this by presenting case studies dealing with the transition from high school to university and from Master to doctoral work. IL interventions earlier in the education cycle, in our case, appear to provide benefits later in life, but we have not yet performed a longitudinal study confirming this. Nevertheless, while the Czech education system does not yet require independent research and academic writing outputs in its high school curriculum (Výzkumný ústav pedagogický v Praze, 2007), our efforts to date (Razím & Chodounská, 2021; Martinová & Tassanyi, 2018; Tvrdá & Martinová, 2017) developed in cooperation with instructors, are in high demand. This anecdotally points to a need for more comprehensive IL interventions that systematically encompass the entire public educational cycle, as previously identified by Martinová & Tassanyi (2018).

The goal of our contribution is to show what structural IL gaps should be filled at the high school level and why, and how libraries could contribute to achieving this. Aside from continuing the aforementioned instructional services, we plan to extend our services to more schools and to resume our cooperation with the National Pedagogical Institute, with the hope that we can provide evidence-based data to the Czech Ministry of Education on the effectiveness of IL interventions and, perhaps in the form of a future longitudinal survey tracking student success over the long-term, show how IL leads to benefits such as better preparation for university-level work and/or civic engagement.

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Keywords: information literacy, academic services, library instructional services

How Do Instruction Librarians Continue Learning New Concepts and Skills throughout their Careers? Stories and Best Practices From North American Instruction Librarians

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Introduction & Literature Review

Instruction librarians are at the forefront of introducing learners to new concepts and skills such as evaluation strategies, searching techniques, and trends in scholarly communication. But how do instruction librarians themselves learn new concepts and skills? Especially if they have been a professional for a significant amount of time and have experienced multiple changes in the profession. We conducted a study to learn how mid-career and experienced instruction librarians seek out and learn new professional information, how they find curiosity sparks to keep them engaged in their work, and how they choose to incorporate new ideas or professional competencies into their instructional practice.

Mid-career professional development has been characterized by stage-like models depicting growth, stability, and sometimes frustration (Maskit, 2011). These stages have been explored in K-12 teachers, and we wanted to determine how well these stages describe the experiences of mid-career and experienced instruction librarians. We were especially interested in these librarians because many workplaces have multiple generations of workers and must find ways to encourage growth in an age-diverse environment. However, much of the literature and professional development opportunities focus on supporting newer librarians (for example, Flatley and Weber, 2004). We enthusiastically agree that newer librarians should receive significant and thoughtful supports, but we were curious to explore the unique challenges mid-career and experienced librarians face based on their accumulated experiences as well as how they sustain their engagement with new ideas.

Objectives, Methodology and Outcomes

Our objectives were to learn:

- how mid-career and experienced instruction librarians seek out and learn new professional information,
- how they find inspiration to keep them engaged in their work,
- how they choose to incorporate new ideas or professional competencies into their instructional practice.

In an online survey and follow up interviews, we asked mid-career and experienced instruction librarians from North America to share their experiences about how they engage with and incorporate new professional ideas into their instructional practice. Recognizing the systemic changes brought about by the global pandemic, we asked participants to reflect on how these changes impact their learning preferences, what inspires their curiosity, for their self-evaluation of where they are now situated in the career cycle stage, and what they think are currently the most pressing issues in librarianship. We used convenience sampling to recruit up to twenty library workers who conduct instructional activities in an academic setting and who have worked for at least 10 years--regardless of full or part-time employment. To extend our participant pool, we used snowball sampling. Participants were asked to respond to an online survey consisting of nine multiple choice and short answer questions and were invited to participate in an hour-long virtual interview to expand on their survey responses.

We discuss how our findings and analysis, along with our suggestions, can inform institutional training efforts and retention strategies. We will also discuss how we can use these findings at the individual level to inform how we adapt to professional changes in rejuvenating and productive ways.

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Keywords: professional development, curiosity, midcareer librarians

ENOEL: The Introduction of a European Open Education Group

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ECIL and ENOEL are two groups that have a lot in common. Both strive to bring together the librarians of Europe for a bigger goal. Their topics differ slightly, but the groups definitely have similarities. Whereas ECIL unites information specialists from all over Europe to exchange ideas, best practices, and research on all aspects of information literacy, ENOEL does the same job on all aspects of open education (OE). ENOEL started around three years ago as a part of SPARC Europe and since then ENOEL members have been working on a lot of projects. ENOEL consists of more than 100 very enthusiastic librarians from 27 countries all over Europe. We meet (virtually) around ten times a year.

The projects we have been working on are the following:

- OE Champions: a series of 13 interviews with inspirational advocates of OE in Europe.
- The ENOEL toolkit: a toolkit that consists of reusable and adaptable templates for Twitter cards, slides, and leaflets. Its aim is to help raise awareness of the importance of OE and explain benefits for four stakeholder groups: students, teachers, institutions, and society at large. ENOEL members have translated the Toolkit into 16 languages so far.
- Resources for librarians & OE enthusiasts: a Wakelet page that is filled by members of the ENOEL community with links to key documents that can support librarians and OE advocates.
- A "ENOEL practitioners under the spotlight" webinar series: In this series of webinars, ENOEL members guide us through their personal journeys with OEproviding a space for network members to share ideas, ask questions, and learn from one another.
- OE "Drops": A series of short videos explaining the basics of OE to newcomers.
- OE learning path for librarians: a helpful guide for librarians who want to learn more about OE and identify available resources for educators, researchers, and students.
- A survey on OE in European libraries of higher education.

We partner with national and international networks to stimulate the implementation of the Open Education Agenda, including Creative Commons, ICDE, LIBER, OE Global, SPARC NA, the Network of Open Orgs, and many others. We try to visit as many conferences as we can to spread the word about our activities and learn from other communities and organize virtual OE café sessions with our OE Champions on different themes. The last one we did was on OE policy. The work of the ENOEL membership has paid off: last year we won the worldwide OE Award for Open Collaboration.

But we want to do more and that's why we invite you to become a member of our community: the more we grow, the more we can do to support the OE movement.

Keywords: ENOEL, network, European, open education

The Impact of Teaching Digital Literacies and Open Practices

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Since 2018 I have been module leader for a 15 credit masters level course taught at City, University of London as part of the Masters in Academic Practice, which is a teaching qualification in higher education offered to internal and external staff. Typically there are 100 students on the programme. The module *EDM122 Digital Literacies and Open Practice* explores digital and information literacies of staff and students, including dispelling the myth of the 'digital native' and how to embed various literacies into academic programmes. The module also helps develop copyright literacy (Morrison & Secker, 2017) and situates this as a key component of digital scholarship (Weller, 2011). In addition to being offered to academic staff, it is an elective module for students in the Library and Information Science (LIS) department and has been completed by several members of library staff at City. The module webinar series is available to anyone to join and recordings and resources are shared on the module blog: https://blogs.city.ac.uk/dilop/

In this reflective practice session I will share my experiences of teaching this module for the past 5 years and the impact it has had on my students' open educational practices. I will also reflect on the role of the open access board game The Publishing Trap (Morrison & Secker, 2022) which is played on the final teaching day of the module. To illustrate the session I will share feedback and assessments created by students that highlight their own understanding and experiences of digital, information, and copyright literacy and its relationship to open educational practices (OEP). The students are teachers in a wide variety of disciplines, but it is worth noting that there has been a high number of health sciences lecturers and nurse educators who appear to find the module particularly transformative. I will discuss any new practices they might have adopted, drawing on how previous studies conceptualise OEP (Cronin & MacLaren, 2018).

The impact of the module will be considered from broader perspective and I will briefly report on findings from an ongoing research project on staff attitudes towards technology enabled teaching and its relationship to open practices (Secker, 2020) I will be collecting additional data in Spring and Summer 2023 so I should also be able to share more recent findings at the conference that explore the impact of the pandemic on staff attitudes.

Finally, I will invite contributions from the delegates to share any insights into the way a module of this type might contribute to building staff understanding of digital literacies and OEP.

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Keywords: copyright literacy, international research, communities of practice, open educational practices

Information Literacy Workshops from On-Site to Online – Lessons Learned

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This best practice case presents the development of information literacy workshops embedded in a bachelor's thesis course when moving the teaching to an online environment. On-site information literacy (IL) lecture on the principles of information searching, presentation of the most important databases and hands-on information search training given by an academic librarian had been part of the on-site course curriculum in LUT University since the early 2010s. When the Covid pandemic restrictions started in March 2020, IL teaching had to be moved to an online environment. To find the best IL e-learning methods, iterative student feedback evaluation for continuous development was utilized.

The Two Phased Development Process

To develop the online IL workshops, a new model was implemented in the autumn of 2020. In this model, students (n=35) got a preliminary assignment based on online learning material. The assignment consisted of an essay where students described their information search process for their thesis and reported the results. In the online workshops librarians then gave them feedback and pointers based on the essays, moving on to demonstrations using the University Library's search portal and the Scopus database. After the demonstrations, students performed searches in smaller groups and reported their results at the end of the workshop.

Webropol questionnaire was used to collect feedback from the students to find out about their satisfaction with the workshop. According to grounded theory-based analysis, the result was twofold. In their open answers, some students appreciated the group work, while others considered it not being as beneficial as the rest of the workshop. In addition, comments were made on the scheduling and heaviness of the session with back-to-back demonstrations.

In the following revisions, the preliminary assignment was split into four narrower questions covering the scope of the essay. In the workshop, the group work was replaced by two independent search sessions, giving students an opportunity to both have a little breather and to do searches based on their thesis topic. Other parts of the workshop remained the same. Lastly, feedback was collected.

Conclusion

Like other flipped and online classroom initiatives report (Fisher et al., 2017, Yap & Manabat, 2021), students appeared to benefit from getting acquainted with the learning material in advance and from using class time for active learning activities. According to citation analyses of preliminary assignments, students had learned the skill to find scientific documents on their topics by reading the online learning material (Talikka et al., 2022). Students considered independent searching for information on their thesis topic very useful, and group work did not appear to support it sufficiently. The overall satisfaction with the renewed workshop was good.

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Keywords: information literacy, information literacy education, higher education, online teaching

Paving the Way for Graduate Students' Information Literacy Skills

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Over 85% of students doing their Masters' degree in Finnish Universities of Applied Sciences are over 30 years old (Education Statistics Finland 2022), usually meaning that some time has passed since their first degree. When returning to studies, their information literacy (IL) skills need updating to help them use the current databases and search portals effectively. Together with the teachers from the health faculty, academic librarians worked on finding the best information literacy guidance tools for Masters' degree students in LAB University of Applied Sciences.

Scoping the Needs with Service Design

A service design process was initiated in early 2022 to find ways to enhance the information retrieval skills of the Master's Students. Information was gathered using mixed methods, including observation, interview, survey and scoping to form a versatile view of the current situation.

Customer profiles were created for three different student types based on the collected data. The student types showed differences in their need for guidance and support – one being a super achiever and needing just a little push in the right direction, the other needing more structured and personalized help, and the third looking for individualized support. Solution ideas most beneficial for all student types were a step-by-step guide for updating and refreshing the information retrieval skills and an entry-level skills test which allows the students to reflect on and evaluate their IL skills.

Useful Tools for Adult Learners

The step-by-step guide that emphasized search skills and tools was created in summer 2022. This guide was designed to work with the already existing comprehensive information retrieval guide. The new guide was tested with a pilot group of summer course students. According to the course lecturer, the students had less difficulties finding and identifying academic sources with the help of the new guide.

The teachers viewed the step-by-step guide as such an important part of the studies that they wanted to ensure and control that the students have familiarized themselves with the guide. The entry-level skills test was created in autumn 2022 for this purpose. Passing the test is a mandatory part of a research methods course. The test was piloted in spring 2023.

As Marquez and Downey (2015) state, using a service design process can help the library refine existing services to meet the needs of our patrons and ensure through collaboration that the services are effective and relevant. Customer profiles offer a good way to remind the librarians of the diverse customer base, and to make sure the adult learners' specific needs are met.

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Keywords: adult learners, information literacy, higher education, service design

Shaping Online Digital Literacy Training for People with Low Digital Skills

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The digital divide manifests not only in an unequal distribution of Internet access and connectivity but increasingly in the lack of digital literacy. Drivers for bridging the digital gap and promoting digital inclusion are measures to advance digital literacy in society. This is especially true for vulnerable populations, such as refugees, as they are more likely to be exposed to social, financial, and educational risks (Nüßlein & Schmidt, 2020). Therefore, the non-profit organisation Grenzenlos Digital e.V. (https://www.grenzenlos-digital.org/) promotes digital skills particularly for refugees, asylum seekers and migrants. People fleeing from their home countries are confronted with many hurdles in the countries in which they seek asylum. Next to the strenuous public authority procedures and the need to find accommodation, they often face professional reorientation as they need to find or train for new jobs or need additional qualifications to enter the labour market. However, the job search and orientation process are difficult and require knowledge about the labour market, the skills for online research and communication, and the attitudes, which include values, aspirations and priorities. The barriers to the job market are becoming even higher for people with low digital skills, as recruiting is moving online and companies rely solely on digital application processes. Targeted digital literacy training is fundamental to successful labour market orientation laying the foundation for digital inclusion. In this best practice session, we present experiences and learnings from a digital skills course for refugees and migrants in Germany that is set up in an online learning environment. The project "Intro - Finding work using computers and the Internet" (https://www.grenzenlos-digital.org/en/intro) runs for one year with participants from all over Germany. The course enables attendees to increase their information literacy and digital skills and apply them to learn more about the German job market. Goal of the project is to increase participants' digital skills so they can use the Internet to orient themselves on the German job market as well as to communicate online about their preferences and qualifications. The training implements a new concept by triangulated synchronous (online live sessions) and asynchronous (via online learning platform) teaching methods. The curriculum of the course and its learning goals are based on the "Digital Competence Framework for Citizens - DigComp 2.2" (European Commission, 2022) from the EU covering two of the five competence areas, namely 1) information and data literacy and 2) communication and collaboration. The course content and methods employed are shaped by experiences and lessons from four years of digital skills training for refugees and migrants. In addition, the course considers findings from scientific research on barriers to information-seeking during labour market orientation, such as inadequate operational skills (Stiller & Trkulja, 2018) resulting from restricted availability of laptops and computers. The best practice session covers different aspects that need to be acknowledged when designing low digital skills training, such as the target group, evaluation of students' progress and course content, motivations, and the settings in which the course will take place. The benefits and drawbacks of aligning the course content with the digital skills framework are elaborated and discussed. Furthermore, we will share tips on teaching practices and methods that proved to be successful in conveying low digital skills.

Acknowledgments

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Keywords: digital divide, digital inclusion, job market orientation, digital empowerment, vulnerable groups

"The Most Instagrammable Library". How to Increase the Library's Impact on Instagram

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Since the early 2010s, Instagram has been growing in popularity as a social media platform (Ebrand, 2022; OFS, 2020). Instagram has become a truly interactive platform with a vast potential for organizations such as university libraries. The Helsinki University Library is the largest multidisciplinary research library in Finland, and it provides services to the University of Helsinki community as well as to the wider public. The library employs organic Instagram marketing strategies for promoting its services and collections actively, not only for current university students, but also for aspiring future ones as well. In this presentation, I will identify our library's experiences on how to put a social-media strategy into practice and use Instagram as an effective tool in everyday library work.

The Helsinki University Library has been publishing library-related content on its own Instagram account (@helunilib) since 2014. In 2018, the library started to employ Instagram Stories more in its communications. Instagram has evolved from a photo-sharing application into an interactive multimedia platform, which has driven the library to rethink its posting strategies. In 2019, the library updated its social media concepts and strategy. Besides Instagram, the library also posts regularly on Facebook, Twitter, and YouTube. For the library's Instagram, the target groups are primarily students and other library patrons and secondarily other visitors, such as tourists and library enthusiasts.

During the COVID-19 pandemic, students in Finland were spending more time at home on their devices, which motivated the library to reach out to its customers online even more than before (Helsinki University Library Annual Report, 2021). Between the years 2020 and 2023, the number of followers of the Helsinki University Library Instagram account had increased by 567. In January 2023, the library had almost 1850 followers on Instagram.

Collaborations with other users has been an important practice for maximizing the library's impact. To achieve this, the library has benefitted from interactive practices, such as Instagram Story takeovers, tagging relevant users and using question stickers in Stories. Many student organizations at the University of Helsinki have their own account on Instagram, which makes Instagram a valuable platform for reaching students.

In the beginning of the academic year, the library took over the University of Helsinki account and answered students' questions on Instagram. These takeovers have helped the library to gain more followers and to reach individuals who would not necessarily follow other library channels. Having more friends and being active boosts the algorithm and thus grows the account's visibility.

The library increased its student-engagement by using Instagram's interactive features. One of the challenges has been posting regularly and keeping up with the changing trends and features. Recently, the library has experimented with reels and audio-based trends and even making videos on TikTok. As social media constantly changes, so too does students' online behavior, in which case users might switch from one platform to another. The library's task is to serve its customers and provide information using those channels that make sense for their communities.

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Keywords: social media, library engagement, library outreach, Instagram, information literacy

Keeping up with Open Access Publishing: Scholarly Publishing Literacy for Researchers and Librarians

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With open access publishing becoming a norm for research extensive universities, academic librarians are facing new challenges and need new skills for successful business and communication with publishers and authors, and for mastering the open access publishing process. The changes are constant and the ecology of scholarly communication is complex, with different business models and different workflows for authors and librarians. In this multifaceted new reality, academic librarians are taking a more and more active role in providing appropriate scholarly publishing support and training for their faculty and students.

King Abdullah University of Science and Technology (KAUST) in Saudi Arabia is a graduate research university established in 2009. Its mission is to find solutions for some of the most pressing scientific and technological challenges in the world as well as in Saudi Arabia in the areas of food and health, water, energy, environment and the digital domain. KAUST strives to attract the greatest minds from all around the world, with faculty and students coming from 120 different nations. KAUST is a prolific university with the scholarly output of 10,635 academic works published from 2019 to 2022, 71,3% published as open access (Scival, January 2023). Clarivate included 15 KAUST authors in their annual Highly Cited Researchers list in 2022 (top 1% of research cited worldwide).

Recognizing the need to actively support KAUST publishing and wider dissemination of published research results, KAUST Library was one of the early adopters and signatories of OA2020 and one of the first promoters of open access in the Middle East. Our open access journey started with establishing a green open access route via a research repository, supported by the KAUST University Open Access Policy in 2014. The next step was signing the first OA publishing agreements in 2019, with the aim of supporting gold open access. Now, in 2022, we support publishing in hybrid and gold journals with many relevant STEM publishers.

In this paper we will explain:

- The KAUST Library approach in supporting the research community in open access publishing. We will present our main tools and services (Open Acess Publishing training sessions, Open Access Publishing research guide, reference support in OA publishing area).
- Reseachers needs in OA Publishing We have reviewed and analyzed open access publishing-related tickets in our KAUST Library Springshare LibAnswers database (2020–2022) to identify the needs of our research community and to determine how these needs are changing as more open access publishing agreements become available and as awareness of the value of open access grows.
- Our learning curve how we as librarians learn about OA publishing (ESAC Community of practice, sharing knowledge with colleagues, active dialogue with publishers) and tools we developed to make the best of our agreements (Open Access Publishing Dashboard).

The aim of this presentation is to share our experience with colleagues from other academic libraries, present our approach in negotiating and accessing transformative deals, and hear from other colleagues about their experiences, challenges and approaches.

Keywords: scholarly publishing literacy, open access publishing, scholarly communication, transformative agreements, academic librarians

Innovative Information Literacy Support for Academic Students – We Got their Backs

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Demand for Change

The information specialists in Tritonia Academic Library, a joint library in a multilingual environment, are used to finding new and innovative ways to support students in the field of information literacy (IL). Our information specialists have given hands on tutorials, lessons on request, and one credit courses in IL for both first-year students and bachelor degree students for the past 15 years. Some courses are developed or held together with the teaching staff. The ever-changing scientific landscape demands a change in how we support the students' IL (Lokse et al., 2017). As our IL teachers have the possibility for only one lecture of two hours per IL course, the risk of overloading students with information is imminent (Lokse et al., 2017). To keep the lectures quite light, our library offers as much IL support as possible in various other ways.

IL Services Close at Hand

Since the pandemic, students seem to prefer receiving library services online (Baker & Ellis, 2021). Therefore, IL questions and support takes place in channels preferred by the students. Our library has a live chat service for students, researchers, and staff. We feel that a chatbot does not empower students to evaluate, use, and create information effectively. Other ways of getting IL support is to use the Ask the library form or send us e-mail. Questions from both the form and e-mail go to a ticket system managed by information specialists. For these online library services to be successful, it is important to keep up with the evolving technology and to maintain and develop the information specialists' knowledge and expertise through relevant training (Laaro, 2021).

We also offer a weekly drop-in thesis workshop together with the university's study psychologist. The workshop aims to solve the students' thesis-related problems regarding IL issues, time management, and writer's blocks. Students also give and get peer support. Before the pandemic, the workshops were on campus, but now the workshops are held online.

In addition, students can get personal IL guidance by booking an appointment with an information specialist through the Book, a tutorial service. The service helps students with issues, such as finding suitable information resources, upgrading their search strategies, and creating literature reviews. These appointments are generally held online. The library gives open online sessions on subjects including e-books, reference and data management, and open science.

At Tritonia, we acknowledge that we have an important role in giving our university students sound IL support when they need it so that they can thrive in their academic studies and also later in their work life. Offering different kinds of easily accessible IL support services favors not only the students but the whole university. IL support does not have to be that complicated, but it needs professional and flexible information specialists.

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Keywords: information literacy, online support, academic libraries, thesis workshops

Taking Digital Literacy Further through Sharing and Reuse

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In many frameworks, information literacy skills are seen as part of a much broader set of skills: digital skills. Although information literacy also includes non-digital skills, it is evident that digital competence is an important part of the information literate student (Leaning, 2019).

Consequently, in many educational institutions in the Netherlands, skills education has now broadened to include digital skills. Following a previous project in which IL educational materials were shared, the Dutch IL working group has now taken the initiative for nationwide sharing of digital skills educational materials via the national Dutch search portal Edusources.

To create optimal support, the IL Working Group sought cooperation with six other national library working groups. This makes the project unique.

Such cooperation prevents many parties from doing the same thing through different platforms. Cooperation is also important in defining a common scope that has translated into a Digital Skills taxonomy. As a basis for that taxonomy, all major digital skills frameworks, such as DQ framework and Digcomp 2.2 (DQ Institute, 2019; Vuorikari, Kluzer, & Punie, 2022) were compared and analyzed. Based on that, a first draft was developed that became final after incorporating feedback from a broad spectrum of relevant working groups and stakeholders. That taxonomy will have a place in the edusources search portal to increase retrievability and thus promote reuse.

During this presentation we will briefly discuss the relationship between information literacy and digital literacy and you will get an idea of the different facets of sharing (DS) educational resources.

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Keywords: open educational resources, information literacy, digital skills

Towards a Dutch Open Badge Information Literacy

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Flexibilization of higher education is a hot topic in the Netherlands. One of the conditions for making this flexibilization possible is the use of open badges, which are digital certificates that allow students to visualize the knowledge and skills they have acquired. A national infrastructure for awarding open badges to students, called edubadges, has been set up for this purpose.

Edubadges are normally created and awarded per institution. The Dutch Working Group on Information Literacy is now working on a scoop. In order to give edubadges added value, work is being done on institution-wide Information literacy edubadges. The IL taxonomy has been used as the basis for these badges.

The added value of these interchangeable badges is that students who transfer to another institution or curriculum can use the badge to show what level of IL competency they have. In this way, it is easier to catch up with the required IL competency level of the new curriculum. Moreover, because multiple institution are involved in its creation, it can contribute to the quality improvement (Raish & Rimland, 2016) of IL education and testing as part of it. Finally, IL badges allow for visibility of information literacy within the curriculum (Rimland & Raish, 2017).

The biggest challenge in this project is reaching consensus on learning outcomes to be tested and an edubadges format related to this. During this session we will take you on a journey towards institution-wide badges.

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Keywords: open badges, open education, information literacy

PECHA KUCHA

Information Literacy in the Omani Government Companies and its Impact on Employees' Creativity

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The purpose of this paper is to investigate and interpret information experience variations that affect the information literacy possessed by employees in the Omani holding government companies while focusing on the impact of information literacy on the development of the employees' creativity. The study attempts to answer this question: How is creativity affected by the different ways through which employees in the Omani government companies experience information literacy?

The study employs a phenomenography approach as a qualitative method that focuses on the experiences of people, emphasizing variation in the perceptions of phenomena. The executed approach, phenomenography, leads to richer, more accurate conclusions about what information literacy means in practical terms. It also provides better understanding and thorough insights into the research problem by investigating multiple perspectives.

Thirty-six participants, from nine holding companies, were interviewed face-to-face as a purposive sample for the study by using a semi-structured interview. These interviews took place in an interpersonal interaction experience and sought to understand the meaning of information literacy in the interviewee's workplace while focusing on job creativity. The data was analyzed using MAXQDA software though which the transcripts of the interviews were classified and organized by various themes.

The results show that creativity happens as a result of the various ways through which employees in the Omani government companies experience information literacy. For example, most of the interviewees reveal that discovering and evaluating information has positive impact on their business. In addition, the results demonstrate that information literacy enables employees to overcome a variety of challenges when managing information including tackling investment risks, and dealing with huge amount of data.

The research contributes to the field of job creativity and development by shedding light on the less-researched information experiences of employees in the workplace information literacy. Therefore, the study provides policymakers, decision-makers, and trainers with a sound basis for developing training programs and frameworks that are based on the lived information literacy experiences of workers at their real workplaces.

Keywords: information literacy in the workplace, employees' creativity, phenomenography approach, Oman

Digital Fluency: Students' Perceptions and Participation in Designing the Curriculum in Bulgaria, Finland and Italy

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Since 2021, the TLIT4U project¹ has been implemented by ULSIT (Bulgaria), UNIPR (Italy), ULAPLAND (Finland) and FPM (Italy). The project highlights the need to improve students' multiple literacy skills and develop a curriculum integrating a STE(A)M approach and using serious games. The numerous definitions of Digital Fluency - DF (Demir, 2015; Ross, 2015) often overlap with definitions of IL, digital competencies and even multimodality. Sparrow (2018) defines 5 skills essential for students with regard to fluency. The paper presents the results of the survey on DF carried out in the first phase of TLT4U and the focus group with students using Design thinking (DT) method realized in the second phase of the project.

Methodology

The research questions of the survey during the first phase were: How do students rate their digital fluency and what do teachers think about the difficulty of integrating digital fluency skills into their curricula? In order to investigate students' perceptions and skills, the project team organized a workshop and presented the concepts of transliteracy, STEM and DF to trainees from the partner universities in IT, BG and FI. After an analysis of the students' needs, in the second phase the partners involved students in the design of a curriculum to obtain DF skills applying the DT method.

Findings

The perceptions of students and teachers on DF and Digital literacy skills were analyzed and further activities with students were planned towards the design of a DF curriculum. The learning objectives set by students, the proposed learning activities and assessment methods were matched with the criteria of interdisciplinarity and employability. The outcomes of a relevant curriculum were specified and a syllabus was developed by the students using the DT method and the peer assessment approach. The project will use these results to prepare a model curriculum and promote an active learning based on Inquiry based and STEAM education.

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Keywords: digital fluency, design thinking, STEAM

¹TLIT4U - Improving Transliteracy Skills through Serious Games is an Erasmus+ Project № 2021-1-BG01-KA220-HED-000027624: https://translit-eu.unibit.bg

Contemporary Publishing in Information Literacy Context: A Case Study of the University of Osijek

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Objectives

The importance of information literacy at universities is on the rise due to the development of IT and new ways of scientific communication. This results in the need for acquiring additional information skills in the process of publishing various publications and research works by using and applying international identifiers to identify and differentiate the publications. Higher education librarians have an important role in this process since they offer information literacy programmes including elements of the publication process.

The National and University Library in Zagreb has created educational films as part of the *E-praktikum* programme of the Croatian Legal Deposit portal available at: http://hop.nsk.hr/e-praktikum/. The films have been designed for publishers, librarians, and the interested general public to inform, educate, and promote laws and by-laws related to the institution and system of legal deposit. *E-praktikum* contains six informative and educational films:

- Legal Deposit in the Republic of Croatia
- Legal Deposit of Online Resources
- International Identifiers in the National and University Library in Zagreb
- Croatian Web Archive
- CIP
- Bibliography.

The aim of this paper is to investigate how and to which extent higher education librarians interactively participate in their scientists' contemporary publishing activities.

Methodology

We used the case study research methodto investigate the involvement of higher education librarians in the publishing process of units of the University of Osijek. We sent a questionnaire to 12 heads of libraries including questions pertaining to:

- formal and informal workshops on information literacy about the importance of the given aspects of the publishing process such as ISBN, ISSN, DOI
- whether there was someone in the institution following all the segments
- whether scientists were educated about the significance and importance of those segments for themselves as authors and for the entire publishing activity of their institutions.

Outcomes

Librarians with their competencies have an important role and responsibility in educating scientists. The application of the given premises of the publishing process into information literacy programmes is an added value in the improvement of the process and model of the contemporary publishing in the global media context. The Croatian Legal Deposit portal is an example of an informative and educational aggregator and a practical tool in promoting the founding basics of contemporary publishing.

Keywords: contemporary publishing, international identifiers, higher education libraries, information literacy

Incorporating the SIFT Method into One-Shot Library Instruction Workshops

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As the world of media continues to rapidly evolve, it is crucial for librarian instructors to equip students with the necessary skills to effectively evaluate online information. However, traditional methods of information evaluation, such as the CRAAP test with a focus on close reading, may no longer be sufficient in today's digital age.

To address this challenge an exercise teaching updated information evaluation skills has been incorporated into a oneshot librarian instructor workshop taught in a large undergraduate compulsory course at the American University of Sharjah. The exercise is based on a new method designed for evaluating web-based media called SIFT (The Four Moves), developed in 2017 by digital information specialist Mike Caulfield (Caulfield, 2019).

The SIFT method consists of four moves that are performed when encountering online information;

- Stop
- Investigate the source
- Find better coverage
- Trace quotes to original source

The new exercise is designed to teach students to determine the legitimacy of information in a fast and effective manner by reframing information evaluation skills as 'learning to think like fact-checkers', as suggested in Caulfield's SIFT video series instruction of the method (CTRL-F, 2020). The exercise, taught within the one-shot workshop, has been repeated over multiple semesters to all sections of the course, taught by either one of two librarian instructors or a graduate teaching assistant. The exercise continues to be refined and updated based on feedback and new findings, ensuring that skills are delivered using the most effective approach.

By encouraging students to explore the wider context of a source, they can self-teach and build practice in using evaluative habits that are highly valuable both in an academic sense and also for their own personal media and social media literacy skills. Ultimately, this exercise aims to provide students with the necessary skills to critically evaluate online information, making them better equipped to navigate the rapidly shifting landscape of media in today's digital age. This presentation will share strategies and learnings from delivering this SIFT-based exercise within the structure of the one-shot librarian instructor workshop.

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Keywords: *information literacy, digital literacy, librarian instruction, academic librarians, information evaluation, SIFT method*

Creating a Web-Based Quiz to Support Information Literacy for Food Science and Nutrition Students and the Academic Librarians who Support them

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In the 1960s, four scientific organizations from around the globe set up a charitable organization--a publisher--charged with serving that community's discipline-specific information needs. This was primarily done through the creation of an A&I database, but serving those information needs also extended to enhancing the community's understanding of information and the information ecosystem.

To do so, the publisher created a literacy and outreach manager role. Efforts to enhance information literacy amongst students and professionals in the field have included creating guidance about: good practice for literature searching; the publication process; predatory publishers; and, discipline-specific systematic review methodology.

The latest effort has been to design and build a lengthy SpringShare LibWizard quiz. This quiz is a training tutorial for the database (with one version per vendor platform), but it is also a vehicle for instilling principles of information literacy. Thanks to the publisher's robust global networks with academic and industry-based librarians and researchers, this quiz can potentially have substantial reach and influence in the field. This PechaKucha presentation will capture the project's challenges and solutions.

First, the motivation for building the quiz—to teach students to use the database, to understand that and how it differs from a search engine, and to have a basic understanding of controlled vocabulary. This, hopefully, can help solve the problem of poor student research skills and weak bibliographies.

Second, logistical issues. Why use LibWizard as the vehicle for the training tutorial? Why use the quiz function rather than the tutorial function? What are the challenges in building a thirty-page tutorial in a tool mostly designed for shorter objects?

Third, pedagogical issues. Where does the balance lie between showing where to click on the interface and dwelling on the quality of information and interpreting the results that a search returns? What might a person taking the quiz know already? How long can a quiz be that must be completed in one sitting? What are the most important points to emphasize and reinforce with the quiz questions? How can questions be structured so that learning is active?

Third, reception and roll out. Although the tutorial will be freely available for anyone to use who wants to—anyone who finds it online can take it—the vision of its success is for it to be integrated into library sessions and course modules at universities that subscribe to the database. One librarian at a US university has said that they will use it for a flipped learning exercise before students attend face-to-face library sessions. Another academic lecturer has asked to have a version branded with their course number and library webpage and they'll embed it into a mandatory introductory course. Will the quiz be adopted more broadly? If so, how and where?

As this project of creating a web-based quiz to support database searching and information literacy skills is just being rolled out, a PechaKucha presentation has the potential to capture the most important lessons and challenges encountered in the earliest stages of its release.

Keywords: web-based learning, controlled vocabulary, information literacy, research skills, international collaboration

Aligning the Values of Information Literacy and Scholarly Publishing

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Scholarly journals serve as the published record for the information literacy (IL) field's discourse, accomplishments, and directions. Accordingly, they should reflect the field's fundamental values of advancing diversity, equity, inclusion, and social justice (DEIJ). These values are articulated in some of the IL field's cornerstone documents, such as The International Federation of Library Associations and Institutions' Alexandria Proclamation on Information Literacy and Lifelong Learning (2005), and American Library Association's Core Values of Librarianship (2019). As argued by Folk (2019), however, the advancement of DEIJ is neglected in the professional literature. By extension, these values "seem to have lost their traction or relevance in the daily work that [information literacy] librarians perform" (Jacobs & Berg, 2011). It is therefore critical to the health and well-being of the IL field that DEIJ values are advanced in a fundamental way through its published record. For this to occur, it is necessary for DEIJ values to be integrated into the publishing policies and practices of the field's scholarly journals.

The presenter is co-founder and co-editor of *Communications in Information Literacy* (CIL), one of the IL field's leading journals. CIL is a values-driven publication. It was founded on principles of open scholarship and giving voice to underrepresented members of the IL community. More recently, the journal's editorial team committed to comprehensively integrating DEIJ values into all aspects of the publication process. This is an ongoing, iterative process involving reflection and a willingness to engage in difficult conversations, and it has resulted in some fundamental shifts in journal operations. In this Pecha Kucha, the presenter will share specific actions taken at CIL to advance DEIJ by way of new policies and practices aimed at bringing IL scholarship into greater alignment with the field's core values.

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Keywords: information literacy, scholarly publishing, core values, diversity, equity, inclusion, social justice

Open Education Resources, Information Literacy and Libraries – "the Bermuda Triangle" or "the Treasure Island"?

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The COVID-19 pandemic is a prominent aspect of most scientific analyses over the past three years. Some researchers consider the pandemic to be a "catalyst for change" in both the public and business sectors. Continuing these reflections, we must point to education, as one of the most critical areas in which the pandemic caused changes during and after it. Libraries and educational institutions around the world have been the first to respond to the learning crisis and have made every effort to provide online support materials and provide access to Open Educational Resources (OER). The term OER was first defined by UNESCO in 2002 as "the open provision of educational resources, enabled by information and communication technologies, for consultation, use, and adaptation by a community of users for non-commercial purposes" (UNESCO, 2002). The Open Educational Resources "should be freely shared through open licenses which facilitate use, revision, translation, improvement, and sharing by anyone" and "whenever possible, should also be available in formats that are accessible to people with disabilities and people who do not yet have access to the Internet" (Cape Town Open Education Declaration, 2007). The use of OER ensures free access for all to learning materials and the opening of education stimulates the creation of new interactive content and learning tools by promoting open frameworks (European Commission, 2019). Over the past two decades open education initiatives have created opportunities for organizations, teachers, students, and learners to use digital technologies and content to teach and learn in more innovative ways, but the emphasis on OER benefits in times of crises was added later on (during the COVID pandemic). Lessons learned during nearly two years of forced distance learning due to COVID-19 outline the direct link between users' digital and information literacy skills and the finding, using, and adaptation of online learning resources and highlight the significant role of libraries in developing information literacy as a key factor for a successful learning process (Martzoukou, 2021).

The findings and conclusions from the library practices, case studies, and open data examined, enable the authors to identify three main roles for libraries in fulfilling their core OER commitments: "promoting their creation and use; ensuring their availability, accessibility, and visibility; maintaining and ensuring their quality; advising on copyright issues; training users in ICT skills; and promoting digital literacy" (IFLA, 2019):

- 1. The library as a supporter helping the opening of educational resources;
- 2. The library as an aggregator and navigator integrating and indexing existing OER in portals, and
- 3. The library as creator preparing new OER for information literacy skills (an effective way to develop users' IL literacy skills on how to find, use and evaluate different information resources, as well as OER).

The main hypothesis is based on the assumption that the potential of libraries as creators of OER on information literacy topics has not yet been fully exploited (although it started to stand out during COVID). The authors use metaphors to compare their observations and point out that for some of the existing library practices in a global context, the current situation is more like a "Bermuda Triangle" (where OER are "lost" or "invisible"), but there are also many examples, which can be defined as a "Treasure Island" (where OERs are "stored" and waiting to be "discovered").

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Keywords: OER, information literacy, COVID-19, libraries, open educational resources, online education, open education

XPRTN for Futures Literacies

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Educational institutions are politically the "slowest tanker" regarding their willingness to change. That is as true for schools and their curricula as it is for pedagogical adaptations and paradigms of public libraries. Given ChatGPT, Luminar Neo, and similar AI-supported image and text programs and the demands of a diversified society, these institutions face even more severe challenges and changes than those brought about by digitization and networking in Web 2.0. Schools and universities are considering how examinations can be made even safer and how undercutting can become impossible. Initial considerations are expectedly to move in the direction of restrictions and controls. They are relying on appropriate security software, which is the equivalent of using AI, to put AI on trial?. Teachers fear losing control over knowledge acquisition if artificial bits of intelligence with access to the digitally available literature create texts at a speed and complexity at which this is impossible for humans.

What is the function of libraries in this process? How do they respond to the "competition of AI"? Solutions must not be sought by taking a step backward, ignoring the existence of such systems, and relying on memorized book knowledge in oral exams as proof of performance. To borrow Henry Jenkins' description of schools' misadoption of innovation: we need to avoid learning for an "outdated world" (Jenkins & Kelly, 2013, p. 9). Disruptive technological developments require just such societal adjustments. Riel Miller's (2011), theory of futures literacy, now a UN initiative, considers inculcating more effective preparation, analysis, and empowerment for what challenges and developments lie ahead for humanity.

The collective examination of different levels of future problems and possible developments and solutions should make short-, medium- and longer-term scenarios conceivable and creatively workable. In our new continuing education program, "XPRTN for futures literacies," we wanted to create training reflective of beliefs held by public library employees while supporting their searchfor a future library pedagogy through knowledge of theory, structure, and categories as well as through collaborative development We were concerned with meeting the challenges in a diverse post- or transhumanistic mediatized society of inclusion, gender justice, democratization, linguistic and social diversity, (Ernst & Schröter, 2020). Our team at TU Dortmund and TH Cologne University of Applied Sciences addressed these concerns in our training –. The format thus replaces the "XPRTN for Reading," which has qualified about 15 employees of public libraries annually since 2011. The reference to educational partners' expectations and framework conditions will remain in the new offering. However, the orientation moves from reading as a cultural technique to a more action-oriented approach of participatory adaptation to continuously changing framework conditions and the social challenges of the library as a "third place (Oldenburg, 1989)." We plan to outline and reflect on the concept in a collegial circle in our conference presentation.

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Keywords: information literacy, future libraries, diversity, digital literacy

Information Literacy in the Space of Intellectual Property

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Intellectual property plays a key role in the development of the knowledge-based economy in that it affects competitiveness and innovation. The aim of this research was to draw attention, through ananalysis and criticism of literature, to the importance of knowledge of intellectual property protection. Industrial property and copyright is important to understand in the context of new, dynamically developing information and communication technologies and the digital economy. In this context, higher education librarians, in particular scientific librarians in science, technology, engineering, and mathematics (STEM) areas, can play an important role. The inclusion of training in the use of intellectual property skills in academic information literacy programs will contribute to strengthening students' knowledge of intellectual property protection. This will assist librarians in developing practical skills and developing and improving professional competences related to functioning in a modern, innovative economy. In my paper I will define the concepts related to the ability to use intellectual property and the ability to use information in the area of intellectual property. I will present activities drawn from scientific librarians shaping the ability to use intellectual property with selected faculties of the Jagiellonian University including the Faculty of Medicine, Faculty of Pharmacy, Faculty of Management and Social Communication, and Faculty of Biophysics, Biochemistry and Biotechnology). I will collect the data as part of a survey conducted among librarians of individual faculties.

Keywords: faculty libraries, information literacy, intellectual property, intellectual property literacy

Generation Z and the Collision with Intellectual Property Literacy as part of Information Literacy

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In the second decade of the 21^{st} century, representatives of Generation Z – individuals between 14 and 28 years old, born in the period 1995-2010, are beginning their higher education or career. Bearing in mind the specific characteristics of this generation, like any other, in terms of its expectations and needs, the educational system and businesses themselves should intervene adequately, in order to improve the information literacy competencies (Seemiller & Grace, 2018).

Information literacy (IL) combines a major set of skills, such as media literacy, digital literacy, and critical thinking and in the end – transliteracy, which is a new concept and combination of skills, knowledge, thinking and acting. In every skill set in the new digital age, in which we are all participants, the intellectual property (IP) plays an essential role – it is an inseparable part of information literacy (Trencheva, 2020).

The purpose of this paper is to analyze what competences Generation Z has, on the one hand, and on the other hand, to investigate their familiarity with intellectual property, and whether competence in IP is necessary in the age of free sharing of information and free access to resources. In the course of the research, it will be clarified to what extent the representatives of generation Z are prepared for their realization in various fields and what is the set of necessary knowledge related to copyright. The research methodology includes bibliographic searching of sources, indicating examples of research and project activities, researching the recommendations of the European Commission regarding employment, social issues and inclusion, publications on the topic of the research from the database of the European Union Intellectual Property Office (EUIPO) and the World Intellectual Property Organization (WIPO).

As a result, it is suggested that the positive education environment suggests that IL programs should be promoted as a way of enhancing students' understanding of IP issues. IP is vital for creativity if students are aware and able to use it effectively.

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Keywords: generation Z, information literacy, intellectual property, intellectual property literacy

Promoting the Information Literacy: Research Collaboration in the Citizen Science Projects

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Purpose

This report highlights the extending role of libraries and other memory institutions due to the progress of Open Science and particularly Citizen Science. Citizen Science is a developing practice with various stakeholders, combining strengths and resources, engaging in research by addressing societal needs and global problems, and developing a knowledge society. Libraries play a relevant role here by promoting collaboration among various stakeholders and increasing information and scientific literacy.

Methodology

The international project LibOCS (Project Number: 2021-1-EE01-KA220-HED-000031125) was the framework for the chosen methodology and study. Two surveys were run in the Baltic States: Estonia, Latvia, and Lithuania. The first survey was held from April to July 2022. The second survey was built based on the data obtained in the first survey, and it was held from June to September 2022. The feedback received from both semi-structured questionnaires was 127 filled and valid for analysis responses of the first survey and 60 of the second one.

Gathered data helped to list the opinions and experiences of researchers, librarians, and specialists of other memory institutions, citizen scientists, or volunteers engaged in Citizen Science projects. The research of available information highlighted only a few Citizen Science projects aired in the Baltics with the engagement of library specialists (Kaseorg, 2022; Dobreva, 2015; Bite, 2020), therefore, it was decided to widen the range of respondents, and to run the surveys also among other memory institutions.

The QuestionPro tool was exploited to design surveys and collect data, and content analysis was used as the method of data aanalysis.

Findings

Respondents in the Baltic States expressed the willingness to collaborate with memory institution specialists in Citizen Science projects. The answers of the respondents witness the expanding role of the memory institutions specialists in research with the ability to perform the tasks related to organizing training on information, digital, data, and scientific literacy, as well as to giving support for Citizen Science projects through community conventions and promotion of knowledge sharing culture.

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Keywords: *citizen science, scientific literacy, civic engagement, collaboration in research, role of library, memory institution, open science*

POSTERS
Information Specialists supporting Research, Business and Innovation in the EU

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The project "Developing Information and Research Skills for Business, Innovation and Enterpreneurship" (INRS Project – 2021-1-IE02-KA220-HED-00003581) is an Erasmus+ project under the program KA220-HED - Cooperation partnerships in higher education. The project lead is the Technological University of the Shannon (Limerick IT): Midlands Midwest and the project partners are: MBThinktank, Universitatea Transilvania Din Brasov, Panepistimio Kritis, Kauno Technologijos Universitetas, University of Zagreb, and Universitat Politecnica de Valencia.

The aim of the project is to reinforce and enhance knowledge transfer between academia and business in European Union (EU) countries and to enable HEIs to provide increased and specialist information support to Research, Business and Innovation in the EU and in the regions that they serve. The project will enhance knowledge transfer between academia and business and effectively expand information specialist engagement with employers and business for the development of key transferable skills in the Regions that are critical for business, research and innovation. Furthermore, the planned activities and outputs aim to improve the level of skills and competencies of information specialist staff in the EU partner institutions in the project.

Project partners will develop training courses that will enhance information and research skills. The project is focused on developing courses, teaching, training materials, handbooks, and guides. This training curriculum, will feature a complete range of modern and key transferable skills that will address the most critical need of the 21 century Information Specialist staff. This will be conducted using innovative educational methods and learning environment as the project plans to enhance the quality of teaching in learning in the field of information research, business, and research.

The project is expected to have an impact on modernization of education at the universities on one hand and improvement of the lifelong learning at the public libraries on the other hand. The activities and outputs are organized under the following topics:

- The training curriculum
- Handbook for Information Specialists
- INRS Trainers Toolkit
- Online Platform
- Guide for Best Practices and Case Studies.

In the project's preparation phase we will conduct the training need analysis of both the library situation as well as training needs analysis of university stakeholders in the EU countries in this project and across the business and research community in the Regions they serve. We hope that the INRS project will increase the capacity of libraries to provide key information support to students and businesses in starting new ventures and to help move research from academia to market.

Keywords: research skills, information literacy, entrepreneurship

The NIAGARA Project – Navigating the Digital Landscape: Universities Partnering for Change

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The goal of my proposed poster is to inform the ECIL community of an interesting and important international project, funded by the European Education and Culture Executive Agency (EACEA) under ERASMUS+ programme, concerning digital/information literacy issues in Sub-Saharan Africa.

The main aim of the project *Navigating the digital landscape: universities partnering for change* (NIAGARA) is to utilize the partnership between universities in Zambia, Tanzania, Poland, and Norway to improve and expand information services by developing libraries' ICT infrastructure and librarians' digital competencies.

The project started in January 2023 and will continue through December 2025. The partnering institutions are:

- Hogskolen I Innlandet (Norway),
- Oslomet Storbyuniversitetet (Norway),
- University of Dar es Salaam (Tanzania),
- Sokoine University of Agriculture (Tanzania),
- University of Zambia (Zambia),
- The University of Barotseland Limited (Zambia), and
- Jagiellonian University (Uniwersytet Jagielloński) (Poland).

The specific objectives of the NIAGARA project are:

- (1) to strengthen the digital infrastructure in partner university libraries in Tanzania and Zambia that will benefit all students and staff and ensure inclusive and equal access to library and information services;
- (2) to examine current digital competencies needed for efficient provision of library and information services; and
- (3) to develop and implement short-term IL courses.

The primary target groups are the higher education institutions (HEI) librarians and library and information science (LIS) students in Zambia and Tanzania. Further target beneficiaries are all students and faculty members, including those with fewer opportunities, working in the noted countries.

Some important outputs will be open courses and interactive learning materials on digital literacy and data management. Information and outputs will be accessible through the project website and social media.

Knowledge gained from the project should be informative for policy makers and leaders in higher education as well as governing bodies in regions that are looking to increase citizens' digital competencies and even out digital divides. The results ought to be transferable to other HEIs, library and information science educators, and academic libraries and will contribute to scholarly discussions and research on issues related to open access and accessibility.

Keywords: academic libraries, digital competencies, NIAGARA, Tanzania, Zambia

Information Literacy (IL) Approaches of Research University Libraries in Türkiye

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In today's world where information and communication technologies (ICT) are developing at an incredible speed, there is a concept that draws our attention: information literacy (IL). Eisenberg et al. (2004, p. 19) explains that "People trained in the application of information resources to their work can be called information literates." Since the concept is mostly and directly related to society, it is brought to the society through public libraries, where government policies can be created and directly implemented. This is a result frequently encountered in the literature.

To start with we can list types of libraries where services are provided to assist patrons in becoming information literate. Types of libraries may include research libraries, medical libraries, law libraries, manuscript and rare books libraries, and children's libraries. Although it is common to bring IL to society mostly through public libraries, the number of studies focusing on these roles in research libraries is quite limited. In general, various services including collection development is provided to library patrons based on their age groups. Materials available through public library collections include books, non-book materials (such as magazines, comics, brochures, CDs, DVDs), toys, learning games, computers, software and internet connectivity.

Research libraries do not divide their services by age group.

What kind of activities can research libraries provide to position IL? How can this feature be instilled or developed in university students who are among the main stakeholders of research libraries in universities? These are just two of the questions of our research. We have adopted a content/document analysis for our qualitative research method. In this context, we investigated the web pages and strategic plans of the relevant research libraries and asked short questions about IL by interviewing authorized persons through a semi-structured and unstructured method. The scope of the study was limited to the ILpolicies of research libraries in Türkiye. The scope of our research involved first examining the Strategic Plans of Research University Libraries, Lifelong Learning Strategy Documents and Action Plans of Türkiye to try identify Educational Policies. Second, we I analyzed the research library had an IL policy, then we applied our method to determine how they implemented it to the holders. Eventually, we can gain generalized insights.

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Keywords: information literacy, information literacy approach, information literacy approaches in Türkiye

Collaboration is Key: Teaching Research Data Literacy Skills at NTNU

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The field of data management arose decades ago while publishing and archiving research data as an essential part of most research projects came into focus much later. Nowadays, research funders and other stakeholders not only require the (open) publication of research (results), but also expect publication and archiving of the underlying data because access to and re-use of research data will increase reproducibility and transparency in science. To be able to plan, collect, store, use, share, and preserve data that are generated in research projects it is beneficial to use what is called Research Data Management (RDM). Academic libraries will soon become involved in and responsible for RDM services as they are experts within these areas.

Good practices of managing research data require the need for teaching and training researchers and students, ensuring that they have the skills to properly manage their research data throughout the entire research life cycle. These skills are usually called research data literacy skills, and (research) data literacy is seen as a "sub-discipline of information literacy" (Schneider, 2013). Many stakeholders have identified the libraries as a key place to provide teaching and support for RDM, given that they already give information literacy instructions to students and researchers.

The Norwegian University of Science and Technology (NTNU) started focusing on RDM several years ago. NTNU approved a Policy for Open Science, including principles for RDM, in 2020 (NTNU, 2020). The university library was assigned the main responsibility to support and train students and researchers in managing their research data in a secure and responsible way. Library staff organized This work is organised via a central service called Research Data @NTNU and is conducted in close collaboration with the university's IT department, research administration, lawyers, as well as with other libraries in the Nordic countries.

This poster will illustrate the various activities at NTNU that foster research data literacy among students and researchers. It will show the lectures and workshops that are provided and give an overview about their content and pedagogical approaches. This includes online and in-person courses on topics like the Introduction to Research Data Management, RDM tools, how to write a Data Management Plan, how to make your data FAIR (Findable, Accessible, Interoperable, Reusable), and how to handle personal data. It will also showcase other teaching activities including tailored seminars at departments, events for PhD and master programmes, webinars, as well as guidance services.In addition, the poster will highlight the collaboration with other departments and stakeholders.

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Keywords: research data management, research data literacy, university libraries, collaboration

Investigating Young Finns' Information Literacy Regarding AI-Generated Media

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The advancement of artificial intelligence (AI) boosts the emergence of new digital platforms. As one of the signature examples, AI-generated media (AGM), a hyper-realistic media that automatically generated by AI, have been pervasive on social media platforms. For various content creators, they can use these applications to create images of an existing person's face and "automatically merge, combine, replace and superimpose" this onto "a targeted video", powered by AI and deep learning techniques. With the launches of more novel AI-powered platforms, such as DALL-E 2, people can even create realistic images and art from a description in natural language.

This emerging media is controversial. On the one hand, they have broadened the scope of art, by presenting diverse creative content. Meanwhile however, they potentially can cause many problems. Since the content of AGM looks more realistic, these media might be utilized to cause fraud and disinformation, which leads people to "re-evaluate" their "very perception of reality". Hence, it is harder for people to identify the authenticity of media content. As young people have been the prominent consumers of social media platforms, they might encounter AGM in their everyday lives. Therefore, it is vital to research how they deal with information revealed in AGM while facing AGM in their everyday lives.

This research aims to study young people's information literacy as practice while confronting content brought by AGM. Driven by this aim, the purpose of this study is to investigate how young Finns deal with AGM in their everyday lives, focusing on their information literacy practices. There are two objectives for this research: 1. Examining young Finns' understandings of AGM, primarily involving their definition and views towards AGM; 2. Exploring young Finns' information practice with AGM in their everyday lives, including how they access, deal with, and evaluate the information shown in AGM.

In-depth interviews were applied as the method for this research. A basic interview guide was designed before the data collection according to the objectives. The interview was planned to be conducted in English and last for around 30-40 minutes. Twenty Finnish 9th grade pupils were recruited from the Oulu International School to attend TET week in 2021, and participated in tasks involving technology development and use. The participants represent Generation Z, a prominent group of young people who consume videos often in their everyday lives (Baron, 2019). All the conversations were recorded under their permission.

This research will primarily contribute to increasing understanding of AGM as a new type of information powered by AI technology and knowledge on young people's understanding, experiences and competencies regarding AGM. It can also generate knowledge to propel Internet policy practitioners to pay more attention on emerging AI-driven content and strengthen the contemporary AI governance.

Keywords: artificial intelligence, information literacy, information practice, young people, synthetic media, AI governance

War Media Trauma during Russia Invasion in Ukraine: New Challenge for Media and Informational Literacy Education

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Theoretical background. The concept of media traumatization have been repeatedly described after terrorist attacks, technological disasters, and other traumatic events covered by the media. The influence of the media as a trigger that worsens the condition of victims has been noted since the 1980s (McFarlane, 1986) for TV viewers (Hamblen, 2015). Mass media can play a leading role in helping to reduce individual and national traumatic reactions, based on understanding the internal connection between violence and trauma (Ross, 2005). Trauma is considered as a critical concept for understanding modern visual media by art critics and cultural scholars (Broderick & Traverso, 2010; Meek, 2011). The concepts of trauma pop culture as the experience of the pain of others in various forms of modern media practices in social networks regarding the viewing and reposting of videos of traumatic events confirm the statistical significance of these factors on the formation of users' post-traumatic stress disorder (PTSD) (Abdalla at al, 2021). However, media traumatization remains one of the least researched components of the development of war PTSD for the civilian population, particularly among minors (Morina, 2018).

Objectives. The main purposes of our research were to measure the level of traumatic stress of Ukrainians during war and evaluate the role that media impacts at stress experience for develop a new component into informational literacy education.

Methods. We conducted two surveys. The first was:

- 1. A national level survey about psychological well-being of the adult habitants of cities and towns with populations of (50,000 thousand or more in the Ukraine during August 2022 (N=1,000).
- A survey with educator and student participants that we conducted remotely during September-October 2022 (N=455). We used the media trauma intensity scale (MTIS) and modified the Impact of Event Scale -Revised (IES-R) (Weiss, & Marmar, 1996).

Results and discussion. As reported by 85% of the participants, the most traumatic experience was the depiction of destroyed homes. That was followed by death (61%), children in war situations (49%), and violence and discrimination (35%). When examining their answers, it was appparent that 47% of respondents demonstrated high levels of PTSD symptoms and were atrisk for developing a pathological reaction. The research showed that media content was a contributing factor to the stress experience during war and had a high impact on media consumers' PTSD symptoms. Media trauma intensity in terms of PTSD symptoms showed a small difference between psychological reactions on real traumatic events and media covered ones. This impact must be appropriately recognized in news media production.

Conclusion. The traumatic impact of war media is a new challenge for informational literacy education, suggesting that the topic of health protection must be included in the media literacy curriculum both for school teachers and for journalism students.

Keywords: public health, psycho trauma, war, media impact

Development of Students' Media Literacy through the Special Course "Professionally Oriented Media Education"

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The purpose of my presentation is to introduce a new special course, "Professionally Oriented Media Education", and its implementation at the Kyiv Medical University.

Nowadays, information technologies have become widespread and diverse, as they reflect the processes of searching, analyzing, and implementing various information. Thematic pages have become platforms for the exchange of information advanced experience of specialists in various fields of knowledge. The terms "information literacy" and "media and information literacy" lead to a new terminological system that is being actively enriched. Within the new terminological system, the concept of media didactics - the use of media for educational purposes - is relatively new and combines various technologies. In my report I present the structure of the new course, "Professionally Oriented Media Education", that can be easily transformed to meet the needs of schools of various disciplinary fields of training.

The course's structure consists of media didactic sections that are filled with links to professional media sources. Students work out and comment on them in accordance with educational tasks. The sections are as follows:

- 1. Terminology of media education Introduction: subject, purpose, and tasks of media education.
- 2. Media competence of a specialist. Basics of media competence.
- 3. Press didactics. Publishing activity in the field of the future specialty, in encyclopedias, handbooks, and educational literature .
- 4. Media didactics and Internet didactics. Media didactics and its components:press didactics, film didactics, radio didactics, television didactics, multimedia didactics, and Internet didactics. Internet didactics and its components:wiki didactics, site didactics, blog didactics, webinar didactics, and so forth.
- 5. Development of critical thinking. Film didactics.Educational and scientific films about the science and practice of the field
- 6. Wikididactics. Field of expertise in the Ukrainian and English sectors of Wikipedia.
- 7. Didactics blogs and sites. Websites and blogs on the profession in the social network and their media education function.
- 8. Webinarodikatics. Webinars on the profession and their role in the professional development of the future specialist.
- 9. Bibliodidactics. Museum didactics. Branch libraries and museums and their media educational activities. Specialist libraries and museums online. Museums of the industry on the Internet.
- 10. Final lesson. The conference as a media-educational technology.

Media teachers successfully develop new technologies for the use of media in the process of education and training. Innovative forms of media work appeared in libraries Examples of their presence in social networks testify to the feasibility of updating the concept "library blog didactics".

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Keywords: *media literacy, information literacy, media competence, media didactics of higher education, professionally oriented media education*

BRIDGE Project: Information and Digital Literacy at Primary School

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The aim of this poster is to present the Erasmus+ KA2 European project BRIDGE ("Information and Digital Literacy at School. A Bridge to Support Critical Thinking and Equality Values for Primary Education Using Children's Literature and Transmedia"), developed by 8 partners from 6 countries (Universitat Jaume I, Spain; Hacettepe Universitesi and Cankaya Universitesi Vakfi, Turkey; Università degli Studi di Genova, Italy; University of Oulu, Finland; Ionian University, Greece; InformAll and SP4IL, United Kingdom).

BRIDGE endeavours to foster information and digital literacy as a vital basis for educating an informed citizenry that will stand up to disinformation, hate speech and fake news, enhancing the relevance of curiosity, empathy, enquiry-based learning and critical thinking, starting from childhood.

The main purpose of BRIDGE is the joint promotion of information and digital literacy as a way of underpinning education in equality values in primary schools. The project is aimed for children in the approximate middle primary school stage (aged 8-11 years) and intends to take advantage of the educational potential of children's literature (especially picture books) and digital resources to engage with students about equality, diversity and inclusiveness and global citizenship, and as a door to information and digital literacy activities that help to encourage enquiry-led learning and critical thinking.

The project addresses the following three objectives:

- O1. To advocate for the urgent need to promote information and digital literacy in primary schools, as a key pillar for the education of a democratic citizenship based on critical thinking and values of equality.
- O2. To elaborate an open access multilingual portal where resources and good practices from the six participating countries will be collected. The portal will include a selection of children's literature and transmedia resources with special potential for the development of educational activities for information literacy and education in equality values.
- O3. To design and develop a training seminar (a seminar will be developed in each partner country) to provide recommendations and guidelines on how to implement information and digital literacy with an emphasis on the promotion of values of equality in an embedded and transversal way in the school curriculum.

Project outcomes, namely a report on existing situations and calls for action (PR1), open access portals with selected resources and good practices, children's literature and transmedia (PR2), and structures of the training seminars as well as the guidelines booklet (PR3) will be presented in the poster.

Keywords: *information literacy, digital literacy, primary education, school, equality values, children's literature, transmedia resources*

Survey on High School Students' and Teachers' Interest in Information Literacy

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Information Literacy Education for Japan

It has been 20 years since the Ministry of Education, Culture, Sports, Science and Technology (MEXT) implemented comprehensive learning classes in elementary and secondary education. In integrated learning classes, they explore materials from the school library and information on the Internet, but they have few opportunities to gain experience in information literacy.

Survey on Information Literacy

We have already conducted four surveys on information literacy in Japan. The first was for current teachers and university students who wanted to become teachers, the second was for high school students and teachers, the third was for junior high school students and teachers, and the fourth was for elementary school students and teachers. This year, the same questionnaire was distributed to high school students and teachers. The purpose of this questionnaire was not to judge the skills of teachers and students in information literacy, but to consider their interests and needs for information skills. We also examined differences in interest in information skills depending on the number of years of experience of teachers and the subjects they taught. We think of information literacy as a complex set of multiple skills. The information skills used in teacher and student questions was based on the PLUS model published by James E. Herring in 2010. The model included four steps: purpose, location, application, and self-assessment.

In January 2023, we surveyed sixty-four students and sixteen teachers from high schools in rural areas of Japan. While students and teachers tended to be more interested in using computer applications to present their skills, the survey showed that they are also interested in the skills of discovering topics to explore. Van Dijk and Van Deursen (2014) argued that they paid less attention to information skills, that is, the ability to search, select and evaluate information in digital media.

We will review the analyzed results of information literacy education and improve information literacy education at the surveyed schools.

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Keywords: information skills, survey, teachers, students, high school, Japan

Library User Experience (LUX) in the Context of Designing Information Services – Subject Literature Review

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The subject of this poster is the concept of LUX - Library user experience, defined as a comprehensive, positive, purposefully designed user experience related to the service process in the library and implemented both in the traditional and electronic environment (Priestner & Borg, 2016). The concept of building user experience is interdisciplinary and is the subject of considerations in psychology, computer science, and management sciences. For the purposes of this poster, I implemented the concept of the so-called experience economy, defined as an economic model in which the greatest value for the consumer is the experience associated with the service or commercial process itself (Pine & Gilmore, 2020). The main objectives included: determining the current state of research on the LUX; indicating practical recommendations for the implementation of this concept in academic libraries and proposing directions for further research. The concept of LUX is relatively well established in library and information science (LIS) theory; but it is still too rarely implemented in practice (Wójcik, 2019). My poster explored the potential reasons for this by identifying barriers to building LUX. The method of analysis and criticism of the literature I used was conducting a systematic search in databases indexing articles from magazines with a high Impact Factor - Scopus and Web of Science. In addition, I searched the resources of the popular Google Scholar search engine. I selected the collected materials based on the analysis of abstracts and keywords. I then analyzed the final body of the publication quantitatively and qualitatively. As a result, the poster presented a summary of the current state of knowledge on building the user experience in the library, especially in the context of providing information services. Additionally, I formulated recommendations on how to effectively implement the LUX principles in academic libraries, as well as additional recommendations to further research in this area based on identified gaps in the literature. The review of the literature showed that the biggest problem - both at the level of gaps in the literature and at the level of practical implementations - was the difficulty in integrating the physical and virtual space of libraries to create a coherent, holistic user experience.

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Keywords: academic libraries, experience economy, experiencing information information services, library user experience

WORKSHOPS

Building the Habit: How Information Literacy in Everyday Life Connects to Lifelong Learning

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Often learners enter the learning environment apprehensive of their ability to navigate the new skills and doubting the validity of their prior experiences. How do we help learners overcome this deficit thinking? Is there a way to connect everyday experiences with information literacy? Can we present information literacy instruction in a way that empowers learners to become resilient, confident, lifelong learners?

In this workshop, we will reflect on and examine how everyday personal experiences with information mirror the habits essential to lifelong information literacy. Together, we will investigate how learners experience and create meaning through exemplar information literacy activities. Participants will be invited to discuss how these habits could relate to other learning environments and ways to provide a platform for skill transference, shifting the narrative from a deficit mindset to a strengths-based mindset. Presenters will lead participants through a guided reflection exercise utilizing an existing information literacy lesson to integrate everyday habits with the intent of developing resilient and confident lifelong learners. Participants are encouraged to bring an existing or known assignment from their context or coursework with which to engage.

Objectives

Participants in the workshop will:

- Reflect on their personal experience with information in everyday life
- Investigate how individuals interpret and create meaning from information they experience
- Infer how meaning making habits encourage individuals to become lifelong learners
- Modify an existing information literacy lesson to integrate everyday habits of mind

Proposed Time

50 Minutes

Target Audience

Instructors or librarians who teach information literacy-related concepts to learners at any level.

Equipment

Projector and screen, round tables, poster/chart paper and markers.

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Keywords: lifelong learning, information literacy instruction, everyday life, habits of mind

Editing Wikipedia: An Effective Tool to Teach Information Literacy Skills Workshop

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Since 2001, Wikipedia has been much loved by users and oft vilified by librarians and educators. Now slightly more than twenty years into this experiment in crowdsourcing, Wikipedia has stood the test of time and shown its value as an encyclopedia for the world. Yet we as librarians and educators are not making the most of its existence and accessibility. Many of us still steer students away from it while, secretly or not so secretly, using it as a fast-fact reference tool. It is time to embrace using Wikipedia as an encyclopedia everyone can not only learn from but can add information to and edit existing articles.

Courtney Baron (2020) suggests that even while students should not be taught to cite Wikipedia, even the most novice researcher should be taught to use Wikipedia to identify both topics of interest and resources outside of Wikipedia that may be references in research writing (p. 225). But the real genius of using Wikipedia with students is in using it to teach information literacy through doing. Courtney Stine (2022) recently pointed out that "writing and editing Wikipedia articles showcases the research process, requiring students to understand how information is created, ask questions to identify information gaps, use strategic searching to find information, evaluate articles for authority and inclusivity, properly use and cite sources, and connect with other researchers (p. 166)."

Teaching information literacy through editing Wikipedia is an engaging way to teach upper-level teen students and university students the concepts encompassed in ACRL's Framework for Information Literacy ("Framework for information literacy for higher education," 2016). Any number of universities and libraries have held Wikipedia edita-thons for various reasons. Yet, how many of us really know how to edit Wikipedia ourselves, let alone how to train others to edit? It is all well and good to host an edit-a-thon and hope that everyone is able to figure out how to do it. But to be able to use an edit-a-thon as a tool for learning takes some skill, practice, and knowledge many of us do not already possess.

In this workshop, attendees will create a Wikipedia login (if they have not already done so), learn some basic editing skills, and edit in real-time a Wikipedia article, with guidance from the presenters. We have participated in some train-the-trainer sessions with Wikimedia to prepare to them to use Wikipedia editing to teach information literacy skills and have hosted joint virtual edit-a-thons at both USF and TSU. We will share their experiences and student feed back from these edit-a-thons.

At the end of the workshop, participants will have enough skills to edit Wikipedia and host an edit-a-thon in their library or educational setting.

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Stine, C. (2022). Crowdsourced pedagogy: Editing Wikipedia and the Framework for Information Literacy for Higher Education. *College and Research Libraries News*, 83(4), 166-170.

Keywords: Wikipedia Edit-A-Thon, information literacy instruction, ACRL Framework

Building a National Alliance for Media and Information Literacy

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In this workshop, we will share our experience, in the UK, of developing a national coordination body to advocate for media and information literacy (MIL), encourage capacity-building and help to build the MIL evidence base. We would like to compare our approach with similar or related initiatives in other countries and to use the workshop as to discuss with participants the ways of building awareness, across society, of MIL as an indispensable contribution to lifelong learning, citizenship, health and everyday life. The workshop will address lessons learnt from the UK and from participants' own countries. It should point to ideas about how best to generate interest in MIL among diverse stakeholders (within and beyond the information professions) and, ultimately, contribute to the elaboration of public policy and practice, including educational practice.

The workshop will draw from the work undertaken by the UK's Media and Information Literacy Alliance (MILA). This was set up in October 2021, following the publication of the UK Government's Online Media Literacy Strategy (Online Media Literacy Strategy, 2021), which covers both media literacy and information literacy. One of the challenges identified in the Strategy is the lack of cross-sector coordination and collaboration between the wide range of stakeholders in the UK. MILA seeks to address this, in the first instance by generating a dialogue with a multiplicity of players. These include, for instance, Ofcom (the UK's media regulator), Health Education England, the Association for Citizenship Teaching, Wikimedia UK, The Royal Society of Arts, as well as individuals and organisations representing higher education, public libraries, school libraries and policymakers.

The workshop will discuss the dynamics of building a national MIL initiative from scratch, and participants will be asked to cover questions such as:

- What are the approaches to persuading stakeholders (public, commercial and third-sector) of the relevance and importance of MIL?
- What are the most effective mechanisms and strategies for developing a network or alliance?
- What are the concrete activities that a national MIL might best undertake (e.g. undertaking research, building communities of practice, advocacy, etc.)?
- In a context where MIL is often seen as a protectionist measure against threats such as disinformation, how can stakeholders and society also be made aware of the empowering potential of MIL?
- How might such initiatives be resourced (money, people), in environments where funding is not always easily available?

The extent and scale of national MIL policies and practices, particularly in the educational world, varies from country to country (Frau-Meigs, et al., 2017). It is almost 10 years since UNESCO issued their Media and information literacy policy and strategy guidelines (2013), so we would like to discuss what impact these might have had around the world. The workshop will enable participants to consider good practice internationally, to compare experiences and to provide insights into what collaborative interventions are effective to help foster national MIL policies. The facilitators will use world cafe style discussions to capture outputs from the workshop and share these with delegates after the session. Participants will work in groups, each of which will cover the questions outlined above, drawing from their own national/international experiences, and focusing on the steps and mechanics for building a national alliance and the ways of developing and maintaining momentum.

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Keywords: information literacy, media literacy, collaboration, stakeholders, policy, government

Helping Instructors to Decode Information Literacy: A Workshop

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Many instructors expect that students will develop and demonstrate their information literacy through course-based assignments but are often frustrated with the results, because students (as novices) and instructors (as disciplinary experts) are seemingly speaking two different languages. In this workshop, we model activities that we have delivered for several cohorts of course instructors centered on using Decoding the Disciplines (Pace & Middendorf, 2004) and Writing to Learn (WAC Clearinghouse, n.d.) to help instructors identify ways in which they can intentionally and transparently develop their students' information literacy while also learning disciplinary ways of thinking. We believe this is a scalable and sustainable strategy for incorporating information literacy into programs and curricula, as working with a single instructor could benefit multiple courses. This strategy provides librarians the hands-on opportunity to be intimately involved with the integration of information literacy into students' academic experiences but does not require librarians to plan and deliver multiple workshops.

Learning Outcomes

After attending this workshop, participants will be able to:

- apply Decoding the Disciplines to their work with instructors to identify students' information literacy learning bottlenecks;
- use resources like the Framework for Information Literacy for Higher Education and Writing to Learn to develop or adapt activities to address students' information literacy bottlenecks.

Topics to be Covered

- Information literacy's evolution, instructors' perceptions of information literacy, how information literacy can be part of a hidden curriculum, and the strategy of supporting information literacy through instructor development;
- Overview of Decoding the Disciplines;
- Introduction of Writing to Learn;
- Participants are encouraged to bring their electronic devices, though some paper copies of the workshop materials will be available.

Target Audience

Any librarian who works with faculty/instructors, particularly at a college or university.

References

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Keywords: *academic libraries, instructor development, equitable learning, inclusive learning*

Disability Advocacy in Libraries: Developing Events for Accessibility

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Utilizing board games, information professionals teach critical thinking, visual literacy, and communication skills in a low-stakes environment, encouraging otherwise reluctant students to participate. Disabled individuals have the same needs and uses for information literacy, but most popular games are not designed with accessibility in mind. Lack of accessibility, rather than creating community and encouraging participations, further alienates already marginalized students. By combining the lowered stakes of board games and demonstrating consideration for disabled people, events such as these expand the audience for information professionals.

As games and gamification have become more intrinsically linked to both education and libraries, two librarians at a public university developed a tabletop gaming event to raise awareness of accessible and inclusive design in gaming. While games work very well in building communities, much of the tabletop gaming industry does little to mitigate exclusionary design. The vast majority of games use color alone to distinguish player pieces from each other despite the prevalence of distinct types of colorblindness. For example, approximately 8% of the male population experiences some form of colorblindness. The simple design change of adding shapes, textures or patterns would make these games accessible to color blind players.

Using their expertise in game design and human factors, the authors carefully reviewed and play-tested multiple games for inclusion in the event. While no individual game can be created or modified to have universal accessibility, playing games with an eye toward accessibility is the only way to determine which games have better design. Providing descriptions of what specific games do well (or poorly) along with tested modifications prompt players to consider how design can be improved for accessibility. Workshop attendees will play sample games used in the event and evaluate them for accessibility.

Successful gaming events or use of games in instruction requires partnerships. In this case, we developed partnerships with the Student Access Center and the University's acculturation class.

In developing events like these, the greatest expense comes from building game collections. While more familiar board games are quite affordable, these are generally among the worst when it comes to accessible design. That said, certain companies have created modified versions, including large print, braille, and tactile modifications. While these do expand human diversity in playability, most of these are post-market modifications which increase costs by as much as 500%. With the rising prevalence and falling costs of 3D printing and makerspaces, replacing or modifying the pieces and parts of existing games is far more effective if the right facilities are available in your area.

Participants will work together in this active session to play, evaluate, and describe how various games meet or fail to meet accessibility standards. The authors will also share informational resources, including informational sites that will help in growing your own list of games suitable for playtesting, with factors such as popularity, time investment, complexity level, and design mechanics. 3D printing files are free or inexpensive, and multiple online communities devoted to accessibility in games can be found through both gaming and disabled perspectives.

Keywords: games, libraries, accessibility, disability

Creating Informed Learners in the Classroom Workshop

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In this interactive workshop, participants will develop strategies rooted in informed learning for partnering with disciplinary instructors in higher education courses to advance students' information practices and learning. Informed learning is an approach to information literacy that describes how students may use information in situation-specific ways to learn (Bruce, 2008). Highlighting how information-focused learning activities are an integral part of the learning process, informed learning emphasizes the need for students to learn about using information at the same time they are learning about subject content. A curriculum design model for developing instruction grounded in informed learning, informed learning design supports the development of curricular partnerships between librarians and classroom instructors that recognizes the vital role information plays in disciplinary learning (Maybee, Bruce, Lupton and Pang, 2019). This approach to embedding information literacy into curricula has been successful in a faculty development program–with research suggesting relationships between how students use information, academic success, and levels of motivation (Flierl, Bonem and Maybee, 2021).

Participants in this interactive workshop will be academic librarians interested in collaborating with classroom instructors to integrate informed learning into course curricula. Led by experienced facilitators, participants will work in small groups to uncover opportunities in their own contexts and compare ideas and practices with others. They will use the informed learning design model (Maybee et al., 2019) to envision partnerships with instructors to develop information-rich learning activities reflective of their shared expertise. Examples of successful collaborations will be shared with participants from a grant-funded project in which 30 librarians and instructors at three large universities in the United States participated in a 4-week program in which they used informed learning design to develop information literacy coursework. Participants will learn strategies for collaborating with classroom instructors to teach students to use information to support disciplinary learning, including: 1) identifying opportunities within their institutional context for partnering with instructors; 2) recognizing how their own experiences of collaborating with instructors aligns with research-based conceptions of collaborative information literacy work; and 3) determining ways they can apply informed learning design to successfully partner with instructors and contribute to the development of information literacy in curricula.

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Keywords: informed learning, informed learning design, librarian and instructor collaboration

Teaching Instructors to Develop Transparent and Equitable Assignments: A Workshop

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Research assignments, which are assignments that require students to form an argument or develop a question about a topic and use information sources to support their argument or to answer their question, are common across disciplines in tertiary education and often require students to demonstrate their information literacy development. However, instructors often take for granted that students have developed their information literacy to meet performance expectations or feel constrained to teach core academic skills like information literacy at the expense of disciplinary content. Because of this, the ways of thinking and knowing related to information literacy can form a hidden curriculum for some students, resulting in lower grades, frustration, and decreasing motivation. In this workshop, we will model how a team of library and writing staff have used the Transparency in Learning and Teaching (TILT) approach to help instructors to develop more transparent and equitable research assignments. The TILT approach requires instructors to think carefully about the purpose of any research assignment, identify the kinds of information-literacy related tasks students will need to do to be successful, and to intentionally articulate the criteria by which student work will be evaluated. Research has indicated that the use of TILT has positive results for students' academic confidence, sense of belonging, and awareness of skills mastery (Winkelmes et al., 2016).

Learning Outcomes

After attending this workshop, participants will be able to:

- Describe the importance of transparency and equity to design research assignments;
- Apply the Transparency in Learning & Teaching (TILT) approach to research assignments prompts, handouts, and other instructional collateral;
- Consider how to apply TILT when working with instructors.

Topics to be Covered

- Introduction to the expert/novice researcher gap, implications for student learning, and role of the librarian;
- Introduction of TILT, emphasizing how research has provided evidence of this as an equity-focused;
- Participants are encouraged to bring their electronic devices, though some paper copies of the workshop materials will be available.

Target Audience

Any librarian who works with faculty/ instructors, particularly at a college or university.

References

Winkelmes, M. A., Bernacki, M., Butler, J., Zochowski, M., Golanics, J., & Weavil, K. H. (2016). A teaching intervention that increases underserved college students' success. *Peer Review*, 31–36.

Keywords: academic libraries, instructor development, equitable learning, inclusive learning, research assignments

Question Asking is an Art: Teaching Students How to Ask Good Questions

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Were you taught how to ask questions? The facilitators of this session were not, even though we have learned over time to develop effective research questions when conducting our own research and helping others with theirs. The Research as Inquiry frame from the ALA Association of College & Research Libraries' Framework for Information Literacy centers question-asking as an essential part of the research process. However, librarians generally spend much of their time with learners focused on finding credible sources, sometimes skipping over the central role inquiry plays in the research process. We wondered if question-asking was even a skill that we could help our students develop. As it turns out, we can!

Learners often experience anxiety at the beginning of the research process (Kuhlthau, 2004), feeling that they will choose the wrong topic and eventually fail as a result. As long as the formulation of an inquiry is commonly conceptualized as "plucking a topic like an apple off a tree," (Bates, 1994) the process will continue to feel risky for many. Librarians will sometimes address topic development with a concept map or a reference sources exercise but ,with limited classroom time, the inquiry portion of the research process can end up sidelined in our instruction.

We maintain that centering the art of question-asking from the beginning of and throughout the research process, as opposed to starting the process with thesis-statement-writing or finding credible sources, can lower the stakes for failure? among learners while encouraging them to express their creativity and curiosity. In teaching Research as Inquiry, librarians at the University of New Mexico have relied on adaptations of the Question Formulation Technique (QFT), a relatively simple approach that helps learners generate questions and improve their question-asking skills.

Over time, we have adapted the QFT to work with high school, undergraduate, and even graduate students. We use it alone, as an exercise to develop question asking muscles, and with related lessons on topic development and finding background information. We sometimes ask questions about topics related to the subject of a particular course and other times topics of personal interest. We have also shared the QFT with general education instructors in workshops about research as inquiry and some instructors have incorporated it into their teaching.

In this session participants will experience different versions of the QFT, adapted for different learners, disciplines, and instructor preferences. We will also discuss our experiences working with students and faculty on the art of question-asking. Then participants will work together in pairs or small groups to develop a lesson plan using QFT for their own context.

Learning Objectives

Participants will experience the Question Formulation Technique as students in order to identify the major components of the QFT and determine topics they can use for their QFT.

Participants will review iterations of the QFT in order to create a customized QFT for their classroom.

Time: 90 minutes (this is negotiable)

Materials needed: projector, computer with internet access, paper and pens for participants

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Keywords: information literacy, inquiry, Question Formulation Technique

Learning Library Skills Playfully

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When students first start their studies, they have much to learn. Even though the new environment can be a bit overwhelming, newcomers should learn about the services that help them cope with their studies (Reed, 2020). This is a situation in which we should find new ways to effectively encourage and support learning. Functional learning, playfulness and collaboration can enhance learner motivation and improve the chances of remembering what has been learned (Bai, 2019). Utilization of mobile game-based learning can be a powerful idea because "students feel more engaged in the learning process and are interested in following the educational strategy" (Troussas et. al., 2020). Players of a game are active collaborators instead of passive listeners.

The library introduction game in Metropolia UAS is basic level;, the aim is to introduce library services and facilities. Students play it in small groups with their own mobile devices. We use Seppo, which is a platform for gamified mobile learning and training, for the game. The game consists of ten map-based tasks, some of which are locked so that the players need to unlock them with a key hidden in the library. The idea is to make students move around the library premises. To motivate players we use goals, which are a basic feature of games (Walsh, 2018). The goal is to win and be rewarded a prize.

During spring and autumn 2023 we will study the students' views on playing the library introduction game with a short questionnaire. The preliminary results suggest that students react positively to gamified library introduction. We will report the results at the workshop.

Workshop Outline and Objectives

The participants will play a short game specifically designed for the session. The participants will gain a good understanding of the game and how it can be used in a library setting. After playing we will discuss the game and the thoughts and ideas the participants have gained.

Target audience are those who are interested in using games for library introduction or information skills teaching. Participants need a mobile device that has an internet connection. The space needs to enable moving from one task point to another in groups of 2-3.

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Keywords: playful learning, gamification, collaborative learning, functional learning

PANELS

Library Instruction for Mis/Disinformation: French and U.S. Perspectives

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Attention to the challenges of mis- and disinformation has increased along with the recognition of the influence of mis/disinformation on successive United States presidential elections, the Brexit vote, other elections and ballot initiatives worldwide, and response to the antiviral vaccine for the COVID-19 virus. In 2013, the World Economic Forum identified mis/disinformation as one of the top three global threats (Howell, 2013), and in its 2019 report, the Forum elaborated to recognize that "among the most widespread and disruptive impacts of AI in recent years has been its role in the rise of "media echo chambers and fake news" (World Economic Forum, 2019).

The crisis of misinformation has led to calls for greater attention to information and news literacy instruction, and libraries have been identified as one of the key institutions to provide such training (Jaeger & Taylor, 2021). However, academic librarians often depend on the interest and invitation of teaching faculty to engage in library instruction. Even when they are given classroom time, they often have to tailor their instruction to the specific courses, assignments, and directions of the faculty, which might not allow them to address topics of mis/disinformation in any depth. Indeed, a study of over 700 faculty members in the United States across various disciplines found that while the vast majority of faculty agree that the mis/disinformation is a problem and that instruction in news literacy skills is important, they vary as to whether they believe it is their responsibility to teach those skills, and very few report working with a librarian to address mis/disinformation in the Classroom (Saunders, 2022). This survey of faculty was followed in 2022 by a survey of academic librarians in the United States. Similar to the faculty survey, librarians were asked their perspectives on various aspects of mis- and disinformation, whether and how they were addressing mis- and disinformation topics in their instruction, and their perceptions of student news literacy competencies (Saunders, forthcoming).

The survey of academic librarians was replicated in France in fall of 2023. In this session the panelists will share the results of the surveys from both countries, exploring how librarians in each country perceive the challenges of misand disinformation, which tools and responses they believe to be most effective in combatting those challenges, and the extent to which they are teaching these concepts to their students. The panelists will provide a preliminary comparison of responses between the two countries and compare these to the faculty responses from the previous study. They conclude with recommendations for increasing collaboration between faculty and librarians, and further integration of mis/disinformation topics into library instruction. This session is suited to a panel presentation because the presenters will be reporting on two separate studies first, before comparing the results across the studies. The panel format allows for the studies to be presented as a series, but will also entail ample time for questions and discussion with the audience.

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Keywords: *mis/disinformation, academic libraries, united states, discipline-specific instruction, discipline approaches*

Building Knowledge across the Curriculum: Utilizing the Learning Community Model to Maximize Relevant Information Literacy Instruction

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Librarians at a southern New England Community College designed a freshman-level college course intended to teach information literacy skills to students within the context of their majors through a linked Learning Community. It is critically important for students to understand research within the context of their fields. As they progress through their education, students will build on the information literacy skills gained in their first two years of college, creating engaged and research-focused students and professionals (Virtue et al., 2019). The new course will align to different courses through the Learning Community model, allowing students to connect information literacy skills with real-world application within their discipline. Hopefully, through completing this course students will be encouraged to engage in life-long learning and potentially transfer to a four-year institution.

Objectives

In this session we will focus on the collaborative efforts of the librarians at this Community College and their new course in information literacy designed to teach research methods within specific majors. We created the course to act as a sort of "lab" for a foundational course in the disciplines that will focus on research methods utilized in those academic areas. For example, the course could be paired with a foundational sociology course and would then focus on the research methods in that field. Or, it could be paired with a history course, where students would learn research methods in that field. The course would include bringing in the college writing center in order to teach students to write within their chosen field as well as feature guest lecturers who have conducted research so that students can ask questions about interviewing, data collection, and other facets of research.

We will base the course on the High Impact Practice (HIP) of a learning community. The course will be offered as part of the required college first-year curriculum but will specifically be tailored to declared majors. The course, as a part of a learning community, would teach to the research assignments that are assigned in its partner course. In doing so, the students will be able to gain the research skills and support required to complete assigned research assignments.

Methodology

Our course proposal was approved by the College Wide Curriculum Committee in March of 2023. We intend to run several sessions in the summer of 2023, if possible. A faculty member in sociology has already agreed to participate in the first learning community, planned for Fall 2023. A variety of concerns are present, including staffing to teach the course in a time of low enrollment. Thus, the librarians feel that tailored courses will have more of an impact on student learning of information literacy concepts. Our presentation will include current research on information literacy and learning communities to illustrate the need for a modern approach.

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Keywords: community college, learning communities, information literacy, high impact practice

Recognizing the Discipline of Information Literacy: Implications for Research and Practice

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Information literacy has been recognized as a maturing, soft discipline (Webber & Johnson, 2017). Despite the acknowledgment of its evolution as a discipline (Johnston and Webber, 1999; 2006), the information literacy community has been slow to acknowledge the disciplinarity of information literacy. Revisiting this idea, this panel describes how information literacy aligns with elements of a discipline, including 1) a community of scholars, 2) communication networks 3) code of ethics, 4) traditions and history 5) modes of inquiry, and 6) shared knowledge. Panelists will engage attendees in considering potential outcomes of recognizing information literacy as a discipline, including more robust collaborations, new research agenda, and enhanced curricula.

The four panelists are members of an international group of researchers (ILIAD: Information Literacy Is A Discipline) interested in advancing scholarly conversation around the idea that information literacy is a maturing discipline. The session will begin with the panel moderator describing the work this group has undertaken to further this discussion, including hosting conversations with members of the information literacy community around the world, and plans to publish an edited book on the subject in 2025. Contrasting with alternative views, we will outline how information literacy aligns with the characteristics of a discipline, and its relationship with other disciplines.

The panelists work in different areas of the field. (1) An instruction coordinator at a community college will focus on how acknowledging that information literacy is a discipline supports promoting information literacy instruction to departmental faculty. (2) A librarian at a research institution will emphasize how recognizing information literacy as a discipline supports librarian researchers in exploring information literacy in new contexts. (3) A library and information science educator (LIS) and (4) an educational researcher will focus on how the idea of information literacy as a discipline may influence research as well as impact graduate education. Each of the panelists will answer these questions in turn: 1) what do they see as the implications of recognizing information literacy as a discipline? and 2) how can this recognition help us advocate for more institutional resources to develop new information literacy curricula and research? After each has answered, the panelists will engage in discussion.

Following discussion by the panelists, attendees will be asked to share their views concerning recognizing information literacy as a discipline and the implications for their work in the field, leading to an open discussion. At the end of the session, attendees will be invited to continue the discussion in a community channel on a Discord server.

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Keywords: information literacy, disciplinarity, relationship to other disciplines

Information and Digital Literacy for Primary Education. Diagnosis of Needs and Challenges

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The aftermath of the crisis generated by the COVID-19 pandemic, and the dangerous infodemic that has emerged in parallel, has made the importance of fostering information literacy even more evident. Information literacy is fundamental in all ages to enable us to participate in contemporary society, and is therefore specifically a key competence to be developed starting from early childhood (Baji, Bigdeli, Parsa, & Haeusler, 2018; Batool, & Webber, 2019; Chu, Tse, & Chow, 2011; Gardner, Goldstein, Pavey, & Secker, 2020).

In some countries, for the primary education stage, the socio-educational need to promote information literacy has obtained an institutional response with the inclusion of information and digital competence in the school curriculum and in current legislation. But the reality is that there is no sound educational approach, no updated and transferable curricular design, no substantial support for the school library, and the results of both the PISA Programme (2018) and recent academic research (Martínez-Piñeiro, Gewerc, & Rodríguez-Groba, 2019) regarding information literacy of primary school students show huge gaps that urgently need to be addressed.

The aim of this panel is to describe the preliminary results of the research carried out within the European project BRIDGE ("Information and Digital Literacy at School. A Bridge to Support Critical Thinking and Equality Values for Primary Education Using Children's Literature and Transmedia"). Current legislation, curricula, and practices of promoting information and digital literacy in the six countries of the project, Spain, Turkey, Italy, Finland, Greece and the United Kingdom, have been reviewed and accompanied with results from a questionnaire survey for teachers and librarians working with 8-11-year-olds. The questionnaire addressed how primary school teachers and school librarians support their students in developing information literacy, digital literacy, critical thinking and equality values as part of their teaching practices, and also included open-ended questions to collect information on the challenges they encounter, as well as their suggestions for materials and best practices. In the panel, the main results obtained in the six countries of the project will be presented to identify and reflect the needs and challenges shared and those that are specific to each country.

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Keywords: information literacy, digital literacy, primary education, school, school library, questionnaire

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