2014 ALISE Annual Conference Abstracts:

Works-In-Progress Posters

Natasha Ali, University of Toronto

The Information-seeking and Use of Novice and Expert Investment Sell-side Analysts: An Information Behavior Model

The objective of my study is to explore how expert and novice analysts approach information-seeking of non-financial and financial information to evaluate the financial health of companies. Novice and expert analysts may have different approaches to assess information. As part of the information-seeking process, analysts perceive and identify factors/incidents as a prompt to seek and use information. It is important to consider if novices and experts offer similar and consistent strategies to seek and use information to evaluate companies. Previous studies in this area refer to US sectors but do not cover Canadian sectors and companies in-depth. Previous studies do not offer an analysis of 'critical incidents' to explore the concepts of expertise in the context of the current business environment in Canada.

Canadian investment analysts are under studied from an information perspective. The research studies which focus on investment analysts refer to datasets prior to 2008, and therefore, previous research examines the information behavior of analysts prior to financial collapses in 2008, and these studies predate the regulatory changes which shaped the industry after the financial crises.

Novice and expert analysts are economic actors who influence the decision-making of investors in the current complex business environment. My exploratory study of this critical community of analysts will focus on expertise and the way that analysts seek and use information to produce research reports. Analysts respond to the information needs of investors to write the content for research reports which will be relevant for investors. Novice analysts consider the information needs of short term investors, a group satisfied with basic, publicly available information, such as company stock price (Stout, 2012). Expert analysts interpret their environment to anticipate the information needs of institutional clients in order to engage in information exchange. I am developing a model which adapts Kuhlthau's (2004) Information Seeking Process (ISP) model and extends concepts from Wilson's (2006) studies on information behavior, and Wilson's (1999) Problem Solving Model, to explore how the information goals of novice and expert analysts are based on their responses to specific information needs of investors.

My research questions address how investment analysts seek and use specific financial and non-financial information for investment research reports. I will explore the ways that novice and expert analysts perceive signals in their environment and 'critical incidents' to prompt specific information-seeking and information use. According to Choo (2006), Information-seeking behavior "refers to the patterns of behavior that people display as they recognize information needs, make choices about where and how to look for information, and reflect or act on the information they see. Conceptually, information-seeking behavior consists of (1) information needs, (2) information seeking, and (3) information use." (p. 74). Based on the literature review, it appears that novice and expert analysts may have distinct ways to identify signals in the environment which prompt analysts to seek and use information.

Analysts may seek information in a complex business environment and identify ‘critical factors’ as pertinent to their assessment of the company. Analysts “act” or “use” information to complete their ‘information role’ to produce research reports. According to Choo (2006) information use: “is the selection of relevant messages from the information encountered during the search and the processing of the information so that it leads to a change in the state of the individual's knowledge or capacity to act.” (p.41). Analysts perceive signals in the environment, and identify ‘critical factors’ to prompt them to seek and to use information. It appears that the analyst must act or use information to develop constructs, and thereby increase expertise through experience as per Kuhlthau (1993; 2004).

Based on the work of Kuhlthau (1993/2004), expert investment analysts seek information ‘beyond’ usual sources, and Kuhlthau (1993) refers to George Kelly’s Personal Construct Theory (1963) to assimilate new constructs (p.23), and constructs are “built out of a person’s past experience to anticipate future events. Constructs are patterns that one formulates to make sense of the world” (p.37). Construct development occurs over years of experience and expertise. The expert analyst refines his/her ability to perceive signals in the environment or “scan” the environment. The expert reflects on key incidents which match constructs formed by previous experience. As analysts ‘assume coverage’ on a new company, they encounter information which does not match their constructs. Expert and novice analysts feel uncertain when they cover new companies. The expert investment analyst recognizes that uncertain feelings are ‘signals’ to seek information, and generally, to not interpret ‘uncertainty’ as negative. By contrast, novices become anxious during times of uncertainty. Novices have not developed their constructs yet (Kuhlthau, 1993). The novice and expert analysts may have different approaches to identifying these ‘signals’. Expertise may be a factor to interpret how these signals match previously formed constructs. It is important to explore the way that analysts perceive ‘critical factors’ and ‘signals’ in the environment, as early detection of issues may help to identify errors and increase transparency of financial data which analysts use to assess the financial health of companies.

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Simon Aristeguieta-Trillos,

Information Seeking Behavior of Humanities Scholars

Summary description of the research:

The proposed study investigates information seeking behavior of Humanities Scholars. A qualitative approach will be used to explore the information needs and information seeking behavior of University scholars in the humanities areas. Long interviews are followed by coding, developing higher categories of abstraction, data analysis and theory building models within the framework of the general inductive approach. Interviews will be carried out until saturation is achieved. It is expected that a model that illustrates and explains information needs and information behavior will be developed. The participants will be selected from the following areas, disciplines and domains: Archaeology, Architecture, Art, Asian Studies, Classics, Cultural studies, Dance, Film, Radio and Television, Folklore, History, Philosophy of science, Humanities, Language and linguistics, Literary reviews, Literary theory and criticism, Literature, Medieval and Renaissance studies, Music, Philosophy, Poetry, Religion, Theater,

Qualitative methodology calls for an emerging design that will grow from the analysis on the participants' perspectives, There are stated initial research questions that will guide the research; however, other non-anticipated directions on the research quest are expected and welcomed. In this regards, the study does not begin with prior assumptions and preconceived ideas and hypothesis; quite the contrary, the study is designed to understand the participants perspective on information behavior.

Initial research questions that will drive the proposed studies are:

How do humanities scholars keep current with literature in the discipline?
What are humanities scholars information needs?
How are the information sources search, retrieve and organize?
What patterns of information seeking behavior can be developed by studying research practices of humanities scholars?

The proposed study will provide unique insights of humanities scholars’ information behavior from their own perspectives, expressed in their own words. The findings will document the information needs of scholars in the humanities disciplines; and how those needs are addressed by behaviors such as searching, accessing and organizing information sources.

The discoveries of the study will add to the body of knowledge in information science, on the important topics of information seeking behavior of humanities professors, and researchers. The study is relevant because it will reveal how members of this scholarly community interact with information sources in order to carry out research and keep current with new research available in a number of different formats. It is expected that the findings of the proposed study will informed future studies on humanities scholars which will include other methods as well; for example, survey analysis, citation analysis and bibliometrics. Also future comparative and longitudinal collection studies are planned to contrast catalog holdings of the past and the present to discover the development of information sources in the humanities field. Timeline: IRB approval is expected during the 2014 Spring term. Participants selection and initial contacts are planned for Summer 2014. Interviews will start in Fall 2014. Interviews and analysis will occur simultaneously. Participants revision of transcribed interviews is planned for the end the year 2014. It is expected that the results of the proposed study will be presented during the first quarter of the year 2015.

Jung Hoon Baeg, Florida State University

eHealth Literacy and Cancer Prevention: A Structural Equation Modeling (SEM)

The present study examined (1) the structure of eHEALS and eCancer literacy, (2) relationship between eHealth literacy, SES, health status, health information sources, and cancer screening practices. Structural Equation Modeling (SEM) was used to identify the direct or indirect relationship between variables, such as SES, eHealth literacy, eCancer literacy, and cancer prevention. A convenient sampling method was used to recruit participants. A total of 108 adults (Male = 00, Female = 00) participated in this study participated in this study between March and May 2013. The questionnaire consisted of 37 questions with 3 parts: General characteristics (18), Cancer screening/cancer information seeking questions (6), eCancer literacy (5) and eHEALS (eHealth literacy scales (8)). In the general characteristics questions, participants were asked about their socio-demographic information, cancer history, and current health status. In the cancer screening/cancer information seeking section, participants answered cancer screening tests for breast, cervical, colon, and prostate cancer and 5 items of perception of cancer information seeking on the Internet, such as 'Too hard to understand cancer information found on the internet' with 5-point Likert scales (1-strongly disagree and 5-strongly agree). In order to measure the eHealth literacy, 8 items of eHEALS was measured. Each item is rated on five point Likert scales of 1 to 5. (1-strongly disagree and 5-strongly agree). The items are: "(1) I know what kind of health resources are available on the Internet; (2) I know where to find helpful health resources on the Internet; (3) I know how to find helpful health resources on the Internet; (4) I know how to use the Internet to answer my questions about health; (5) I know how to use the health information I find on the Internet to help me; (6) I have the skills I need to evaluate the health resources I find on the Internet; (7) I can tell the difference between high quality health resources and low quality health resources on the Internet; and (8) I feel confident in using information from the Internet to make decisions about by health." eHEALS has identified the excellent internal consistency reliability, alpha = .89-.97 with good test-retest reliability. Principle Component Analysis (PCS) used to verify the eHEALS and results showed the eHEALS is a single factor scale (eigenvalue = 5.29, 66% of the variance explained). Factor loading ranged from .68 to .89 among 8 items. Internal consistency reliability is Cronbach alpha of .92. eHEALS is also reasonable fit structured scale from Confirmatory Factor Analysis (CFA) ($p.<.01$, CFI = .962, RMSEA = .14, SRMR = .042). eCancer literacy also showed the good fit for the CFA results ($p>.2$, CFI = .987, RMSEA = .063, SRMA = .038). Final SEM model showed the good fit (CFI = .855, TLI = .946, RMSEA = .076, WRMR = .630). Among variables these variables are statistically significant on the direct influence from SES (H1) to Internet usage (β = -.257, p=.00), from Internet usage (H2) to eHeath literacy (β = .222, p=.00), from eHealth literacy (H4) to eCancer literacy (β = .293, p=. 00), from eCancer literacy (H5) to cancer prevention (β =.862, p=.05). However, there is no statistically significant on the direct influence from ehealth literacy (h3) to Cancer screening behavior. This study found that there is direct and indirect relationship between eHealth literacy and the cancer screening experience. This study also further examined the structure of the eHEALS and validated this scale and also examined relationship between SES and Internet usage and indicated how these relationship influence eHealth literacy. In addition, this study results indicated there is a relationship between eHealth literacy and actual cancer screening behavior.

Sheila Baker, Old Dominion University

Technological Pedagogical Content Knowledge (TPACK): A Framework for an Investigation of School Librarians' Integration of E-Books and E-Readers

Two frameworks guide this qualitative research exploring school librarian and teacher experiences when integrating e-books and e-readers. Interviews are analyzed to explore school librarian leadership and effective technology integration. This study is relevant to the increasing use of e-books and e-readers, and may inform practice, purchasing decisions, and profession development.

Jihee Beak, University of Wisconsin-Milwaukee

Emotional Metadata: Pilot Study of Children's Book Selection Behaviors

Children have become a major user group in the library environment. Despite many efforts and studies developing child-friendly web portals and digital libraries, there is still a lack of consideration of children’s information seeking behaviors based on their cognition and emotional interest. Emotion is an especially important factor relating to cognition and perception, and greatly influences selection and decision making. Norman (2004) notes that in human “the emotional system is also tightly coupled with behavior, preparing the body to respond appropriately to a given situation” (p. 12). In other words, if knowledge organization systems are designed without considering children’s emotional system, children may have difficulty finding information and as a result, feel frustrated. Reuter (2007) studied aesthetic relevance, which is introduced by Green (1997), in a context of children’s recreational book selection. Aesthetic relevance involves emotional engagement to select books. In other words, emotion plays a role in judging relevance of information. “Affect control theory insists that cognitive processes cannot be understood without recognizing the mechanism by which feelings and emotions control the parameters of every cognitive operation” (Nahl 2007, p.24). Beak (2012) claimed that “emotional interest plays an important role in making a decision of book selection, but also is perceived by many external factors of books and internal factors of person” (p. 6). Beak (2012) briefly addressed emotional interest as one of children’s perceptual cognitive factors during children's book selection. This study moves forward to re-analyzing the cognitive factors identified by Beak (2012) based on emotional interest during children's book selection.

The purpose of this study is to identify the cognitive factors in relation to emotional expression used by children during book selection. Moreover, this study discusses how the cognitive factors identified can be associated with a metadata schema. The research questions include: 1) How does emotional expression correspond to metadata elements? 2) What emergent emotional vocabularies do children use during book selection? 3) What do the emergent emotional vocabularies reference?

This study used qualitative research methods consisting of observation, interview, and diary. Six participants between six to nine years old were recruited for Beak's (2012) study. Participants were asked to select books and think aloud during book selection, which was recorded and transcribed. Data were analyzed based on emergent vocabularies related to referents of emotional expression. Emotional vocabularies include words such as "love," "like," "interesting/interested," "good," "awesome," "happy," "scary", etc. For instance, Child D saw the image of a squid on a book cover, then decided not to read the book because of the perceived scariness of the picture. In this case, a referent of scary emotion is the squid image.

Referents of the emotional expressions are cognitive factors that participants perceived during book selection. The referents of the emotional expressions are matched with the cognitive factors founded in Beak's (2012) study. Moreover, this current study analyzes the cognitive factors by frequency of occurrence. Since this study is qualitative, the frequency of the referents cannot be used for generalization. However, this analysis will provide general ideas of what aspects or components of books participants perceived more often. It means that a children's metadata schema needs to describe those information and provide them as access points.

This study is limited by the many variables and factors that could influence children's emotion. The study tried to capture participants' perceptions and behaviors when selecting books in a natural setting, their local public library, in order to understand more intuitive cognitive processes.

Data are still being analyzed, but it is clear that in children, emotion plays a central role in perceiving information. Preliminary findings show that some cognitive factors like illustration, characters, or subjects more frequently evoke emotional interest; whereas basic bibliographical information such as the title of a book rarely evokes emotional interest. In addition, sometimes participants mentioned self-directed emotional interest, which is associated with personal experiences or individual personality; conversely, the most frequent referents of emotional interest came directly from a book.

Overall, the preliminary findings also suggest different perspectives on metadata elements from current cataloging standards used in school and public libraries for children's resources. Instead of describing bibliographical information such as title, author, and publisher, children's metadata elements should be created for describing the referents of the emotional expressions or the cognitive factors related to emotion. In this way, the metadata elements could reflect children's perspectives and emotional interest so that metadata may bring more attention and attraction to children. Consequently, emotional metadata may enable children to readily and more intuitively search for information.

Jackie Brodsky, University of Alabama

Experiential Learning in LIS Through the Lens of Social Support Theory: Project FIT 4 Retirement

As e-government resources such as the Social Security Administration and Veterans Administration become more mainstream, older adults will require proficiency with information technology (IT) to access important resources and to engage in lifelong learning. To help older adults become proficient in IT, library and information science (LIS) graduate students over the course of three years conducted classes and tutoring sessions in a variety of IT topics for older adults at a senior center in the Southeastern United States as part of Project FIT 4 Retirement (FIT = Fluency with Information Technology), first in a group setting (three students at a time in a classroom of 8-10 older adult students), and then with individual students conducting individual or small group tutoring sessions. For some students, it was their first teaching role.

This study investigated the role of social support in enabling LIS students to supplement classroom learning with experiential learning through providing services in the community to an older adult population.

Research Questions:

RQ1: How does Project FIT 4 Retirement impact instructors' attitudes about community engagement?

RQ2: What types of social support do instructors perceive through Project FIT 4 Retirement?

Social Support Theory (House, 1981) states that social support is the availability of assistance or caring from other people and the perception that one is part of a supportive network. This support is given by four types of interactions – emotional (provision of empathy); instrumental (provision of demonstrable assistance); informational (provision of resources or instruction); and appraisal (provision of feedback). The LIS student instructors were interviewed about their experiences with Project FIT 4 Retirement, as well as their views on community engagement and experiential learning. The students who taught in the classroom were interviewed in focus-group style, and the tutors were interviewed individually. Responses were examined for themes regarding the four types of social support interactions. Students who taught in a classroom situation appreciated the presence and advice of more experienced peers in the classroom. Some students disclosed that they were afraid during their first teaching experience, but reassurance (appraisal support) helped build their confidence. One student disclosed that she had originally wanted to work in a library position that did not involve dealing with the public out of fear of "making a fool of myself," but emotional and appraisal support she perceived from the older adults she tutored helped her to realize that "it's okay for you not to know everything." Another student indicated that she had made friends with the older adults she tutored and was looking forward to staying in contact with them. Other students indicated that the experience helped them to learn patience when working with diverse populations.

Emerging themes from the interviews include the importance of community engagement and outreach, additional settings for ICT instruction (boys' and girls' clubs, women's shelters), and bringing in older adult guest speakers into LIS classes to inform students about the information needs of older adult populations. Students indicated that the social support they perceived from their peers and the older adults they were teaching during this time of experiential learning positively impacted their views on community engagement and their future career goals.

John Budd, University of Missouri

Schrödinger's Student

The poster uses the conundrum of **Schrödinger's cat** to show how library and information science programs can create designed experiences for students. The formalized experiences can enable students to gain the proficiencies they need to become successful in their first professional positions. The probability of the puzzle is overcome by determinacy of action.

Programs are able to betray rules of probability by reducing variability and introducing some determinacy into the otherwise uncertain outcome of graduate performance. The poster will illustrate the determinable elements of this problem so as to demonstrate how programs can enable their students to succeed upon graduation, while admitting (and accounting for) that variability rests with students themselves to meet the learning objectives.

The puzzle of Schrödinger's cat holds that a cat and a phial of poison are placed in a box, and we do not know when or if the phial will break. Therefore, at any given time the cat can be said to be both dead and alive. If we extend the puzzle to library and information science students, we wonder if graduates are able to enter librarianship as effective professionals or as less than competent novices. We can provide education and resources to help them meet that goal, but it is only when the metaphorical box of graduation and initial employment is opened that we can know the answer.

The proposed poster will illustrate that action on the parts of programs of clearly articulated and executed learning objectives, applied in very applied course and learning experience (such as practica or internships) alters randomness. A student who can meet all of the learning objectives in all courses is much more likely to become a successful professional. Another action that can be taken by programs is to consult with representatives of employers and supervisors so as to design a full curriculum of courses that will best meet the needs of the organizations in which graduates will work. .

If we adopt quantum-like thinking and apply these to the futures of students, we can examine what phenomena might be likely to increase the probability of structure and success and reduce the probability of failure. The essential concern is to influence action, and in doing so, assure that the factors that affect learning are enhanced intentionally. The action must be probabilistically designed to enhance learning of the particular kinds that will have desired results. The analogy is the control of the location, direction, and velocity of particles.

A "living" student, one who meets all or most of the learning objectives in all of the courses, is generally the product of a complete and coherently structured curriculum, clearly applied learning objectives that are linked to assessment, and application of learning to practice. A"dead" student, on the other hand, may be the product of incoherent requirements, a lack of a cohesive core, haphazard and inconsistent assessment in courses that do not build upon each other, limited practical experience, or lack of instruction oriented toward the problems of practice.

John T.F. Burgess, University of Alabama

Virtue Ethics and American Librarianship: Initial Steps

Virtue ethics represents a third major approach to normative ethics, distinct from deontological and consequential ethics. Professional librarianship in the United States developed during a period of time when virtue ethics was out of favor within the circles of professional ethicists. Because of this timing, virtue ethics concepts were not available when the codes of ethics of librarianship's various professional organizations were first created. Virtue ethics re-emerged in the mid 20th century, and since then theorists in the ethics of several professions have explored the advantages and challenges of incorporating virtue ethics into their professional codes. This ongoing research project attempts the same for professional librarianship, addressing the questions of why and how to introduce virtue ethics into the mature corpus of American librarianship's professional ethics.

The primary advantage that virtue ethics offers is that it is a non-transgressive form of ethics. Instead of assigning a negative moral value to failing to comply with a set of rules, as is the case with deontology, or assigning a negative moral value to failing to behave in a way that produces the greatest measurable good, as is the case with consequentialism, virtue ethics does not assign a negative moral value to any action. Instead, to be ethical, one works to develop a character that is in line with one's purpose or function. The goals of virtue ethical action are excellence in action and the flourishing of one's purpose. To be unethical then is to be ignorant of one's purpose, to be undisciplined in pursuing that purpose, or to work counter to that purpose overtly. Failing to flourish is not a moral failure resulting in shame or guilt, rather a missed opportunity at greater happiness. Having an ethical instrument that guides behavior without producing shame or guilt has the potential to usefully supplement existing approaches to resolve persistent ethical problems within the American library profession, for example the ongoing disparity in recruiting persons of color to library and information sciences programs, as students and faculty.

The primary challenge of incorporating virtue ethics into librarianship's professional ethics is the reliance on the concept of a purpose or function, and the high criteria for proof that such a claim would require. Virtue ethics was originally an expression of Aristotelian philosophy, derived from assumptions made about the nature of being that most no longer hold. One such assumption is the idea that everything can be understood in terms of causal forces, including final or teleological causes. If this challenge could be overcome, the liability of being a purpose-dependent ethical system could become a strength, since purpose would be a powerful decision-making aid for a profession that is rapidly evolving. The secondary challenge is to address how a collective body such as a professional organization could have a unified character in a way that is ethically meaningful. Even if librarianship does have a purpose, how can knowledge of that purpose be ethically useful to individual librarians in the way that a deontological code is?

The method used in this research to uncover librarianship's function is hermeneutical phenomenology, the philosophical discipline of interpreting the meaning given to historical events. Hans-Georg Gadamer's hermeneutic circle technique and Paul Ricoeur's theory of narrative intelligence are used to engage in a dialogue with three crises in the history of American librarianship. These pivotal events are the fiction question, librarian nationalism during World War I, and the dispute between supporters of the "Library Bill of Rights" and social responsibility. Using this approach, three recurring themes become apparent: the tendency to reconcile idealism and pragmatism, the intent to do good for individuals and society, and the role of professional insecurity in precipitating the conflicts. Through the process of emplotment, an identity narrative for librarianship emerges that can serve as an effective analog for function as the basis of professional virtue ethics for librarianship.

The finding thus far is that librarianship's function is the promotion of stability-happiness. This is the dual-process of supporting dominant socio-cultural institutions as a means of protecting librarianship's capacity to offer access to the knowledge, cultural records, and avenues for information literacy that can improve lives and facilitate individuals' pursuit of happiness. This balance of serving the needs of the profession and the needs of the community prevents a strictly inward-looking or outward-looking sense of purpose. This function may result in unintended biases towards the dominant culture and social structures. Ongoing avenues of research include using this interpretation of librarianship's function to determine what counts as virtues in library practice and how best to promote those virtue concepts to individual librarians, particularly in ways that preserve the autonomy of librarianship while being more aware of cultural biases.

In conclusion, this research represents the initial steps of a more extensive project in virtue ethics for American librarianship. These steps suggest means of addressing the first two challenges of introducing virtue ethics to existing library professional ethics, those being to reconcile the Aristotelian origins of virtue ethics with more contemporary epistemological perspectives and using narrative identity to support the viability of the concept of character for a professional group.

Jennifer Campbell-Meier, University of Alabama

Developing a Mentoring Program for LIS Student Recruitment

While students choose graduate programs for a variety of reasons, many have a mentor to help guide or focus that interest. This is particularly important for masters programs in library and information science, an interdisciplinary degree that combines theoretical and practical components to educate information professionals to work in a technologically oriented and knowledge-based society. Surveys of MLIS students at the University of Alabama and Simmons College and the University of Hawaii were administered in 2013, with 365 responses. More than 50% of respondents had a mentor, however, more than 70% of students worked in an LIS environment prior to entering a program, which implies that either staff are not taking on mentoring roles or that the students do perceive their interactions with fellow staff as mentoring. The poster identifies best practices for developing a mentoring program to recruit student workers at colleges and universities into LIS programs.

How LIS students self-identify has an impact on both LIS programs and the future of the profession. Student identification may be used to highlight where faculty are needed and inform future hiring practices. With many librarians nearing retirement age, self-identification may also impact recruitment goals. A follow up study is planned in 3 years to track changes in self-identification and to document influencing factors.

Mentoring, however, is not a simple or easily defined process. Mentorship is an “intentional act,” (Lacy and Copeland, 2013, p. 136) that establishes a relationship that requires the mentor to assist in the development and education of the mentee. It is based on a mutual attraction, a willingness to spend significant time together, and openness to ideas and sharing. Mentoring also requires commitment from both the mentor and mentee.

The most important challenges deal with the generation gap. In our current digital world, there is a perception that the younger generation is only focused on technology and the digital world while the older generation (the current LIS professionals) are seen as out of touch with technology and society (Ballard, 2013). While these are both very broad and overreaching statements, these (mis)perceptions can shape behaviors in such a way as to alienate both the new professional and the current professional, effectively preventing any kind of mentoring situation.

The development of a structured mentoring initiative would identify talented students early and introduce them to the LIS field. There is no single mentoring approach, no “one-size-fits-all” program. A wide variety of participation and impact on both mentees and mentors is to be expected in any program. Some mentoring relationships bring immediate and longer term benefits; others may not work at all through no fault of those implementing the program. Three formal types of mentoring programs are considered best practices in the field. The poster examines structured, formal mentoring programs rather than informal or spontaneous mentoring practices that may occur in an organization and their advantages and disadvantages. “Traditional” mentoring, team mentoring and peer mentoring are highlighted.

A mentoring plan must have a workable structure with goals if it is to be successful. However, it is most important to involve and persuade Library Directors of the value of your initiative. Mentoring cannot happen if the senior people to whom everyone listens are negative about mentoring in general or uninterested in being mentors and recruit for LIS programs.

Jennifer Campbell-Meier, University of Alabama

Sustainsble Training for Alabama Public Library Employees

STAPLE is an IMLS funded grant project designed as a model training initiative to meet the educational needs of public library managers (library directors with no formal LIS education) in Alabama. The School of Library and Information Studies (SLIS) at The University of Alabama and the Alabama Public Library Service (APLS) formed a partnership for this project to create a replicable, sustainable, educational program to initially train 2 cohorts of 30 library managers. STAPLE has built-in, continuous activity with virtual and face-to-face sessions and opportunities for participants to share challenges and successes, and gain instant feedback from their peers in public libraries of similar sizes, thereby developing a comprehensive catalog of best-practices. This will enable library managers to immediately address identified challenges in their library plans and to orchestrate strategies that will deliver better results.

Bimonthly focused opportunities transform practice through specialized training in areas such as planning cultural outreach programs, developing collections for diverse communities, writing grants, and marketing library programs and services to the community. Each of the sessions address specific training needs identified by library managers at the beginning of the STAPLE initiative. Library managers can share skills and information from these sessions with their staff to enhance current practices within the library; thus transforming practice at all levels within the public library.

It is anticipated that STAPLE will help library managers to: identify community needs; strategically plan for success; collaborate with their peers; gain and polish professional skills; more effectively train and mentor staff members; provide high-quality programs and services to diverse populations; evaluate the impact of library programs and services; and improve their library's standing with the people of its community. In addition, participants will develop a strategic plan with outcomes and assessment measures; expand and market library services based on the plan, develop a network of peer library managers, review and develop policies for collection management and public services, and assess local strategic plans.

After our first workshop, STAPLE participants wrote favorably about the workshop. Comments: I am very new at being a librarian . . . [this training] was very helpful for me. Another participant added: Learning how different libraries operate [is very useful]. I can take some of these ideas back to my library. I [enjoyed learning about] being a leader and/or manager and the different styles of management - knowing you don't have to fit into one
The October 2013: Face-to-Face 4 day Training Institute for 2013 Staple Cohort worked to develop a sense of community among participants. The workshop included: participating in group building exercises; solving real-life management dilemmas; developing mock promotional materials for library programs; planning strategies for funding programming; role-playing censorship attempts; exploring virtual reference resources; and examining collection development policies and procedures.

Monthly online workshops and discussion sessions began in November. Workshop topics include: community partnerships and multicultural día programming; grant writing; successful strategies for running a rural library; and goal setting and employee relations.

Participants will return to the Tuscaloosa campus for a one day Capstone Event in September 2014. A new Cohort begins in 2014.

Alexander J. Carroll, University of Maryland

The Retweet of Academia: Using Twitter to Improve Information Literacy Instruction

Previous educational literature contends that undergraduate students need more basic instruction on citation and plagiarism (Lee, 2013, p. 55). Meanwhile, citation management systems such as EndNote Web, Zotero, and Mendeley are becoming increasingly robust and sophisticated, and libraries are responding by integrating these software applications into their service offerings (Childress, 2011, p. 143). The confluence of these two trends suggests an opportunity for libraries to shift the emphasis of their citation instruction. Rather than focusing on the specific mechanics of citation styles, issues that are now largely handled by citation management tools, libraries can emphasize instruction on the topics of plagiarism and citation more broadly and return the focus of plagiarism discussions to the more fundamental issues of integrity and scholarly discourse.

This need for more basic instruction may be due in part to the fact that students, particularly undergraduates, are unfamiliar with the conventions of academic writing (Thonny, 2011, p. 347). This lack of familiarity renders students unprepared to produce academic writing for their coursework. One of the primary conventions of scholarly communication is that "academic writers respond to what others have written about their topic" (Thonny, 2011, p. 349). Since students' work is typically only presented in a limited classroom context and carried out in discrete units of largely individualistic effort, many students do not view their own academic writing as participation in a discourse. They therefore do not necessarily view traditional citation instruction as relevant or meaningful. Twitter, a social media platform that features a familiar interface for many students, can be a useful tool for visually demonstrating how discourse unfolds. Within the literature, Brook suggests that Twitter and other social media tools are "platform[s] for social discourse" (Brook, 2012, p. 120). Twitter facilitates the sharing of content and ideas, as well as interaction between different users, in effect representing a stream of discourse true to the intentions of academic discourse, but with a decidedly interaction-centric emphasis. Using Twitter as a pedagogical tool could allow librarians to reintroduce the human element into citation instruction, focusing on the norms, intricacies, and ethics of discourse among a specialized community, in turn leading to a more robust discussion of scholarly issues in a real world context. Traditional academic discourse and Twitter discourse and share a number of analogous conventions. Academic discourse can be traced both forwards and backwards through time by consulting bibliographies and publication dates. Scholars "speak" to one another in a documented pattern using citations, and they reference the work of others in their own work through the use of direct quotes and paraphrasing. Scholarly works give credit to other scholars through footnotes, endnotes, and parenthetical citations. Meanwhile, Twitter discourse is traced backwards and forwards through timelines and timestamps. Twitter users "speak" to one another using @reply and mentions, and also reference the work of others in their own work, using retweet (RT) for direct quotes and modified tweet (MT), hat tip (HT or h/t), and via for paraphrasing. These commonalities extend to the metrics used for evaluating the impact and influence of individuals and the content they create. Within academic discourse, metrics like h-index demonstrate the influence of a scholar's work, while Web of Knowledge's Times Cited measures the impact of a single work. Similar metrics exist within Twitter discourse. The number of followers a Twitter user has indicates how many users like that account's content, while the number of times a single Tweet is favorited or retweeted indicates how widely a Tweet has been shared. In both forms of discourse, authors use a consistent name or handle to create their "brand." These metrics measure the author's reach and influence, and can have an impact on the careers of those involved in each discourse community, whether used as determining factors in tenure and promotion decisions or as indicators of the public's response to a commercial product or merely as indicators of personal fame and influence.

In both academia and Twitter, the original producers of content gain significant value from their work being properly attributed to them. When students, Twitter users, or scholars use the work of others without properly attributing the content to its original source, they are doing a grave disservice to the original content creator. This expression of why plagiarism is wrong can be conveyed to students at many academic levels. When creating citation and plagiarism instruction, educators should move away from warning students about the immediate negative scholastic consequences that can stem from plagiarism, and instead focus their teaching on how plagiarism affects others and harms communities of discourse. Because it has conventions and features similar to academic discourse, Twitter is a promising model for conveying these concepts to students.

Thus far, we have incorporated this discussion of Twitter as analogy for academic discourse, with the specific example of known plagiarist Twitter user @prodigalsam, into a research and writing workshop for new graduate students, where it met with general success. Our goals for future research include introducing this method of instruction into additional instruction sessions in the Spring of 2014, implementing systematic assessment of the efficacy of this method of instruction, and investigating whether #hashtags can be used as an analogy for explaining subject headings and controlled vocabularies.

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Sara Chizari, University of South Carolina

'Design With' Vs. 'Design For': An Experimental Study on Two Different Children's Digital Libraries.

Abstract:

The goal of this experimental study is to compare the children's levels of fun and success while they are interacting with two differently designed children's digital libraries to discover the more effective approach in designing children's interfaces. Also, the ease of use and learnability of the systems will be examined.

Research Problem:

Recent literature on children interaction design reveals a strong tendency toward involving children in the design process of technologies that are particularly for them. In order to be able to accept that the child-oriented theory is a better approach in developing technologies for children, it is important to demonstrate that child-oriented design theory results in a more usable and fun product for children. However, no experimental study has been done to prove such assumption by actually comparing the levels of fun that children have when using differently designed devices.

Research Design:

In this study I aim at testing the 'designing for children' and 'children as designers' approaches by comparing the children's experience (age 6-10) with two differently designed interfaces. The two children's digital libraries that I used for this study are International Children's Digital Library (ICDL) and Meegenius. ICDL, which is designed and developed at University of Maryland, is the only children's digital library that is designed based on child-oriented approach. In the ICDL project, children have contributed as design partners in the research team (Druin, 2002; Hutchinson, Bederson, & Druin, 2006). On the contrary, Meegenius, like several other children's digital libraries, is developed based on 'designing for children' approach (Hoh & Park, 2010).

Research Question:
Does 'children as designers' approach result in a more usable and fun interactive product for children?

Sub-questions:

- How easy is it to use this digital library?
- How easy is it to learn how to use this library?

- How successful the children are in completing the task?
- How much fun do children have while working with the websites?

Methodology:

During this experimental pilot study 8 children (age 6 to 10) were observed and interviewed by semi-structured questions while they were carrying out the tasks that they were given. Also, after finishing each task they were asked to express their feeling and experience on a Smileyometer. Children were conducted to do three different tasks for both children's digital libraries. Each experiment took about one hour to finish.

Discussion and Conclusion:

Based on my observations, I found two initial experiences that are important in explaining if the kid finds the digital library is fun to use. The first important feature is the search experiment and the second one is the reading experiment. My observations and the children responses show that they prefer a simple and straight forward book finding. Also, the experience that kids had in reading the books seem to have a significant effect on children's overall feeling about the digital library. Almost all of the participants found MeeGenius easier to use and learn rather than ICDL. Hence, they find MeeGenius more enjoyable to use. Easy and entertaining reading feature on MeeGenius was another strong reason for children to describe it as a fun digital library.
In the case of ICDL, the complicated search system with too many options for the book's categories seem to cause confusion and therefore frustration for children. Children were all distracted with the buttons they saw on the homepage and kept clicking on them without paying attention to the search results and the books. Also, the old fashioned reading feature made them not to be willing to continue or redo their tasks.

This pilot study has many limitations. Further studies need to be done in order to investigate the pros and cons of involving children in the process of design.

Heekyung Choi, Seoul National University

Information, or Knowledge? That Is the Question

Information or Knowledge? That is the Problem.

Are information and knowledge same or different? Information professionals are well aware that the two terms are not same, but the two are frequently being used interchangeably. It may be either because knowledge actually takes on more importance than information as the economy becomes more knowledge-intensive, or because knowledge sounds like a more trendy expression than information. Brown and Duguid (2000) witness that the word "knowledge" started to replace "information" since the late 1990s in the management field. They point out that much about this rise of knowledge is faddish and suggest that if there is anything with knowledge that information does not catch, that will need to be explicated. The same argument may be true for the LIS field which has long been in charge of managing information and knowledge.

Bates (2012) observes a shift of gravity within the information field, from institutions to users. Before, the emphasis of the information field was the institutions that have stored information, such as libraries and archives. Now we are more interested in people's information behavior, as technological innovations have made preserving and storing information so much easier and efficient. This shift implies that the roles expected for information professionals may also be expanding from the traditional roles of managing information to newer roles of assisting users construct knowledge. Therefore, it is worth looking into the differences between information and knowledge for new generation information professionals to be prepared accordingly.

Although many efforts have been made to distinguish information and knowledge, information and knowledge are often confused because they of many similarities. Especially in library settings, information a lot of times actually indicates library materials which are essentially information goods, such as books, magazines, DVDs, and journal articles. These information goods are often called "knowledge," as these materials contain people's intellectual endeavours accumulated over time. Besides, libraries have been particularly interested in promoting people's learning, which is expected to occur as a consequence of being provided with information. Meanwhile, knowledge is obtained as a consequence of learning. Indifferent use of information and knowledge may be due to this close relationship around learning.

Previous studies including Machlup (1983), Buckland (1991), Polanyi (1966), Nonaka (1995), Foray (2004), and Brown & Duguid (2000) were reviewed. These previous works suggest that information and knowledge need distinction when it comes to the issues of managing them. Information is more standalone and self-containing, of which the significance is fundamentally about people's access. Whether users can get fair access that they deserve is more of an issue than whether users can intellectually get it. Knowledge, on the other hand, moves less effortlessly: sometimes knowledge is very sticky and would not move among people, other times knowledge is leaky and just so easily flows among them. Knowledge moves through a more uneven way depending on the users and situations. Therefore, different management strategies are expected depending on the ways in which the situation is framed: an information problem or a knowledge problem.

The differences discussed in the review of previous studies will be demonstrated in an ethnographic study with graduate students in an interdisciplinary program. In this study, I am planning to observe how information and knowledge mobilize differently in an interdisciplinary graduate program where students are developing their thesis research proposal. The specific questions that will be investigated are 1) How information and knowledge mobilize differently in an academic setting? and 2) What would be proper roles for information professionals in terms of managing information and knowledge?

The research setting will be an interdisciplinary graduate program in Korea. Several unique factors, such as its interdisciplinary nature, rigorous academic requirements, a lack of a research tradition of its own due to its relatively short history, and its physical distance from its main campus, make this program an interesting venue full of intriguing instances. As this program requires all the master's students to complete a thesis, students are engaged in a massive amount of formal and informal information seeking, desperate to shape a research proposal within the tight two-year timeline.

The field study will be conducted from the beginning of the Spring 2014 semester to the proposal defence day of the same semester. Field notes and interview transcripts will be obtained and analysed to vividly demonstrate the diverse patterns of information and knowledge flow in the setting. Students' proposal documents, the central artefacts of this setting, will also be collected and analysed. All the research data will be analysed following a qualitative data analysis method. It is expected that information and knowledge are sought intensively but in different ways. The results will help suggest a framework in which the new generation information professionals envision their evolving roles.

Academic research settings have long been many information professionals' centre stage, and the core of information professionals' work has been selecting, organizing, retrieving and using information (Bates, 2012). Even if the weight of their work is shifting from information to knowledge, it does not mean that information professionals leave their traditional roles behind and try to take on the roles that resemble those of students' academic advisors. If they want to play more of a role of knowledge managers, or are expected to do so by others, they will have to be engaged more in the organization's subtle processes and adjust their own roles accordingly. They could either remain focused on what librarians have long been good at, or take on a new role as a knowledge manager who would nurture knowledge in a given setting. Only informed information professionals regarding the difference will be able to determine which path they will follow.

Wonchan Choi, Florida State University

Implications of Assessing the Credibility of Online Information for the LIS Curriculum

This work-in-progress poster discusses how the topic of online information credibility can be integrated into the library and information studies (LIS) curriculum. Considering the lack of education to prepare future information professionals for credibility assessment, discussion about development of courses addressing credibility assessment issues is important. In particular, this study has two research purposes: define core content components of the topic (i.e., information credibility) and discover the best way to set up the courses in the LIS curriculum.

To identify content components that should be taught in an LIS curriculum, this study reviewed literature on definitions and underlying dimensions of credibility, markers (cues) and heuristics affecting users' judgments of online information credibility, and related theories. In addition, Master of Science in Information Quality (MSIQ) which includes similar courses, was reviewed to identify core components that need to be included in credibility courses. Based on the literature analysis, this study suggests three topics as main components: 1) foundations – definitions of credibility, key dimensions, related concepts such as quality, trust, authority, etc., and theories addressing the process of credibility assessment; 2) information seeking and retrieval – credibility as a relevance criterion and credibility judgment of information seekers; and 3) evaluation of Web resources – Web credibility markers (cues), heuristics, etc.

To find the most appropriate way to cover information credibility in LIS programs, this study's second purpose, this study mainly discusses three specific issues regarding new course development: 1) Would standalone courses be added or would core content components be integrated into existing courses? 2) In case of adding new courses, how many courses would be developed, and would these courses be set up as core or elective courses? and 3) In case of integrating core content components into existing courses, in which courses would the contents be introduced? In particular, the curriculum of the School of Library and Information Studies (SLIS) at Florida State University (FSU) was used as a case study in order to determine which courses cover related content into which the credibility issues could possibly be integrated. Based on an analysis of the FSU curriculum, which was mainly focused on course titles and descriptions and syllabi when available, fourteen existing courses were found that could adopt the core content components identified in this study: Assessing Information Needs (LIS 5203); Theory of Information Retrieval (LIS 5263); Usability Analysis (LIS 5275); Website Development and Administration (LIS 5364); Advanced Web Applications (LIS 5367); Business Information Needs and Sources (LIS 5474); Instructional Role of the Information Specialist (LIS 5524); Information Needs of Children (LIS 5564); Information Needs of Young Adults (LIS 5565); Multicultural Literature & Information Resources for Children and Young Adults (LIS 5566); International Literature for Children and Young Adults (LIS 5567); Information Needs of Adults (LIS 5576); Introduction to Information Services (LIS 5603); Issues in Information Studies (LIS 5916).

Based on examinations of the core content components and practical conditions for developing the courses, both developing standalone courses and integrating content into existing courses seemed to have strengths and weaknesses. In terms of the option of adding standalone courses to the curriculum, the fact that the topic could be addressed in-depth would be the most important benefit. In particular, independent courses for credibility assessment would work well for providing a foundation for addressing various definitions, dimensions, and types of credibility, relationships between them, and theories explaining the process of credibility assessment. However, practical constraints, such as the limitations on the number courses a program can require and accreditation requirements are tough barriers.

The other option, integrating necessary content into existing courses, is more possible and practical, considering the current structure of LIS curriculums. Since the process of credibility assessment is based on users' perception, existing courses addressing various users groups and types of information resources could cover the topic. Also, information technology (IT) related courses, such as those dealing with website development, could address the core content components, such as factors either increasing or decreasing credibility of Web resources. However, foundational theories of credibility assessment would be difficult to address by implanting them into other courses. Because the existing courses have their own theoretical content, credibility assessment is only addressed as it relates to the existing courses' topics.

In conclusion, it would be desirable to combine the two options: to develop an independent course for the foundational theories of credibility assessment and to integrate other important content components across related courses. However, because this study broadly examined how to integrate credibility assessment into LIS curriculums, a more thorough discussion considering the practical conditions of individual schools and content development for the courses is necessary. Future iteration of this research will include more case studies of ALA-accredited LIS schools' curriculums, as well as the development of a survey instrument for LIS school directors that asks about their perceptions of the necessity and appropriateness of developing credibility assessment-related courses.

Yunseon Choi, Southern Connecticut State University
Designing a User-Centric Faceted Browsing Interface for Non-Professional Users (K-12 Children): An Analysis of User Tags in Social Networking Sites

As networked information resources on the Web continue to grow rapidly, a need for effective access to better organized information has necessitated an improvement of the website design. Faceted classification has become widely used to organize resources on the Web. Growing interests in the application of faceted classification on the design of websites have led to successfully providing users with findability of resources. However, too little attention was paid to the faceted navigation for children-related web sites. With increased availability of the Internet, more and more children are getting online and using the internet to find information interesting to them. It has been reported that children have problems with searching and browsing information at some children-related web sites due to their poor structures. Also, it has been revealed that children preferred using browsing items to using keyword search. Thus, it is necessary to turn our interests to the development of an improved navigation structure to support seeking information in that domain.

The study aims to provide a better information seeking environment for non-professional users such as children (K-12) on their information access and use with a user-centric web navigation. There have been a lot of efforts to develop user-centered web design, but they are not based users' information needs and behavior, and they tend to focus on the characteristics of web sites. This study suggests the application of faceted approach to the design of children-related web sites with two important considerations for selecting appropriate facets. First, facets should correctly represent audience. The characteristic of domain "children" is that its user population includes adults (i.e., parents and teachers) as well as children. Second, facets should be able to reflect users' perspectives. The labels of facets should be clear and recognizable to users. The faceted structures of faceted classification were constructed by professionals, not by users. Although professionally developed facet structures are consistent and systematic, sometimes it is not easy for users to understand the concepts of facets and their relationships. Those facets are mainly based on controlled vocabulary and the priority of facets is not represented by users' preferences, leading to difficulty in finding appropriate facets to their needs. If faceted structure would be complemented by users' vocabulary, it would provide better support of information seeking during the searching process.

This paper is based on the result of the pilot study which was conducted to see how existing hierarchical web directories can be improved by faceted browsing based on a user's perspective. The outcomes of the pilot study addressed that a user-centric approach to developing facets appears to be critical in designing a faceted web interface. The methodology of this research is divided into four stages: (1) analyzing categories in web directories to understand a professional’s perspective (Q.1), (2) analyzing social tags assigned to children’s books in social networking sites in order to identify a user’s perspective (Q.2), (3) conducting facet analysis to identify user-centric facets (Q.3), and (4) developing a faceted web design to design a faceted web site for Children (K-12) (Q.4).

Laura Clark, Florida State University

Emergent Literacy in Public Libraries

Public libraries are an outlet for emergent literacy, and thus are an important part of the community. Public libraries have proven that they are a positive force in the development of emergent literacy skills. Public libraries serve their communities with free and equal access to materials, internet, and programming. Public libraries are one of the most appropriate places in any community to support children's emergent and early literacy development. Librarians and staff deem literacy development in our children as an essential component to our country, state, and community. These public library teams prepare programs for their communities and support them regardless of the constraints. These heroes for emergent and early literacy find a way through problems such as shortage of funds, and difficulties in reaching all the people in the community, to provide resources for children. (Yilmaz, 2009).

Due to the barriers, many from low socio-economic backgrounds depend on libraries as a literacy resource, and public libraries play an important role in childhood access to reading materials. Low socio-economic and minority children are at jeopardy in terms of early literacy development, because books and literacy materials are less accessible to poor parents and their children. Public libraries' role as a free, public provider that meets this population's demands for literacy materials and their support makes an important contribution to children's lives. Without this resource, many children would not have access to reading materials necessary for literacy development. (Yilmaz, 2009). Any experience a child has with literacy resources is important no matter how limited. The experiences a child has with literacy will have an effect on their school achievement and readiness. Lack of research on this topic of emergent literacy in libraries has not be addressed, but McKechnie (1996), showed that public libraries have an important impact on children's reading advancement through making print-rich environments available. There is a substantial lack of information regarding emergent literacy in public libraries. Research conducted by Teale (1995) and Irwin, Moore, Tornatore, and Fowler (2012) established the important role public libraries have in children’s development of emergent literacy.

Emergent literacy is an important skill for children to have when starting school. Emergent literacy perspectives on young children's experiences opens up exciting possibilities for librarians, teachers, and parents alike to promote children's development of reading and writing through programming, coaching, and materials. This is the phase that children go through before they start decoding words. Emergent literacy development for children is defined in general terms, as the phase when children begin exhibiting reading and writing behaviors that proceed to conventional literacy. Researchers believe that early literacy in children, as a component of written and oral language development, is a process that begins at birth (Wedvik, 2010). Children's librarians have demonstrated substantial amount of support for emergent literacy development in children. There is a lack of academic research that speaks to the role and influence of public libraries in developing emergent literacy skills.

One aspect of this review is the concept of a rich or quality program for children in public libraries. I will attempt to define this concept for clarity in this paper. Public library environments that are rich in emergent literacy have place, diverse multimodal programming, funding, supportive administration, policy, and an evaluation system. Place addresses both a location of the children's collection and where programming is held. Diverse multimodal programming contain sensory components that address all different types of learning styles indifferent modes that make certain task better in a fun and stimulating way that engages in sensory learning. Visual stimulus and movement must intertwine with rhymes, books, and music. All the necessary tools need to be provided by funding through the library system. Supportive administration speaks to managers and directors understanding the importance of emergent literacy and giving children's librarians the support needed to be successful. Emergent literacy in policy is found in vision or mission statements when communities understand how valuable developing this is in our future. Funding for libraries is a constraint that plays an important role in the effectiveness of programming. Lastly, evaluation in public libraries should be implemented for quality assurance.

Stacy Creel, University of Southern Mississippi

A Survey of Student Perception on Course Activities for Online Community-Building

This research follows an earlier study that identified technology and communication tools, class activities and assignments used to achieve community building in the student's physical community and their online courses in The University of Southern Mississippi's School of Library and Information Science from the perspective of the faculty. The original study employed both quantitative and qualitative research methods and included a survey of the SLIS faculty on nine categories of involvement in 33 master courses (or 66% of the courses in the Graduate Bulletin). The nine categories included: conducting activities in local/physical community; synchronous chats; discussions with required response; group projects or presentations and group work; internships and practicums; creating podcasts or vodcasts with peer feedback; using social networking with required connections with others; conducting interviews or conversation/interaction with information professionals; and using Web 2.0 with peer feedback. The first part of the study indicated that "elective courses have fewer required physical activities in students' local communities; archival courses have fewer virtual community-building requirements but more physical community-building activities in their local communities; and school library courses have a high number of required community-building activities, both virtually in the online environment and physically in students' local communities" (Creel & Welsh, in press). This research presents the preliminary results of a student survey using the same nine categories and how the students view them as achieving community building in their virtual community.

One definition of virtual community is "a group of people who interact with each other, learn from each other's work, and provide knowledge and information resources to the group related to certain agreed-upon topics of shared interest" (Hunter, 2002, p. 96). Virtual learning communities make use of information and communication technologies (ICT)—a broad term that includes communication applications and devices and the services provided through them (http://searchcio-midmarket.techtarget.com/definition/ICT). The interactive learning model of distance education has four recognizable features: (1) it uses a variety of technology for "private, group, and public communication;" (2) the activities are "synchronous and asynchronous;" (3) interaction takes place regularly between the students as well as with the professor; (4) "courses are not self-paced" (Kazmer 2005, p. 194). Students in online programs are connected to two communities – their physical community (family, friends, clubs, social groups, etc.) and their online education community; there is a two-way sharing of information in which students bring knowledge from their courses to their community and vice versa (Haythornthwaite, et al., 2000; Haythornthwaite & Kazmer, 2001; Kazmer, 2005; Most, 2011).

These connections are strengthened by appropriate use of ICT. Overall, the study seeks to answer the research question: how do students rate the course activities in creating community? This poster presents the very preliminary results of the student study on the online community building activities only. To date, 170 completed, usable surveys have been collected. The majority of respondents are white (79%) women (79%). Thirty-eight percent of respondents are 21 to 30 years of age, 23% are 31 to 40 years of age, and the remaining 39% are over 40. Just over 65% have worked at least one year in a library setting. The top three online activities rated by students as high and maximized virtual community building are group projects (71%), synchronous chats (57%), and discussions with response (49%). While these are only preliminary results—the survey is still in progress and detailed analysis has not been done—it is interesting to note that the most frequently included online community building activities in the courses are also ranked as the ones that students found to have the greatest community building influence.

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Ann Cullen, Simmons College

Developing a Conceptual Framework for Effective Information Literacy Instruction Design in MBA Programs

Effective use of information is a key component of the manager's job (Katzer & Fletcher, 1992). In a business environment burdened by information overload (Bawden & Robinson, 2009; Dean & Webb, 2011; Edmunds & Morris, 2000), the question for MBA programs is how to provide instruction so that graduates have the necessary foundations in this skill (Hawes, 1994; Julien, Detlor, Serenko, Willson & Lavalle, 2011). Many information professionals at business schools have been investigating ways to effectively impart this skill (Fiegen, 2011). However an absence was observed of any sort of generalized conceptual framework to illustrate the factors to consider in devising instruction for Master of Business Administration (MBA) programs. This research aims to develop a comprehensive and easy to understand framework that can be used in designing this instruction.

The source of material for this research comes from a combination of primary and secondary research on the information skills MBAs should have (Cullen, 2010; Cullen, 2012; Edmondson & Cullen, 2008; Wallace, Cullen, & Esty, 2007) as well as the experience of this researcher who has worked as a business librarian and educator in both academic and corporate environments for over 20 years. In addition to the management literature on the skills MBAs should have (Datar, Garvin & Cullen, 2010) and information behavior of managers (de Alwis, Majid, & Chaudhry, 2006) one area of additional influence has been research on how identity, environmental and lifecycle characteristics can affect how information gathering is approached by individuals (Fisher, Erdelez & McKechnie, 2006; Heinstrom, 2005).

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Christine D'Arpa, University of Illinois at Urbana-Champaign

The Corporate Development of Middlebrow Reading: The Peoples Book Club of the Sears, Roebuck Mail-Order Catalog.

The Sears, Roebuck and Co. mail-order catalog brought a full service department store to more than 12 million homes in the United States by the middle of the twentieth century. Over one third of those households were rural, and the primary purchasers of mail-order items were women. My research examines the history and the economic and cultural impact of the decision by Sears, Roebuck and Co. to establish a mail-order book club, the Peoples Book Club, in 1943.

Since its introduction in 1896, Sears (later Sears, Roebuck and Co.) featured books and magazines in its mail-order catalog. But the introduction of the Peoples Book Club by Sears, Roebuck and Co. in the July 1943 issue of its mail-order catalog marked a significant change in how the company offered books to its customers. The announcement came as a full-page color advertisement that included a self-addressed, postage-paid, sign-up card sewn into the catalog's binding. The infrastructure behind the project was equally elaborate. The company not only marketed and distributed the books it sold but also established a publishing house in Chicago to design and print these special editions and the Peoples Book Club's monthly catalog, The Peoples Choice, that was sent to members.

By the time the Peoples Book Club began, the Book-of-the-Month Club had been operating with great success for seventeen years. As Janice Radway demonstrated in her study of the Book-of-the-Month Club, there was a distinct difference between those who selected the readings and the Club's members. The selection process at Book-of-the-Month CLub was directed by the presumed literary authority of individuals who were highly educated and thus, "experts." In contrast, the Peoples Book Club cultivated not simply the views of literary "experts," but also the reading preferences of members in the selection of monthly reading choices. The Peoples Book Club employed the services of George Gallup's American Institute of Public Opinion to help gauge readers' interest in a "scientific" manner in order to establish the worthiness of each book. The method of selection, plus the fact that these readers were overwhelmingly rural and female sets the Peoples Book Club apart from the many other book clubs already firmly established in U.S. culture.

The Peoples Book Club had 350,000 members at its peak, but there are surprisingly few references to it in any of the scholarly literature on book clubs, women's reading, and American "middlebrow" reading during the mid-twentieth century. The Peoples Book Club represents an opportunity to more deeply understand and situate the evolution mass culture in post-World War II America. Specifically, a critical history of the Peoples Book Club will afford greater insight into the nature of women's reading and corporate catering to and manipulation of what was perceived as women's interests. The study draws on data from the Sears, Roebuck and Co. mail-order catalogs during this period, book club advertisements and mailers, the company archives, and literature of the book trade. In addition, I position my work within the tradition established by the groundbreaking scholarship of Janice Radway and Elizabeth Long on women readers and reading.

Rebecca O. Davis, University of Tennessee-Knoxville

Educating College Freshmen from Underrepresented Groups in the STEM fields: A Curriculum of Library Skills Courses to Teach during a Summer Program

This poster presents a proposal of various library skills courses that can be incorporated into three week summer programs targeting incoming college freshmen from underrepresented groups, which consists of racial/ethnic minorities and women in the Science, Technology, Engineering and Mathematics (STEM) fields. The initial concept for this project was devised after observing a Summer Bridge Program at a Research I University for incoming freshmen from underrepresented groups in the STEM fields. During the program the students met in the library for two weeks of program and had four library skills courses on database searching, navigating the library website and two courses on plagiarism and citations, but that could be expanded to everyday throughout the three week program. The students seemed generally interested in the courses and enjoyed the activities that the librarian prepared for the students to complete at the end of each course. The activities were a review of what was covered during the hour in the course. The proposed courses would be part of the summer program and the students would meet in the library where librarians from various departments could teach a course each day for approximately 1 hour. By meeting in the library, the students would have the opportunity to tour the library and become familiar with the larger academic library. This would also give students the opportunity to meet various librarians and learn about what the library has to offer. Suggestions for courses that could be offered are: introduction to the academic library, navigating the library website, frequently asked questions about the library, how to search the library catalog, databases and e-journals, library materials, library use, research assistance, plagiarism and citations, and resources and services available for STEM majors. Each course would serve as a way to introduce the students to the academic library and all that is available for their use as students. The students would have the opportunity to learn more about the library by taking these courses and become familiar with the library and what is available. The courses would give students a chance to meet some of the librarians and ask any questions that they have about the library. By taking these courses the students would be a step ahead of other incoming classmates because of the library skills courses that they took over the summer. The courses would also help the students by introducing them the various search techniques to use when searching for academic information. Since the students taking these courses will all be incoming freshmen the material covered in the courses will provide them with a good introduction to the academic library. By having various librarians teach the courses the students will already know who to contact when they have questions about the library and finding academic information.

This early introduction to the academic library and the librarians could help the students to build a positive relationship with the library and librarians. The students would know that there are people in the library who are willing to assist and support them with academic work and that the library is a place to study, relax and socialize. Retention with underrepresented groups in the STEM fields is a major issue. Librarians could play a role in trying to help retain these students by teaching them about what is available in the library and how they can use services and resources to their benefit. This could be a qualitative study and the students would be interviewed about their experience taking the library skills courses. The first interview would be after the students have completed all library skills courses in order to learn about whether or not they found the courses useful and if they have any suggestions for other courses. The students may also be interviewed for a second time during their sophomore year to learn about whether or not they have been able to use any of the skills and information that they learned during the summer courses. By interviewing the students this will allow them to share their experiences and the librarians may benefit by learning about how helpful the courses are and what changes could be made to improve the courses.

Liya Deng, University of South Carolina

Fostering a Culture of Learning and Inclusion: The Interplay of Technology and Tradition in Modern Museums

In recent decades, the educational potential of museums has been greatly expanded with the advent of emerging digital technologies that bring about immense developmental and communication opportunities for users. Critical discourse analysis reveals that, influenced by the technological innovations, museums are undergoing a fundamental paradigm shift in their curatorial practices marked by the emergence of new user-centered patterns that have essentially replaced the previously accepted object-centered approach (Mack, 2011). As educational and cultural hubs, museums are experiencing significant change in the ways they interact with their visitors and attempt to become more actively involved with the communities they serve. This higher degree of involvement is achieved with the use of digital media that serve as powerful instruments enabling museums to play a more essential role in today's global knowledge society. Incorporated into museum work, digital media have the potential to foster environments in which members can create and feel connected with one another.

However, despite its indisputable positive impact, digital technology may also present considerable challenges for museums, challenges related to affordability, usability, and universal access to cultural resources (Institute of Museum and Library Services [IMLS], 2013). Sources indicate that community members of lower socio-economic status are, on average, less likely to visit a museum than persons of higher socio-economic status (Swan & Manjarrez, 2013). Thus, low-income families are often excluded from the emerging participatory culture and are therefore unable to take advantage of educational, social, and economic benefits stemming from the exposure to cultural artifacts. In a sense, the inability of visitors of lower means to benefit from a wealth of culturally-valuable materials leads to the denial of their fundamental human right to culture and ultimately to social exclusion.

While the general impact of technological innovations on enhancing access to museum resources has been widely covered in professional literature, little scholarly attention has been given to the role of technology in attracting low-income audiences and meeting their cultural and intellectual needs. The primary purpose of this exploratory study is to investigate how modern museums can incorporate emerging digital media into their practice to attract visitors from underserved communities, thereby facilitating immersion and social inclusion. However, the overall conceptual framework of this research is more complex than the difference between users who have technological access and those who do not. The real concern of the author is the widening culture gap, a phenomenon that Stein (2012) has identified as the direct consequence of the concurrent technology and participation gaps. In particular, the researcher investigates a number of key questions museums have to face in order to better cope with the challenges of seeking out and removing access barriers. What does it mean for a low-income community to have a museum that is geared to and responsive to their needs? Are contemporary museums truly prepared for large-scale social inclusion? Do they have the resources to successfully reach out to those audiences who are typically "invisible" in society? Is there an enduring value in increasing their presence and role in museum life?

This study employs a mixed methods approach to data collection. First, purposive sampling is being used to survey personnel of fifty art and history museums in five Southeastern states. Based on the survey results, focus groups and individual follow-up interviews will be conducted in ten selected museums to explore salient issues in more depth. Data will be analyzed through a variety of techniques, including organizing, coding, identifying themes, and developing category systems to compare and contrast information from various sources. By exploring how inclusion in the museum community affects the ways visitors learn, socialize, and participate in civic life, this study contributes to reducing the existing disparity of learning and socio-economic opportunities available to low-income museum audiences. As such, this research is vital for rethinking the educative and community-building functions of museums as it intends to shed additional light on how digital media can serve to attract non-traditional visitors, form inclusive learning communities, and expand educational and social boundaries.

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Jeffrey Discala, University of Maryland

How Districts Recruit and Hire School Librarians: School District Governance and Knowledge Fit in Decision Rights

When a choice must be made in an organization, an individual or group generally has the specific knowledge to make the most effective decision regarding that choice. Those with the specific knowledge about the choice should be given decision rights. In most school districts, principals are given decision rights for recruiting and hiring school librarians for their school. However, previous research indicates that principals often have outdated and incomplete knowledge about the roles of the school librarians. Those with the specific knowledge about the school library program, namely school library district supervisors, often are not consulted about these decisions regarding recruiting and hiring.

This research is the first part of a study that will look at decision-making processes through comparative case studies of school districts concerning the recruiting and hiring of school librarians. It will use a theoretical lens based on research in IT governance that determines decision rights based on the knowledge-fit of groups and individuals. In the latter part of the study, data will be collected through interviews with principals, individuals in human resources, school district library supervisors, and school librarians in each district. Additionally, data will be collected through documentation from organizational charts regarding governance, HR policies, and other resources concerning recruitment and hiring.

The data in this early part of the study reports on the preliminary research required to put school districts into categories, creating groups that represent the different levels of involvement of the supervisor in hiring practices and the level of involvement of others in hiring school librarians. A small survey was conducted with school library districts supervisors that had previously taken part in the Lilead Survey of 2012, a baseline study of the roles and responsibilities of supervisors. This follow-up survey focused on two research questions:

1. What level of involvement does the school district library supervisor have in hiring building-level school librarians?
2. Who are the other individuals in the school district involved in the process?

Supervisors were asked to select from a list of tasks in which they participate regarding hiring school librarians in their school district. Among other tasks, the list included actions such as reviewing applications, performing screening interviews, providing principals and HR with guidelines for evaluation, conducting interviews with principal, and either making final recommendations or hiring decisions. The number of tasks totaled 14, with the average supervisor participating in seven of those tasks. The most common tasks performed were making interview and final candidate recommendations to principals and providing principals with evaluation guidelines.

Additionally, supervisors were asked about the other individuals in the school district that participated in the hiring process of school librarians. One hundred percent of respondents indicated that the principal is involved. Thirty-five percent indicated the involvement of an assistant principal. Sixty-one percent indicated a general representative of HR is involved in the process, while 14 percent of supervisors indicated that they work with a liaison in the HR department that is meant to work specifically with school library hires.

As stated earlier, this research is the beginning stage of later research on recruiting and hiring school libraries. This survey will inform the sampling and selection of school districts for case studies that will take an in-depth view of how school districts recruit and hire school librarians. Future research will look at the processes and policies of school districts and take a closer look at the different levels of involvement of departments and administrators in each school district.

Contributions of this study include recommendations regarding the organizational structure surrounding recruiting and hiring decisions of school librarians, policy suggestions for more effective recruiting and hiring in districts, possible strategies to help school district library supervisors become more involved in the process as advocates and leaders for their school librarians, and the application of a theoretical lens on governance, knowledge-fit, and decision rights not previously applied to this area of librarianship.

Kaye Dotson, East Carolina University

Technology Integration and the Internship: Which Standards Prevail?

Technology is a leading force in the transformation of schools and learning today. Because the use of technology available is always evolving, and technology-related professional development is often focused on technology skills instead of integration, classroom teachers depend upon school librarians for guidance and support. This need has demanded our leadership role within the profession. Educators are increasingly bombarded with new technology and school librarians must be prepared to provide teachers with the support they need to most effectively guide the students they teach. In today's technological world, school librarians should always be ready to keep up with advances in standards significant to the profession. The well-prepared librarian will be able to determine the best uses of technology for the best outcome. (Farkas, 2013). Pre-service graduate programs are in a unique position to help meet these needs through program internships that prepare future school librarians for this pivotal role. This study will examine the standards interns in library and information science graduate programs have practiced in order best prepare pre-service librarians for their future librarian roles.

The internship, as the clinical experience, offers a culminating opportunity to put into practice the theory learned in coursework, as well as an avenue to experience professional work while continuing to have access to academic support. It is critical that the graduate school internship unambiguously prepare future professionals for the impact of evolving professional responsibilities due to advances in technology. As use of and advances in technology are emphatically impacting the roles of school librarians, graduate programs are called upon to examine how and if they are addressing this area in the pre-service work.

The program under review is part of the College of Education at East Carolina University and is one of the 38 AASL/NCATE endorsed school library programs throughout the US. The Library Science program, approved by North Carolina's Department of Public Instruction, is completely online and is based on goals and objectives established by the Department of Library Science (DLS) faculty through the curriculum development process. This process evolved through systematic planning by the DLS Curriculum Committee in response to requirements for licensure from the state Department of Public Instruction (DPI) and the Standards for Initial Preparation of School Librarians designed by ALA/American Association of School Librarians (AASL). Based on the program goals and objectives, the curriculum addresses the theory, principles, values and practices necessary for MLS students to succeed in their professional library careers. The MLS program fosters curricular goals and objectives through a variety of educational experiences,

culminating in the capstone clinical experience, the professional internship. The internship is a crucial, culminating link between theory and practice.
Specific questions examined by this study include:

(1) What clinical experiences in technology integration do pre-service librarians perceive they have participated in within the internship?
(2) Which standards are emphasized in the clinical experience?

An online survey will be used for collecting the perceptions of program alumni and current interns on their perceptions of technology integration within the internship and their perceptions of standards emphasized. These opinions will be used to identify strengths and limitations of the MLS program and make improvements in program quality to better prepare school librarians for the professional role.

Yunfei Du, University of North Texas

Building Library Spaces to Support Individual Learning

Introduction. This poster session addresses the conceptual and practical implications of virtual spaces in library and information education. Currently, rural and small public libraries as well as many academic libraries face challenges in organizing spaces. On the one hand, readers, particularly senior citizens might prefer a quiet reading space. At the same time, teens and children may prefer learning commons and gaming space for formal and informal learning, and they also participate in library virtual spaces such as its mobile portal, Facebook pages, and other social networking sites. With decreasing funding support on buildings and facilities in many libraries, organizing physical and virtual space may attract more community users and provide satisfactory services.

Conceptually, Keppell, Souter, and Riddle (2011, pp. 17) suggested that learning spaces are multi-dimensional and integrated in nature, and should include physical, virtual, formal, informal, blended, mobile, and even outdoor spaces. Virtual learning space is often narrowly defined as the online learning environment that is complement to the face-to-face learning and teaching experience in educational settings. This poster suggests library learning spaces should include both physical and virtual spaces such as library Websites, and Facebook, Twitter, Instagram and other social network sites, as well the interaction with personal learning spaces (See Figure 1).

Insert Figure 1. Personal Learning Spaces as suggested by Keppell, Souter & Riddle (2011)

Practical Applications. Souter, Riddle, Keppell, and Sellers (2010) suggested when designing learning spaces one should consider user-centeredness, collaboration, and experiential learning principles. These principles may be used as guidance to design library physical spaces as well. Rippel (2013) demonstrated ShelfShuffler (http://db.tt/O6vXtB9V), an open source software package that creates 2D layouts of furniture, bookshelves, and other library spaces. He also provided detailed steps and examples on using this software.

Three-dimensional design might better represent the space and easier for end-users to visualize the final product. While Auto CAD is one of most popular 3D tools among engineers, there are alternative tools for amateur designers. 3D virtual worlds such as Second Life and Minecraft are such platforms to simulate library spaces. Libraries designed in Minecraft virtual spaces are illustrated in this poster session.
3Dream (https://www.3dream.net/) is an online 3D tool for interior design and it can be used for space planning. This free online tool allows users to build a room using 2D and 3D objects. In order to run this online tool, DX Studio Player plug-in has to be installed and integrated to Web browser. DX Studio is a software packaged sponsored by Worldweaver Ltd, a company specializing in game design. Library spaces designed using 3Dream are illustrated in this poster session.

Conclusions. Various applications tools can help librarians to design physical spaces, and they can be a 2D tool (Shelfshuffler), virtual space (Minecraft), or a 3D model (3Dream). Skold (2012) suggested the study of aesthetics of physical and virtual spaces be an especially rewarding area to explore in future research. Research tools that can assess the effects of user-centered design, user collaboration, and experiential learning are much needed. Further research should collect data on how physical and virtual spaces can accommodate individual preferences and improve learning outcomes.

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Aaron Elkins, Florida State University

Recreational Digital Games, 21st Century Literacies, and LIS Education: Are Future Librarians and Information Professionals Prepared for a Gamified Century?

Although the idea of 21st Century literacies is not new, the idea of using recreational digital games to teach these skills is beginning to gain traction. This poster presents some of the research that describes how recreational digital games can engage and develop 21st century literacies. LIS educators should learn about the potential of using recreational digital games to teach 21st Century literacies so that they can prepare librarians who will be entering the workforce to do so. Many researchers, librarians, and information professionals have published about implementing games in the libraries at the professional and practical levels. However, it is not clear how LIS educators are preparing future librarians and information professionals for an increasingly gamified century while they are students. A mixed method study utilizing surveys of and interviews with LIS educators and content analysis of syllabi, course descriptions, and related curricular artifacts is proposed in order to explore if and how future librarians and information professionals are being prepared to program for games, develop game collections, practice gamer's advisory, or gamify their information organizations. Findings of the proposed study will help to better understand where LIS education and games stand, where it shines and where it needs improvement, as well as demonstrate and increase the entreprenerial advantage of an LIS degree in a gaming century.

Rachel A. Fleming-May, University of Tennessee-Knoxville

Poetry Unbound: Faculty Poets' Online Literary Publishing Attitudes and Behavior

In a 2009 Poets & Writers article, Sandra Beasley noted that "as glossy magazines die by the dozen and blogs become increasingly influential, we face the reality that print venues…are rapidly ceding ground to Web-based publishing." Today, the Poets and Writers magazine database and the Council of Literary Magazines and Presses index altogether list nearly 800 venues that publish at least some online poetry, including titles with a print counterpart. The swift increase of literary publishing in online-based publications and weblogs has expanded venues for literary expression and possibly even suggests a fruitful democratization of literary culture.

Online literary journals, e-zines, and print publications' websites have enabled more extensive dissemination of literary works than ever before, and have broadened the possibilities for incorporating these works into the classroom and other public venues. While many of these online publications are affiliated with academic institutions and/or follow the quality control guidelines of print publications, the democratic nature of web publishing has raised questions about the value of publishing online. Poets in faculty positions face the same tenure requirements as their colleagues in other departments and must take questions of journal quality and impact into consideration when selecting publication venues.

To explore these and other issues, we conducted a survey of Master's in Fine Arts/Creative Writing faculty, followed by a series of interviews with select poet/faculty members. This research uncovered interesting and sometimes unexpected commentary about the role of the Internet in the ancient world of poetry. This poster will share findings regarding:

- Faculty opinion about online publishing in the current literary landscape.
- Creative writing faculty members' search techniques and tools to locate information about poets and poetic texts.
- Faculty behaviors related to discovery and reading of web-published poetry.
- Poets' practices related to publication of their poetry

• Incentives and impediments to publishing online, including acceptance of online publishing in scholarly culture and the tenure and promotion process.

This research was conducted as part of an Institution of Museum and Library Services (IMLS)-funded National Leadership Planning Grant Project entitled “Virtual Verse in the Library: Surveying the e-Poetry Landscape,” the purpose of which is exploring issues related to intellectual access to individual works of poetry published on the web. While poetical works and short stories that have been published in print have been indexed in resources such as the MLA International Bibliography, Short Story Index, or Columbia Granger’s Index of Poetry, very few poems published on the web have been indexed in standard sources. Even as increasing numbers of print journals publish additional works only their websites, most do not index these online-only works with the rest of their content. As a result, individual works can only be identified by browsing individual publications or searching for specific works and/or authors.

The researchers sought to speak with communities involved in the creation, dissemination, and potential preservation of online-only poetry, and conducted surveys and interviews with creative writing faculty, librarians, and literary journal editors and publishers. The findings presented in this poster represent one facet of the Virtual Verse research project.

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Danielle E. Forest, Old Dominion University

Portrayals of Social Class in Newbery Titles, 2004-2013

Children’s literature has a “tremendous impact on children’s lives” (Boutte, 2002, p. 152). Books can “shape the dreams” of children but they can also “cut off hopes and limit aspirations” when they present negative stereotypes (Kohl, 2007, p. 41). The stories that children read can have a deep, long-lasting impact on readers (Kohl, 2007), and children may form their worldviews based on what they read (Taxel, 1989). Therefore, understanding the content of what children read is an important undertaking.

For some time, scholars have examined the content of children’s literature for depictions of different social and cultural groups. In a 1965 article titled The All-White World of Children’s Books, Nancy Larrick called attention to the scarcity of African-American characters in children’s literature. This scarcity, Larrick contended, could lead African-American children to believe they are unimportant, while it could lead Caucasian children to believe (falsely) in their superiority over other racial groups. “There seems little chance of developing the humility so urgently needed for world cooperation, instead of world conflict, as long as our children are brought up on gentle doses of racism in their books” (Larrick, 1965, p. 63). Since the publication of Larrick’s article, other scholars have examined depictions of race as well as gender in children’s literature.

However, few researchers have examined depictions of social class in books for children. Just as children need to see positive portrayals of racial and gender groups in books, they also deserve to see socioeconomic diversity as well as positive images of different class groups. Further, young people in the United States belong to a wide range of class groups, and Dutro (2010) contended that young readers ought to be able to see positive images of people like themselves in children's literature. Unless social class is studied in children's literature, it is unclear 1) whether socioeconomic diversity is present in children's literature and 2) how members of different class groups are portrayed in books for children.

To date, there have been few studies about social class portrayals in children's literature. Sano (2009) found that in schools, English Language Learners are often shown books with characters who are first generation Americans and members of the working class; meanwhile, children who are exposed to Caldecott books are more likely to see books with middle class characters. Glenn (2008) found negative stereotypes about both wealthy and lower class characters in three popular young adult novels, while Forest, Garrison, and Kimmel (in press) explored how class was depicted in award-winning international literature. Kelley, Rosenberger, and Botelho (2005) investigated themes about poverty in realistic fiction books; one of these themes was invisibility, which indicates it is "shameful" to be poor (p. 29). Although these studies make valuable contributions to the field of literature, none of these examine class in Newbery titles. Books receiving the Newbery have a major impact on children's book sales and the types of books that are selected for publication (Horning, 2010). The Newbery is an important and influential award in children's literature (Kidd, 2007), and Newbery books merit examination.

In this study, the researcher is quantitatively analyzing portrayals of social class in Newbery Medal and Honor books receiving the award between 2004 and 2013. This time period was selected not only because it represents the 10 most recent years of Newbery winners, but because this period encompassed a variety of class-related issues in the United States, such as the Great Recession and the Occupy Wall Street movement. It was hypothesized that books published during this period might yield a wealth of information about social class and the messages about class that are conveyed to children through literature.

The study is guided by the following questions:

1. In what ways is social class portrayed in titles receiving the Newbery Medal or Honor between 2004 and 2013?
   a. How are characters from different class groups portrayed?
   b. What messages about social class are conveyed in the books?

The questions above are being explored through qualitative content analysis. The analysis is two-fold: first, data is being analyzed for the presence of 18 class "frames," or portrayals, identified by Kendall (2011), who examined class depictions n mass media. Second, data that does not fit a class frame is being analyzed inductively in order to determine new frames for depicting social class groups.

As of this writing, data has been collected for the 22 Newbery books receiving the Medal or Honor between 2009 and 2013. Thus far, the presence of several class frames has been observed in the titles, such as “exceptionalism framing,” which is similar to a “rags-to-riches” theme, as well as “caricature framing,” which portrays the working class as trashy or slovenly (Kendall, 2011). The researcher anticipates collecting data for the 2004-2008 Newbery books in January of 2014 and analyzing the results more fully in the coming months.

(References provided on request.)

Matthew Griffin, University of Alabama

Primary Care Physicians' Use of Digital Video within Patient Care

Background:

A research study was started as collaboration between the School of Library and Information Studies (SLIS) and the Autism Spectrum Disorders (ASD) Clinic at the University of Alabama (UA). Researchers implemented a web-based video digital library, enabling primary care physicians to both contribute video recordings of structured play sessions (i.e. “video play sample”) and receive video-based feedback in return, after standardized assessments are performed by autism experts at the UA ASD Clinic. After such clinical assessments, time stamp information is used as indicated by the autism experts, to segment the full video play samples into shorter clips, which can demonstrate or show certain behaviors that can be significant and usable throughout the identification protocol. The overarching motivation for this larger study is to examine how the autism assessment and identification processes involving both primary care physicians and autism experts can be enhanced in terms of being more efficient and effective. Presently, researchers on this project have preliminary questions about the application and use of video information for clinical tasks and activities in family practices, generally speaking. This question is examined in this works in progress poster.

Research Question:

To what extent do primary care physicians’ use video as an information resource in the context of patient care?

Methodology:

Primary care physicians are being actively recruited, through multiple statewide family medicine associations, to participate in an online survey. Demographic data of the participating physicians are being collected, including the location of their primary medical practice, years of experience in family medicine, and basic information technology use and skill level. The level of video use among the participating physicians, excluding telemedicine, but including different formats and sources, like YouTube, other digital video or libraries, DVDs, and/or VHS, is currently being collected. In addition, the perceived usefulness of such different types of video is being garnered on a five-point scale. Open-ended responses regarding their perceptions of using video in the context of patient care are also being collected. Basic descriptive statistical results of the survey will be presented, along with a series of comparisons drawn between the use or application of video by primary care physicians (in the context of patient care) and the various demographic data points being collected. Future research stemming from this work-in-progress study will ultimately examine the practicality of using clinical video digital libraries to support decision-making in the context of patient care and to design and evaluate designs of user interfaces that enable physicians to use video efficiently and effectively.

Preliminary Results:

Data is continuing to be accepted from participants. That being the case data presented here may change. As of December 5, 2013 there is a clear division of video for patient care. One such division among the use of video is according to age; physicians surveyed under the age of 40 uses video resources, of those YouTube was used the most, while other physicians do not. Further data suggests that even those physicians who do not directly use video for clinical tasks express its potential as a valuable information resource. These preliminary findings demonstrate that the application of video by physicians for patient care will likely grow in the future. And will motivate future research of delivery mechanisms and interfaces for clinical collections.

Matthew Griffis, University of Southern Mississippi

The Virtual Library as Place: An Exploratory Study

The literature about virtual libraries and library websites is vast. Studies of the prevalence of Web 2.0 applications in library websites (for example, Chua & Goh, 2010) are typical, and tell us how different applications are being "used complimentarily to increase the level of user engagement" (p. 203) at these sites. Other studies focus on group-specific site content and the decision-making process behind site design (Hughes-Hassell & Miller, 2003; Kanazawa, Maruyama & Motoki, 2011). Still other studies focus specifically on "web presence" and design quality (Menemy, 2007). However, no research has yet compared the nature of "place" between the physical and online versions of public libraries.

This poster reports on a two-year exploratory study that examines the ways in which the physical and virtual library realms compare, to what extent they interact, and how they might potentially enhance each other. More specifically, the study seeks to establish to what extent, if any, public library websites can create a sense of place (Hubbard, Kitchin & Valentine, 2004) or community (McMillan & Chavis, 1986) among their users. Data collection has been divided into two phases, the first of which included a survey and descriptive analysis of 30 public library websites to determine what online features, services, resources and programs are most typically offered to online library users. The survey (recently completed) determined that, while each of these sites contained much of what library websites have always contained (namely, descriptive information about in-person library services and programs, library policies, street addresses and general contact information), most of the websites offered features and resources that allowed library card holders to use (and participate in) "the library" without having to visit a library building in-person. Thus, it is believed, these websites have the potential to create a sense of place or a sense of community among their users.

The second phase of data collection, scheduled to begin in the fall of 2014, will entail completing research interviews with library users at 3-4 selected public libraries. These interviews are intended to shed light on how the user experience in the physical and virtual environments compare. The information collected during this second phase will answer more specific research questions such as whether users prefer different services or resources in one environment over the other; the extent to which the in-person/online relationship dictates what services can be offered; and what services or kinds of resources are enhanced, if at all, by a combination of the two experiences. Ultimately the study's findings will attempt to determine to what extent even the virtual library can create among users a sense of place or community.

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Katie Hassman, Syracuse University

What Does It Mean to Be Open? Characteristics of Open Educational Resource Access & Use

This poster explores conceptualizations of open educational resources (OERs) and presents results from a landscape survey of OER technologies. Drawing on the findings, an extended OER model is described that incorporates characteristics of access and use. A list of research questions is presented to guide future inquiry on the topic.

Materu (2004) has called our current decade the open, or the'o-decade,' characterized by the growing prevalence and increasing innovation of new forms of open resources and technologies. Open educational resources (OERs for short) are one example of these new forms. While the recent proliferation of OERs suggests increased opportunities for flexible learning in both formal and informal settings, access and participation cannot be taken for granted. Indeed in many cases these new forms of technology may even set up new requirements for participation that need to be addressed. While research has developed conceptual models (e.g., CERI, 2007; Mulder & Janssen, 2013; Tuomi, 2006) capable of accommodating the complexity and diversity of OERs, existing models tend to focus on technical and social aspects of design and development, overlooking issues of how OERs are accessed by learners and then put to use.

Research presented in this poster explores characteristics of OER access and use based on an analysis of the social and technical affordances of a landscape sample of OERs. The landscape sample was drawn from existing lists of OERs created by organizations, individuals, and crowdsourced on sites like Reddit. An additional search was conducted to ensure saturation. Using extant lists of OERs allows a selection of projects considered to be OERs by third parties. The definition of OER employed for sampling is a project or website that provides freely accessible resources designed and marketed explicitly for learning that can be shared, modified, or altered. A total of 88 OER websites were reviewed for this project. The landscape sample was drawn to represent diversity and the projects chosen represent a broad range of OER types. Each OER website was analyzed according to approximately 40 facets drawn from existing models of online learning, previously conducted case studies of OERs (Creative Commons, "OER Case Studies"), and developed inductively throughout the review and analysis. These facets include: institutional relations, genre, curriculum, media types, participant role, degree of choice, and others. Publically available digital traces of use in the form of online discussions hosted within the studied OERs were also analyzed to identify characteristics and themes in learner needs and experiences.

Preliminary findings identify broad categories of OERs that may be valuable in future analyses of OER projects. Findings indicate that many OERs offer flexibility for independent learners. However, in order to access and use OERs, learners often have to take on new roles of organizing, assessing, and moderating their own learning. The presence of multiple licensing types and multimedia in much of the analyzed corpus suggest a need to understand the information and digital literacy skills that support successful use of OERs. These and other findings led to the development of an extended conceptual model of OERs that includes components related to information literacy and information behavior. Overall, findings suggest the need to better understand OER access and use from the perspective of the learner, and that librarians and Library and Information Science researchers may provide valuable insight into the study and the future design of OERs.

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Lisa Hussey, Simmons College

Digging Deeper into Diversity: White Privilege and LIS

Diversity is a term that is both important and often misunderstood. Yet, despite this very nebulous understanding, it has been a continuous focus in the LIS professions, particularly in regards to recruitment and retention initiatives. According to the latest Bureau of Labor Statistics (BLS) data, librarians are predominately Caucasian, with just over 16% of professionals identifying as African American, Asian American, or Hispanic/Latino (BLS, 2011). Despite many initiatives and programs, there has been no significant change in the demographic breakdown of LIS professionals over the past 10 years (BLS, 2001-2011). Yet, despite any significant degree of success, many of the same ideas are used again and again to try to increase diversity in the LIS professions. However, as is evident in the BLS statistics, this is not enough to diversify the profession to better reflect the communities they serve, an often-stated goal in diversity initiatives. These initiatives and programs also fall short in their attempt to have the LIS professional body better represent the demographic breakdowns of the larger overall population. As a profession, we need to consider new ideas.

As a predominately Caucasian profession, the role of White Culture should be considered in this analysis. For this research, White Culture is defined as the behaviors and beliefs that are the basis of the prevailing cultural hegemony in the United States. Although Caucasians identify from a variety of backgrounds, such as various Western European countries, they often share similar world views and values, such as a strong focus on individualism, which is often in contrast to the importance of community and family stressed in other cultures. As the ethnic group that makes up the majority of the professional body in LIS, the decision makers, the experiences, views, and attitudes of individuals and groups from White Culture are strongly influential in decision making regarding both the profession as a whole and in the establishment and delivery of programs, such as diversity initiatives. Hence, this research begins by considering the possible influence of White Culture and what does it mean in regards to how LIS is both presented and understood?

While there is plenty literature in LIS considering at the issues surrounding diversity in the profession, we tend to focus on topics like financial aid and recruitment, but within the LIS literature, authors rarely address more complicated and uncomfortable topics, such as race relations, the basis of accepted cultural LIS norms, and the power and influence of the prevailing cultural hegemony in libraries and LIS education. By not including these topics in the discussion of diversity, we are only considering part of the issues and barriers to true diversity. In order to fully address the continuing challenges of diversifying LIS, I believe we need to conduct in depth analysis of attitudes, expectations, and presentation of information centers, information professionals, and LIS education. Part of this involves considering the outlook and assumptions of the majority, as they are the ones who most strongly influence the profession. As the majority primarily consists of White, middle class individual, their outlook and culture must also be considered.

With the goal of new ideas, the research intends to question and analyze some of the underlying assumptions and ideas that influence and shape the understanding and presentation of LIS as a profession and as an institution. Considering what influences and how LIS institutions and organizations are presented is important for two reasons. First, LIS is a service focused profession, one in which the goal is to serve users and communities. How the profession and the institutions are presented has an influence on how they are perceived by different groups and communities, which then influences the acceptance and use of LIS services and organizations. Second, as we question the barriers to improved diversity, part of the discussion should consider how the profession is presented and perceived by those whom we hope to recruit and retain as LIS professionals.

Ronald C. Jantz, Rutgers University

The Determinants of Organizational Innovation in Research Libraries: Implications for an Innovative Culture

The research reported in this poster session is focused on a specific type of change in an organization – an innovation. In an empirical analysis of research libraries, it was found that five factors had a significant impact on the innovation performance of the library. In this poster session, the theoretical model, empirical results and implications for library leadership and the culture of the library will be discussed.

Our society is complex with challenges emanating from many different dimensions – social, economical, political, and technological. Organizations change in different ways in response to these forces, however the rate of change and the resulting success can vary significantly. Many library leaders have stated that it is essential for libraries to make major changes in order to meet the information and research requirements of the modern 21st century university (Jantz, 2012). Some 50 years ago, Jesse Shera (1966, p. 95), a preeminent library scholar, understood the cultural challenge and suggested a librarian mindset for creating a more innovative library: “In a world of mingled menace and promise, the winds of change blow as surely through the library stacks as they do through the corridors of the United Nations . . . . The librarian, therefore, must be both critic and architect – destroyer of that which is obsolete and builder of his own future”. Shera’s admonition suggests that architects of great skill will be needed to address the information structure of the future.

The focus in this reported research is on those nonprofit organizations that have an institutional and professional framework, and more specifically, the university research library. The study sample consisted of 50 libraries that are members of the Association of Research Libraries. In this study, it is assumed that innovativeness is a desirable trait for social organizations. Innovation is about change in complex organizations, but what kind of change is needed in the library and what are the factors that bring about change? Researchers have highlighted the forces that act against major change in an institution (DiMaggio & Powell, 1983). Bureaucratic organizations and the deleterious effects of well-established norms and traditions can work to resist innovation.

The most important innovation characteristic for this study deals with the extent of change which varies along a continuum from incremental to radical. Radical innovations involve new knowledge that is used to create totally new products and services or to make fundamental changes in an existing product or service. In contrast, an incremental innovation uses existing knowledge to create minor improvements in an existing product or service. For the research library and similar non-profit institutions, innovations are primarily of two types: administrative and technical. Given this basic typology, innovation can be defined as the introduction into the organization of a technical innovation (a new product, a new service, a new technology) or a new administrative practice; or a significant improvement to an existing product, service, technology, or administrative practice (Damanpour & Gopalakrishnan, 1998).

In the author's innovation study, leaders responded to survey questions related to library innovations, organizational structure, the external environment, leadership, and demographics. From these responses, 17 potential independent variables were created that might have an impact on innovation in the research library. A unique dependent variable, innovation performance, was created for the regression analysis. The resulting analysis demonstrated that five variables had a significant impact on the innovation performance of the research library and accounted for 49% of the variation in innovation performance.

The five variables relate to the strategy, organizational structure, and leadership of the research library. This poster will explain the effects of these five variables, highlight certain additional correlations that are meaningful, and demonstrate how these results relate to the culture of the library (Martins & Terblanche, 2003) and opportunities for library leadership. Becoming more innovative results in conflicts and inconsistent organizational structures, what researchers (Smith & Tushman, 2005; Tushman & O'Reilly, 1997) have identified as an organizational paradox. The locus of this paradox resides with the leadership team. In order to become more innovative, library leaders will need to acknowledge this paradox, articulate its relevance, and promulgate a vision throughout the organization that will enable the creation of new services for the 21st century information society.

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Melissa P. Johnston, University of Alabama

Innovative Partnerships: Exploring School Librarianship through a Global Lens

The need to equip today's youth with complex 21st century information literacy and knowledge construction skills has served as a catalyst for evolvement and change in the traditional practices of school librarians all over the world. It is this necessary change that led the researchers to question school library practices at an international level, exploring school librarianship as an entrepreneurial partnership through a global lens. Creating innovative research partnerships with school librarians in other countries provides a space for inquiry that can foster connections, collaboration and new knowledge; contributing to school library pedagogy and the preparation of future school librarians the world over.

Asking "what are the similarities in the experiences and practices of school librarians across international boundaries in efforts to meet the needs of 21st century learners?" guided the researchers to Institutional Ethnography (IE), a methodology for explaining and gaining insight into the actualities of professional work lives. IE focuses on the day-to-day work life of individuals, describing how they choose to interact with and within their institutions, while examining the ruling relations that impact the institution (Campbell & Gregor, 2004; Leckie, Given, & Lushman, 2010). This poster presents preliminary findings from an IE study on school librarianship, conducted in the summer of 2013 in Florianópolis, SC Brazil.

IE work-setting research studies are often developed in response to a vague, persistent concern about a situation and the people it affects (Stooke, 2010). There is a sequence of steps to guide the researcher. First, a point of entry for the inquiry is identified, which for this study, was the researchers' previous experiences with informal visits to school libraries in other countries, as well as an invitation to present at the Brazilian Congress of Librarianship, Documentation and Information Science. Next, institutional processes or elements that shape the situation are identified. Finally, processes or elements are investigated in order to objectively describe how these shape the situation being studied (DeVault & McCoy, 2002). In IE, the researcher "inquires, investigates, examines, and observes," but does not impose (Given, 2008, p. 434). Instead he or she develops understandings based on observations and exchanges with those that are directly involved. Therefore, this research began with observing and documenting the practices, or work, of school librarians in Brazil.

During the summer of 2013 the researchers spent one week in Florianópolis, SC Brazil, attending the BCLDIS and conducting school site visits. First, at the conference, the researchers recorded numerous presentations delivered by practicing Brazilian school librarians. Afterwards, the researchers conducted informal semi-structured interviews with the presenters in order to clarify and gain further understanding of the action research presented. This allowed for forging partnerships with practicing school librarians as well as school library educators. Second, site visits were conducted at purposively selected schools, locations that offered the most learning opportunities for intense study due to their accessibility (Denzin & Lincoln, 2008).

Utilizing an observation questionnaire, researchers recorded data on various practices, types of school library activities, and the roles of teachers and school librarians. Additionally, informal semi-structured interviews were conducted with school librarians at each site; which allowed interviewees to member-check any of the information recorded, clarifying possible misinterpretations from translation (Lincoln & Guba, 1985). All data collected was transcribed and entered into a spreadsheet for translation and coding. The researchers utilized inductive qualitative content analysis to analyze interview transcripts, notes from presentations, and the observation questionnaires, culling emerging themes from the data (Glaser, 1965; Zhang & Wildemuth, 2009).

Institutional ethnography, while rarely utilized in LIS research, provides a way to connect issues across multiple sites, uncovering how institutional factors can shape practice in sometimes unrecognized ways, while provide information to foster change at the local level. Ingrid Parent, President of IFLA recently stated, "We must think globally, act nationally, and deliver locally." As school librarians around the world struggle with strikingly similar challenges, it is important to examine the work of school librarians through a global lens. This worldwide perspective allows us to form entrepreneurial partnerships that allow school librarians and school library educators to investigate institutional factors that shape the experiences and practices of school librarians, providing opportunities to learn from, share expertise with, and support one another, thus strengthening the practice of school librarianship throughout the world.

Kyle Jones, University of Wisconsin-Madison

What's the Place of Privacy in Learning Analytics?

Higher education has recently expanded by offering distance education opportunities buoyed by emerging technologies and new instructional practices. Integral to such programs are learning management systems (LMSs), which provide the primary instructional environment. Moreover, traditional face-to-face education has adopted such systems to augment instruction. As of late, LMS vendors have developed advanced analytic capacity–commonly called "learning analytics"–that build on their vast stores of student information to track, analyze, and predict student behaviors.

Due to serious questions learnings analytics raises about student privacy, we argue that there are deep, and largely unexplored, moral issues surrounding the technology and its associated practices, and we advance a framework to analyze and evaluate adoption, extension, and its use. We first examine the relationship of LMSs to campus technological infrastructures and explore how other data sources may be incorporated into learning analytics systems. After reviewing the literature discussing some of the outstanding privacy concerns related to learning analytics, we outline several significant privacy issues surrounding student data, each requiring analysis of justifications for privacy protections and for education generally. Based on these questions, we begin to build a framework for analyzing privacy and learning analytics.

Learning analytics is defined as "the use of analytic techniques to help target instructional, curricular, and support resources to support the achievement of specific learning goals." Learning analytics targets the behavioral data (the "digital breadcrumbs") that students leave as they move throughout the LMS. Proponents argue that learning analytics leads to better assessments of learners, their practices, and their environments. Based on such assessment, learning analytics can both provide intervention strategies (e.g., send an automated message to a student who has not logged in recently) and predict future performance (e.g., predict a particular student's success or failure based on her online behavior).

While learning analytics proponents continue to push forward with the development of the technology, little work has been done to provide guidance in addressing the outstanding privacy problems, issues that are naturally intertwined with digital tracking and personally identifiable data mining practices in higher education. A significant amount of the learning analytics literature treats the privacy problems without intellectual depth. Nonetheless, we have found the literature revealing of privacy concerns facing learning analytics practitioners and institutional actors. Specifically, some consider student privacy to be a minimal issue; others think that institutions have an obligation to use the data if it is available, regardless of the privacy issues; some proponents argue that data governance and transparency will resolve the privacy issues, but this is a fallacy; while others consider the Orwellian characteristic of learning analytics to be inevitable and a non-issue; and, finally, a small segment of the literature recognizes and addresses the student autonomy issues that we find most troubling.

We offer several criteria for assessing learning analytics: Use of information should be strictly delineated between instructional use and research use, such that appropriate sets of institutional actors are precluded from having certain types of information about students; use of information that is simply convenient to access or interesting to add to learning analytics algorithms is not a justifiable argument–it must be tied directly to empirical evidence that demonstrates its efficacy in explaining or measuring learning outcomes; and use of information for learning analytics must be designed to be autonomy-promoting first and outcome-oriented second.

Ji Hei Kang, Florida State University

Identification of School Librarians' Stages of Concern in an Impending Statewide Implementation of Digital Textbooks

INTRODUCTION

Comprehensive adoption of digital textbooks will rapidly take place in Florida in 2015 (Mardis, Everhart, Smith, Newsum & Baker, 2010). School librarians, who are resource and instructional specialists and will serve on the front line of this implementation, could potentially play a part in this transition.

This poster presents a study designed to understand the variety of concerns that school librarians in Florida regarding this impending technology, and to explore their initial stages of concern, posing two research questions:

RQ1: What specific concerns do Florida school librarians have regarding the implementation of digital textbooks?

RQ2: What stages of concern apply to Florida school librarians regarding the implementation of digital textbooks?

THEORETICAL FRAMEWORK: STAGES OF CONCERN

Based on the importance of an individual’s adoption pattern, the Concerns-Based Adoption Model (CBAM) provides both a theoretical framework and methodology to identify an individual educator’s concerns when implementing innovative technologies. The Stages of Concern (SoC) provide seven structures ranging from little concern or involvement with the innovation (Stage 0, Awareness) to focusing on pursuing more benefits of the innovation (Stage 6, Refocusing).

METHODOLOGY

In Phase 1, a survey was conducted of 166 Florida school librarians that included an open-ended question, “What concerns do you have with the Florida law that is requiring all students to be using digital textbooks by 2015?” forming the basis of this poster.
To address the first research question, an inductive approach was applied, adopting the open-coding method. Through discussion with two coders, axial coding was conducted by grouping categories and developing code books. One researcher coded data twice, at three-month intervals, making judgments based on substantive criteria. To answer research question 2, the Stages of Concern served as a theoretical framework.

RESULTS

The 166 respondents generated 302 types and 188 stages of concerns. Table 1 presents the types of concerns. The highest percentage of respondents (n=62, 20.5%) had concerns about expenses related to the implementation of digital textbooks. Also, concerns related to Internet access (n=29, 9.6%) and devices, e-readers and tablets (n=27, 8.9%) were ranked high. Concerns regarding hardware and administrative support/staffing (n=24, 7.9%) were fourth.

As Table 2 demonstrates, 105 responses (55.9%) were included in Stage 1. The second most frequent stage was Stage 4 (n=60, 31.9%). Stages 3 and 0 had marginal frequencies; n=10 and 9, respectively.

Statistically, the number of years that they had worked (X2 (5) = 14.68, p< .01) affected the stages. At Stage 4, the group with less work experience (n=39) had significantly more responses than the group with longer work experience (n=21), where more experienced school librarians showed more concerns at Stage 0.

CONCLUSION/IMPLICATIONS

As an initial study, this project identified the various types and levels of concerns that school librarians regarding the implementation of digital textbooks. School librarians' greatest concerns focused on budgeting (20.5%), infrastructure issues and support (7.9%), rather than on learners' or educators' abilities or pedagogical issues. In addition, the stages of concern highlighted school librarians' information needs and concerns about leading teachers in the implementation of digital textbooks. Diverse methods such as professional seminars, including webinars, workshops, and conferences are required to share information about digital textbooks. (Hord, Rutherford, Huling & Hall, 2006). The statistical results suggest that customized training and education programs are required.

In Phase 2, a comparison study between Florida and other states and Korea will be conducted. Also, chronological research will determine patterns, showing how librarians adapt to innovative technologies.

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Hyunseung Koh, Indiana University Bloomington

Challenges and Lessons Learned from a Mixed Method Study

The rate of acceptance of ebooks is growing rapidly (Milliot, 2008; Ramaiah, 2005). Yet studies show that for intensive or active reading people still prefer to read on paper and employ skimming strategies when reading from the computer screen (Hillesund, 2010; Liu, 2005). These studies imply that currently available ebooks do not fully support the needs of people who want to use ebooks for active reading.

In order to find out how to improve existing ebooks or create new forms of ebooks that best serve active reading, a study is designed that helps investigate behavioral (e.g., moving one page to another) and non-behavioral (e.g., notes in page margins) aspects of reader-text interaction, utilizing the three approaches of reader-response theory (i.e., subjective criticism, phenomenology, and constructivism), a key reading theory that helps understand active reading.

Taking a naturalistic inquiry (constructivism) approach and utilizing mixed-methods, the study consists of five phases that are designed to collect a wide range of quantitative and qualitative data about reader-text interaction. A quantitative survey in the first phase is used to identify a purposive sample(s) or meaningful target group(s) to be investigated in-depth in subsequent phases, using qualitative methods including annotation analysis, the first and the second follow-up interviews, and video observation using a teleconferencing technology.

Along with a holistic picture of the research design, this poster will present philosophical, theoretical, methodological, and technical challenges and lessons the author learned throughout all five phases of the mixed methods (i.e., online survey, annotation analysis, interviews, and video observation using a teleconferencing technology). A philosophical challenge was whether or not to use one overarching philosophical worldview (naturalistic inquiry), regardless of methodological orientations (quantitative vs. qualitative). What I obtained as one lesson was that this approach could allow the researcher to obtain diverse insights from in-between approaches on a continuum with strictly quantitative and strictly qualitative approaches at opposite poles. A theoretical challenge was to decide whether or not to adopt one theory (reader-response theory) from one particular discipline and utilize it in an interdisciplinary discipline context (HCI design). If yes, what would be the best way(s) to utilize it? This study utilized reader-response theory adopting the three higher levels of categories (or three groups of critics), an approach which I believed could lead directly to applicable insights and explicitly into tangible design. A methodological challenge was to determine what it means to begin with quantitative research (survey) and move onto qualitative research based on outcomes of the quantitative research and whether or not there would be one right way or more appropriate ways to use multiple methods and in what order. What I learned from my own experience was that the approach I took would allow the researcher to see a big picture of the up-to-date real world, which is otherwise not possible with currently available but necessarily dated literature, and identify a starting point for the research. Last, a technical challenge was to decide whether or not naturalistic lab-based observation using teleconferencing technology was consistent with the philosophical foundation of naturalistic inquiry. I believe that this approach could be one alternative way to collect naturalistic data under the circumstances in which the installation of complex technologies in natural settings (individuals' homes or offices) is not feasible.

Don Latham, Florida State University

Enhancing 21st Century Skills Development in High School Math and Science Students: Investigating Collaborative Practices among Teachers and Librarians

This pilot project examines the attitudes, practices, and barriers associated with collaboration among high school librarians and math and science teachers to enhance 21st Century Skill development in students. The findings are based on data collected through interviews with librarians and math and science teachers at two different high schools.

Increasing emphasis is being placed on preparing students for STEM careers and also helping them develop “21st Century Skills” (http://www.p21.org). One way to achieve both objectives is through high school math and science teachers collaborating with librarians. Yet such collaboration is not consistently taking place. This pilot project examines the attitudes, practices, and barriers associated with collaboration among high school librarians and math and science teachers. The data to be presented was collected through semi-structured interviews conducted with librarians, math teachers, and science teachers at two different high schools. Data was analyzed using a grounded theory approach and the constant comparative method.

This poster will summarize the preliminary findings in relation to the research questions posed:

(1) What attitudes do high school librarians and math and science teachers express toward the role of teacher-librarian collaboration in math and science education?
(2) What attitudes do high school librarians and math and science teachers express toward the role of 21st Century Skills in math and science education?
(3) What are the current practices of high school librarians and math and science teachers in relation to teacher-librarian collaboration in math and science education?
(4) What are the current practices of high school librarians and math and science teachers in relation to incorporating instruction in 21st Century Skills in math and science education?

(5) What barriers to teacher-librarian collaboration do high school librarians and math and science teachers encounter?
(6) What barriers to 21st Century Skills instruction do high school librarians and math and science teachers encounter?

Preliminary findings indicate the following: Attitudes [RQ 1 & 2]: Science teachers are more open to collaborating with librarians than are math teachers. (Math teachers are not sure how librarians can help them.) Teachers report that their collaboration experiences, though limited, have been "positive" to "very positive. Science and math teachers and librarians report that more collaboration occurs between English teachers and librarians. Current Practices [RQ 3 & 4]: A key role of the librarian is procuring resources for teachers and students. In addition, the librarian provides technology access and training. Sometimes, the librarian assists with developing assignments. There is not a lot of collaboration between the librarian and math and science teachers related to 21st Century Skills instruction. Overall, there is very little collaboration between librarians and math teachers. Barriers [RQ 5 & 6]: The major barriers to collaboration include time, scheduling, standardized testing, lack of awareness on the part of teachers, the fact that new teachers are overwhelmed, and not enough in-service time.

Future research, funded through an IMLS National Leadership Planning Grant, will gather additional data through focus groups with school librarians, public librarians, science teachers, and math teachers at four national conferences, and will identify potential partners for an IMLS National Leadership Research Grant proposal.

Dong Joon Lee, Florida State University

Data Activities and Identifier Schemas

Introduction:

The need for greater access and sharing of research data to increase the impact, efficiency and effectiveness of scientific activities and funding has been emphasized by the government and various funding agencies (NSF, 2010). The greater access to researcher data, however, is enabled not just by appropriate data policies but also with the deployment of effective infrastructure mechanisms, including augmenting data with effective metadata (Simmhan, Plale, & Gannon, 2005). Identifiers are important metadata that traditionally have been used for entity identification, linking and referencing in various domains (Altman & King, 2007). This poster reports identifier system use with research data. To enable effective metadata creation support for research data, it is essential to gain better understanding of the current uses of identifiers with research data and the needs for identifier system functionalities.

The scope of the poster is restricted to the following research questions:
- What are the activity types which use data identifiers?
- What are some of the identifiers currently used for each activity?

The study identified four types of activities that use data identifiers: identification, citation, linking and annotation of research data. The poster will discuss characteristics and uses of fourteen data identifiers (i.e., ARK, DOI, Handle system, PURL, URI, UUID, NCBI Accession Number, CAS Registry Number, LSID, ISNI, ORCID, ResearcherID, OpenID, and GeoNameID) with these four data activities as suggested by the literature and identify directions for the future research.

Identification:

Identification task can be defined as “confirming that the entity described corresponds to the entity sought [by the user], or distinguishing between two or more entities with similar characteristics” (IFLA, 2009). The identification activity is conducted by utilizing identity metadata elements, most importantly identifiers (NISO, 2013).

Citation:

The main goal of data citation is to build the connection between an identifier and its associated data object at any time in the future (Duerr et al., 2011), and the minimum component of the connection is a persistent identifier (Altman & King, 2007). Many institutional data repositories assign identifiers to data objects to connect them to various types of entities (Lee & Stvilia, 2012).

Linking:

The activity of linking can be defined as a connection between data that was not previously linked, or the connection of data lowering the barriers to linking data currently linked using other methods (Heath, n.d.). Data is serialized and published on the Web using the Resource Description Framework (RDF) based format, which potentially allows to connect the data with other related datasets at a low cost.

Annotation:

Annotation is a process of adding notes on or commentary to informational sources. Annotations may enhance the value of data by connecting or supplementing it with relevant descriptions, explanations and interpretations (Abbott, 2008). The amount of annotation and integration of research data with relevant scholarly works tend increases with the increase of data-driven research in scientific disciplines (Wu, Stvilia, & Lee, 2012).

Next Steps:

This study examined the use of identifier systems in four data activities as reported in the literature. The next steps of this research will include collection of empirical data by surveying and interviewing scientists and data curators to identify activity specific requirements for an identifier system for research data in different domains.

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Chris Leeder, University of Michigan

Metacognition and Online Information Literacy: A Novel Pedagogical Approach

This research investigates the use of scaffolded metacognitive supports for Information Literacy (IL) instruction. An online credibility evaluation learning tool was built which incorporates metacognitive strategies for students to monitor, plan, and reflect on their learning of IL skills, and incorporates learning into the online information environment where students do their research. An experimental study was conducted to test the tool's effectiveness.

Information literacy is inherently metacognitive in that it encourages individuals to become aware of their search and evaluation skills and apply them to specific information needs (Booth, 2011). IL can be seen as a metacognitive device for students to better manage the learning process (MSCHE, 2003). Instruction in IL skills should not only equip students with guidelines to help them assess the credibility of websites, but should also encourage reflection on the process of evaluation (Madden et al., 2011). Support for metacognition is rarely studied in IL research (Gorrell et al., 2009).

The online credibility evaluation learning tool called "InCredibility" incorporates scaffolding and metacognitive supports to help students reflect on their learning of IL skills. Using the tool, students practice evaluating online information sources by applying specific credibility and relevance criteria, reviewing the evaluations of other students, and comparing the relative merits of multiple evaluated sources.

This research present a novel pedagogical approach to teaching online Information Literacy (IL). While research has documented the benefits of IL training in preparing students for future success (Daugherty & Russo, 2011; Wang, 2006), research also demonstrates the lack of IL skills in today's students (Gross & Latham, 2007; Julien & Barker, 2009), their preference for online information sources (Herring, 2011; Kolowich, 2011), and the deficiencies of the traditional one-shot IL instruction format (Owusu-Ansah 2004; Weiner 2012). Given these challenges, a new pedagogical approach to IL instruction is needed. This research investigates the effectiveness of a custom-built IL learning tool that integrates IL instruction into the online information environment where students do their research, incorporating it into relevant class coursework, and utilizing interactivity and participatory learning.

This research also investigates the relationship between IL skills and metacognitive awareness. Metacognition refers to the processes of monitoring, controlling and regulating one's own learning (Pintrich et al., 2000). In essence, metacognition is thinking about thinking – understanding one's own thought process and their understanding of the task (Flavell, 1979). Higher levels of metacognitive ability facilitate the transfer of acquired knowledge and skills to new learning tasks and problems (De Corte, 1996). Good learners are also highly aware of their own thinking and memory and use that information to regulate their learning (Bruning, et al., 2004). Thus, students who are learning unfamiliar content should be significantly helped by developing metacognitive skills, which can compensate for low domain knowledge and limited strategy repertoire (Bruning, et al., 2004). Acquiring these skills is an important objective of education and a hallmark of effective learning (Kaufman, 2004; Scardamalia et al., 1989). However, studies show that students often lack the ability or awareness to monitor and regulate their cognitive processes while engaged in problem solving (Artz & Armour-Thomas, 1992). Since students do not spontaneously engage in metacognitive thinking unless they are specifically encouraged to do so, it is important to include metacognitive support in online learning environments (Lin, 2001).

Information literacy is inherently metacognitive in that it encourages individuals to become aware of their search and evaluation skills and apply them to specific information needs (Booth, 2011). The Information Literacy Competency Standards for Higher Education aim to support students in building a "metacognitive approach to learning" through gaining control over their interactions with information and through making explicit the criteria for gathering, analyzing, and using information (ACRL, 2000, p. 6). The Middle States Commission on Higher Education in their Guidelines for Information Literacy in the Curriculum echo the ACRL, stating that "one of the highest and best uses of information literacy is as a metacognitive device for students to better manage the learning process" (MSCHE, 2003). Instruction in IL skills should not only equip students with guidelines to help them assess the credibility of websites, but should also encourage them to reflect on the process of evaluation (Madden et al., 2011).

While metacognition is frequently studied in education research, it is infrequently studied in IL research (Gorrell et al., 2009). This research investigates the application of scaffolded metacognitive support to IL instruction in the evaluation of online information sources. This paper presents the results of a metacognition test on subjects who have taken an online IL tutorial, which is the first element of the custom learning tool. The IL tutorial covers the specific evidence that students should investigate about online information sources (a webpage's authors, main ideas, domain name, About statement) when making judgments about credibility criteria (authority, relevance, reliability, currency, and purpose). The metacognition test developed by Raes et al. (2012) measures how students use metacognitive strategies when searching for information online, and has been experimentally validated. Results of the test showed that students have very low awareness of metacognitive strategies for evaluating online information, and suggest that metacognitive support for IL instruction is needed.

Elise Lewis, University of South Carolina

Incorporating Service-Learning Projects into LIS Curricula: Lessons Learned and Successes of Community Collaborations

Service-learning (SL) projects encourage student engagement in their community and provide practical, hands-on experience. Discussing SL projects may help educators create best practices for a variety of learning environments. This poster highlights the successes and challenges of 3 diverse SL project taught in the LIS curricula.

Alaine Martaus, University of Illinois at Urbana-Champaign

Nerdfighteria's Literary Salon: Understanding the Social Networks in an Online Community of Readers and Authors

In January 2007, brothers John and Hank Green began a year-long experiment in which they would communicate only through alternating videos posted to their Vlogbrothers YouTube channel. Their witty, fast-talking video letters gradually collected a significant fan-base, especially amongst teen and young adult self-proclaimed nerds, and eventually spawned a tight-knit community of followers who call themselves Nerdfighters. For those interested in youth culture and online fan communities, the Nerdfighters provide an opportunity to observe a unique kind of active fandom in which adults take on a distinctive role.

As objects of fandom who are also active participants in the fan community, the Vlogbrothers guide its values, covertly cultivating their position as experts and advisers and encouraging their fans to adopt a particular kind of engagement with the larger world. The intention of this research is to explore one aspect of this value system, tracing the rhetoric used by adults associated with the Nerdfighter community to promote reading, critical and imaginative engagement with texts, and a form of multi-literacy that connects new media and books in intriguing new ways. By focusing the social aspect of the reading experience, within the context of social and new media, I hope to trace the development and to analyze the on-going conversation about books and social reading within the Nerdfighter community, exploring the way that it intersects with current theories about the relationship between books and new media. To fully understand the function and development of the conversation itself and the impact of its social media context, it is essential to recognize the networks that connect those participating in it. The Nerdfighter community is a social network with the Vlogbrothers' videos at its center, but John and Hank Green are not its only important voices. Through online and offline connections between authors, artists, and various other content creators, a core group of influential figures becomes discernible. Many of these people are adults like John and Hank Green, but a few significant figures are young adults who started as Nerdfighters themselves and who have over time established their own fandoms and their own sphere of influence. This poster therefore presents a visual representation of the increasingly complex network of inter-referential connections at the core of the Nerdfighter community.

These social media-driven connections result in a kind of online literary salon, in which central voices of the community engage in a conversation about books and reading in full view of, and with the sometime participation of, a predominantly young adult audience. By mapping these relationships across various social and new media environments, including YouTube, Twitter, Tumblr, and individual author blogs, the poster provides insights into a variety of important questions: how online communities of readers and authors are created and maintained, how important voices in the community are established and recognized, and how those voices present a collective ideal about the value of the reading experience. Answers to these questions may in turn provide those interested in the intersection of traditional, new media, and 21st-century literacies with a new lens through which to consider how young people negotiate reading through new media formats in ways that have broader theoretical implications for the study of critical and creative engagement with texts.

Michelle Martin, University of South Carolina

The Science of Reading: Essential to LIS Illiteracy Initiatives and Curricula? Definitely

Literacy and literacy skill development are in a state of crisis. Two of every three students in the United States do not have the necessary reading proficiencies to successfully complete grade-level work (Allington, 2011). Numerous research studies implicate socioeconomic status, race, ethnicity, ability or learning differences, parental and community involvement, summer reading achievement gaps, and summer reading programs, as well as motivation to read and attitudes toward reading, as factors in literacy skill development and overall academic achievement (Alexander, Entwisle, & Olson, 2007; Allington, 2010; Benson and Borman, 2010; Graham, McNamera, & Van Lanveld, 2011; Kim & White, 2011; McKool, 2007; Roberts and Wilson, 2006) . Research also proves that intervention programs (including summer programs) that address student needs for 1. reading instruction and the use of scaffolding in summer reading, 2. availability of reading materials, 3. the ability to read books that are matched to student reading levels and interests, 4. combining activities and singing that help children understand what they are reading about with the act of reading itself, and 5. motivation to read have positive impacts upon literacy skill development and maintenance (Allington & Gabriel, 2011 ; Applegate & Applegate, 2010; Benson & Borman, 2010; Graham, McNamera & Van Lanveld, 2011; McKool, 2007). Librarians and other educators have a common goal of providing learners with the skills necessary for functioning in the 21st Century society. Reports from LIS professionals present evidence of the need to provide librarians with the skills necessary to further support reading instruction for young patrons.

The University of South Carolina's School of Library and Information Science and College of Education and Richland Library in Columbia, SC partnered to offer a Science of Reading Institute. The institute was designed for librarians, parents, reading tutors and teachers wanting to enhance their skills for providing effective reading instruction to child beginning readers. This institute provided instruction and hands-on applications with the nuts and bolts of reading instruction, including phonemic awareness, alphabetic principles, automaticity, vocabulary development, comprehension, print concepts, assessment, and access to print materials. 100% of the participants indicated increased knowledge of implementing literacy activities with young readers and increased understanding of the importance of considering culture and background and the role of illustrations in the teaching of reading, employing interventions for learning differences and disabilities, and attending to the role of family engagement in literacy. Institute outcomes demonstrate effectiveness of initiatives to help librarians further develop early literacy programming skills (including reading instruction). Additional implications include the need for national awareness-building and educational support opportunities for those who desire further professional development for literacy work and further analysis of LIS curricula on a national level to ascertain how, if at all, LIS programs address the science of reading. The Institute served as a pilot for what we hope will become state-wide and national programming for public and school librarians, teachers, tutors, families and others involved in early literacy skill development.

The University of South Carolina's School of Library and Information Science and College of Education and Richland Library are planning a National Forum on eliminating illiteracy among children and young adults for the summer of 2014. The Forum is intended to serve as a call to action for the library and education communities to come together to better meet the needs of 21st Century learners. It will focus on: 1) launching an associated research agenda, 2) assessing community needs and priorities, and 3) making recommendations for future actions informed by best practices for literacy instruction and initiating discussions for developing related instructional materials for public library literacy programming. For the professional community, the potential national impact and intended results include the following: initiating change within LIS education that will better prepare LIS professionals to support the acquisition of early literacy skills of young patrons in libraries; bringing together professionals with expertise in education/literacy, LIS and public libraries to begin to address nationally how all entities can better support early literacy efforts in public libraries; establishing best practices for literacy programming in libraries, informed by experts from disparate academic fields and professions, that would contribute to the development of well-informed and effective literacy curricula and programs for public library; and laying the foundation for ongoing electronically accessible professional development programs for librarians on effective literacy instruction to early learners. The potential impact and intended results for libraries and the communities they serve include the following: increasing librarians' abilities to offer high-quality early learning experiences for young readers; engaging and supporting families as their children's first teachers; supporting the acquisition of "deeper learning" skills through literacy; creating seamless links across early learning and the early grades between libraries, schools, communities and homes; better positioning children for meeting expectations of the Common Core State Standards; and addressing the summer slide.

The results, summarized and synthesized in the publicly available white paper, will include: 1) exploration of possible changes to be made in LIS curricula to address the ability of these individuals to provide effective reading instruction and literacy support to young library patrons, 2) identification of skills that are essential to enhance the ability of librarians to cultivate 21st Century skills in pre-K through 3rd grade library patrons, and 3) delineation of the role libraries and librarians play in literacy as it pertains to reading instruction.

Miriam L. Matteson, Kent State University

21st Century Library Management Education

Effective management has always been – and continues to be – a critical factor in the success of any library. But in the history of library education, more attention has been paid to teaching technical knowledge and skills than to a comprehensive preparation of effective managers. This gap has been filled to some extent through programs and services offered by professional associations. But professional associations often lack the resources needed to create an effective learning opportunity for librarians to develop their managerial knowledge, skills, and abilities.

LIS schools may be better equipped to provide management education, but still face other constraints. Most ALA-accredited LIS programs require a single course on management, but in some schools this requirement can be fulfilled with a course focused on a type of library that may not cover a full range of management topics. Beyond the single course, few schools offer a range of electives in sub-topics of management. Some schools offer a joint MBA-MLIS degree, but anecdotal evidence suggests few students enroll in this degree combination.

Other indirect measures can be assessed to add to the argument for a need for more continuing education in management. The major LIS publishers such as Libraries Unlimited and ALA Editions produce numerous titles on management topics, many of which seem to specifically target post-MLIS librarians who find themselves in a management position and the need to brush up on a particular area.

Given this situation, research is needed to answer the questions: 1) Is the current model of library management education adequate for the new challenges libraries face? 2) What new management education programs could be developed to increase librarians' readiness to manage in the 21st century?

This poster presents two phases of a research project examining the need for continuing education in library management. Phase 1 looked at the perceptions of library directors on the need for continuing education in management for emerging librarians (1-8 years post MLIS).

Phase 2 explores the perceptions of emerging librarians of their own management knowledge, and their preparation for management positions in libraries. Preliminary analysis suggests that both directors and emerging librarians share a perception for the need for continuing education in management, and gave the greatest weight to the areas of leadership, human resources, organizational behavior, and strategy. Their perceptions differ, however, on the level of management knowledge librarians have. Directors reported observing on average lower levels of management knowledge in applicants for management positions than librarians self-assessed their own management knowledge. Initial findings suggest that both groups see a need for management continuing education that extends in breadth and depth the course offerings for the MLIS degree. Further, there is interest in continuing education that contributes to librarians' desire to learn as well as is relevant to librarians' positions in the library. Other characteristics of continuing education in management that emerged were courses that were flexibly scheduled, reasonably priced, and included a mix of knowledge, practice and coaching from mentors in the field.

Subsequent phases of this research will explore different models for developing a formal continuing education program in library management and consider the feasibility of offering such models in LIS schools.

Adriana McCleer, University of Wisconsin-Milwaukee

Converging Knowledge: Networking the Gap between Public Librarians and Researchers

This study investigates responses of Wisconsin public library directors and library system directors to the findings of 2013 Pew Research Center (Pew) reports on Public Libraries, "Library Services in the Digital Age," "Parents, Children, Libraries, and Reading," and "Younger Americans' Library Habits and Expectations." The poster outlines collaborative research between doctoral student researchers at the University of Wisconsin-Milwaukee and public library (PL) directors that is informed by various streams of knowledge. The researchers unite multiple knowledge bases by incorporating elements of collaborative, participatory, embedded, evidence-based, and action research. The study prioritizes the perspective of practicing librarians and focuses on network building as a fundamental strategy for bridging the gap between researchers and practitioners.

The gap between research and practice is an issue troubling various disciplines. Various studies examining the interactions of PL librarians and researchers reveal a communication gap between the two groups, which can be based on motivation or limited time. This emphasizes the need for open dialogue to promote effective communication and problem solving.

This research outlines the various strategies for bridging the communication gap between researchers and PL librarians. The researchers developed a collaborative network, which included practitioner involvement, creation and employment of social capital, and establishment of trust. Embedded practitioner researchers (i.e., researchers who are also library directors) provide insider perspectives, while other researchers contribute an outside perspective to the collaboration. The composite perspectives develop appropriate research methods through network-building. Collaboration between researchers and practitioners is mutually beneficial when insights from practice raise questions for research, and practitioners utilize research findings to improve service thus, enriching the interactions. These collaborations should occur throughout the research process. Ideally, the encounters should be face-to-face to expedite understanding of potential concerns and importance of the research.

The methods of building the network, disseminating information, and recruiting participants are based on the researchers' experiential knowledge as librarians. At the Wisconsin Public Library Association conference, the researchers shared information about the Pew reports and the research project, and invited library directors to participate in focus groups and interviews. The reception was an opportunity to network and engage in conversation with new and previous colleagues. This research project generates a PL research focus blog continuing the conversation online employing ongoing email exchanges, participation in library system meetings, along with focus group and interview conversations, thereby strengthening dialogue and networks.
The researchers reviewed literature from fields of library and information science, education, and psychology, which emphasized the importance of building social capital and trust with practitioners to strengthen collaborative relationships. By nurturing collaboration, trust can be built over time to develop a level of comfort between members of the group. That trust acts as social capital. The creation of the study and network facilitates social capital for the benefit of the researchers, practitioners, the organizations and library communities. Social capital is facilitated through the intraorganizational linkages between the academy and the libraries, which form a participatory network. Through this network, practitioners may learn where to turn for relevant research, and meet academics who are willing to collaborate on research. Meanwhile, the researchers discover new problems to consider, and identify potential partners for future research. The Pew research results in this study act as a nexus joining the academic and PL worlds in dialogue.

The researchers acknowledge the Pew findings as valuable generalizable data for U.S. PLs, and seek to leverage these findings to inform practice on a local level. Using experiential and intellectual insights, the researchers engage in peer production to create action research that advances knowledge around PLs in Wisconsin, marrying the national Pew findings with the local, qualitative stories told by the participants. The initial findings demonstrate that the network-building process allowed for a rich exploration of the Pew findings and their relevance on the statewide and local level. The findings also provide a framework for future collaboration between the researchers and librarians as the researchers and practitioners jointly seek evidence-based best practices for public libraries. The researchers will restart the process with a survey to simultaneously build generalizable knowledge and localize the Pew findings, re-informing practitioners and academics of the results at future professional and scholarly conferences.

Rebecca Eileen McElrath, Texas Women's University

Best Practice: Academic Library Security in Today's Environment

This beginning work's purpose is to review the literature about academic library security in today's environment and to identify specific measures academic libraries have implemented since the Virginia Tech University killings as well as the directors' recommendations for additional security measures. Crime, including killings, is not new to academic libraries. Donna G. Davis in 1971 writes, "Academic libraries are vulnerable to sit-ins, fire, bombings, book thefts, vandalism, natural disasters, including earthquakes and floods, burglaries, and other threats to safety. The most serious current problem is the security of academic libraries is student violence" (15). Otis A. Chadley writes in 1996 about the increase of the rate of violent incidents on American college campuses (385). Unfortunately, the same challenge remains today. Crimes like the 2011 Virginia Tech University tragedy and other school shootings have heightened awareness of this type of violent crime. Universities have tightened and improved their security measures in response this tragedy.

While it is intuitively appealing to assume that university security measures recently enacted are sufficient for the academic library, there are differences in operational responsibilities that suggest different safety measures may be needed in academic libraries. For example, the campus library is opened seven days a week and open late hours each night. Additionally, the library's goals of being a welcoming and social place for students and faculty make it vulnerable. Any security measures implemented need to be sensitive to this mission. There is much written in the literature about academic libraries that focuses on crimes committed against library materials and computers. D. B. MacLean reports in 2011 that his search of the literature and professional association's websites "shows an abundance of general safety advice, research, and data but a dearth of library specific advice and data (especially in the higher education field" (210). There is a gap in knowledge when identifying security measures against violence like shootings that academic libraries have implemented and in identifying best practices that address this violence that are being used in multiple library environments.

It is a rare person working in libraries not heard of the term "best practices." Best practice research originally comes from management. A basic definition is, "In a general sense, the term best practice refers to the most efficient way of doing something. The fastest method that uses the least resources (including labor and parts) to create the highest quality output is the "best practice" (Encyclopedia, 2009). "Tuominen et al. (2004, cited in Stenstrom and Laine 2006, 12-13) have designed the following classification of "good practice" definitions:

1. Definitions emphasizing functionality:
1). Good practices can be anything which works fully or partly; they can be useful sets of functions which generate learning.
2). Good practices are outcomes which can be transferred elsewhere as functional sets.

2. Definitions emphasizing processes:
1). Good practices stand for advantageous methods which help to achieve the objectives defined for an activity, open up avenues of action, and make a company more profitable.
2). Good practices include the same elements as benchmarking even if the associated data collection procedures are more research-based.

3. Definitions emphasizing innovativeness and transformability:
1). Good practices are innovative. They create opportunities to introduce new procedures and approaches.

2). Good practices are associated with successful projects.
3). Good practice can be turned into new practices. Good practice includes elements needed in problem-solving in which case it can be transformed to suit different situations (Vesley 101-102).

Methodology:

This current research proposes to use best practice research mechanism theory proposed by Eugene Bardach who defines a mechanism as "an explanation of a phenomenon at eh medium level of abstraction. It is less abstract than general "laws" but more abstract than mere descriptions. In order to describe "smart practices," Bardach uses the metaphor of "reservoir," a kind of energy or potentiality in the social reality that can be tapped" (107). Bardach uses the term "smart practice" which he says suggests "the existence of a smart or interesting idea in a given practice, one that deserves attention" (106). Bardach's "primary aim is to find a practice that fits the target site…. Bardach takes a "mostly qualitative approach, in fact a form of case study" (108). This research will use case study-based qualitative best practice research to establish "good practice" or as Bardach says "smart practice." This research will use personal interviews with four academic library directors to identify security measures that have been implemented and security measures they recommend to be implemented. The information gathered will form the foundation for a larger survey of academic library directors with the goal of developing a list of practices that are being used. A comprehensive qualitative survey will give an idea of "where exemplars of 'smart practice' might exist" (Vesley 110).

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Anthony Molaro, St Catherine University

Makerspaces: Penetration and Adoption in Public Libraries

Makerspaces (a.k.a. hackerspaces, learning labs, or fab labs) are community-based workspaces where users explore and create objects and content. "There is an explosion of interest among museums and libraries in 'making' environments" (IMLS). What does this explosion look like? Where are these spaces being created, and what is being created within them? How are public libraries planning to incorporate maker technologies into their service offerings and programming? What are the barriers and challenges to the development and establishment of these kinds of spaces?

Defining a makerspace is made difficult by the differences among spaces and activities therein, but all emphasize innovationg and creating with technology. The maker movement encompasses a wide continuum of technologies and activities focused on designing, creating, and manipulating physical objects and digital content rather than consuming, aligning with Science, Technology, Engineering, and Math (STEM) education goals and innovative learning initiatives. The movement includes the creation of "fab labs," generally workshops dedicated to the fabrication of physical objects, as well as "hackerspaces" which tend to be more focused on computer programming and web design. It also includes other types of co-working environments, both high- and low-tech, where users can come together to build, share, and collaborate.

Public libraries across the country have been creating makerspace environments within their establishments and using technologies within these spaces to enhance traditional library services. They have been experimenting with their own makerspaces to the benefit of the communities they serve, creating programs as varied as the maker movement itself. Some of these programs focus on working only with children, others with teens and adults. Wildly varied learning goes on in these spaces; from using 3-D printers and computer-aided design (CAD) software to fixing bicycles to sewing to chroma key compositing, public libraries have created makerspaces that allow users to learn a wide array of skills in drop-in labs and programs led by library staff and community experts.

This research study seeks to understand and describe the current and near-future adoption and penetration of makerspaces in public libraries. In particular, this study seeks to understand the staff challenges and knowledge barriers preventing the adoption of maker environments.

While little research exists regarding the adoption and penetration of makerspaces in public libraries, the literature does provide insight regarding the adoption and penetration of other technological advances in libraries. The diffusion of innovation model will serve as the theoretical framework for this study. This model categorizes adopters of innovation into five categories: innovators, early adopters, early majority, late majority, and laggards. Building upon this model, Attewell (1992) notes that knowledge barriers can impede organizational adoption of computing technology and the suffusion of new ideas and practices through society. He posits that one of the reasons a technological innovation spreads through a culture is an increase of knowledge over time.

This study will be executed using a survey approach with a random sampling of public libraries across the United States. The survey will contain both open and closed questions. The open questions will be analyzed using a content analysis approach.

Tami Oliphant, University of Alberta

Entrepreneurial Education: Cost-recovery and Online Learning

The School of Library and Information Studies at the University of Alberta, Canada has accepted the first cohort of students into our online Master of Library and Information Studies (MLIS) degree program commencing September 2013. Recruitment initiatives were carried out in 2012 and almost 80 students applied for the online option. Although the online MLIS and the face-to-face MLIS offer the same MLIS degree program, for the purposes of the poster we have separated the two programs to carefully examine the online experience for students.

The online MLIS degree incorporates those elements of the in-person program that have been foundational to the School's reputation of excellence. Students in the online program have met the same admission, program, credit, and course requirements as students enrolled in the in-person MLIS. Like the in-person program, the online program uses the cohort model whereby students complete the degree requirements together. Unlike the in-person program, online students have a more prescribed set of electives. Courses are offered following the regular university calendar (13 week courses in fall and winter and 6 week courses in spring and summer).

A number of features of the University of Alberta's online MLIS program distinguish it from others. The University of Alberta delivers the MLIS entirely online with no residency or in-person orientation requirements and no hybrid or blended classes (a type of class where face-to-face and virtual students are taught concurrently). The fee structure for the program is cost-recovery, a structure that differs from the tuition fees paid by in-person MLIS students. Under the cost-recovery model, SLIS receives 85% of the tuition fees paid by students. However, the online MLIS was deliberately designed to have comparable tuition costs to our in-person program in order that SLIS can provide a needed service in addition to generating revenue for the School.

Because Canada is large, vast, and diverse, the overarching goal of the online MLIS is to provide a service for those students who could not relocate to Edmonton or another major centre where the MLIS is offered because of work and family obligations and to support rural, remote, and Northern centres where libraries act as a community-level support. Many of our online students will remain in their communities of origin once they complete their degrees. Consequently, our online students are not competing with our in-person students for careers in Edmonton. The program also was designed and marketed to those who currently work in libraries in Canada.

For this poster presentation we share the development of Canada's first fully online MLIS program by focusing on the innovative cost-recovery business model used, our recruitment strategies, and curriculum development. For example, in terms of the curriculum, our community-focused librarianship program led to the creation of four new courses that have expanded our face-to-face course offerings as well. Future research will explore the experiences of online students in a cost recovery program and compare them to students in our face-to-face program, examine disconnects between face-to-face and online learning, and detail the development of a model of the online program itself which is being examined by other departments at the University of Alberta as a best practices model.

Maria Otero-Boisvert, San Jose State University/Queensland University of Technology

Funding the Academic Library: An Ethnographic Study

University administrators are asked to make dozens of critical decisions on a daily, if not hourly, basis. From the largest to the smallest, each decision has an impact on the entire university community. This study seeks to understand the the process of decision making on the individual and the interpersonal level. In an era of fiscal constraints and the need for greater stewardship of dwindling resources, university administrators can only benefit from a better understanding of their own and other's decision making processes. A clear understanding of the human element at the core of institutional processes such as budget allocations will help academic units such as the library better position themselves for success.

This study is based on the theories of influence as described by Dr. Robert Cialdini (2009) who attempts to describe and explain the very human process of decision making. The researcher seeks to discover how decisions are made within an organization. How are decision makers influenced? What is the role of the library director in higher education decision-making especially in the context of budget allocations? Social psychology is a field rich in findings, theories, scientifically-tested knowledge and practical applications, which has yet to capture the attention of the library profession. This study will seek to fill that gap which exists between Influence Theory, Higher Education Administration and Academic Library Administration with the hope of finding applications which will inform and improve the practice of academic library leadership.

This qualitative, ethnographic study was carried out within one participating site. Data gathering methods included: Document Review and Content Analysis; Semistructured interviews; Participant Observation; Visual Mapping; Field Notes (thick description); Member Checks; Journaling; and an iterative process of analysis. A pilot study for this research project was carried out in the Spring of 2013 at a large, public university (to be known as "Urban State University"). The researcher continued the study at the same site and is currently still embedded within the university library. A courtesy title of Research Fellow was granted in order to facilitate the study on campus.

Initial findings suggest that, at Urban State University, an incremental budget allocation process based on small changes to a historically based budget provided many opportunities for interpersonal negotiations and influence between the unit heads and the vice presidents. At every stage of this process the researcher was able to identify instances of influence and persuasion as described by Cialdini (2009). Of his six "pillars of influence:" liking, reciprocity and authority appear to be the most important elements at play. Other elements such as social proof, scarcity and commitment and consistency are also present but more difficult to identify. Interviews emphasized the importance of being seen as a "team player," of "supporting the mission of the university," and of the intangible yet crucial concept of "getting it." More than micropolitics, more than the old concepts of power and influence as described by French and Raven (1959) the most important advocacy tool in the library's arsenal appears to be the dean's ability to interact on a consistent basis with the university's key decision makers in a collaborative, authoritative and supportive manner.

MinSook Park, Florida State University

Eye-Tracking Analysis on the Effects of Cognitive Load During Web Searching

Introduction:

Searching for information on the Web has become an indispensable tool for finding information. According to Pew Internet & American Life Project tracking surveys (2013), 91% of adult Internet users in the U.S use a search engine to find information. Even though people use the Web daily for seeking information, web searching is not a simple task, but a complex process (Bates, 1989; Case, 2008), which involves human cognition (Vakkari, Pennanen, & Serola, 2003).

Finding relevant information among overwhelming resources on the Web can be mentally demanding for searchers, and may cause mental fatigue and frustration. However, research in the effects of cognitive load in Library and Information Science has been understudied. In order to better understand cognitive aspects of web search processes, this study explores the effects of cognitive load during web searching, using a method of eye-tracking.

Research Questions: This study will be guided by the following questions:

RQ1: Are there any differences in patterns of eye movement (fixation, saccade, and pupil dilation) between searchers who experience manipulated mental demand and those who do not, when searching information?

RQ2: : Are there any differences in patterns of eye movement (fixation, saccade, and pupil dilation) between searchers who experience manipulated mental demand and those who do not have, when searching information of different levels of task complexity?

Methods & Procedure: In an exploratory experimental setting, 40 participants will be examined by using eye tracking techniques to trace the patterns of the eye movement in terms of variations of cognitive load and task complexity during information search processes. There will be two groups: experimental and control group. Twenty participants in an experimental group will be exposed to mental demand manipulation through two different tasks, while 20 participants in a control group will not. Whether they experience mental demand manipulation or not, each group will have two different tasks.

The researcher will deliberately manipulate different components of cognitive load through two tasks: Upon the primary task, which is search task, experimental group will be required to remember a code and recall it.

After a practice session, participants will be asked to complete a pre-task questionnaire. The participants will complete two search tasks on the test bed, which is a Google search engine. Between search task sessions, participants will be asked to complete the post-task questionnaire, then given a break to avoid any carryover effects.

Eye-tracking: Eye-tracking is a technique which has been used to understand cognitive processes by measuring eye movements (Granka, Joachims, & Gay, 2004; Lorigo et al., 2008; Poole & Ball, 2006). Eye-tracking is considered an objective measure of cognitive load (Brünken, Plass, & Leutner, 2003; Yung, 2009). In this study, self-reported cognitive load assessment with the National Aeronautical and Space Administration Task Load Index (NASA-TLX) will be used to measure subjective cognitive load of study participants. However, eye-tracking will be used as the primary data collection method.

Using the eye-tracker, we can investigate how fixations (looking at the same place for a while), saccades (fast eye movements) and pupil dilation responses (changes in pupil sizes) are related to the information on the screen and behavioral choices during an experiment.

Tasks:

There are two study search tasks given to the participants. The study search tasks will be designed to differ in terms of their difficulty and structure. These search tasks are ill-structured problem-solving tasks so that the researcher can expect different search behaviors.

Data Analysis:

The collected data using eye-tracking will be analyzed with three variables: fixations, saccades, and pupil dilation. These three variables are the most frequently used variables in eye-tracking technique. Fixations refer to a spatially stationary gaze which shows attention is relatively stable to a specific area of the web pages. They last for 218 milliseconds on average (Poole & Ball, 2006). Fixations represent the moment in which information processing is able to occur (Granka, Jachims, & Gay, 2004). Saccade is defined as an eye movement between fixations, typically lasting for 20 to 35 milliseconds (Poole & Ball, 2006).

To measure fixations, the dwell time method of fixation determination will be used. If the duration of stationary eye exceeds a predetermined threshold- 218 milliseconds -, it is considered a fixation. Saccade will be measured using the velocity detection method. This method identifies the velocity of eye movement using an empirically determined velocity threshold, which is 35 milliseconds.

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Abigail L. Phillips, Florida State University

More Than Just Books: Librarians as a Source of Support for Cyberbullied Young Adults

Young adults are engaging with social media at a quickly increasing speed. The majority of young adults are using social media tools to interact with real world friends in positive, thoughtful, and healthy ways. Social networking sites, like Facebook and Instagram, can be a venue for young adults to express themselves in creative and exciting ways. According to boyd and Ellison, social networking sites permit individuals to create a public or semi-public profile within a confined system, construct a list of other users with they wish to interact with, and navigate through their lists of connections - ‘friends’ or ‘followers’- and those of other users within the system.

However, a significant number of young adults are using social media for a darker and more dangerous purpose: cyberbullying. National and international press coverage of extreme cases of cyberbullying has brought attention to this relatively new phenomenon. Due to disagreements among researchers over the operational and conceptual definitions of ‘cyberbullying’, it is difficult to construct a working definition and how prevalent is it among young adults. Although bullying and cyberbullying share many similarities, there are some significant differences. The most obvious differences are the definitions given for cyberbullying and traditional bullying, along with the characteristics that are ascribed to each. These differences are a result of the online environment through which cyberbullying occurs.

In a report on young adults, social media, and cruelty produced by the Pew Research Center, 15% of young adults reported being the target of aggressive behavior while online. Nineteen percent of these surveyed young adults reported being victimized by cyberbullies in some form during the previous year. Clearly, online cruelty and harassment is an unfortunate reality for many young adults. Information professionals, particularly public librarians, have an opportunity to work as first-responders by providing support, education, and guidance for victims of cyberbullying. The concept of pastoral care is particularly applicable to cyberbullying research. As a designated safe space that lacks the structure and teacher presence of the classroom, libraries are a natural location to which cyberbullying victims can turn. A library is a public space that satisfies many needs, yet it “allows for anonymity and independence”. Librarians could be seen as an intermediary within a young adult’s social world. Librarians do not possess the powers and influences that parents, teachers, school administrators, or even peers possess. However, by working in one-on-one, caring, nuturing relationships with troubled young adults, librarians can connect with these patrons in entirely different and beneficial ways. However, considerably more research must be conducted to create an appropriate and actionable rubric for librarians in cyberbullying prevention and intervention. This literature review will synthesize the current research on cyberbullying, identify key findings that can be drawn from the research, acknowledge existing gaps in the research, and suggest opportunities for further research. Although the focus of this article is a review of the literature, a secondary focus is the potential for public librarians, through pastoral care, to serve as a support system for victims of cyberbullying.

Sarah Ramdeen, University of North Carolina-Chapel Hill

A Proposed Study: Information Seeking Behavior of Geologists when Searching for Physical Sample Materials

In the field of geology, physical specimens such as cores, cuttings, fossils, and rocks are considered primary data; they represent “the foundation of basic and applied geoscience research and education, and underpin industry programs to discover and develop domestic natural resources” (National Research Council, 2002, p. 1). Science organizations enable discovery, access, use, documentation, and the preservation of physical scientific data throughout their lifecycle. But geologists’ interactions with such systems remain understudied. Indeed, previous studies focus only on the ways in which geologists search for publications (Bichteler and Ward, 1989; Joseph, 2001), not physical data. My research fills this gap.

Examining the literature drawn from information and library science and from the earth sciences, four topics emerge which will illuminate this research: science data, organizing information, organization and knowledge management, and information seeking behavior. Science data includes accessing, organizing, and managing data. It is important to define science data collections, variations between big and small data, the potential uses of these collections, and finally, the users of science data. Second, one should understand and analyze information capture systems for organizing and connecting information (cyberinfrastructure) and ontologies. Third, an examination of organizations and the role of organizational knowledge and/or memory are important. Finally, I reviewed information seeking behavior, specifically reviewing David Ellis's model and its potential applicability to understanding geologists' information seeking process for physical samples.

Based on my review of the literature, I have developed the following research questions:

RQ1: What information seeking strategies do geologists employ in searching for physical sample materials?
Limited in application to publication and print materials, Ellis's current model has not yet been tested on conducting searches for data. Thus I will test it to determine whether its categories can encompass searches for data. If not, I will investigate the possibility of expanding the model to include a new category: data creation.

RQ2: Based on role, what skills or training are needed to successfully interact with hybrid collections which include physical and digital materials?
Skills or training needs operate on two levels: training individuals for the stewardship of hybrid collections (e.g. data creators developing documentation and metadata for their materials or data managers overseeing the data throughout its lifecycle) and training individuals (e.g. researchers) to successfully search within these collections. What skills are needed to search within a physical collection as opposed to a print collection? Do those skills differ among various communities of practice?

RQ3: What barriers do users encounter while searching for physical sample materials, and how are they different from the internal vs. external user perspective?
Users who work in an organization which is collecting or archiving data sets may have a different perspective and different levels of access to data sets then external users. This potentially includes knowing more about how the data were collected or about information related to metadata capture. How do these differences in knowledge impact the access to data by external users? Do these users encounter different search barriers or search experiences than internal users? How can we mediate these differences in the future? How does membership in various communities of practice (Brown & Duguid, 1998) affect the search process?

To document the user's search process and to identify barriers encountered, I shall collect data at a core repository using qualitative methods such as interviews, observations, and content analysis. My data will allow me to engage with and to extend Ellis's information-seeking behavior model (Ellis, 1993; Ellis, Cox and Hall, 1993; and Ellis and Haugan, 1997). Specifically, I shall test Ellis's model to assess how well his categories function in data searching; my work will suggest the need to extend Ellis's model to include data creation.
To enable this comparison, I will look at the organizational structures which manage these types of data. First, how is the data is managed and organized and what is its status within the parent

organization of the repository? Second, how does the status of various internal and external users condition their search behaviors? During data analysis, I will map the information seeking categories to those identified by Ellis for fit and for potential expansion of the model to include new categories such as data creation.

Three planned outcomes currently stand out. First, as there is not currently a model for understanding information seeking for seeking physical data sets, I will propose a refined and extended model. Second, my research will influence the design and development of cyberinfrastructure systems. Cyber systems link users to physical information objects; they enumerate processes for data access and include methods for capturing various forms of knowledge. Finally, my work will underscore the need for the training of information professionals to prepare them for curation, preservation, and stewardship duties in the science realm.

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Casey Rawson, University of North Carolina-Chapel Hill

Synergy for Science: Design and Preliminary Results of a Collaborative Lesson Plan Design Project

Despite the fact that collaboration is emphasized in professional standards and education programs for both classroom teachers and school librarians, substantive teacher-librarian collaboration is not the norm in every school, particularly in STEM content areas (science, technology, engineering, and mathematics). In response to this problem of practice, doctoral student Casey Rawson (UNC Chapel Hill SILS) and Assistant Professor Janice Anderson (UNC Chapel Hill School of Education) co-designed a collaborative lesson plan design assignment that partnered graduate students in the Curriculum and the School Librarian course with senior undergraduate students in an elementary science methods course. The goals of this assignment included developing collaboration skills among both sets of students in an authentic setting, providing library science students with exposure to STEM-focused collaboration, and increasing preservice teachers' understanding of the roles and expertise of school librarians.

We are studying the impact of this collaborative assignment using a design-based, mixed methods research program that collects both qualitative and quantitative data from both sets of participants at multiple points over the course of the assignment. Design-based research is iterative in nature, thus the data from this semester's implementation of the project will be used to inform the design of both the assignment and the research methods for future semesters.

This study was designed to address the following research questions:

RQ1: What do preservice elementary school teachers know and understand about the training, expertise, and collaborative instructional role of the school librarian?

RQ2: Would a collaborative lesson design project completed by preservice teachers and preservice school librarians result in a better understanding among preservice teachers of school librarians' training, expertise, and collaborative instructional role?

RQ3: What issues emerge during the collaborative process, and how do the students address those issues?

Subquestion 1: Do any issues emerge during the collaborative process that are specifically related to the science content focus of the assignment, and how do the students address those issues?

RQ4: Would working together on such a collaborative project result in an increased self-reported likelihood to undertake such a collaboration after entering their respective professions?

Subquestion 2: Will school librarians express increased confidence related to collaboration in science content areas as a result of this project?

This semester's work represents the first phase of a design-based research program carried out with the dual goals of 1) developing general design principals applicable to others wishing to implement a similar collaborative project in their own settings and 2) contributing to theory on teacher-librarian collaboration. Montiel-Overall's theory of Teacher-Librarian Collaboration (TLC) has framed our initial design of the collaborative project and has provided a starting framework for data analysis. We are collecting both quantitative and qualitative data from sources including pre- and post-project surveys, pre- and post-project interviews, classroom observations, and student work samples.

The collaborative lesson design project grouped each preservice school librarian (PSL) with 3-4 preservice elementary school teachers (PSTs), each of whom had to write a science unit plan including at least five detailed lesson plans as their final assignment for their elementary science methods course. PSLs worked with each of their group members to choose at least one lesson within this unit to collaboratively plan using the principles of backward design. Lessons were required to address both state science content standards and state or national (AASL) information literacy standards, and followed the TPA planning format used by the UNC Chapel Hill School of Education. PSLs were instructed to work with their group members to negotiate the division of labor for writing each lesson plan, and instructors worked individually with each PSL to ensure that their total contributions were roughly equivalent across groups. PSLs were also encouraged to develop any supplemental materials required by their lesson plan (for example, student worksheets or resource lists).

Preliminary data analysis offers some hints for opportunities related to science-themed teacher-librarian collaboration at the elementary level. PSTs expressed enthusiasm for working with school librarians on science lessons or units, related to their understanding that science teaching and learning involves research and that school librarians have expertise in this area. However, many PSTs lacked a clear understanding of the science content knowledge underlying their units, and this created some barriers to effective implementation of the backward design planning process.

In their class presentations, PSLs expressed an appreciation for the way this assignment imitated some real-life conditions of teacher-librarian collaboration, while also admitting that the process was not always smooth or easy. They further indicated that the project provided them with valuable experiences that helped them learn about their own strengths and weaknesses related to teacher-librarian collaboration.

Mark-Shane E. Scale, Western University

Untapped Educational Opportunity in Library & Information Consultancy?

This poster examines trends in library employment and library and information consultancy. I raise the question of whether schools of library and information science (LIS) should develop an alternate curriculum to prepare graduates for library and information consultancy considering declining employment in the public sector.

Most LIS graduates are traditionally employed full-time in large institutions. The U.S. Bureau of Labor Statistics (2010) reports 88% of American librarians being employed in public and private educational institutions or by the government. Statistics on the employment of 2011 library school graduates in the United States reveal that the full-time employment rate is at 75.4% (Maata, 2013). Maata (2013) further reports declining permanent professional positions within LIS, with an accompanying increase in permanent and professional jobs outside of LIS.

Governments in containing spending on public services are reducing jobs in the public sector. The casualties include full-time professional library employment. Recent statistical data from

1990 to 2012 show steady decline in the number of library science positions available with the Canadian government. U.S. statistics also indicate greater difficulties for library school graduates in getting jobs in school libraries, children librarianship and other non-managerial or non-administrative positions in public libraries (Maata, 2012).

While the public sector for full-time librarians is shrinking, library and information consultancy is emerging. In 2006, a Jamaican professor forecasted growing opportunities for LIS graduates to work as consultants for public/private sector organizations (Durant, 2006). Recent online job advertisements confirm this. In Nigeria, a recent news article documented complaints about quality library consultancy services. Further, the American Library Association (ALA) in 2011 established a special interest group for library consultants. In addition, the Association of Independent Information Professionals (AIIP) provides a listing of library and information consultants, documenting more than 500 members worldwide.

Declining demand for full-time professional employment with government and emerging new roles in library and information consultancy are indicative of a change in how governments are employing and engaging LIS graduates for the provision of library and information services. In response, library school administrators may need to adapt library education to prepare LIS graduates for a changing employment outlook. ALISE's theme of 'Educational Entrepreneurship' is timely for discussing such new possibilities. The proposed question is should we develop a library school curriculum to formally prepare graduates for opportunities in library and information consultancy given who library and information consultants are and their working roles?

Library and information consultants simultaneously play both professional and entrepreneurial roles. According to Rogers (1994), 'increasing numbers of highly qualified librarians, information scientists, archivists, architects, library planners, budget advisers, indexers and online searchers are available on a freelance basis' (p. v). While some library consultants are formally educated in librarianship, others possess informal education from experience or expertise in working within library settings, from which they offer library-related expertise and services. de Stricker (2008) further defines library consulting as consisting of both librarians offering 'skills to a variety of clients (not necessarily libraries)' and of 'other types of professionals (e.g. architects, staff training experts)' offering services to 'libraries and library-like entities' (p.vi).

Library and information consultants can be further analysed as two distinct groups: a) library consultants and b) information consultants. According to Prytherch, (2005), information consultant is a generic term referring to 'self-employed Freelance individuals operating on a commercial basis in the areas of information handling, research, data handling and related fields' (p.350). On the other hand, library consultants are narrowly defined as individuals offering 'a range of professional skills and advice relevant to the operation of libraries' that are 'marketed on a commercial basis by a Freelance self-employed person who is not directly employed by the library concerned, but who may be retained on contract for a fee' (Prytherch, 2005). In this poster, the latter is given greater focus.

Library consultants are brought into libraries to deal with changes in the external environment to which libraries need to adapt. According to Rawles and Wessells (1984), library consultants undertake a professional 'helping and facilitating process' in order to help clients 'bring about change and solve problems' in libraries (p.3). For Blasingame, the library consultant represents 'a shortcut to…new, expanded or updated [library] facilities or programs' (npd). Consequently, there seems to be a logical difference between the working roles of library consultants that usher something new into a library and the traditional librarian that maintains the library system and current operations. Such working roles may indeed necessitate different education and curriculum needs.

Library consultants also differ from librarians in that library consultants are entrepreneurs. In Davidsson's (2004) classification of the typologies of activities considered as entrepreneurship, library consultants are twice entrepreneurs, as they both offer or introduce something new to the economy by creating a new service and bring about organizational change, so that libraries may offer something new to the society or economy. As such, library consultants are both entrepreneurs when they create their own employment or businesses and act as change agents within institutions.

In the past, many library consultants were librarians 'spending relatively small time on consulting or [were] members of library school faculties with full-time commitments to teaching and research' (Blasingame, 1969). While library consultants were historically employed full-time in institutions and practiced consulting on a part-time basis, Blasingame forecasted that in time, full-time library consulting 'may become more common'. Over 40 years since Blasingame's 1969 forecast, current research is needed to ascertain whether the thin line of demarcation between self-employed library consultants and librarians has changed.

Considering these issues, I raise the question as to whether schools of LIS need curriculum development to prepare graduates for these opportunities and challenges. It is hoped that by raising these issues that LIS educators will engage in discussions about whether curriculum development is warranted to prepare graduates for this alternative career possibility considering the reality of shrinking demand for full-time public sector librarians.

Julia Skinner, Florida State University

The Information Seeking of Sexual Assault Survivors (ISSAS) Model

Sexual assault is a very prevalent and underreported crime, and one that stigmatizes and isolates survivors. The ISSAS model describes the information seeking behavior of survivors as they navigate the healing process. It is hoped that the model will stimulate further research and improve information services to survivors. The ISSAS model is based on models of help seeking and recovery developed in the field of Psychology (Harney, Leowitz, & Harvey, 1997; Kennedy et al., 2012) and Dervin's sense making theory (1992). The model is also informed by the principles of information-seeking outlined by Harris and Dwedney (1994). The ISSAS model combines and adapts these theories to account for the survivor's location within the stages of recovery, as well as the circumstances that impact him or her while trying to fulfill a specific information need. Our poster will show a visual representation of the model, alongside text and handouts that articulate the different stages of healing and steps in the seeking process. In this model, the survivor is surrounded by the context of Harney, Lebowitz, and Harvey (1997)'s three stages of recovery: Restoration of safety, remembrance and mourning, and reconnecting with others. These are situated around the user, and provide the context in which the information need erupts and in which the individual constructs meaning. These are external stages that the person may be moving through or within a stage whether or not they self-identify in that way. The information-seeking process begins with the individual identifying a need, which is informed by the stage of healing a person is in. As the person moves through the seeking process, they move through enablers and barriers that create different freedoms or constraints, and impact what resources the survivor has the ability to consult and what resources may be considered most viable. This research is significant to LIS, as sexual assault is a crime that impacts people from all walks of life, with an average of 207,754 individuals being assaulted each year (RAINN, 2013). In addition, sexual assault is a widely underreported crime because of the stigma survivors face (Rennison, 2002). This stigma may also inhibit an individual's desire to self-identify as a survivor of sexual assault when seeking information related to recovery. Sexual assault's prevalence among the U.S. population (and thus the populations served by U.S. libraries), suggests that improving services to survivors should be a part of LIS research and practice. The model may also be adapted by future researchers to address other underserved populations that may be hesitant to self-identify

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Brenton Stewart, University of Southern Mississippi

HBCU Libraries & Twitter: A Measure of Engagement with Social Media

Library 2.0 has radically changed the way that libraries connect with patrons. No longer a one directional flow of information, this new iteration of librarianship is grounded in a dual communicative exchange, that's facilitated by the adoption of social-technical devices utilized by patrons. Over the last half-decade, academic libraries have increasingly adopted social media as a form of outreach. The microblogging service Twitter, for example, is often leveraged by academic libraries as means to market, brand, as well as establish itself in the digital lives of users.

Historically research on academic libraries at Historically Black Colleges & Universities (HBCUs) is rather limited in the professional literature; yet, HBCUs educate a large percentage of African American college graduates, particularly those in the STEM disciplines. Conversely, African Americans comprise the largest demographic of Twitter users. It is at this intersection that the project commences. This research is a longitudinal empirical study that examines the cultural relevance of HBCU libraries in social media with an emphasis on Twitter.

The project is organized around four research questions:

RQ1: How does Twitter interactions impact library patrons within the physical world based on cultural elements?
RQ2: How does Twitter facilitate or hinder patterns of temporal trust between individuals, declared groups or public entities such as libraries and their services?
RQ3: How do individuals or groups form dynamic communities within Twitter, based on library generated content or information dissemination?
RQ4: To what extent do network structures emerge based on library services elements in both unique and non-unique ways within Twitter?
Methodology:

The project will examine each research question through, experimental analysis of Twitter live data streams. In which actors on such sites public data can be programmatically extracted using free/existing application programming interfaces (APIs) to provide a never-ending stream of data. These data streams will be utilized to construct dataset of HBCU library patron interaction with the library. Data will be stored in a database and analyzed to obtain important information such as sender, recipient, time interval (t), number of messages in within a day (m), estimated participation of each user (p), and the frequency of their conversations in within a certain period of time (f). Utilizing unique algorithms we will be able measure states of engagement between entities i.e. the library and its patrons. A long-term goal of the project is the construction of wiki dynamic visualization that will evolve over time with the associated dynamic data streams. Unlike existing static visualizations of social media data, which are published only to show a snapshot in time of a social media interaction. These visualizations will be linked programmatically to the live data streams utilized in the project and will evolve over time to reflect the individual elements measured in this project.

Preliminary Findings: We have collected approximately 480,000,000 tweets, which is only preliminary, in that we limited the time-interval to one week. Data Analysis will begin shortly on the Apollo supercomputer housed at the University of Arkansas Pine Bluff/HBCU. Tweets emanated from HBCU libraries are stored in a MongoDB collection, which is a No-SQL database to enable faster analysis of data.

Dawn W. Stitzel, Library of Congress

Library of Congress Knowledge Navigators Program

The Library of Congress Knowledge Navigators Program is an initiative launched by the Librarian of Congress in late 2012 that supports the Library's overall succession planning strategy and the Library's Human Capital Management Plan. The initiative has three priorities: bringing highly skilled individuals into the Library for short-term learning experiences; providing Library of Congress staff with short-term learning opportunities at similar institutions; and mentoring and training Library of Congress staff to ensure a smooth transfer of knowledge as senior staff retire or move on to other positions. Addressing the first priority, the initiative provides a uniform system for students and new professionals to learn about projects at the Library that call for specialized skills, apply for and then assist with the execution and accomplishment of these projects. These students and new professionals can participate in Library projects onsite in a traditional internship but we are also exploring the possibility of participation offsite via e-internships. For the second and third priorities, the initiative also encourages Library staff development by providing external staff exchanges and facilitates staff mentoring to encourage a smooth transfer of knowledge from existing staff to newer staff. Implementation of the Program: Initially the Library of Congress Knowledge Navigators Program will begin in Library Services, one of the five service units of the Library of Congress. Since the goal of the initiative is Library-wide, as systems and procedures are put into place in Library Services, the Library of Congress Knowledge Navigators Program will expand to include other service units as appropriate. There is also an advisory committee composed of representatives from Library Services, the Office of Strategic Initiatives and the Law Library of Congress. Representation from other units within the Library will be added as appropriate. Relationship of the Library of Congress Knowledge Navigators Program to other intern and fellowship programs in the Library: The long-standing, prestigious Junior Fellows Summer Intern Program now falls under the aegis of the Library of Congress Knowledge Navigators Program. Because there are many other robust, extant intern programs in the Library, the decision was made to initially treat the Library of Congress Knowledge Navigators Program as one additional channel through which the Library receives interns and fellows. Efforts will be made to standardize processes and paperwork requirements across the range of opportunities using the Library of Congress Knowledge Navigators experience as a guide. Relationship to existing staff mentoring programs at the Library: Mentoring in the context of the Library of Congress Knowledge Navigators Program refers to the transfer of subject matter expertise from senior staff to newer staff in order to facilitate a smooth information transfer when the senior staff retire or take other positions. This does not relate to leadership and career development which are the emphasis of other current programs at the Library. Funding for the Library of Congress Knowledge Navigators Program: Initially, only the Junior Fellows Summer Intern

Program will be funded by the Library of Congress Knowledge Navigators Trust Fund. Library of Congress staff experiences will be supported separately from an existing gift fund.

Rick A. Stoddart, Oregon State University

Pedagogy for Critical Reflection in Librarianship: A Suggested Methodology and Syllabus For Teaching Autoethnography and Self-Reflection

Academic librarianship has an intimate association with narratives and stories in their traditional role in curating, caring for, and making collections accessible. Librarians also experience the intricacies and challenges of narrative inquiry through the qualitative research they undertake, oral histories they gather, reflective teaching practices they facilitate, and oral-traditions they interact with. Despite these intersections with reflection and narrative, academic librarianship, (and library sciences as a whole), have not fully incorporated their own narrative(s) within their professional practice(s). Academic librarianship has the ability but not the spaces to critically reflect in a holistic manner. Shadiow (2013) encourages us all to "recall, retell, and then scrutinize your stories", through critical reflection. One potential method to accomplish this task of "scrutinizing our stories" is the reflective technique known as currere developed by curriculum theorist William F. Pinar (1976). Grumet (1976) suggests that currere allows us to put our "essences back into existence". As such, the currere reflective methodology provides a pathway to putting ourselves back into librarianship much as it has done with other educators and professions.

This poster reports on a dissertation's research-in-progress to develop a curriculum of structured critical reflection for practicing academic librarians. Professional and pre-professional reflection connects everyday librarianship to the philosophy, values, and ethics that shape our discipline. As such, ongoing reflection is an essential librarian competency to bridge thought and action; uncover personal values of librarianship; and ground librarian practice with library theory. This research is inspired by the autobiographical and self-narrative methodologies developed by curriculum theorists William F. Pinar and Madeleine R. Grumet (1976), well as the autoethnography work of sociologist Carolyn Ellis (2004). The curriculum will be deployed in Spring 2014 with a cohort of academic librarians. Participants will be led through a series of reflection exercises culminating in an overall reflection synthesis. For the dissertation, librarian reflections will be analyzed for themes, connections, and discontinuity with LIS core values, theory and philosophy. The poster will detail the narrative research methodology, reflection curriculum, and include a syllabus draft. The intended outcome of this research is to suggest a process for librarian self-examination that illuminates the connections to library philosophy and motivations for librarian practice. The closer we are able to examine the constellation of stories that comprise the librarian experience, the better able the LIS profession is positioned to understand its place within the overarching community and culture at-large. Critical reflection is essential for academic librarians to sustain their passion for the profession, build Praxis, and engage library stakeholders in as authentic practitioners.

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Sarah W. Sutton, Emporia State University

Using Concept Inventories to Assess Student Learning in a Core MLS Course

All Emporia State University School of Library and Information Management (SLIM) graduate core courses are delivered through a hybrid model in which multiple systems of asynchronous online modules and face-to-face instruction are combined. This mixed delivery model shifts into a blended pedagogical framework as the instructor and the students work together to accomplish learning outcomes through best practices and delivery models most conducive for particular concepts. Well-developed best practices and assessment measures of traditional instructional delivery are not always suitable for hybrid models used to support blended learning environments. This poster will present action research in progress in hybrid-learning masters' level LIS courses undertaken to inform the development of an outcomes based concept inventory which will inform teaching and course improvements. The goal of the research is to create and then validate an instrument for this purpose.

Concept inventories appear similar to a common assessment in format; however, the primary goal is to inform educators of core knowledge levels. While unique to LIS, concept inventories began over a decade ago in the science domains. The instrument development process has six general tasks: (1) define the content, (2) develop and select the instrument items, (3) informal informant sessions, (4) interview sessions with LIS educators and library practitioners, (5) instrument administration, and (6) evaluation and final refinement. Having completed the first two tasks, the development process and example items from a Collection Management course will be shared during the poster session. ALISE will serve as an opportunity to collect feedback in support of task 3 prior to moving into the more formal instrument development tasks.

In the first phase of instrument development, we derived subject matter concepts for a course in collection development from course textbooks, practitioner and scholarly articles, and LIS syllabi. In the second phase, we tested the concepts with students enrolled in three sections of the course in fall 2013. As part of their course work, 61 students responded to a knowledge survey at the beginning and end of the semester. Knowledge surveys ask students to rate their confidence in their ability to answer questions on a 5 point Likert-like scale. The questions cover course learning objectives in depth and lay out the course in its entirety for student. They allow both instructors and students to evaluate course subject matter concepts from the perspective of student learning rather than student experience. This, in turn, can reveal students' levels of confidence with course material before the course starts and support adjustments to its delivery in order to meet students' learning needs.

Phase three began with an examination of the ten broad domain categories of subject matter concepts (sub-domain items) which included selection and user needs; policies and patron driven acquisition; access, ethics, and intellectual freedom; acquisitions; selection; print, serials, and media materials; electronic resources; cooperation and collaboration; assessment of print resources; assessment of electronic resources; The poster contains an example of the interface through which students completed the knowledge surveys as well as well as sample results from a comparison of both a domain level item and single sub-domain item. Phase three will conclude with informal discussion of subject matter concepts for collection development during the ALISE 2014 poster session.

Natalie G. Taylor, University of Maryland-College Park

Use and Efficacy of Government Websites in an Educational Context for Youth Health, Information, and Civic Literacy Needs

This poster describes the first phase of a larger study that examines government health resources and their use and efficacy for the youth population. The research question for this phase of the study asks how health-related government resources are used by school librarians to meet the needs of their school populations.

This work addresses three critical literacy areas: health, civic, and information. Research has shown that youth have trouble distinguishing between legitimate sites and inaccurate sources, particularly online (Gray et al, 2005; Skolpelja et al, 2008). This is especially concerning considering the importance of accuracy in health information. Despite the ubiquity of online government websites, and the potential for their use as trustworthy resources, it is unclear whether youth know these sites are available. School librarians are in a unique position to help both their colleagues disseminate this information to youth and to help youth directly with their health information searches. This study assesses current uses and efficacy of government health-related resources by school librarians and suggests further research in this area.

Data presented in this poster was collected from a pilot descriptive survey completed by K-12 school librarians in the mid-Atlantic region. The survey was distributed via the states' professional school library associations. Data was collected and analyzed using Qualtrics, a survey software application. During the three week survey period in October 2013, 109 school librarians completed the survey. Though the response rate does follow standards set by other published studies in the school library field, this data is not representative or generalizable.

Preliminary findings show that librarians do in fact use health-related government websites, but find that the sites occasionally pose challenges to their users. High reading levels and difficult navigation were common complaints. The sites were also occasionally criticized as being at too high a reading level. At the same time, librarians were often divided on these assessments. In fact, navigation was described in a positive light by some librarians. Site organization was also appealing to some, but “too busy” for others. It is clear that the comprehension level of students as well as the particular sites used have a big impact on librarians’ perceptions of government health sites for youth.

School librarians were generally positive toward health-related government site(s) that they had used and/or recommended.77% of librarians ranked the sites as “somewhat” or “very” useful. This positivity is also present in the responses to the question asked about whether the school librarian would “use a health-related government website for a classroom lesson or activity over another type of site (academic, non-profit, etc).” Half of school librarians surveyed said that they would, 40% of librarians answered that they were “not sure,” and only 10% answered that they would not. Of those who said yes, the reason given most frequently was that government sites are more trustworthy than other sites. Of those who said no, librarians most frequently answered that they knew of sites that would better suit their students’ needs.

Overall, the survey showed that school librarians generally find these sites trustworthy and useful, but further study into the usability of the sites would be useful, as would additional qualitative studies on actual uses of government sites in the classroom and for students’ personal information needs. Future work related to the project may include: 1) further analysis of the survey responses, cross-tabulated with demographic information, 2) qualitative interviews with school librarians surveyed, 3) analysis of health-related government websites in relation to their reading levels and relevance to school curricula, and 4) focus groups with youth on their use of these sites.

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Tonyia J. Tidline, University of Illinois at Urbana-Champaign

Entrepreneurial Effects of State Library Association Social Media Use

This W-i-P poster offers early results of an investigation about state library association use of social media. Over 80 library associations exist at the state level, from those focused on public or academic libraries to those existing solely to support library trustees. These institutions provide financial and structural support for libraries and their personnel and activities including, but not limited to, continuing education, help with and advice on advocacy and bond initiatives, and annual conferences to establish or reinforce collaboration, encourage community engagement, and bolster flagging morale in tough economic times. Association efforts warrant more and diverse study and this inquiry contributes to that goal by examining how and the degree to which state library associations use social media outlets like Facebook, Twitter, or Pinterest. It also considers the effects of state library association use of social media on marketing and public relations from both traditional and social entrepreneurial perspectives.

The research began with a simple inventory of types of social media used by the 50 central state library associations. This created a framework for examining how association social media use might be seen as entrepreneurial, thereby raising the profile of libraries, librarians, and library programs and services in the states. Social media use was examined to develop a metric to categorize such communication as entrepreneurial in the traditional commercial, profit-oriented sense or to determine if state library association social media use reflects ideas of "social entrepreneurship," an emergent concept that emphasizes the public good.

Drawing on scholarly and popular literature, traditional entrepreneurial methods are aligned with profit-making, but at their essence are defined by innovation and risk-taking. Although social entrepreneurship similarly embraces originality and speculation, its ways may be more political and its outcomes are intended to address societal ills. Given the aims of library associations generally – to protect and project the health of the profession and to represent professional interests both economically and politically – it is reasonable to look for evidence of both traditional and social entrepreneurial activity in their social media communications.

Initial findings indicate that, while more than half of central state library associations have a Facebook and Twitter presence, Twitter communication could be improved to achieve greater entrepreneurial impact. Preliminary analysis to establish state library association social media entrepreneurial presence involved reviewing message originality and content (were messages fresh or retweets; did they include links or images; did they broadcast association only or other types of events). Also considered was whether associations published their mission statements and/or customized their Twitter backgrounds. Association use of practices recommended for effective social media communication will be combined with the forgoing elements to measure the organization's "entrepreneurial presence."

To narrow the scope of investigation, Twitter was the focus of the first stage of this project. Tweets will be further examined and evaluated on the degree to which they reflect social concerns or social movements (an arena not unfamiliar to librarianship). This will lead to a social entrepreneurial measure, and is just one of several next steps for further study. Others include looking at followers, retweeting practices, and asking state library association personnel about their impressions of preliminary findings. Another phase of the research will apply similar scrutiny to Facebook activity.

Stan Trembach, University of South Carolina

In the Heat of the Cold War: Communist VINITI and the Institutionalization of American Scientific and Technical Information System

An examination of critical landmarks in the evolution of information science, a young and burgeoning academic discipline, is an indispensable part of the worldwide effort to build not only an information, but more importantly an informed society where "information" is productively used to ensure the overall well-being of mankind. This is particularly important during an era of perennial information overload, a phenomenon that Shenk (1997) rightfully described as data smog, or the astounding wealth of information that, due to its sheer volume and alarming growth rate, can be both beneficial and harmful.

It is only fitting, therefore, that our attempts to manage, if not combat, the seemingly imminent information crisis have brought about a renewed scholarly interest in the origins of information explosion that dates back to the early decades of the 20th century. Arguably, the root cause of the unprecedented growth of the overall amount of data was the rapid expansion of scientific and technical advances across the world and the subsequent spread of modern technologies, particularly those applied to scientific and technical information. In the United States and the Soviet Union, the two leaders in the playing field, the growth of information output accelerated by the late 1930s and became truly explosive in the aftermath of the Second World War.

The Cold War and the "space race" that transpired in the 1950s-1970s between the Communist Soviet Union and the United States marked a significant period in the development of information science as an independent field of knowledge. It was also then that scientific and technical information (STI) management became institutionalized as the national priority for both the Soviets and the Americans, resulting in the formation of such giant agencies as VINITI (Scientific and Technical Information Institute) and the NSF and NTIS as its American counterparts. This research is based on the premise that the Cold War and the Soviet military-industrial complex had a profound impact on the rise of the scientific and technical information management system in the mid-twentieth century United States.

However, the specific influence of the Soviet information institutions has been insufficiently studied, in part due to information isolation and the scarcity of original sources, with the majority published in the Russian language to never be translated into English. The author intends to bridge this gap in the existing knowledge by examining a number of original Russian, as well as foreign language, publications to determine the influence of VINITI on the development of a body of scientific and technical information in the United States and specifically on a range of information management agencies in this country, such as the National Technical Information Service (NTIS) and the National Science Foundation (NSF).

In all, to explore the issues surrounding that process and the concurrent maturation of information science as a knowledge domain, this research interprets data from interviews and uses chronological analysis of primary historical documents to shed light on the information problems of the past. As such, it has the potential to open new educational opportunities and inform our judgment about current and future challenges and possibilities brought to us by the global information age.

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Amy Vanscoy, University at Buffalo

“Like Being a Junkie”: Librarians’ Metaphors for Reference and Information Service

Since Lakoff and Johnson’s (1980) influential work Metaphors We Live By, metaphor has been viewed not merely as poetic language, but as evidence of the conceptual systems used by people to understand their experience. Metaphors reveal conceptual structures that people may not be aware they have or may not be able to clearly articulate. Metaphors also reinforce existing conceptual structures, and new metaphors can lead to new perspectives and change in conceptual structures. The study of metaphor has been applied to professional work in areas outside LIS. Schön (1993) saw metaphor as an important component of understanding the “frames” professionals use in understanding problems. Metaphor research has made significant contributions to the understanding of professional thinking and to improvements in professional education in teaching, counseling, social work, and other professions. Some metaphor studies have been conducted in LIS focusing on metaphors for information (Green, 1991), the academic library (Nitecki, 1993), and electronic texts (Smith & Yachnes, 1998). No studies have examined metaphors for RIS although it has been the subject of several essays. RIS has been likened to improvisational theater (Doyle, 1996) and to baseball (Tallent, 1998), the research process to doing laundry (Moye, 2009), and the reference desk to a fortress and a portal (Reenstjerna, 2001). This qualitative study uses metaphor analysis to respond to the following questions: (1) What metaphors do professionals use to describe RIS? (2) What do these metaphors reveal about professionals' conceptual models of RIS? Data collected for this project are interviews with experienced LIS professionals from diverse library environments for whom RIS is a significant part of their position responsibilities. Interviews were semi-structured and included direct questions to elicit metaphors, as well as opportunity for participants to use spontaneous metaphor in their narratives about interactions with users. The data are currently being examined to identify elicited and spontaneous metaphors. A "unilateral identification" approach, wherein the researcher identifies metaphors in the data, is being used. About half of the data have been examined. As the analysis progresses, the metaphors will be analyzed in order to interpret how the "vehicle" (the concept to which RIS is being compared) is like and unlike RIS. The metaphors will then be grouped by similar meaning. These groups will then be analyzed to determine the conceptual models represented by the metaphors. In addition to expanding our understanding of the experience of RIS, identifying and interpreting the metaphors used by librarians in discussing RIS can reveal how the librarians make sense of their professional work. Interpreted metaphors can be used by professionals to reflect on and improve their practice and by LIS students to connect classroom models and concepts to practice.

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Anastasia S. Weigle, Simmons College

User Engagement with Physical Objects: An Investigation of the Multi-dimensional Experience of Archival Users

I am investigating user engagement with physical objects. I did a small study on this topic using a phenomenological approach consisting of observation and semi-structured interviews to investigate users’ perception and experience from handling archival objects. Findings showed engagement characteristics similar to those presented in O’Brien and Toms (2008) study including aesthetic and sensory appeal, attention, pleasure, and interactivity. However, there were also numinous qualities such as unity of moment, imaginative empathy, and inquisitive thinking (Latham, 2009). Results revealed user experience with archival physical objects was greatly influenced by the participants’ personal views or interests. Point of engagement and sustained engagement were attributed to the physicality of the objects. Dis-engagement was attributed by disinterest or negative feelings toward the objects. Characteristics of attributes during the engagement and disengagement process revealed five categories of multi-dimensional experience. They are: 1) sensory aesthetics, 2) variety/novelty, 3) emotions/state of mind, 4) curiosity/inquisitive thinking, and 5) memory/place in time. The study may add new insight for improving the user experience when accessing and viewing physical and digital collections. Humans interact with tangible objects every day. It is something that is done without thought or force. Touch “simultaneously opens up other imaginative, speculative and emotional ways of knowing material objects" (as cited in Candlin, 2008, p. 278). It is what helps humans navigate the world around them. Such an attribute of touch is often difficult to simulate or recreate with digital objects. To date, there is limited research that examines the engagement gaps between interacting with a physical object and with its digital counterpart.

O'Brien and Toms (2008) definition of user experience as applied to technology is characterized by challenge, positive affect, endurability, aesthetic and sensory appeal, attention, feedback, variety/novelty, interactivity and perceived user control (pg. 941). Several studies (Desmet, Porcelijn & van Dijk, 2007; O'Brien and Toms, 2008; Wright, Wallace, & McCarthy, 2008; O'Brien, H. L., & Toms, E. G., 2010) have been done on user engagement as applied to technology yet research on user engagement with physical objects is very scare. The study that could be related to user engagement with physical objects is Latham's (2009) themes of experience as applied to museum objects, which focus on numinous qualities. These include 1) unity of the moment (objects as holistic united feeling of emotion, intellect, experience and object), 2) object as a link to the past (experience both tangible and symbolic meanings, 3) being transported (another time and place temporally, spatially, bodily, and 4) connections bigger than self (having epiphanic connections) (pg. 82-83). When we physically manipulate objects, it allows us to be creative in ways that diagrams cannot experience (Overbeeke, Djajadiningrat, Hummels, Wensveen & Frens, 2004). Having the ability to handle objects is not only enjoyable, but enriches the learning. It builds a level of memory and fulfillment that mediated experiences cannot match (Lapetino, 2012).

The strength of the study was examining user engagement from a unique angle of users interacting with physical objects. Having the study done on site also was a strength allowing the researcher to observe first hand how users related to the objects in the archives.

The second strength of this study was the participants' themselves and the words they used to described their experience. Rich detail and anecdotal stories revealed deep emotions providing a better understanding of the phenomenon.

The limitation of the study was the small number of participants, as well as the fact that all participants were users of the archives. Further studies involving more participants and participants who are non-archive users are necessary to examine the whole spectrum of user engagement experiences.

The close proximity between the participant and the researcher during observation might also a weakness. It would have been more advantageous if the participants had privacy while the research observes unnoticeably.

The study offered rich insight on the phenomenon of physical objects and their relationship with users. This can set the groundwork for further study on user engagement with physical objects using a wider and varied population. Further study on the relationship between objects and "flow" theory may reveal additional attributes. The proposed conceptual model presented in this study highlights the variety of experiences during sustained engagement with point of engagement and disengagement being just a small part of the experience. This is because the participants connected with the object immediately. The study showed the similarities of attributes presented by O’Brien and Toms (2005) and Latham’s (2009) work. But it also presented the differences between archival users and users of technology. Participants preferred to touch and feel objects over a digital counterpart. As one participant described, “It is the story that they tell, the historical context, personal feeling, tie to community, to other people. Grounding and sentimental in a way—giving you a sense of place.”

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Rebekah Willett, University of Wisconsin-Madison

Everyday Economics: Media Literacies in Virtual World Games

This poster presents preliminary analysis of data related to children’s understanding of the economics of virtual world games. Observational and interview data were collected as part of a study which explored how children (ages 8 to 11) engage with these games. The study took place in an elementary school through a ‘games study group’ that met in a computer lab every day for 20-25 minutes before school started for three weeks. The group involved 28 children: 11 boys and 17 girls; seven 8-year-olds, nine 9-year-olds, and twelve 10-year-olds; representing different ethnic backgrounds, with Latino/a children making up almost half the group. About half the members of our focus group were novice virtual world game players; about one-third had mid-level experience of a virtual world game; and the remaining five players were experienced. These levels were largely connected with ethnicity and possibly socio-economic status, with Latino/a and African-American children representing 10 out of 12 novice players, and Euro-Americans representing 4 out of 5 experienced players.

When we initially observed our participants playing games in the computer lab, we noticed that many participants did not know their usernames and passwords and subsequently started new accounts. We were not surprised to find this was the case with our novice players. However, we inquired further and found that our mid-level and experienced players in Club Penguin and other sites also had multiple accounts. We also found that some children played different games on different days of our study. Further, we saw very few children taking part in some of the more advanced features of the games such as guilds in Club Penguin. On the whole, we found the novice and mid-level experienced players (over three-quarters of our group) were not invested in developing their characters, spaces, and gaming repertoire/skills; rather their engagement in virtual worlds consisted of play that had fewer long-term goals (for example, some children spent sessions playing mini-games). This indicates that a majority of our participants were not investing time or money in the games. This contrasts with studies of teens online who are described as "always on" and available for social contact (Ito et al. 2010), or studies which indicate that videogamers ages 8 - 18 play for almost two hours per day on average (Rideout et al. 2010). In addition to raising questions about the applicability of these studies in relation to younger children's online activities, there are questions about the meaningfulness and impact of advertising and new forms of marketing in virtual world games, given that children may not be investing time or effort engaging in these spaces.

We also engaged the children in paper-based activities which aimed to investigate children's understandings of commercial structures in the games, and we interviewed children at computers about online advertisements. Most children were able to identify ways games make money, mentioning membership, advertisements, and different kinds of merchandise, and all children were able to identify online advertisements such as banners. With further questioning, we found evidence of some children's more complex understandings of online advertising, including knowledge of persuasive intent of advertisers. However, not all participants showed high levels of consumer literacy. For example, two Latina girls (age 8) who were new to virtual world games and had limited/slow internet access at home had difficulties expanding their ideas about commercial intent beyond membership. Many factors might explain these girls' level of consumer literacy (including age and internet access). Importantly, the divides represented in the data align with growing concerns about implications of digital divides on children's ability to take part in participatory cultures and ultimately on their development of new literacies (Jenkins et al. 2007).

Children were largely unaware of the names of companies behind virtual world games. Some children were aware that Poptropica (part of Pearson Education) was founded by Jeff Kinney (author of Diary of a Wimpy Kid series), because this had been discussed in some classes and Jeff Kinney had visited the school in connection with his books. No children could say which company owned Club Penguin in spite of the Disney logo and text that appears on the login pages. The more experienced players told us who owned them when we were sitting at their computers, possibly by reading the logos on the site – as one girl pointed out. Across the interviews, we found ownership to be a confusing concept – for example, one boy, age 8, said Mojang was Minecraft's sponsor, explaining that "Mojang gives money to support it". Similarly, there was confusion over revenue from advertisements. When asked why an advertisement was on Poptropica, one girl (age nine) said: "I think they just want to, like, help other businesses". In some ways this lack of understanding is not surprising: all the sites that participants mentioned are freeview, and subscriptions are affordable for many children. Further, Club Penguin does not contain third party advertisements and has limited cross-promotional advertising; and Minecraft is an independent company and contains no in-game advertising and very little merchandising. One conclusion that might be drawn from this analysis is that although concerns are raised about the presence of advertising and marking in children's online environments, by not portraying online spaces as part of large commercial businesses children might also be misled. By protecting children from the big business aspects of these sites, children may be limited in their development of understanding of the economics behind these sites.

Kam Woods, University of North Carolina-Chapel Hill

Filling in the Gaps: Improving Data Curation Education and Research Outcomes in the BitCurator Project

Acquisition and management of born-digital materials is an increasingly commonplace practice for libraries, archives, museums, and other collecting institutions. Yet many of the practices associated with processing these materials are technically and philosophically incomplete. This has a profound impact on the the ability of these institutions to ensure appropriate records of provenance, maintain linked data from original sources, and protect private and sensitive information.

The BitCurator project is an effort to adapt and transform digital forensics tools and methods in ways that may be used by real-world collecting institutions to address these issues. BitCurator incorporates powerful open source digital forensics software tools and modifies these tools to simplify access to data analytics techniques that can improve preservation and management outcomes. BitCurator uses fiwalk, a tool originally produced by Simson Garfinkel (now incorporated into The Sleuth Kit), to export an XML file detailing file system hierarchy within a disk image - including files and folders, deleted materials, and information in slack space. BitCurator also includes Garfinkel's Bulk Extractor (and the Bulk Extractor GUI, BEViewer), to assist users in finding potentially private and sensitive information. This tool employs stream-based forensics (analyzing the disk image at the block level), executing parsers to identify features such as email addresses, geolocation metadata, and credit card numbers (among many others).

These technologies allow information professionals and researchers to extract and create actionable reports on metadata from born-digital sources such as removable disks (floppies, CD-ROMs, flash media, and others) and hard drives, correlate digital objects and data items found on separate media, and better identify links in the chain of provenance across the life of a digital object. BitCurator provides "one-click" access to a toolchain that produces reports on file system contents, information items that may require redaction, and preservation metadata in the form of PREMIS.

At the School of Information and Library Science at the University of North Carolina at Chapel Hill, and in a recently-developed Digital Archives Specialization course for the Society of

American Archivists, we are creating new educational opportunities for current students and reimagining training for collections professionals, introducing cross-disciplinary methods using state-of-the-art data forensics methods to support new insights into how these materials are handled.

This poster describes core aspects of this work, including the development of software supporting educational and training initiatives, ongoing research in metadata extraction and analysis, and support for long-term access to born-digital materials.

BitCurator is a joint effort led by the School of Information and Library Science at the University of North Carolina, Chapel Hill (SILS) and the Maryland Institute for Technology in the Humanities (MITH) to develop a system for collecting professionals that incorporates the functionality of many digital forensics tools. It has been funded since 2010 by the Andrew W. Mellon Foundation.
Two groups of external partners have contributed to the process of defining the goals sought by the project: a Professional Expert Panel (PEP), comprised of individuals currently implementing digital forensics tools and methods in their collecting institutions, and a Development Advisory Group (DAG), comprised of individuals who have significant experience with development of data preservation and curation software.

Shuheng Wu, Florida State University

Exploring the Work Organization of the Gene Ontology

The advent of high-throughput techniques has led to exponential increase in the size of biomedical data (e.g., gene sequences) encoded in different formats using various controlled vocabularies and stored in different databases (Wu, Stvilia, & Lee, 2012). This has posed challenges for biomedical scientists to search, retrieve, use, analyze, and integrate data. To meet the urgent need of managing the massive amount of heterogeneous data, there has been a trend towards the development and adoption of bio-ontologies in the biomedical community (Kelso, Hoehndorf, & Prüfer, 2010).

Among these bio-ontologies, the Gene Ontology (GO) is one of the most successful and widely used. The development and maintenance of bio-ontologies usually rely on curators reading and interpreting literature and extracting concepts and relationships among theses concepts from the literature (Kelso et al., 2010). These processes are time-consuming and financially costly. What is special about GO as a sociotechnical system is its collaborative curation processes. GO has created a number of data-related request trackers hosted at SourceForge (http://sourceforge.net/) to allow any individual to provide feedback on the Ontology, such as suggesting a new term or definition, reorganizing a section of the Ontology, and reporting errors or omissions in GO annotations (Gene Ontology, 2013; Gene Ontology Consortium, 2007). GO curators review individual requests and implement edits where appropriate. The purpose of this empirical study is to examine the data activities and work organization of GO, gaining an understanding of its collaborative curation processes. As a large-scale, open-access sociotechnical system, GO's collaborative curation processes can be applied to other similar data repositories and ontologies, enabling different communities to collaboratively build and maintain the systems in an effective and less expensive way.

Guided by Activity Theory (Engeström, 1990; Leont'ev, 1978), this study conducts qualitative content analysis (Schreier, 2012) of GO's curation discussions at SourceForge to answer the following research questions:
(a) What are the data activities around GO?
(b) What are the collaborative curation processes present in GO, including communities, division of labor, object, tools, rules, and mechanisms used?

A random sample of 320 requests from the past two years was drawn from GO's Ontology Requests Tracker. The sample size was determined using the technique introduced by Powell and Connaway (2004). The unit of analysis was individual requests submitted to the Tracker, most of which include curators' comments and the actions they had taken. The study found that GO has developed various tools (e.g., templates for new GO term creation) and mechanisms (e.g., open review processes) to help ensure the quality of the Ontology and involve diverse communities (e.g., model organism databases, bioinformatics resource centers) in collaboratively developing and maintaining the Ontology. The study also found that a set of rules (e.g., taxon-neutrality of GO terms, Open Biological and Biomedical Foundry principles) has been established among these communities to guide their curation activities and span their boundaries. The findings of this study can inform sociotechnical system designers, data curators, and ontologists' development of tools and mechanisms to collaboratively manage a massive amount of heterogeneous data generated from different domains.

Elaine Yontz, East Carolina University

Elaine Yontz. School Librarians and Youth Obesity Prevention

This study is an investigation of the roles that school librarians and age-appropriate fiction and nonfiction books can play in prevention of youth obesity.

Youth obesity is a devastating health problem in Eastern North Carolina, the service area of my university, as well as across the United States. I am curious about how school librarians might provide and facilitate the kind of education that will allow students to make choices that prevent the development of obesity. The relationships that school librarians can build with students over multiple years may engender the kind of trust and credibility that can make them effective guides. Librarians' knowledge of age-appropriate books equips them to locate literature that may inspire self-care in regard to food choices and exercise. A pilot study by Bravender, Russell, Chung, and Armstrong that used the young-adult novel Lake Rescue by Annie Bryant (Simon and Schuster, 2008) noted that adolescent girls enrolled in an obesity treatment program who were provided books showed significant decreases in BMI percentage. The researchers found the most improvement in girls who read about a character with weight issues but also saw improvement in girls who read a book on an unrelated topic, thus raising the possibility that everything that school librarians do to inspire students to read may help to improve their physical health. Other relevant literature includes studies of health-education efforts by other all-school personnel as well as studies of school-based health interventions that use other strategies. Project activities to date include ongoing literature review, collection of relevant books, design of a pilot study, and outreach to possible interdisciplinary collaborators. Since the objective of the project is prevention, the pilot study will focus on early elementary students and literature for that population is being collected.

Initial resources include:

Bravender T, Russell A, Chung R, Armstrong S. A "novel" intervention: a pilot study of children's literature and healthy lifestyles. Pediatrics. 2010;125(3), e513-e517. doi:10.1542/peds.2009-1666;

Feldman DE, Barnett T, Shrier I, Rossignol M, Abenhaim L. Is physical activity differentially associated with different types of sedentary pursuits? Arch Pediatr Adolesc Med. 2003;157(8):797– 802;

Koezuka N, Koo M, Allison K, et al. The relationship between sedentary activities and physical inactivity among adolescents: results from the Canadian Community Health Survey. J Adolesc Health. 2006;39(4): 515–522; and

Utter J, Neumark-Sztainer D, Jeffery R, Story M. Couch potatoes or French fries: are sedentary behaviors associated with body mass index, physical activity, and dietary behaviors among adolescents? J Am Diet Assoc. 2003;103(10):1298 –1305.

Relevant books collected to date include: Showdown at the Food Pyramid by Rex Barron (G.P. Putnam’s Sons, 2004); The Berenstain Bears and Too Much Junk Food by Stan and Jan Berenstain (Random House, 1985); You Are What You Eat by Sharon Gordon (Children’s Press, 2002); Making Healthy Choices by Merilee A. Kern (Starbound, 2006); Oscar & Otis Fat Fighters by Alicia Kirschenheiter (Booksurge, 2008); The Edible Pyramid by Loreen Leedy (Holiday House, 2007); Eat Lots of Colors by Helen Marstiller (Createspace, 2010); The Monster Health Book by Edward Miller (Holiday House, 2012); Good Enough to Eat by Lizzy Rockwell (Harper Collins, 1999); Oh, the Things You Can Do That Are Good for You by Tish Rabe (Random House, 2001), and Gregory the Terrible Eater by Mitchell Sharmat (Scholastic, 1980).

Eunyoung Yoo-Lee, North Carolina Central University

Assessing Hispanic Americans' Health Information Needs and Health Information Seeking Behaviors in the e-Health Environment: Implications for Public Libraries

Ethnicity and English proficiency are known to be closely associated with disparities in health care and health literacy among health information seekers. Among various ethnic groups, the growth of the Hispanic population is the most notable phenomenon. Indeed, Hispanics have replaced African-Americans as the largest minority group in the United States and now comprise almost 17 percent of the nation’s total population. To provide a better healthcare services for this most rapidly growing minority population in the United States, there have been quite a few efforts to understand Hispanics' health information needs and information seeking behaviors. Furthermore, experts in public health have addressed the importance of partnership between libraries and other community health centers in serving the underprivileged populations. Yet, there is a void in the literature that examined the consumer health information services provided by public libraries serving the Hispanic Americans in a broader context of e-Health environments. Thus, this study attempts to assess Hispanic Americans' health information needs and use in the e-Health environment and their use of public libraries as a consumer health information source.

This study is a smaller scale mixed-method approach than can be used to develop a larger scale research later. A survey instrument developed based on previous research was reviewed by two subject specialists in public health. The instrument in English was translated into Spanish, and pilot-tested by two self-identified Hispanic Americans. The questionnaire items includes Hispanic Americans' health information need, source use, and source preference; perceptions and actual use of the library for health information needs; and their perceptions and satisfaction of library's consumer health information services. The survey instrument was prepared in two languages: English and Spanish. When a survey study was conducted, a total of twenty six Hispanic Americans recruited from a community organization, a public library and an ethnic grocery store in North Carolina participated in the survey in summer 2013.

Of the 26 participants 16 were female and 10 were male. Their ages were diverse: eight in 20s, twelve in 30s, four in 40s and two in 50s. In terms of education, while 15 participants did not graduate from high school, 2 were high school graduates and 8 had some college or above education.The majority of the participants were foreign born (92.31%), and non-English speakers (84.62%). Although 81% of the participants were Internet users, only 23% answered that they used a public library for health information seeking.

The objective of this research is to provide a comprehensive understanding of Hispanic Americans' health information use in general and their use of the library for health information in the e-Health environment. The findings of this research will inform Hispanic Americans' health information seeking behaviors, uses of the library as a health information source, and niches of libraries in the wide array of health information sources. The findings will help administrators in libraries and state and federal health services evaluate and plan library services to meet the Hispanic Americans' consumer health information needs in a broader e-Health care environment.

Jane Zhang, Catholic University of America

Archival Representation of Electronic and Born-Digital Records: A Research Proposal

Archival representation has been identified as an evolving process participated by multiple parties. Electronic and born-digital records have added some new dimensions to this evolving process. Recent development shows that digital forensics has arrived for archival processing, digital archivists have become a new workforce, and electronic and born-digital archives are part of big data and can benefit from new text analysis and discovery techniques. This poster outlines a research proposal designed to address issues relating to archival representation of electronic and born-digital records. The research design is guided by a conceptual framework developed from existing research and literature. The framework helps to generate hypotheses and related research questions. Research data will be collected through project reviews, surveys and interviews.

Conceptually speaking, electronic and born-digital archival representation can be derived from the entire lifecycle of electronic and born-digital records from creation to access. Multiple phases can be conceived and archival representation can therefore be generated accumulatively at each stage.

Phase One: Electronic and Born-Digital Records and Recordkeeping
- Typology of electronic and born-digital records
- Electronic/born-digital records creation and keeping systems
- Electronic/born-digital records metadata

Phase Two: Ingest & Storage
- Electronic records and born-digital records metadata transferred and preserved
- Technical metadata (file format and size) vital for decisions about discovery and access extracted or created
- High-level description and initial intellectual control

Phase Three: Arrangement & Description
- Context and structure of born-digital records and their relationships with other material
- Level at which arrangement and description undertaken (fonds or series)
- Descriptive metadata to supplement technical metadata

Phase Four: Discovery & Access
- Granularity of metadata available or created: scope and application of access restrictions
- Discovery models: metadata, content, or hybrid
- Data mining and text analysis techniques generate cues may serve as entry points into browsing interface

Three hypotheses will be tested in this study: 1) Archival representation of electronic and born-digital records is a multi-phased process involving multiple parties; 2) Each phase of the process adds its representative value to the context and content representation of electronic records and born-digital archives; 3) Archival representation of electronic and born-digital records may vary owing to the broad typological range of electronic and born-digital records.

Digital archivists are key players in the multiple phases of digital archival processing in which archival representation will be generated accumulatively. Previous research shows that job postings for digital archivists started to appear in the first decade of the 21st century and the number of postings has increased dramatically after 2010. Job positions for digital archivists have been steadily taken after the turn of the 21st century and the number of positions has increased after 2010.

Research data in this study will be drawn from electronic and born-digital archival processing projects published, self-reported or observed. Data collection methods include: literature review of born-digital archival projects, online survey of digital archivists, and phone or onsite interviews of digital archivists. Sample questions to be included: What types of electronic and born-digital records have been processed? To what extent (at what phase) has the processing been completed so far? What types of personnel have been involved (or plan to be involved) in the processing and at what phase? What kinds of contextual and content description metadata have been accumulated and at what phase? What kinds of finding aids or discovery tools have been constructed (or plan to be constructed)?

Related Literature

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