

Proceedings of the Association for Library and Information Science Education Annual Conference: ALISE 2019



Promoting Excellence in Library
and Information Science Education

Proceedings of the Association for Library and Information Science Education Annual Conference: **ALISE 2019**

Exploring Learning in a Global Information Context

Knoxville, Tennessee
September 24-26, 2019

Conference Co-Chairs:

Gary Burnett, Florida State University, USA
Diane Kelly, University of Tennessee-Knoxville, USA

Proceedings Compiled By:

Hannah C. Gunderman, Carnegie Mellon University, USA





Promoting Excellence in Library
and Information Science Education

The Association for Library and Information Science Education (ALISE)
4 Lan Drive, Suite 310
Westford, MA 01886 — Phone: 978.674.6190
<http://www.alise.org/>
office@alise.org

About the ALISE Proceedings:

ISSN: 2573-2269

Repository: IDEALS, University of Illinois at Urbana-Champaign

<https://www.ideals.illinois.edu/handle/2142/104593>

IDEALS Liaison: Linda Smith; Librarian: Ayla Stein Kenfield

Cover Photo:

Knoxville, Tennessee Skyline

Photographer: James Spears Photography

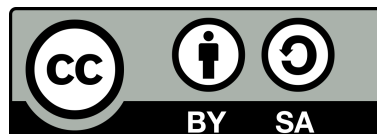
Provided by Visit Knoxville: <https://www.visitknoxville.com/>

Preface Photo:

Knoxville Skyline

Photographer: Laddy Fields

Provided by Knoxville Chamber of Commerce: <https://www.knoxvillechamber.com/>



This proceedings is licensed under a Creative Commons Attribution-ShareAlike 4.0
International License.

Table of Contents

Front Matter

Preface.....	xvii
2018-2019 ALISE Board of Directors.....	xix
2019 Conference Committee.....	xix
2019 ALISE Conference Reviewers.....	xx
President’s Welcome.....	xxii
Keynote Address.....	xxiii
Juried Papers: An Introduction.....	xxiv
Juried Panels: An Introduction.....	xxv
2019 ALISE Academy: An Introduction.....	xxvi
Works in Progress Showcase: An Introduction.....	xxvii
SIG Sessions: An Introduction.....	xxviii
Jean Tague-Sutcliffe Doctoral Poster Competition: An Introduction.....	xxix

Main Content

Juried Papers

Understanding Incoming MLS Graduate Student Proficiency and Perceptions of Information Literacy Skills.....	1
<i>Holly Hebert and Karen Reed</i>	
Evaluation of Self-Directed Technology Skills Learning at the iSchool.....	5
<i>Richard Arias-Hernandez and Can Cui</i>	
ICT Use Among Rural Child Welfare Workers: Implications for LIS Education in a Global Context.....	16
<i>Don Latham, Melissa Gross, Karen Randolph, Chris Constantino, Chance Preshia and Mollie Rooney</i>	
Cross-Campus Collaboration in the Digital Humanities: A Pedagogical Perspective.....	19
<i>Scott Sikes and Ruth Castillo</i>	
How International Are We? Mapping of “Global” Intersections in the LIS Curriculum.....	23
<i>Bharat Mehra and Lisa Curtin</i>	
Training <i>Librarians of Tomorrow</i>: Collaborations between Brooklyn Public Library’s Teen Internship Program and Pratt Institute’s MSLIS Program.....	28
<i>Leanne Bowler and Jennifer Thompson</i>	
Teaching Leadership Lessons through the Camera Lens in a Global Information Context.....	33
<i>Rajesh Singh and Gunilla Widén</i>	
Toward a Framework for Preparing Leaders in a Global Information Context.....	36
<i>Rajesh Singh and Gunilla Widén</i>	
How the Presentation and Metadata of a News Article Influences Perceptions of Fake News.....	40
<i>C. Sean Burns and Renee Kaufmann</i>	
LatinXs Finding InformaXion in Boston (LatinXs buscando InformaXion en Boston).....	44
<i>Mónica Colón-Aguirre and Janet Ceja Alcalá</i>	

Designing Future Library Leaders: Investigating the Incorporation of Design Thinking and Methods in Master’s Level Library Education.....	48
<i>Rachel Ivy Clarke</i>	
A Curricular Model in a “Social Justice and Inclusion Advocacy” Doctoral Concentration: Global Implications for LIS.....	52
<i>Bharat Mehra, Jim Elmborg and Miriam Sweeney</i>	
Integrating Metaliteracy into Knowledge Organization Curriculum: Designing Inclusive Curriculum for International Classrooms.....	57
<i>Kristen Schuster and Kristine N. Stewart</i>	
Codifying Discrepancies among MEDLINE Platforms to Advance Instruction and Practice.....	58
<i>C. Sean Burns, Tyler Nix, Robert M Shapiro II and Jeffrey T Huber</i>	
Academic Library Trends in Conflict Zones.....	62
<i>Baheya Jaber</i>	
Exploring LIS Research Education as Preparation for Practitioner Research.....	68
<i>Nicole D. Alemanne, Changwoo Yang and Xiaoi Ren</i>	
Re-attuning Students in the Information Literacy Classroom: A Theoretical Framework for Promoting Critical Thinking in a Post-Truth Era.....	74
<i>Iulian Vamanu, Kathryn Heffner and Katie Hassman</i>	
Navigating the Role of Mobile Technologies in Shaping Information Behavior: A Meta-synthesis.....	78
<i>Hsia-Ching Chang and Tara Zimmerman</i>	
The Information Sharing and Use of Ethnic Minority with Small Populations.....	93
<i>Yunfei Du and Ming Zhu</i>	
Open Educational Resources: Barriers and Benefits in LIS Education.....	96
<i>Grace Seo, Heather Moulaison Sandy and Guy Wilson</i>	
Developing LIS Curricula for Information Professionals in Library Makerspaces.....	101
<i>Marijel (Maggie) Melo</i>	
Interrogating How Information (Re)produces Systemic Barriers Within LGBTQ+ Communities to Inform Global LIS Education.....	105
<i>Vanessa L. Kitzie, Travis L. Wagner, A. Nick Vera and Valerie Lookingbill</i>	

We Need Them, But What Are They?: A Conceptual Analysis of Diverse Books.....	111
<i>E.E. Lawrence</i>	
Effective Short-Term International Learning Experiences: Promoting Global Understanding and International Cooperation.....	116
<i>Andrew J. M. Smith</i>	
Framework of Mobile-based Learning (M-Learning): An Exploratory Study on the Use of Mobile Devices for University Students’ Academic Learning.....	119
<i>Wenqing Lu and Rong Tang</i>	
The True Meaning of “Meta”: Contributions of LIS to Social Work Education in a Globalized Learning Environment.....	125
<i>Keren Dali</i>	
Preparing Library Professionals for Data Literacy Leadership: Administrator Perspectives.....	129
<i>John Marino, Sarah Evans, Jennifer Moore, Daniella Smith, Barbara Schultz-Jones, and Aaron Elkins</i>	
A Longitudinal Study of Connectedness and Information Flow.....	133
<i>Fatih Oguz and Ethan Lindsay</i>	
Student-Constructed Classroom Guidelines: How to Involve Students in the Creation of a Tailored Classroom Environment.....	138
<i>Emily Vardell</i>	
Spreading Our Wings: ECU MLS Program in the Global Arena.....	142
<i>Barbara Marson and Kaye Dotson</i>	
Cybersecurity and Information Assurance in Information Science Curricula.....	145
<i>Unal Tatar and Abebe Rorissa</i>	
“Alexa, Where do Babies Come From?” Investigating Children’s Practices with Intelligent Personal Assistants.....	148
<i>Marie L. Radford, Diana Floegel, Sarah Barriage and Daniel Houli</i>	
Diversity, Accessing Ability, and LIS Education Practices.....	153
<i>Clayton A. Copeland and Kim M. Thompson</i>	
Needs Assessment of Library Data Services: Establishing a Curriculum Framework for RDMLA.....	157

Rong Tang and Zhan Hu

The Government Needs More Librarians: The Applicability of an MLIS Education in a Public Sector Setting.....	164
<i>Cheryl Trepanier and Toni Samek</i>	

(Re) Shaping and Expanding LIS Education in the Caribbean: An Examination of Strategic and Transformative Responses of the DLIS, University of the West Indies, Mona.....	168
<i>Paulette Kerr and Paulette Stewart</i>	

Serving the Community with Trustworthy Government Information and Data: What Can We Learn from the Public Librarians?.....	174
<i>Xiaohua Zhu, Ellen Cowell, Kristen McBee, Jonathan Stewart Headrick and Joseph Winberry</i>	

Employer’s Perspective on Data Science; Analysis of Job Requirement & Course Description.....	177
<i>Sahar Behpour, Suliman Hawamdeh and Abbas Goudarzi</i>	

Going Against the Current of Hegemonic “White-Is” Discourse: Global Implications of a Doctoral Program Journey from Critical Student + Guide Perspectives.....	183
<i>LaVerne Gray and Bharat Mehra</i>	

Bonded Design in the University: Faculty and Information Technology Professionals Bonding Through Participatory Design.....	188
<i>Valerie Nessel and J. Brice Bible</i>	

Juried Panels

Copyright and LIS in a Global Context: Current Knowledge and Future Trends.....	194
<i>Laura Saunders, Deborah Charbonneau, Allison Nowicki Estell, and Dick Kawooya</i>	

Core Skills Across Information Settings: What Academic, Public, and School Librarians Need to Know.....	195
<i>Laura Saunders, Rebecca Davis, Melanie Kimball, and Rachel Williams</i>	

Information Literacy in a Global Context: Incorporating the ACRL <i>Framework</i> into Preservice Education for Information Professionals.....	196
<i>Melissa Gross, Don Latham, Heidi Julien, Bharat Mehra, Keren Dali, Yvonne Mery, Nicole Pagowsky, Carla Stoffle, Susan Rathbun-Grubb and Elizabeth Burns</i>	

HBCUs and LIS Education: Moving Forward.....	197
---	------------

Ana Ndumu, Ismail Abdullahi, Renate Chancellor, and Aisha Johnson-Jones

The Agony and the Ecstasy of Publishing with Master Students: The Importance of Scholarly Publishing for Global Information Professionals.....198
Keren Dali, Jenny S. Bossaller, Nadia Caidi, Bharat Mehra and Kim M. Thompson

Layers of Advocacy: How Librarians Everywhere Can Make a Difference and Lessons for LIS Education.....199
A.J. Million, Kristine N. Stewart, Kim M. Thompson, Heather Braum, Travis L. Wagner, Denice Adkins and Lauren Smith

In the Pursuit of Global Standards for LIS Education: What Does ‘Librarian’ Mean Around the World?.....200
Anthony S. Chow, Clara M. Chu, Jaya Raju, Dick Kawooya, Ekaterina Shibaeva and Chris Cunningham

Innovative Teaching Methods & Strategies that Work for LIS Education around the Globe.....201
Abebe Rorissa, Hemalata Iyer, Shimelis Assefa, Kendra Albright and Nadia Caidi

Curricula Models and Resources Along the Data Continuum: Lessons Learned in the Development and Delivery of Research Data Management and Data Science Education.....202
Bradley Wade Bishop, Suzie Allard, Karl Benedict, Jane Greenberg, Nancy J. Hoebelheinrich, Xia Lin and Bruce Wilson

Embracing Diversity: What it Means for New LIS Professionals and the Organizations that Hire Them.....203
Anthony Chow, Wanda Brown, Jaya Raju, Lorie Roy, Theo Bothma, LaTasha Velez, Dick Kawooya and Beatriz Guevara

Leadership During Organizational Restructuring of LIS Programs.....204
Rong Tang, Sandra Hirsh, Xia Lin, Kate Marek and Howard Rosenbaum

Spilling the Tea: LIS Professionals Speak Out on the Good, the Bad, and the Ugly in LIS Education.....205
Shari Lee and Renate Chancellor

2019 ALISE Academy

Including Disability in LIS Education and Workplaces: From Local Concerns to Global Vision.....206
Keren Dali, Kim M. Thompson, Mirah J. Dow, Brady Lund and Kevin J. Mallary

Works in Progress Showcase

Scientists, Institutional Repositories and Data Management Practices.....	207
<i>Devan Ray Donaldson</i>	
Transforming Libraries into Community Anchors in Rural Texas (TLCART).....	208
<i>Carol Perryman and Ling Hwey Jeng</i>	
The Latinx Literacy in Libraries and Archives Project.....	209
<i>Janet Ceja Alcalá, Rebecca Davis, Mónica Colón-Aguirre and Danna Leal Cisneros</i>	
Try It Before You Buy it: Library Residencies as Experiential Learning.....	210
<i>Laura Tadena and Natalie Hill</i>	
Improving the Health Literacy of Refugee Women: A Pilot Project.....	211
<i>Margaret Sullivan Zimmerman</i>	
Heritage Monitoring Scouts: Assessing Citizen Science Programs Utilizing Outcome-based Evaluation and Self Determination Theory.....	212
<i>Laura Clark and Sarah Miller</i>	
Caregivers' Perceptions of Children's Programming at the Destination Archaeology Resource Center.....	213
<i>Laura Clark and Mike Thomin</i>	
Examining Disciplinary Cooperation in Grant-Funded Human Health Research: A Text Mining Approach.....	214
<i>Danielle Pollock</i>	
The Role of the Academic Librarian in Online Courses.....	215
<i>Jennifer Elaine Steele</i>	
Small and Rural Public Libraries: Supporting Community Health and Wellness.....	216
<i>Noah Lenstra, Ellen Rubenstein, Christine D'Arpa and Susan K. Burke</i>	
The Three P's: Public Libraries, Partnerships, and (Health and Wellness) Programs.....	217
<i>Noah Lenstra and Ellen Rubenstein</i>	
"I Asked My Mom A Hundred Times To Put It On YouTube": Unboxing Videos in Early Childhood.....	218
<i>Sarah Barriage</i>	

Exploring Reference and Information Service in a Global Information Context.....	219
<i>Amy VanScoy</i>	
Bridging the Digital Divide: Understanding Public Library Users' Technology Needs and Purposes Through Critical Race Theory.....	220
<i>Raymond Pun</i>	
Evaluating the Effectiveness of Collaborative Learning in Online Asynchronous Courses.....	221
<i>Xiaoai Ren</i>	
To Share or Not to Share?: A Comparative Analysis of Data Sharing Factors by Different Academic Positions.....	222
<i>Yunseon Choi, Changwoo Yang and Youngseek Kim</i>	
Towards Quality: A Project to Systematically Develop Quality Matters Skills and Capacities for an Online Department.....	223
<i>Kyle M.L. Jones, Angela Murillo and Ayoung Yoon</i>	
Infusing Diversity, Cultural Competence, and Social Justice into an LIS Curriculum.....	224
<i>Nicole D. Alemanne, Colette Drouillard and Xiaoai Ren</i>	
Users' Hidden Needs: An Investigation of Information Sharing Behaviors on Online Participatory Platforms.....	225
<i>Yunseon Choi</i>	
The Portrait of Global Cultural Leaders & the Framework of Cultural Leadership in the 21st Century: And their Influence on Preparing Cultural Human Resources in China.....	226
<i>Jing Zhang and Jiaqi Liao</i>	
Information Seeking Behaviors in Different Study Settings.....	227
<i>Yiwei Wang, Jiqun Liu and Chirag Shah</i>	
Building a Culture-Rich Environment in the Organization and Selection of Books: An Analysis of GoodReads Reader Reviews on Multicultural Books for Children.....	228
<i>Yunseon Choi and Colette L. Drouillard</i>	
The Use of STEM Programming to Create Global Citizens.....	229
<i>Savanna Draper and Thura Mack</i>	

What Do Global Researchers Mean When They Say Online Learning?	230
<i>Vandana Singh</i>	
The Use of Investigation Video Games to Teach Reasoning Skills in the LIS Classroom	231
<i>John Burgess and Anna Grace Wallace</i>	
Public Librarians: Toward a Typology of Professional Identity	232
<i>Cameron M. Pierson</i>	
Exploring Influences of the Social Context on Task-Based Information Seeking Behavior	233
<i>Eun Youp Rha and Nicholas Belkin</i>	
#Metoo: People’s Concerns, Emotions, and Shared Information on Twitter	234
<i>Iman Tahamtan</i>	
The Implementation Plan of E-learning to Fulfill New Demands of Librarians’ Continuing Education in City Library Network Building	235
<i>Jing Zhang, Siyu Li, Qianli Lin and Liqiong Tan</i>	
LIS Education in the UAE: Exploring School Librarian Qualifications and Opportunities	236
<i>Kristine N. Stewart, Mireille El Najjar and Suhaila Al Mansoori</i>	
Impact of a Study Abroad Course on Cultural Sensitivity	237
<i>Jennifer Luetkemeyer and Rebecca Jordan</i>	
Criteria Used for Selecting E-Book Products: Connection Between Practices and Formal Education in LIS Schools	238
<i>Mei Zhang</i>	
Investigating the States of Task-Based Search Interactions: A Behavioral Economics Approach	239
<i>Jiqun Liu and Yiwei Wang</i>	
Integrating Orientation Content into a Required First Semester Online Course to Support New Online Graduate Student Success	240
<i>Colette L. Drouillard and Linda R. Most</i>	
First Gen, PhD: Understanding the Information Horizons of First-Generation Graduate Students Pursuing Research-Intensive Careers	241
<i>Michelle Parker and Danielle Pollock</i>	

Academic Censorship and the Construction of an Alternative Chinese Narrative: A Preliminary Analysis of <i>China Quarterly</i>	242
<i>Pei-Ying Chen and Kai Li</i>	

Usability as a Method to Analyze a Library Search Box and Interfaces	243
<i>Kenneth Haggerty</i>	

‘What I Wish I Had Seen’: Slash Fanfiction Writing as Queer World-Building ..	244
<i>Diana Floegel</i>	

“They Don’t Even See Us”: Intersectional Approaches to Understanding Disability in LIS	245
<i>Amelia N. Gibson and Kristen Bowen</i>	

SIG Sessions

The Hoax and the President: Historical Perspectives on Politics, Truth, and Academia	246
<i>Anthony Bernier, Jenny Bossaller, Sharon McQueen and Mark Peterson</i>	

Archival Learning in a Global Context	247
<i>Sarah Buchanan, Reem Alkhaledi, Andrea Copeland, Suliman Hawamdeh, Johnathan Thayer and Ayoung Yoon</i>	

Chatman Revisited: Re-examining and Resituating Social Theories of Identity, Access, and Marginalization in LIS	248
<i>Nicole Cooke, Amelia Gibson, Joe Sanchez, Shawne Miksa, Bharat Mehra and LaVerne Gray</i>	

Global Learning: The School Library as an Exploration Hub	249
<i>Elizabeth Burns, Maria Cahill, Sue Kimmel, Marcia Mardis, Barbara Schultz-Jones, Lois Wine, Rita Soulen, Jenna Kammer</i>	

Exploring Innovative Pedagogies in a Global Information Context	250
<i>Kevin Rioux, Rajesh Singh, Kyungwon Koh, Elaine Martaus, Denise Adkins, Nina Exner, Vandana Singh, Kristen Schuster and Brittany Kelley</i>	

Resources for Teaching Technical Services in a Rapidly Changing Global Environment	251
<i>Karen Snow, Heather Moulaison Sandy, Gretchen Hoffman, Athena Salaba and Sarah W. Sutton</i>	

More Data, More Problems: Strategically Addressing Data Ethics and Policy Issues in LIS Curricula and Courses	252
<i>Kyle Jones, Nicole Alemanne, Jenna Kammer, Yasmeen Shorish, Grace Barth, Natalie Greene Taylor, Loni Hagen, Toni Samek, Ali Shiri, Carolin Huang, John Burgess, Emily</i>	

Knox

Youth Services in the Global Learning Community.....	253
<i>Kyungwon Koh, Abigail L. Phillips, Maria Cahill, Kristie L. Escobar, Lesley S.J. Farmer, Kasey Garrison, Karen W. Gavigan, Mary Howard, Soohyung Joo and Rachel M. Magee</i>	

Exploring OER Strategies to Enable the Recasting of the Core Graduate Library Management Course.....	254
<i>Linda Lillard, YooJin Ha, Michael Miller and Cecilia Salvatore</i>	

How Effective is Study Abroad as a Pedagogical and Experiential Learning Tool in LIS Education?.....	255
<i>Dick Kawooya, Elizabeth Jenny Bossaller, Jennifer Luetkemeyer, Kim Thompson, Marie L. Radford, Lisa Hussey and Renate Chancellor</i>	

Jean Tague-Sutcliffe Doctoral Poster Competition

Development of Research Competencies among Academic Librarians.....	256
<i>Nina Exner</i>	

Values in Knowledge Organization Standards: A Value Analysis of Resource Description and Access (RDA).....	257
<i>Brian Dobreski</i>	

Examining the Red Thread of Information in Young Children's Interests: A Child-Centered Approach to Understanding Information Practices.....	258
<i>Sarah Barriage</i>	

Civil Rights Collecting Institutions and the Facilitation of Public Engagement in the American South.....	259
<i>Jeff Hirschy</i>	

Dark Arts: Artists' Information Practices in the Care of Digital Artworks and Archives.....	260
<i>Colin Post</i>	

Understanding the Knowledge, Skills, and Abilities (KSA) of Data Professionals in United States Academic Libraries.....	261
<i>Hammad Rauf Khan</i>	

Cooperative Catalogers' Lived Experience Implementing Resource Description and Access: Developing Best Practices for Creating Global Metadata.....	262
<i>Kristine M. Woods</i>	

Serious Leisure, Information Practices and Embodiment: A Study of Amateur Classical Musicianship.....	263
<i>Brian Griffin</i>	
School Librarians' Impact on Students' English & Math Achievement.....	264
<i>Lois D. Wine</i>	
In a Collective Voice: Uncovering the Black Feminist Information Community of Activist-Mothers in Chicago Public Housing, 1955-1970.....	265
<i>LaVerne Gray</i>	
Cognitive Authority in Online Social Media during Severe Weather.....	266
<i>Carrie A. Boettcher</i>	
Archives in Libraries: The Impact of a Parent-Child Relationship on Corporate Identity and User Perception.....	267
<i>Ashley Todd-Diaz</i>	
Examining the Notion of the Boundary Object in Information Systems: The Transdisciplinary Oeuvre of Cognitive Science.....	268
<i>Laura Ridenour</i>	
The Influence of Socio-Technical Environments on the Information Behaviors and HIV Risk Reduction Behaviors of Black Gay Men.....	269
<i>Megan Threats</i>	
Rising Together: Community Resilience and Public Libraries.....	270
<i>Beth Patin</i>	
A Quantitative Examination of Software-Method Packages in Psychological Research Articles.....	271
<i>Kai Li</i>	
Foregrounding Data Curation to Foster Reproducibility of Workflows and Scientific Data Reuse.....	272
<i>Michael R. Gryk</i>	
Predicting Scientific Evolution by Understanding its Driving Factors.....	273
<i>Jianguen He</i>	
Study Setting and Task Configuration for Task-Based Information Seeking Research.....	274
<i>Yiwei Wang</i>	

Author Index.....	275
Author-Added Keywords Index.....	281
ALISE Topics Taxonomy Index.....	292

Preface



Welcome to the proceedings of the Association for Library and Information Science Education's annual conference (ALISE 2019)! ALISE 2019 provides an opportunity for academics, researchers, educators, professionals, and students to present research and share best practices in pedagogy. While the field of information and library science has many professional organizations and conferences, ALISE is the only organization whose conference is primarily focused on educational practice, which is central to the advancement and development of the field.

We are excited to again partner with the Illinois Digital Environment for Access to Learning and Scholarship (IDEALS) and we thank them for digitally hosting our proceedings, which is open access and provides a DOI for each scholarly work. We are appreciative of the efforts of last year's ALISE conference proceedings editors, Peiling Wang, Shimelis Assefa, and Ashlea Green, who oversaw the creation of the inaugural edition of the ALISE conference proceedings.

This year, we have organized the proceedings into sections based on session type, rather than as a single document, to increase findability of each author's scholarly work. On the landing page for the proceedings, you will find full versions of juried papers, as well as abstracts for juried panels, the Jean Tague-Sutcliffe Doctoral Poster Competition, Works in Progress Showcase, SIG Sessions, and the ALISE Academy. You will also find introductions written

by the papers, panels, and special session track chairs. We invite you to use the proceedings in real-time as you attend sessions and network at ALISE 2019, and we hope the proceedings will allow you, and others not in attendance, to enjoy the vibrant research conducted in LIS education well after the conference ends.

We received a high-quality set of submissions and want to express our gratitude to each author who allowed us the opportunity to consider their work for inclusion in the program. We received 53 juried paper submissions and accepted 40. We received 21 panel submissions and accepted 12. For the ALISE Academy, we received five submissions and accepted one. With respect to the Jean Tague-Sutcliffe Doctoral Poster Competition, Works in Progress Showcase, and SIG Sessions, we received 19, 45 and 11 submissions respectively, and were able to accept all submissions that met the basic inclusion criteria. In the proceedings, you will find 19 Jean Tague-Sutcliffe Doctoral Poster Competition abstracts, 39 Works in Progress abstracts, and 10 SIG Session abstracts.

We are grateful to all the program chairs who managed submissions: Juried Papers (John Budd and Annie Kim); Juried Panels (Kyle Jones and Linda Lillard); SIG Sessions (Nicole Cooke); Works in Progress (Matthew Griffis and Beth St. Jean); Jean Tague-Sutcliffe Doctoral Poster Competition (Paulette Kerr and Eric Meyers); and ALISE Academy (Mary Cavanagh and Marie Radford). We wish to express a warm thanks to Heidi Julien, ALISE President, for all her support and advice throughout the process, and to Cambria Happ from the ALISE Headquarters, for her efforts managing and organizing the conference. Finally, we thank the 76 reviewers who provided feedback on submissions.

We hope you enjoy ALISE 2019 and take the opportunity to catch-up with old friends and make new ones in the fun and relaxed surroundings of Knoxville, Tennessee.

Gary Burnett, Diane Kelly, and Hannah Gunderman

2018-2019 ALISE Board of Directors

President

Heidi Julien
Professor
SUNY Buffalo - New York

Director for Special Interest Groups

Nicole Cooke, Augusta Baker Endowed
Chair and Associate Professor
University of South Carolina

President-Elect

Stephen Bajjaly
Professor
Wayne State University

Director for Membership Services

Cecilia Salvatore
Associate Professor
Dominican University

Past President

Dietmar Wolfram
Professor
University of Wisconsin-Milwaukee

Director for External Relations

Rong Tang
Professor
Simmons University

Secretary/Treasurer

Heather Moulaison Sandy
Associate Professor
University of Missouri

ALISE Headquarters

Executive Director: Cambria Happ
Program Coordinator: Ana Mattson
Bookkeeper: Karla Ferrini

2019 Conference Committee

Conference Co-Chairs: **Gary Burnett**, Florida State University; **Diane Kelly**, University of Tennessee-Knoxville

Juried Paper Co-Chairs: **John M. Budd**, University of Missouri; **Jeonghyun (Annie) Kim**, University of North Texas

Juried Panel Co-Chairs: **Kyle M. L. Jones**, Indiana University-Indianapolis (IUPUI); **Linda Lillard**, Clarion University

ALISE Academy Co-Chairs: **Mary F. Cavanagh**, University of Ottawa; **Marie L. Radford**, Rutgers University

ALISE Jean Tague-Sutcliffe Doctoral Poster Competition Committee Co-Chairs: **Paulette Kerr**, University of the West Indies, Mona; **Eric Meyers**, University of British Columbia

Works in Progress Showcase Co-Chairs: **Matthew Griffis**, University of Southern Mississippi; **Beth St. Jean**, University of Maryland

SIG Session Chairs: **Nicole Cooke**, University of South Carolina; **Kyle M. L. Jones**, Indiana University-Indianapolis (IUPUI); **Linda Lillard**, Clarion University

Proceedings Chair: **Hannah Gunderman**, Carnegie Mellon University

2019 ALISE Conference Reviewers

June Abbas, University of Oklahoma, USA
Waseem Afzal, Charles Sturt University, Australia
Dan Albertson, University at Buffalo, State University of New York, USA
Nicole Alemanne, Valdosta State University, USA
Daniel Gelaw Alemneh, University of North Texas, USA
Jason Kelly Alston, University of Missouri, USA
Amelia Anderson, Old Dominion University, USA
Stephen Bajjaly, Wayne State University, USA
Anthony Bernier, San Jose State University, USA
Dania Bilal, University of Tennessee-Knoxville, USA
Nora Bird, University of North Carolina at Greensboro, USA
Bradley Wade Bishop, University of Tennessee-Knoxville, USA
Jenny Bossaller, University of Missouri, USA
Beth Brendler, University of Missouri, USA
Susan Burke, University of Oklahoma, USA
C. Sean Burns, University of Kentucky, USA
Renate Chancellor, Catholic University of America, USA
Sanda Erdelez, Simmons University, USA
Kristin Eschenfelder, University of Wisconsin-Madison, USA
Amelia Gibson, University of North Carolina at Chapel Hill, USA
Anne Gilliland, University of California, Los Angeles, USA
Ursula Gorham, University of Maryland, USA
Melissa Gross, Florida State University, USA
Yoojin Ha, Clarion University of Pennsylvania, USA
Suliman Hawamdeh, University of North Texas, USA
Deborah Hicks, San Jose State University, USA
Renee Hill, University of Maryland, USA
Kelly M. Hoffman, University of Maryland, USA
Sandra Hughes-Hassell, University of North Carolina at Chapel Hill, USA
Lisa Hussey, Simmons University, USA
Vanessa Irvin, University of Hawaii-Manoa, USA
Fiona Jardine, University of Maryland, USA
Karlene Noel Jennings, University of North Carolina at Greensboro, USA
Soohyung Joo, University of Kentucky, USA
Jenna Kammer, University of Central Missouri, USA
Michelle Kazmer, Florida State University, USA
Hammad Khan, University of North Texas, USA
Goun Kim, Rutgers University, USA
Youngseek Kim, University of Kentucky, USA
Emily Knox, University of Illinois at Urbana-Champaign, USA
Christie Kodama, University of Maryland, USA
Kyungwon Koh, University of Illinois at Urbana-Champaign, USA
Adam Kriesberg, University of Maryland, USA

Don Latham, Florida State University, USA
Myeong Lee, University of Maryland, USA
Shari Lee, St. John's University, USA
Lauren Mandel, University of Rhode Island, USA
Eleanor Mattern, University of Chicago, USA
Lynne McKechnie, University of Western Ontario, Canada
Stephanie Mikitish, Library of Congress, USA
Ana Ndumu, University of Maryland, USA
Valerie Nessel, University at Buffalo, State University of New York, USA
Jennifer Burek Pierce, University of Iowa, USA
Devendra Potnis, University of Tennessee-Knoxville, USA
Brenda Pruitt-Annisette, University of Houston - Clear Lake, USA
Susan Rathbun-Grubb, University of South Carolina, USA
Abebe Rorissa, University at Albany, State University of New York, USA
Ellen Rubenstein, University of Oklahoma, USA
Athena Salaba, Kent State University, USA
Toni Samek, University of Alberta, Canada
Joe Sanchez, Queens College, City University of New York, USA
Heather Moulaison Sandy, University of Missouri, USA
Kristen Schuster, King's College London, United Kingdom
Louise Spiteri, Dalhousie University, Canada
Mary Stansbury, University of Denver, USA
Suzanne Stauffer, Louisiana State University, USA
Rong Tang, Simmons University, USA
Ross Todd, Rutgers University, USA
Amy VanScoy, University at Buffalo, State University of New York, USA
Emily Vardell, Emporia State University, USA
Peiling Wang, University of Tennessee-Knoxville, USA
Michael Widdersheim, Emporia State University, USA
Eunyoung Yoo-Lee, North Carolina Central University, USA
Xiaojun Yuan, University at Albany, State University of New York, USA
Xiaohua Zhu, University of Tennessee-Knoxville, USA
Margaret Zimmerman, University of Iowa, USA

President's Welcome

Welcome to the 2019 ALISE conference in friendly Knoxville! Our theme, Exploring Learning in a Global Information Context, signals our focus on education for the information professions, as well as our interest in maintaining a global perspective on educational issues. Education for the information professions occurs around the world, and as an organization we are moving towards a more international perspective, with greater inclusivity of colleagues outside of North America.

Those of us who prepare information professionals must encourage students to think and engage beyond regional or national boundaries when considering issues that face our global information community. Our connections and conversations with global colleagues will inevitably internationalize our curricula, open new opportunities for our graduates beyond national borders, and bring global perspectives and innovative approaches to local information services. The benefits are clear – access to new and diverse ideas to improve information services, and more globally aware information professionals, who will more effectively meet the needs of the diverse range of clients they serve. We can make this happen by embracing a global perspective on the information world, by reading professional and research literature produced outside of our own countries, and by engaging with colleagues around the world through international conferences and travel to libraries far from home. Our responses to our own local challenges should incorporate the wisdom and experience of the wider, the global, information community. There is much to be learned from one another, and we're all in this together!

We hope that your conference experience embraces the many opportunities we offer, including networking, intellectual engagement with speakers and panelists, placement services, etc. We encourage you to introduce yourself to someone new, and to especially welcome our student and international attendees. Our keynote speaker, Dr. Jaya Raju, is a dynamic presenter who brings very significant international expertise and profile to our community. We are fortunate to host her at ALISE 2019.

I offer my deep and sincere thanks to the conference organizing committee, particularly co-chairs Diane Kelly and Gary Burnett, who worked tirelessly for 18 months to bring this event to life. Their dedication to ALISE, along with their good humor and attention to detail, is an incredible gift to us all. Thanks to Hannah Gunderman for editing the conference proceedings, and to the awards committee chairs and members who devoted their energies and expertise to select worthy recipients of this year's awards. To all the ALISE volunteers, thank you for sharing your talents and time to move the organization forward! I am also grateful to our new Executive Director, Cambria Happ, who has experienced a tremendous learning curve with us these past 11 months, and who has provided steady, responsive, and expert support. We wish all conference attendees an engaging, stimulating, and enjoyable conference experience.

Heidi Julien, 2018-19 ALISE President

Keynote Address

Dr. Jaya Raju

Associate Professor and Head of the Library and Information Studies Centre at the
University of Cape Town, South Africa

Title: Shaping LIS education for blended professionals in a pluralist information environment: global reflections

Abstract:

“Disruptive innovations” have increased demand for information technology (IT) skills in contemporary library and information agencies, creating an increased need for pedagogical skills on the part of library and information science (LIS) professionals so they may empower users with knowledge and skills to navigate a complex digital information terrain. Hence, LIS professionals with both technology and pedagogical skills have become increasingly critical in a digitized information environment. Librarians must now blend traditional skills with the information technologist’s hardware/software skills, and the educational designer’s ability to apply technology appropriately to teaching and learning.

In a troubling context of a disconnect between the increasing importance of pedagogical skills in public service positions and the global response from LIS schools to this skills demand, LIS professionals have turned to continuing professional development to prepare themselves for the teaching roles increasingly thrust upon them, especially in a technology-driven higher education information environment. Academic libraries are across the world the largest employers of LIS graduates; but, much needs to be done in LIS schools globally to enable graduates to develop a confident teacher identity, and credibility as teachers among students, academics and other university constituencies. LIS schools also have a significant role in repositioning the LIS discipline such that the emerging LIS-related IT knowledge and skill sets are pedagogically and epistemologically embedded in LIS curriculum design and development.

In the context of this confluence of knowledge and skills requirements for the LIS professional, and responding to the conference theme, this keynote address draws on early findings from a global phenomenological probe into curriculum development directed at the hybrid LIS professional located in a pluralist information environment, and requiring cross-disciplinary competencies spanning LIS, IT, Teaching and Learning, and perhaps other cognate areas. It explores challenges, ideas, and thinking in LIS education from preliminary empirical findings from Africa, Asia, and South America (representing the global south), and Europe and North America (representing the global north), to stimulate debate and discourse on the repositioning of LIS as it broadens its disciplinary space in response to a technology-driven information environment.

Juried Papers: An Introduction

To quote from the call for participation for Juried Papers: “This call for Juried Papers seeks original contributions including reports of research, theory, pedagogy, best practices, think pieces, and critical essays that contribute to elaboration of the conference theme of “Exploring Learning in a Global Information Context.” This conference welcomes contributions that explore how LIS schools in various parts of the world respond to the growing career opportunities in the information professions by developing curricula, programs, and research activities that address global LIS education issues.” The call was open for several weeks and a total of fifty-three submissions were received. Forty submissions were accepted for inclusion in the Conference Program. Every submission was subjected to three reviews and the overall quantitative and narrative assessments were taken into account in determining which submissions would be selected for the Conference. Among the items accepted are topics including information literacy, data management, information education in a global context, training librarians for tomorrow’s environment, social identity and social justice, and the impact of fake news on information consumers. The Co-Chairs are extremely confident that the scope and breadth of presentations will interest all Conference attendees. There will certainly be something for everyone in the Program. We look forward to these excellent presentations and will welcome the feedback on the Program.

John M. Budd & Jeonghyun (Annie) Kim
ALISE 2019 Juried Papers Co-Chairs

Juried Panels: An Introduction

Juried panels provide a flexible structure for collaborators and to-be collaborators to share time to explore a common theme. The call for proposals explicitly sought submissions “that explore how LIS schools in various parts of the world respond to the growing career opportunities in the information professions by developing curricula, programs, and research activities that address global LIS education issue.” Without a doubt, panelists answered the call.

The selection of juried panels for this year’s conference provides attendees with an array of options. A rough, non-rigorous analysis of the accepted panels suggests that panelists will tackle tough issues, such as ongoing leadership changes in turbulent administrative times. Several panels provide an opportunity for LIS educators to be introspective about and critically examine their role as mentors and educators, while others yet have sought the opinions of working LIS professionals to provide feedback on the work we do in LIS education. There are other panels that address emerging trends in curricula around data science, which naturally raise questions about curricular standards—which a couple of panels address. And true to the conference’s theme on “exploring learning in a global information context,” several panels look at LIS from an international perspective. For instance, information literacy and copyright concerns are explored, while other panels examine teaching methods with a global reach. Perhaps more than ever before, a clear evaluative emphasis was placed on selecting panels that were not only timely and showed promise with regard to content, but explicitly considered audience engagement strategies. At ALISE, we want audience members to leave their sessions inspired, included, and engaged. More importantly, we want attendees to put what they learn into action at their respective university, in their school/department, and with their students in the classroom. We believe that the best panels, the accepted panels have a strategy for accomplishing these goals.

We end this introduction to juried panels with a call to action to panelists and panel attendees. Panels are a ripe time for networking of two sorts: intellectual and social. It is through panels that audience members get exposed to a latticework of ideas. But it is only through engagement with these ideas—and those that lead conversations about them—that future research and teaching collaborations emerge. So our call is this: If an idea rouses you, if a speaker engages you, if you see a research gap in need of inquiry... start today to build a new social and intellectual network, those new collaborations, and then next year submit your juried panel abstract!

We wish all of our colleagues an engaging ALISE experience.

Kyle M. L. Jones & Linda Lillard
ALISE 2019 Juried Panels Co-Chairs

ALISE Academy: An Introduction

This year we are pleased to present the 10th ALISE Academy workshop. Since 2009, the ALISE Academy has been a regular half-day, pre-conference event. A variety of formats have been used to treat new and emerging Library and Information Science (LIS) topics related to career development, teaching, and research among LIS faculty. Key themes have included social justice and inclusion, managing your career at various stages, bringing the GLAM sector and cultural heritage into LIS, educational entrepreneurship and innovation, and various takes on LIS research. The purpose of the ALISE Academy is to provide a learning experience for attendees, free of charge, that takes place on the day before the full conference starts, so that it has no scheduling conflict for all that wish to attend. Traditionally the Academy has related to the conference theme, which this year is “Exploring Learning in a Global Information Context.”

The process of selection for the 2019 Academy involved a competitive review of all submissions which were sent in response to a widely-circulated call for proposals (CFP). We received a number of excellent submissions and used the CFP’s stated criteria to make our selection. Two of the most important criteria focused on the qualifications of the organizers and Academy participants, plus the relevance to the aforementioned theme. The selected proposal is an excellent fit for the theme and will be presented by highly qualified and recognized scholars in the area of global learning in Library and Information Science. This year’s Academy brings our attention to disability inclusion and exclusion, in an international context, again highlighting the need for greater diversity within LIS faculties, schools, and departments. A topic that continues to challenge us all to make our programs as rich a learning experience as possible, for everyone around the table. We would like to thank this year’s Board of Directors and conference organizers for supporting the ALISE Academy, as well as Rutgers University for financial sponsorship.

Mary F. Cavanagh & Marie Radford
ALISE Academy 2019 Co-Chairs

Works in Progress Showcase: An Introduction

This year's showcase will feature 39 posters and cover a broad range of topics related to the ALISE 2019 conference theme, "Exploring Learning in a Global Information Context." The posters show a strong focus on equity, diversity and inclusion, particularly the improvement of information access for disadvantaged populations and the preparation of LIS students to engage more effectively with and better identify the information needs of their communities. Several posters describe programs related to these issues currently active at public libraries and other information centers. Other posters cover such topics as improvement and innovation in MLIS education, including the design, implementation and assessment of online courses, while others explore information behavior across a variety of contexts, from children sharing toy-related information to first-generation graduate students seeking career-related information and collaborative researchers sharing their data. Overall, the Works in Progress Showcase will provide a detailed snapshot of the important work currently in progress to increase information access for all and to help prepare librarians and other information professionals to offer relevant and useful resources to their communities.

Poster authors, who will be present at the Showcase to discuss their work, represent a wide range of institutions and organizations from around the world. This diversity of voices will further strengthen ALISE's reputation as an international venue for research dissemination. As the Showcase Co-Chairs, we were pleased to learn about all of the important and innovative work currently going on in our field, and that so much of it is being carried out on a global scale. We thank all poster authors and presenters for sharing their projects with us and look forward to seeing everyone in Knoxville at the ALISE 2019 Works in Progress Showcase.

Matthew Griffis & Beth St. Jean
ALISE 2019 Works in Progress Showcase Co-Chairs

Special Interest Group (SIG) Sessions: An Introduction

The ALISE Special Interest Groups (SIGs) represent an important part of the ALISE community. The SIGs are a platform for ALISE members to share ideas, plans, news, programs, resources, and opinions related to a particular area of interest, not only at the conference but also throughout the year. The ALISE SIGs constitute subcommunities within ALISE that focus on library and information science (LIS) educator roles and responsibilities, teaching and learning practices, and the range of curricular areas addressed in LIS programs.

The SIG sessions presented at the 2019 ALISE conference represent a broad range of topics of interest to the LIS education and the professional community. This year's sessions address historical perspectives on politics, truth, and academia; archival learning and its importance to the global landscape; school libraries as hubs of exploration; innovative pedagogies that can be utilized in a variety of LIS classrooms; resources for teaching topics related to technical services; data ethics and policy issues in LIS curricula; youth services in a global society; revising graduate library management courses with OER resources in mind; study abroad as an avenue for global LIS education; and the legacy of Dr. Elfreda Chatman and her impact on LIS education.

We are grateful to the SIG conveners and session presenters for their work and expertise!

Nicole Cooke, Kyle M. L. Jones, & Linda Lillard
ALISE 2019 SIG Session Chairpersons

Jean Tague-Sutcliffe

Doctoral Poster Competition: An Introduction

We are delighted to present the work of 19 doctoral students and recent graduates in the Jean Tague-Sutcliffe Doctoral Student Research Poster Competition. This competition was established in 1997 by students from the University of Western Ontario in memory of Jean Tague-Sutcliffe, Professor and former Dean of the Graduate School of Library and Information Science at the University of Western Ontario (now the Faculty of Information and Media Studies). During her thirty-year career, Professor Sutcliffe produced significant and widely regarded research relating to mathematical information retrieval, bibliometrics and information measurement. Her work is internationally recognized for its contributions to the theoretical, methodological, and practical foundations of library and information science. The students in this year's competition carry forward the curiosity, humility and excellence that was embodied by Professor Tague-Sutcliffe.

The Jean Tague-Sutcliffe Doctoral Student Research Poster Competition Award is sponsored by Western University, Faculty of Information and Media Studies. The first-place winner will receive a one-year student membership to ALISE and \$200 cash prize.

Eric M. Meyers & Paulette Kerr

ALISE 2019 Jean Tague-Sutcliffe Doctoral Poster Competition Co-Chairs

Understanding Incoming MLS Graduate Student Proficiency and Perceptions of Information Literacy Skills

Holly Hebert and Karen Reed

Middle Tennessee State University, USA

holly.hebert@mtsu.edu, karen.reed@mtsu.edu

ABSTRACT

Faculty often expect incoming graduate students to have a high level of information literacy skills as obtained during their undergraduate coursework; prior research, however, demonstrates that these skills cannot be presumed. This paper discusses the results of an enhancement to an existing introductory course in one Master of Library Science (MLS) program in which the course was redesigned to include a greater focus on information literacy skills. This case study examined fifteen students for their possible change in knowledge of information literacy skills, as well as to understand their perceptions regarding confidence in their skills post-instruction.

TOPICS

information literacy; standards; curriculum; online learning

INTRODUCTION

Although information literacy instruction has been common in higher education for decades, it has primarily focused on the needs of undergraduate students as there is a prevailing assumption that graduate students are already adept with research skills (Blummer, 2009; Monroe-Gulick & Petr, 2012). Research regarding the information literacy skills of graduate students is limited but suggests that these students tend to be overconfident of their skill level, and that a wide range of proficiency exists (Kumar & Ocha, 2012; Smith, 2012). Furthermore, research specific to the information literacy skills of library science students is very limited, with Lamb (2017) publishing a study similar to the goals of this paper. In all, there is a need for greater work in this area.

This paper describes the efforts of one university's MLS program, which completed a course redesign focused on the skills emphasized by the 2016 ACRL *Framework for Information Literacy for Higher Education* standards.

THE COURSE

LIBS 6000 Librarianship is a beginning-level core course in the Master of Library Science Program. Although its instructor recognized the need for information literacy instruction among her incoming students, she was hesitant to make additions to the heavily laden course. To accommodate the lack of additional instructional time, as well as the varying skill levels of her students, the professor created self-paced online individual learning modules to be completed during the semester. Individual modules for each *Framework* standard were added to the content of the course. Each module contained a brief video explanation and links to several sources for each topic.

METHODOLOGY

This case study utilized a convergent mixed methods design approach in which participants were assessed through several instruments pre- and post-instruction. Prior to the start of their instruction, participants completed a timed 30-question multiple-choice assessment to gauge their knowledge of information literacy concepts; this same assessment was administered post-instruction (Knowledge construct). Survey questions were either taken directly or modified from the “Learning Assessment Questions Version 2018-05-16” (<http://ilaap.ca/>), and were selected to ensure adequate representation of each ACRL *Frame*; see Table 1. The pre- and post-assessments for the Knowledge construct were compared through a paired-samples t-test in SPSS. Tests were run to compare the aggregate scores pre- and post-instruction, as well as to measure the results from each of the six ACRL frames pre- to post-instruction.

Specific ACRL Frame	Total number of questions addressing Frame	Individual questions addressing Frame
Research as Inquiry	4	1, 13, 15, 23
Searching as Strategic Exploration	8	1, 5, 6, 8, 9, 14, 18, 30
Scholarship as Conversation	10	2, 3, 7, 10, 13, 16, 19, 26, 27, 28
Authority is Constructed and Contextual	7	2, 4, 11, 12, 17, 21, 29
Information Creation as a Process	5	3, 4, 7, 16, 23
Information Has Value	6	20, 22, 24, 25, 26, 28

Table 1. Categorization of Knowledge survey questions to ACRL Frames

Additionally, class participants completed a survey post-instruction to measure their perceptions of the information literacy component of class (Perceptions construct). This instrument consisted of five questions each with a ten-point Likert scaled response, as well as three open-response questions.

FINDINGS

The paired-samples t-test for the Knowledge construct demonstrated that on average students entering the class ($M = 24.67$, $SE = 0.72$) experienced a gain in information literacy knowledge by the end of class ($M = 26.47$, $SE = 0.62$). This difference, -1.80 , 95% CI $[-3.33, -0.27]$, was significant $t(14) = -2.53$, $p = .024$, and represented a medium-sized effect, $d = 0.46$. Additionally, students demonstrated a statistically significant gain for one *Frame*: Information Creation as a Process. From the beginning of class ($M = 4.0$, $SE = 0.24$) to the end of class ($M = 4.8$, $SE = 0.11$) students on average made the most improvement in this one area of the *Framework*. The difference, -0.8 , 95% CI $[-1.32, -0.28]$, was significant $t(14) = -3.29$, $p = .005$, and represented a medium-sized effect, $d = 0.66$.

The analysis of the Perceptions construct indicated that students completed the course with a moderate confidence regarding their overall information literacy skills (69%), as well as ability to cite sources (67%). Students felt most confident about their ability to locate scholarly resources (75%) and evaluate these resources (78%) post-instruction.

CONCLUSION

This paper will give greater explanation of the case study's instruction, provide a thorough analysis regarding the study's findings, and discuss implications of this research.

REFERENCES

- Blummer, B. (2009). Providing library instruction to graduate students: A review of the literature. *Public Services Quarterly*, 5(1), 15-39.
- Kumar, S. & Ochoa, M. (2012) Program-integrated information literacy instruction for online graduate students, *Journal of Library & Information Services in Distance Learning*, 6(2), 67-78, DOI: 10.1080/1533290X.2012.684430.
- Lamb, A. (2017). Debunking the librarian "gene": Designing online information literacy instruction for incoming library science students. *Journal of Education for Library and Information Science*, 58(1), 15-26.
- Monroe-Gulick, A. & Petr, J. (2012). Incoming graduate students in the social sciences: How much do they really know about library research? *portal: Libraries and the Academy*, 12(3), 315-335

Smith, E. (2012). The digital native debate in higher education: A comparative analysis of recent literature / Le débat sur les natifs du numérique dans l'enseignement supérieur: une analyse comparative de la littérature récente. *Canadian Journal of Learning and Technology*, 38(3), 1-18.

Evaluation of Self-Directed Technology Skills Learning at the iSchool

Richard Arias-Hernandez and Can Cui

University of British Columbia, Vancouver, Canada

richard.arias@ubc.ca, can.cui@alumni.ubc.ca

ABSTRACT

Addressing the disparate information technology literacy levels of incoming Masters' students while promoting self-directed learning, prompted the iSchool at UBC to design and implement a multimodal, self-directed, and voluntary information technology literacy program called Technology in the Core. In this paper, we report on the design and testing of an evaluation framework to determine the effectivity of this program. We consider the evaluation framework we have developed can be adopted by other iSchools interested in establishing a minimum baseline of information technology literacy skills and knowledge while fostering self-directed and life-long learning attitudes and behaviours among their students.

TOPICS

curriculum; education programs/schools; pedagogy

INTRODUCTION

Technology in the Core (TiC) is an innovative educational program implemented at the University of British Columbia's (UBC) iSchool that provides a self-directed and structured learning environment for students to acquire basic technological competencies (ALA, 2009; SLA 2016) and develop life-long predispositions to self-learn and be up-to-date with technological skills (Martzoukou & Elliott, 2016). This program responds to calls in LIS education to explicitly include a technology literacy component as part of their requirements (Fortney, 2009) that addresses the ability of LIS graduates to embrace change, comfort in the online medium, ability to troubleshoot new technologies, ability to easily learn new technologies, and ability to keep up with new ideas in technology and librarianship (Farkas, 2006). The TiC program provides three types of learning resources and multimodal learning opportunities: (1) an online self-administered information technology literacy test, (2) an educational web portal with a series of online modules, and (3) a series of face-to-face technology tutorials. Prior to starting their

program, our Master students self-assess their basic technology competencies using the online information technology literacy test. After identifying their own gaps in basic technology competencies, students have the opportunity to fill in these gaps by using online tutorials and a series of optional face-to-face technology workshops facilitated by other graduate students. TiC components cover the following topics, knowledge, and skills: Productivity Software (i.e. uses of word processor, spreadsheets, and presentation software), Basics of Web Design (e.g. HTML5 and CSS3), Connectivity and Collaborative Software (e.g. Google Docs, Wikis, VPN, FTP, etc.), and Basics of Databases (e.g. designing and querying a simple database in MS ACCESS). These skills constantly rank high in studies of most beneficial technical skills according to job posts for LIS careers (Gonzalez, 2019; Macelli, 2015; Tzoc & Millard, 2011).

The primary motivation for TiC is to address the wide ranging levels of technology competencies within our incoming student cohorts, that vary from students with no prior technology education or training to students with computer science degrees or a considerable number of years of relevant IT-related work experience, without having to go through a mandatory “introduction to information technology” or “information technology literacy” course. A secondary motivation for TiC is to prime students to engage in self-directed learning, a competency that is a necessary component of digital literacy, and life-long technology learning, a disposition to constantly update technology skills and knowledge (Information and Communications Technology Council, Canada, 2016).

The TiC program was rolled out in the fall of 2015. Since then approximately 300 students in our two Master programs have gone through this program that runs every Fall and Spring. In this paper we present the results of applying this framework to the collection and analysis of data from January to April 2018.

EVALUATION FRAMEWORK

Our current evaluation model was designed to (1) evaluate active participation in all components of the Technology in the Core program (TIC for short), (2) evaluate the influence of TIC on students’ performance; (3) analyze other factors that may influence students’ performance in TIC; and (4) to collect data on students’ perceptions of TIC (See Figure 1).

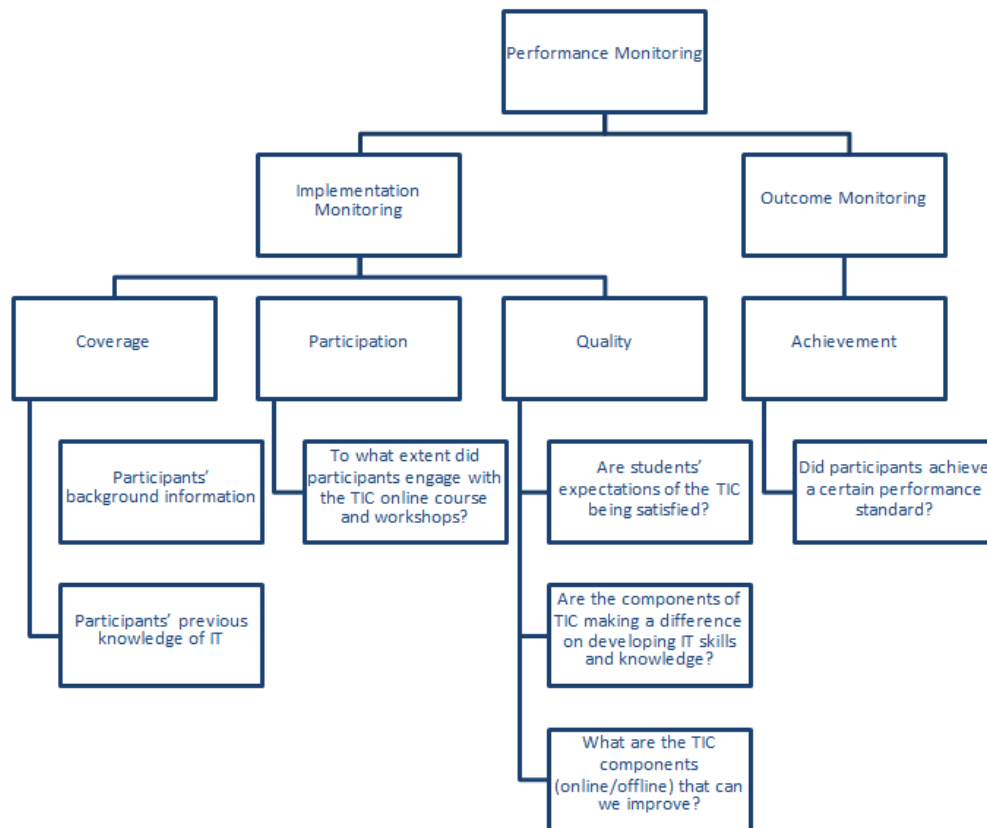


Figure 1 – Evaluation Model for Technology in the Core (TIC)

Our model targets performance components such as participation in on-line and off-line components, achievements in test, perceptions of quality, and the influence of some demographic and academic variables. For each of these dimensions of evaluation we proposed indicators and variables (See Appendix 1) that are currently being captured by an online survey that students complete at the beginning and at the end of their first term at the iSchool. Using EdX logs and analytic reports, we captured additional data such as enrollment, coverage of the modules, completion of the test, and engagement.

APPLICATION OF THE EVALUATION FRAMEWORK

There were 25 respondents who finished both the pre-test and the post-test, among the total 27 students in the Spring 2018 cohort. 17 of them were students from the MLIS, and 8 of them from the dual MLIS/MAS Dual program.

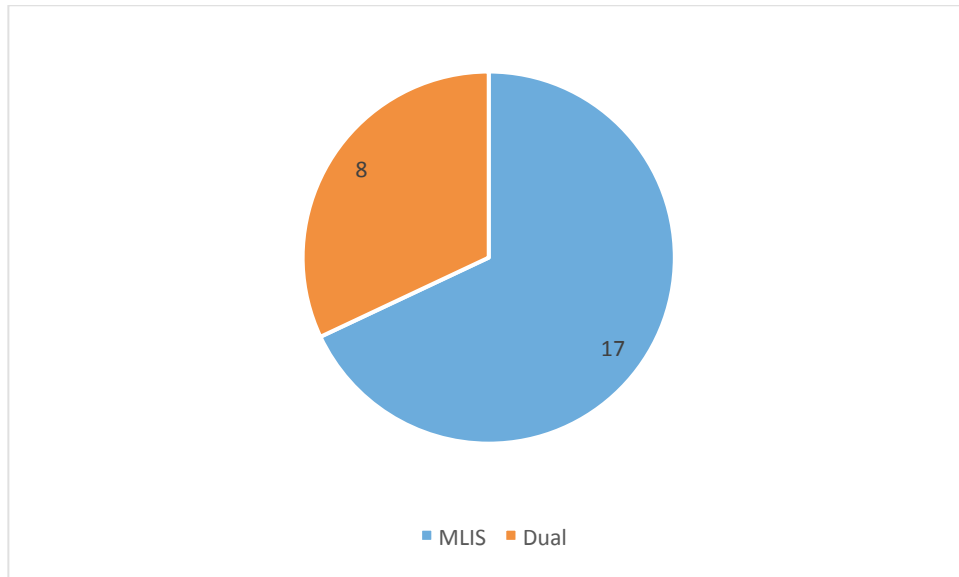


Figure 2. Distribution by Program

Only 3 students fully completed the information literacy test. We also investigated the reason why students did not complete the test. 17 students mentioned time constraints. 6 students got stuck in one of the steps. 4 students mentioned that because they used Mac they did not have MS Access software available to finish the test. Students mentioned that they found it useful to self-direct their study and learn when they needed.

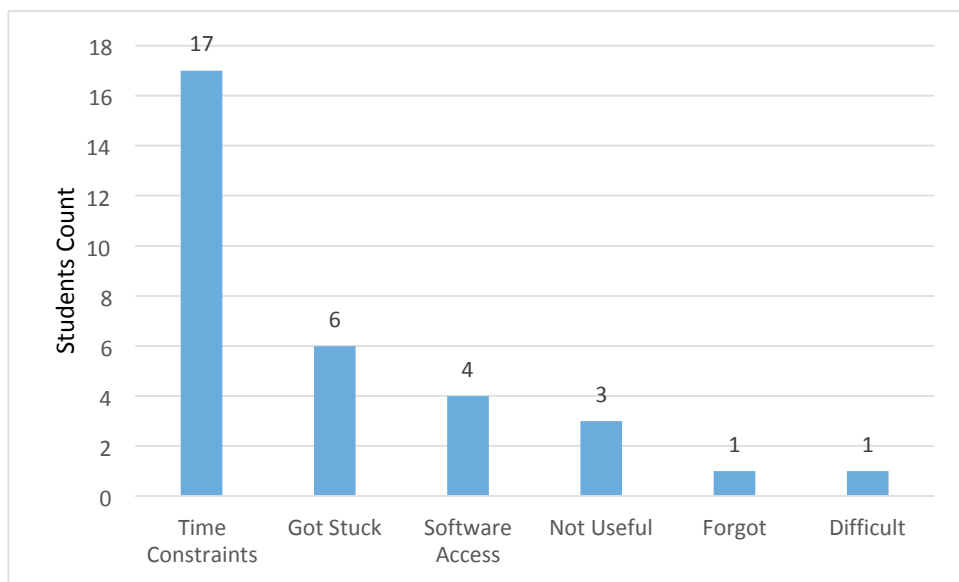


Figure 3. Reason students did not finish the test

Among 25 respondents, 6 of them finished seven or more modules, while most students finished 6 or less modules.

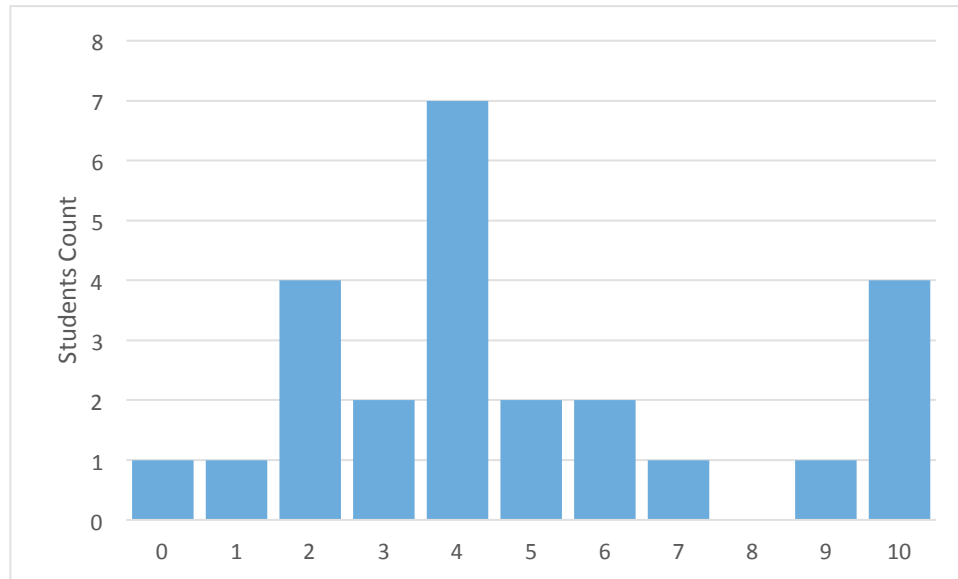


Figure 4. Number of modules finished by students

Most students finished the introductory online module. A lot of students got stuck at the database module. Based on the reasons presented earlier, part of that might be that students have no access to MS Access.

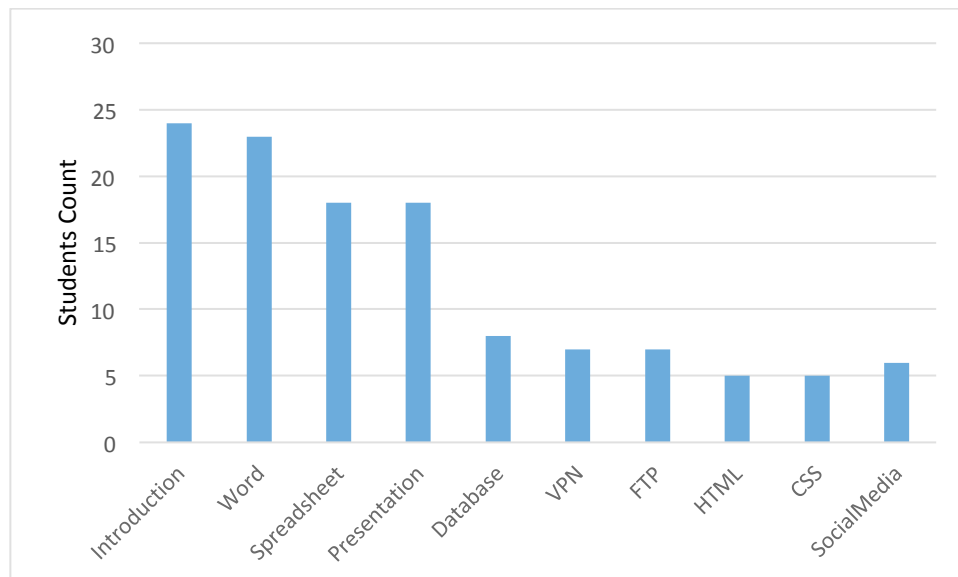


Figure 5. Number of students who complete each module

Most respondents attended all three workshops, while 5 students didn't take any workshops.

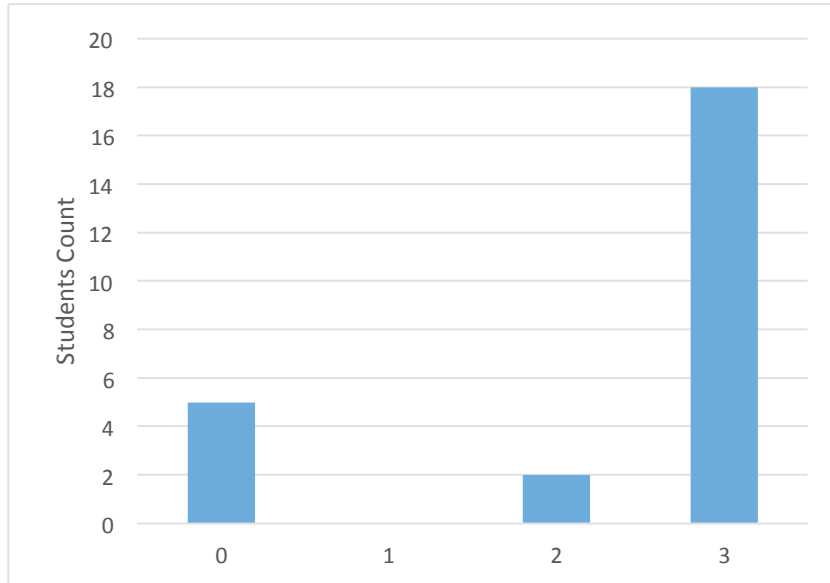


Figure 6. Number of workshops students who attended all workshops

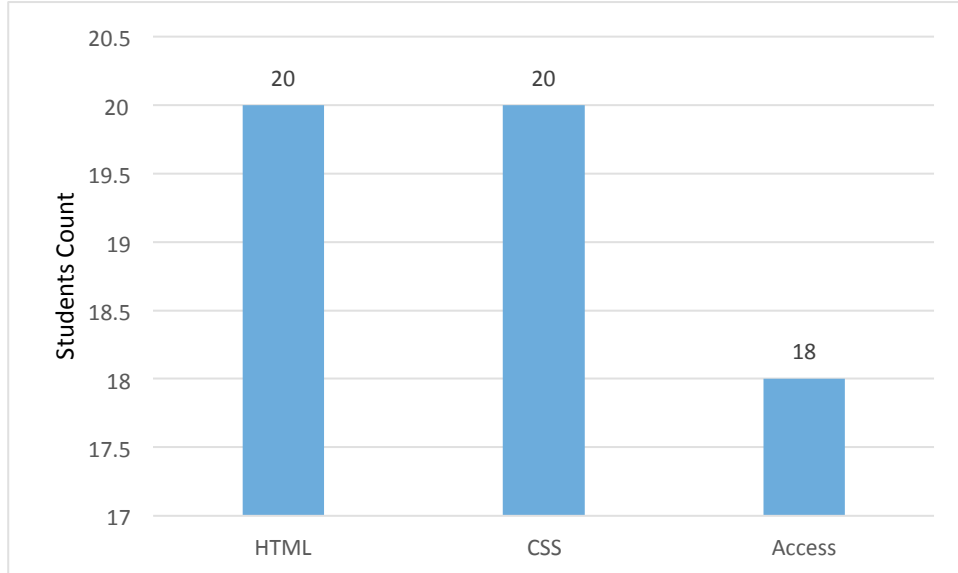


Figure 7. Number of students who attended each workshop

The following figure shows the individual change of level of technology skills by person. The median for each skill level increased for all 25 respondents who completed both the pre-test and post-test.

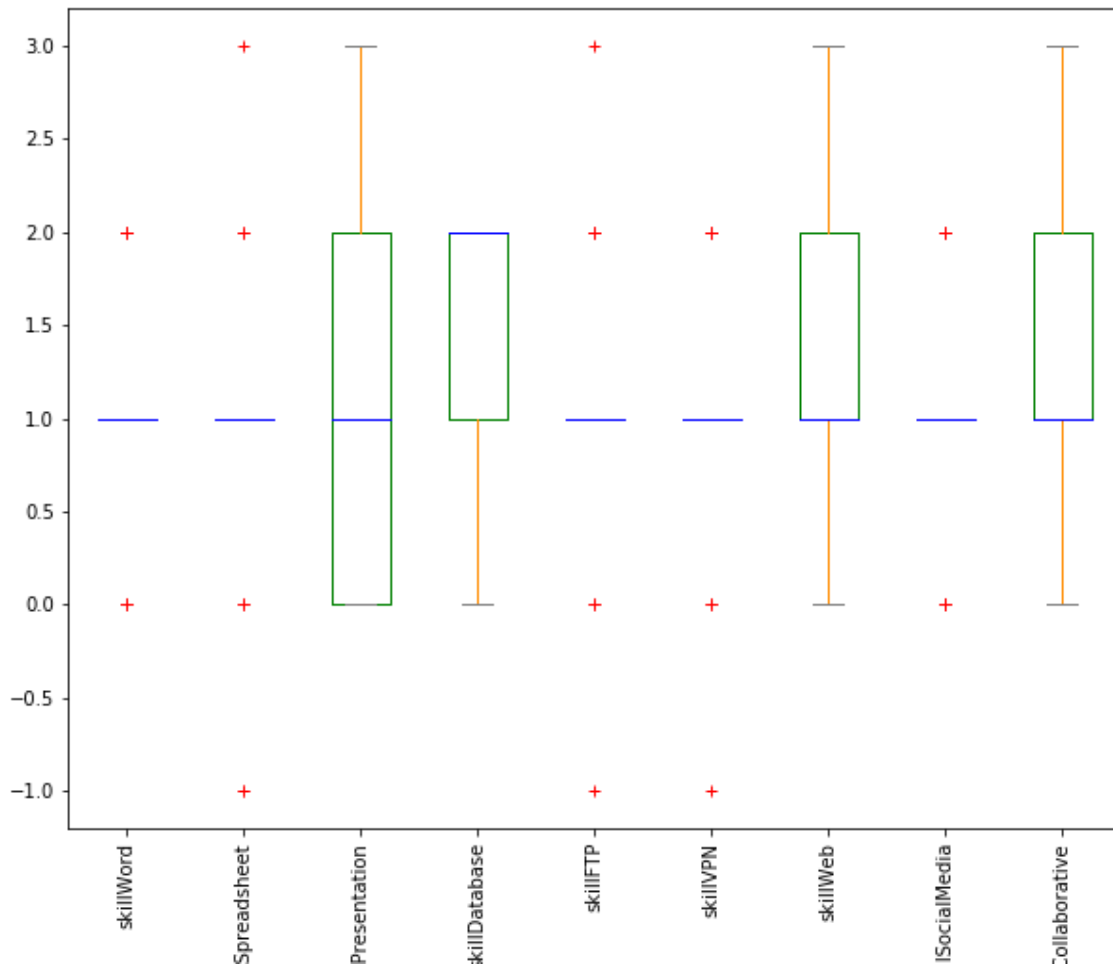


Figure 8. Individual change by technology skill

We also compared the impact of students taking only workshops, or only modules, or both, or neither on changes on perceived technology skills. The result of the analysis is too long to include in this short paper, but suffices to say that students who participated in both online modules and workshops perceived to gain the most skill level boost; while students who participated in neither perceived to have the lowest growth, as expected. However, overall and during the term, all students in all groups perceived to have increased their technology skill levels. The figure below shows the overall perceived change in technology skills after TiC.

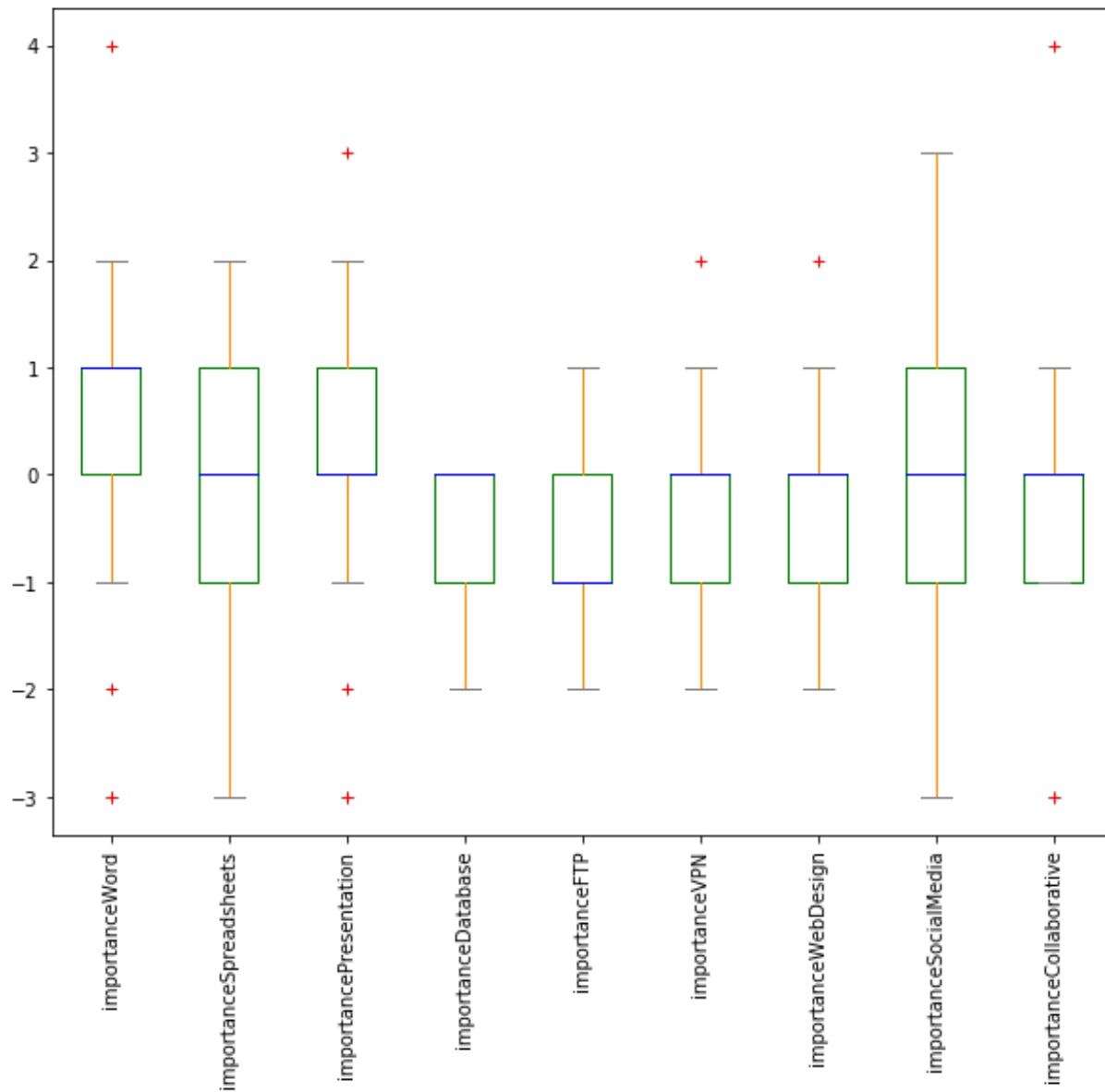


Figure 9. Change in perspective towards technology skills

After TiC, 10 out of 25 students reported that their interest in information technology increased.

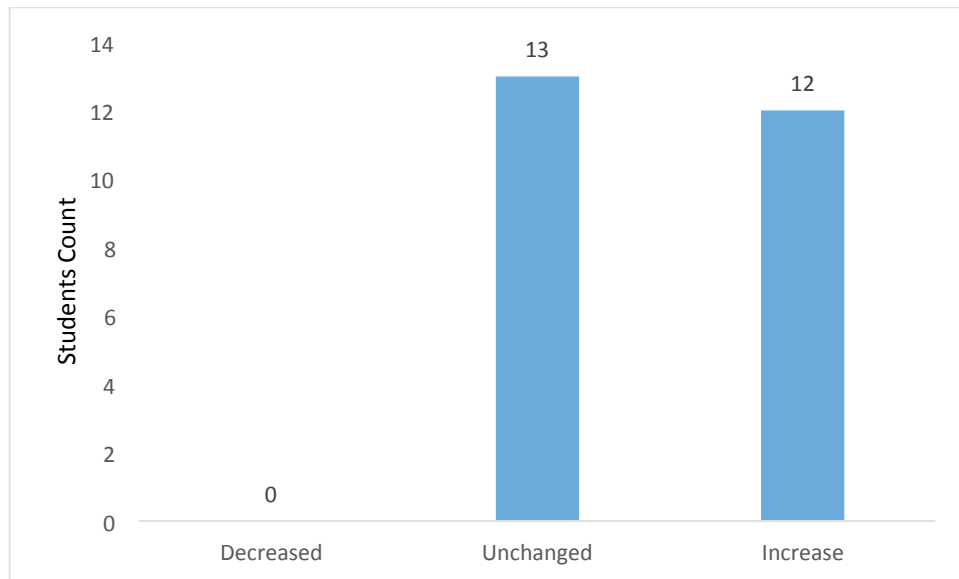


Figure 10. Students' interest on information technology

After TiC, nearly half of students reported that their intention to take technology-oriented courses during the rest of their MLIS or MAS programs increased.

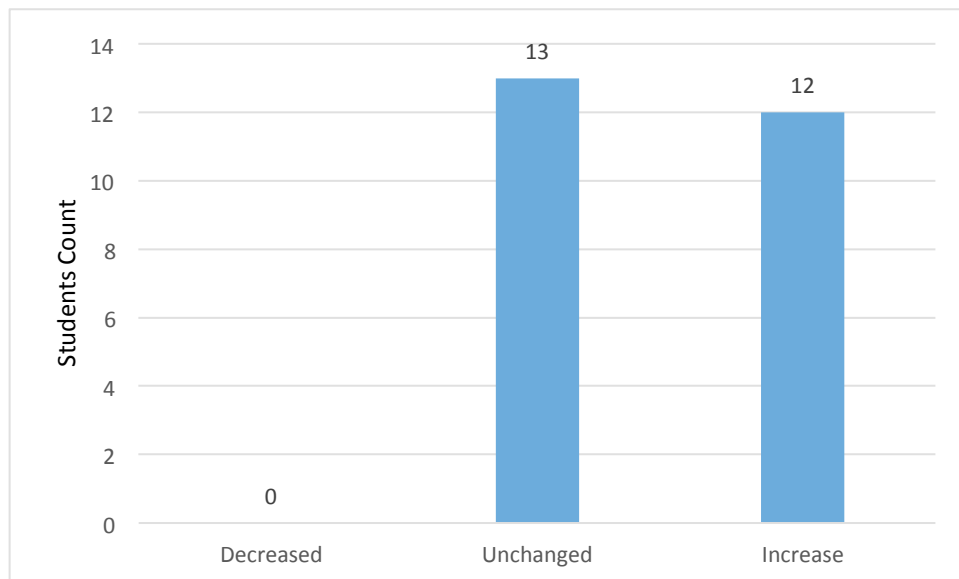


Figure 11. Students' intention to take technology-focused courses in the future

CONCLUSION

The evaluation framework that we developed has helped determine that TIC is working for students and for the iSchool. The framework has proven very useful to answer critical questions about the impact of the Technology in the Core (TIC) program as is today (e.g. voluntary and non-mandatory, self-directed) on student's learning of basic information technology skills and knowledge and their intention on continuing with self-learning attitudes towards strengthening and developing technology skills and knowledge. We consider that this evaluation framework can be used by other iSchools to measure similar programs.

REFERENCES

- ALA - American Library Association (2009) Core Competences of Librarianship.
<http://www.ala.org/educationcareers/sites/ala.org.educationcareers/files/content/careers/corecomp/corecompetences/finalcorecompstat09.pdf>
- Farkas, M. (2006). Skills for the 21st century librarian. Information wants to be free. [Weblog]. Retrieved on Feb. 23, 2019. URL:
<https://meredith.wolfwater.com/wordpress/2006/07/17/skills-for-the-21st-century-librarian/>
- Fortney, K. A. (2009). Comparisons of Information Technology Education in MLIS Programs. Library Student Journal, January 2009, San Jose State University. PURL:
<https://escholarship.org/uc/item/7sh449ds>
- Brighid M. Gonzales (2019): Computer Programming for Librarians: A Study of Job Postings for Library Technologists, Journal of Web Librarianship, DOI: 10.1080/19322909.2018.1534635
- Maceli, M. (2015). Creating tomorrow's technologists: Contrasting information technology curriculum in North American library and information science graduate programs against code4lib job listings. Journal of Education for Library and Information Science, 56(3), 198–212. doi:10.3138/jelis.56.3.198
- Martzoukou, K., & Elliott, J. (2016). The Development of Digital Literacy and Inclusion Skills of Public Librarians. Communications in Information Literacy, 10 (1), 99-115
- SLA Special Library Association (2016) Competencies for Information Professionals.
<https://www.sla.org/about-sla/competencies/>
- Tzoc, E., & Millard, J. (2011). Technical skills for new digital librarians. Library Hi Tech News, 28(8), 11–15. doi:10.1108/07419051111187851

The Information and Communications Technology Council, Canada (2016). Skills in the digital economy. <http://www.ictc-ctic.ca/wp-content/uploads/2016/05/Skills-in-the-Digital-Economy-Where-CanadaStands-and-the-Way-Forward-.pdf>

ICT Use Among Rural Child Welfare Workers: Implications for LIS Education in a Global Context

Don Latham^a, Melissa Gross^a, Karen Randolph^a, Chris Constantino^a, Chance Preshia^a, and
Mollie Rooney^a

^aFlorida State University, USA

dlatham@fsu.edu, mgross@fsu.edu, krandolph@fsu.edu, chris.constantino@cci.fsu.edu,
ecp16@my.fsu.edu, mar16e@my.fsu.edu

ABSTRACT

This presentation will report the research findings on ICT use among rural child welfare workers in North Florida. This study, which represents a collaboration among three different academic units, employed face-to-face interviews and experience sampling via a phone app to collect data about how ICT is being used in the field of child welfare social work and its impact on worker well-being, case outcomes, etc. This research will inform information behavior studies and LIS education interested in research methods as well as information services to the field of social work.

TOPICS

community and civic organizations; information use; research methods; social computing; specific populations

PROBLEM STATEMENT

Studies point to the need for improved IT skills and systems better tailored to social work (Breyette & Hill, 2015). ICT use among child welfare workers in rural communities is likely to be affected by many different factors. These factors include access to broadband (LaRose, Strover Gregg, & Straubhaar, 2011), how the term ICT is conceptualized and operationalized by these workers, the efficacy of the client systems and electronic health records provided by child welfare agencies (Huuskonen & Vakkari, 2010), individual technological skills (Dustin, 2006), agency ICT culture, policy and procedures (Halbesleben, Wakefield, & Wakefield, 2008), and the provision of training in the use of ICT for child welfare workers (Dustin, 2006). It is important to understand the ways that information systems have been formally implemented as well as the use of personal hand-held devices and other technology in the workplace.

RESEARCH QUESTIONS

The purpose of this pilot study was to explore the use of ICT among child welfare workers employed in rural settings in North Florida. The study investigated how these electronic tools are used as well as child welfare workers' experiences and facility with ICT. The research questions that guided the study are:

RQ1: How are child welfare workers in rural counties in North Florida using ICT in the performance of child case management?

RQ2: What are the perceptions of child welfare workers of ICT in their professional work?

RQ3: What are the experiences of child welfare workers with ICT in their professional work?

RQ4: What are child welfare workers' perceived level of comfort with ICT?

METHODS

In-depth interviews and a checklist were used to explore the types of ICT child welfare workers are familiar with, their perceived level of comfort with ICT, and how they use them in child welfare case management. Ten child welfare workers in North Florida will participate in this pilot project.

Initial interviews were conducted in order to explore child welfare workers' ICT use in child case management. A checklist was employed to survey the types of ICTs child welfare workers are familiar with and their perceived level of comfort with these technologies. After the initial interviews were completed, participants were asked to participate in experience sampling via the app PACO, in which they responded to short random phone surveys to report their actual ICT use over the course of one week. Phone surveys were followed up with a second interview to determine child welfare workers' ICT practices as well their views and experiences in light of their answers to the random phone surveys.

Thematic content analysis (i.e., unitizing, categorizing, and pattern searching) (Patton, 2008) is the main data analysis technique employed. Statistical analysis is used in the examination of the checklists and short phone survey data.

SIGNIFICANCE

This pilot study of ICT use among child welfare workers has allowed for the collection of baseline data and also the testing of data collection methods. The ultimate goal is to conduct a larger study that will provide a benchmark for current practice as well as recommendations for improvements where needed and help to establish what best practice looks like. Further findings will inform LIS research on user information behavior as well as begin to elucidate what role information professionals can play in helping other professionals use ICTs for information management. The use of experience sampling has been minimal in LIS research and its use in the pilot will inform future research interested in observing context and content. The findings and methods will be relevant to LIS education and research around the world.

CONNECTION TO CONFERENCE THEME

This study is a good example of how local research can have a global reach. We live in an age of dramatic technological change. Around the world more people are connected through smart phones, social media, and other new forms of ICT. Social workers are not isolated from this change. Indeed, social workers around the world use ICT to varying degrees in their work. We know little about which technologies social workers use, how they use them, and, importantly, how technologies impact their work with clients. This knowledge can help social workers harness their ICT skills to aid their job tasks, inform curriculum development in social work educational programs, and lead to the development of best practices. Ultimately, this work can improve social work services around the world and inform LIS education interested in information services to the field of social work.

REFERENCES

- Breyette, S. K., & Hill, K. (2015). The impact of electronic communication and social media on child welfare practice. *Journal of Technology in Human Services*, 33(4), 283-303. doi: 10.1080/15228835.2015.1101408
- Dustin, D. (2006). Skills and knowledge needed to practice as a care manager: Continuity and change. *Journal of Social Work*, 6, 293-313. doi: 10.1177/1468017306071177
- Halbesleben, J. R. B., Wakefield, D. S., & Wakefield, B. J. (2008). Work-arounds in health care settings: Literature review and research agenda. *Health Care Management Review*, 2-12.
- Huuskonen, S. & Vakkari, P. (2010). Client information system as an everyday information tool in child protection work. In Proceedings of the Third Symposium on Information Interaction in Context (pp. 3-12). doi: 10.1145/1840784.1840788
- LaRose, R., Strover, S., Gregg, J. L., & Straubhaar, J. (2011). The impact of rural broadband development: Lessons from a natural field experiment. *Government Information Quarterly*, 28(1), 91-100.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Cross-Campus Collaboration in the Digital Humanities: A Pedagogical Perspective

Scott Sikes^a and Ruth Castillo^b

^aUniversity of Tennessee, Knoxville, USA

^bEmory & Henry College, USA

esikes@vols.utk.edu, rcastillo@ehc.edu

ABSTRACT

The Appalachian Oral History Project (AOHP) was begun in 1973 and developed through a consortium involving Emory & Henry College, Appalachian State University, Alice Lloyd College, and Lees Junior College. Emory & Henry College's share of the AOHP includes approximately 1,000 audio tapes and printed transcripts. To ensure the long-term preservation of the audio files and transcripts and to make the collection accessible to students and scholars, Emory & Henry College's Kelly Library and the Appalachian Center for Civic Life have partnered on a project to create a digital collection of the material that will be fully accessible, searchable, and made widely available online.

This paper will describe the collaborative work and ongoing results of integrating this effort into the learning objectives of multiple courses and programs across the College curriculum. In addition to creating an accessible, professionally-developed digital collection that preserves important historical material, the project is meant to help students develop a nuanced information and archival literacy, an enhanced conception of civic life, to utilize research skills, and to engage in valuable and hands-on scholarship. Furthermore, the effort to digitize and preserve the AOHP material serves as a model of cross-curricular and cross-campus collaboration between an academic library and another college department, creating a unique avenue for the extension of special collections into the undergraduate classroom and furthering the connective learning concept central to the liberal arts.

TOPICS

digital humanities; academic libraries; pedagogy; students; education

INTRODUCTION

The increasing pervasiveness of digital scholarship has prompted a growing number of scholars to point to the crucial role that digital archives can play in pedagogical practice in the college classroom (Diaz, 2012; Hayden, 2015; Norcia, 2008; Purdy, 2011). In addition to

increasing the overall level of student engagement with information sources, Hayden (2017) noted that the incorporation of digital collections into coursework supports an inquiry-based model of undergraduate education, one that asks students to develop a more distinctive and refined level of information literacy beyond what may be accomplished through the traditional research project. Further, the use of digital archives as a pedagogical tool is a way of extending to undergraduate students an invitation to both the scholarly conversation and the larger academic community to which they already have much to contribute (Norcia, 2008).

BACKGROUND

Begun in 1973, the Appalachian Oral History Project (AOHP) collected and recorded personal interviews with thousands of citizens across the Appalachian region. This work provided for a much-needed social history of Central Appalachia, one created and told by the people of the place (Shackelford, Weinberg, & Anderson, 1977). The project created a trove of data for scholars in multiple disciplines interested in studying and researching the region and its history and culture. Approximately 3,000 such interviews were collected, with most of them being conducted, recorded, and transcribed by students. Emory & Henry College's share of the AOHP includes approximately 1,000 audio tapes and printed transcripts. To ensure the long-term preservation of the audio files and transcripts and to make the collection accessible to students and scholars, Emory & Henry College's Kelly Library and the Appalachian Center for Civic Life have partnered on a project to create a digital collection of the material that will be fully accessible, searchable, and made widely available online. As part of an integrative and connective approach to higher education, the Appalachian Center for Civic Life at Emory & Henry believes that students have within them the capacity and creativity for making a difference in the world. The center further recognizes that all places exist as part of an ongoing, intertwined relationship between the natural environment, the built environment, and human culture and history (Stanley, 2012). The incorporation of special collections into curriculum helps to foster a sense of place and an understanding of the history of the Appalachian region, both of which are necessary for a life of learning and engaged citizenship.

INFORMATION AND ARCHIVAL LITERACY

In addition to developing an advanced information literacy, the ongoing integration of this effort into the learning objectives of multiple courses and programs across the College curriculum is meant to enhance students' conceptions of civic life and provide a chance for them to engage in meaningful, hands-on scholarship. Enoch and VanHaitsma (2015) expressed the importance of utilizing diverse and creative projects in order to foster an archival literacy among undergraduate college students. Such a pedagogical approach goes beyond asking undergraduate students to simply make use of archival sources for a traditional research assignment. Instead, it asks students to begin to learn how "to read these archives carefully and critically" (p. 217). To date, the work of digitizing the AOHP has been incorporated into courses in Appalachian Literature, Research Methods, and in a special topics seminar on Appalachian Civic Identity. In the Appalachian Literature course, students listened to a chosen oral history as they created a digital file of the original tape recording and then wrote and presented a literary work of their own as response. As part of the Research Methods course, students used the digital files to produce a public presentation and to facilitate a discussion of complex issues of race and identity

in the Appalachian region. The use of such nontraditional assignments creates space for students to not only learn and utilize research skills, but to also think critically and to engage in what VanHaitsma (2015) termed “inquiry-driven research and writing” (p. 36). As Hayden (2017) argued, these types of projects promote a distinctive information and archival literacy among college students.

A wide variety of digital archives abound, and their existence removes barriers of distance and travel to an ability for students to engage in high-level and sophisticated research across the full spectrum of academic disciplines and college-wide curricular programs (Purdy, 2011). To that end, the project has also provided the primary framework for the completion of a senior capstone project for students in the College’s Civic Innovation program and has allowed for the creation of an undergraduate research assistant position. The digitization of the AOHP collection also involves students who are part of a community service scholarship program that seeks to measure the impact of civic engagement through real and tangible outcomes created for the benefit of the larger community beyond the campus gates. Furthermore, the effort to digitize and preserve the AOHP material creates equally compelling implications for campus library and information instruction.

COLLABORATIVE AND INTEGRATIVE LEARNING

The project serves as a model of cross-curricular and cross-campus collaboration between an academic library and another college department. Additionally, it has created a unique avenue for the extension of special collections into the undergraduate classroom, furthering the connective learning concept central to the liberal arts. Mullins (2016) noted that an organized, systematic, and collaborative approach to the integration of information literacy into academic courses allows for a more efficacious and effective pedagogy. More so, the expansive and interdisciplinary utilization of such a collection increases the visibility and reach of the academic library, broadens its overall value to the campus community, allows for the cultivation of attentiveness to library services and collections among current students, and seeds the interests of potential future library and information science professionals.

Finally, in a time of general skepticism of the economic value of an integrative and inquiry-based mode of undergraduate education, students use and sharpen a host of concrete, appreciable skills they can identify in e-portfolios and on resumes, from teamwork and leadership, communication and critical thinking to organization and time management, research and creativity.

REFERENCES

- Diaz, J. (2012). The digital archive as a tool for close reading in the undergraduate literature course. *Pedagogy*, 12(3), 425-447.
- Enoch, J., & VanHaitsma, P. (2015). Archival literacy: Reading the rhetoric of digital archives in the undergraduate classroom. *College Composition and Communication*, 67(2), 216-242.

- Hayden, W. (2015). "Gifts" of the archives: A pedagogy for undergraduate research. *College Composition and Communication*, 66(3), 402-426.
- Hayden, W. (2017). And gladly teach: The archival turn's pedagogical turn. *College English*, 80(2), 133-158.
- Mullins, K. (2016). IDEA Model from theory to practice: Integrating information literacy in academic courses. *The Journal of Academic Librarianship*, 42(1), 55-64.
- Norcia, M. (2008). Out of the ivory tower endlessly rocking: Collaborating across disciplines and professions to promote student learning in the digital archive. *Pedagogy*, 8(1), 91-114.
- Purdy, J. (2011). Three gifts of digital archives. *Journal of Literacy and Technology* 12(3), 24-49.
- Shackelford, L., Weinberg, B., & Anderson, D. (1977). *Our Appalachia: An oral history*. New York, NY: Hill and Wang.
- Stanley, T. (2012). *The Poco field: An American story of place*. Urbana, IL: University of Illinois Press.
- VanHaitsma, P. (2015). New pedagogical engagements with archives: Student inquiry and composing in digital spaces. *College English* 78(1), 34-55.

How International Are We?

Mapping of “Global” Intersections in the LIS Curriculum

Bharat Mehra^a and Lisa Curtin^b

^aUniversity of Alabama, USA

^bUniversity of Tennessee, USA

bmehra@ua.edu, lcurtin1@vols.utk.edu

ABSTRACT

This paper presentation highlights how truly international is library and information science (LIS) education in the United States and Canada based on content mapping of “global” intersections in the LIS curriculum. The exploratory mixed-methods study reports on occurrence of varied synonymous/related terms (e.g., diversity, global, international, multicultural, world) in bibliographic course titles and course descriptions on the webpages of 48 graduate programs in the United States (3787 courses) and five in Canada (487 courses). Evidence-based potpourri of best practices and course case studies help develop a roadmap for LIS programs to integrate international/global content in their curricula beyond isolated, ad hoc individual program-based efforts.

TOPICS

curriculum, pedagogy, social justice.

INTRODUCTION

This paper presentation highlights select evidence to address how truly international is library and information science (LIS) education in the United States and Canada as represented in publicly available course descriptions on the websites of their LIS programs. Data collection is based on the mapping of “global” intersections in content and vocabularies within the contextually rich information landscape (i.e., infoscape) of their LIS curriculum (Mehra & Tidwell, 2014; Pearson & Somekh, 2003). The data collected paint a detailed picture of the actualities and identify potentialities of “global” representations in existing LIS required and elective courses. Methods used in the research included semantic metadata-mapping (Alemu, Stevens, & Ross, 2012; Van Uytvanck, Stehouwer, & Lampen, 2012) and content analysis (Aharony, 2012; Spurgin & Wildemuth, 2017) of LIS bibliographic course titles and course descriptions that were available during fall 2018 on the webpages of 48 graduate programs in the United States (offering 3787 courses) and five graduate programs in Canada (offering 487

courses). The list of LIS programs was compiled from institutional members of the Association for Library and Information Science Education (ALISE) (2018).

The exploratory mixed-methods study reports both its quantitative assessment of the counts and numbers as well as a qualitative discussion of the categories, themes, trends, and patterns (Bazeley, 2017; Creswell & Creswell, 2017; Fidel, 2008) based on occurrence of varied synonymous/related terms (e.g., diversity, global, international, multicultural, world, and others). Selective LIS course syllabi (where publicly available) were also studied. Findings map the existing infoscape surrounding the teaching of “global” intersections in LIS education. They also identify future directions for inclusion of international content in all aspects of the teaching of information creation-organization-management-dissemination-research-advocacy processes and activities (Buckland, 2012). Evidence-based potpourri of best practices and course case studies help develop a road-map for LIS programs to integrate international/global content in their curricula beyond isolated ad hoc individual program-based efforts (Hirsh et al., 2015). Strategies identify possibilities of cross-cultural “two-way” learning where LIS educational programs in the United States and Canada can also learn of, and from, information practices and content in countries around the world, integrating those into their course offerings (Mehra, 2008; Mehra & Bishop, 2007). This will facilitate greater global collaborations and deeper exchanges between the internationally dispersed LIS collegiate body, instead of adopting uni-directional approaches of only teaching the world of Anglo/Euro-centric LIS content as reflected in the past (Mehra, 2005; Virkus, 2007).

CONNECTION TO THE CONFERENCE THEME

The paper presentation provides an exploratory assessment of the existing “global” content represented in LIS curricula in the United States and Canada. Accurately identifying existing scope of LIS coverage taught is important to identify gaps and future directions of learning.

RELEVANCE TO CURRENT AND EMERGING ISSUES IN LIS EDUCATION

“Hits and misses” in existing LIS curricula of “global” information content is relevant for future growth and strengthening of the professions to further diverse representations of (and from) around the world. LIS education and information teaching and learning is global in nature. The paper findings will further inclusivity of international content to strengthen validity and existence of the LIS professions (including LIS education) in the United States and Canada (Abdullahi, Kajberg, & Virkus, 2007).

ORIGINALITY

Evidence-based evaluation is important to support accurate and authentic claims, descriptions, and analysis of internationalization of LIS education for real and meaningful growth beyond lip-service. A challenge with the method is that concepts of diversity, global, international, etc. may be woven into the course, but not mentioned in the course descriptions and syllabi. The suggestion for course instructors who adopt this practice is to integrate the relevant vocabularies into their course descriptions and syllabi to provide better visibility and representation to “global” content.

SELECT VISUALIZATION OF FINDINGS

Figure 1 provides a glimpse of findings using various terms to search in LIS bibliographic course titles and course descriptions on the webpages of 48 graduate programs in the United States and Canada. Owing to space limitations, future publications will reveal detailed analysis, thematic assessment, and visualizations related to these findings.

Term and Name of Univ. With Highest No. of LIS Courses	No. of LIS Courses	No. of Universities Offering LIS Courses	Term in LIS Course Title and LIS Course Title Only	Term in LIS Course Descript. And LIS Course Descript. Only	No. of LIS Elective Courses and No. of LIS Required Courses	University With Only One LIS Course	No. of Universities With More Than One LIS Course
Global [Syracuse Univ. = 9]	69	28	17 [7]	62 [52]	62 [7]	16	12
Divers* [Univ. of British Columbia = 14]	134	44	27 [9]	125 [107]	118 [16]	17	27
International [Univ. of British Columbia = 17]	124	39	20 [5]	119 [104]	120 [4]	13	26
Multicultural* [Texas Women's Univ. = 4]	39	27	16 [6]	33 [23]	38 [1]	18	9
World [Univ. of Toronto = 16]	157	45	3 [2]	155 [154]	146 [11]	16	29

Figure 1: Summary of findings using various search terms in LIS bibliographic course descriptions and course titles on the webpages of graduate programs in the United States and Canada.

SIGNIFICANCE/POTENTIAL IMPACT

Findings and discussion of themes to further “global” intersections might help generate greater impact in terms of identifying best practices to expand LIS education in the United States

and Canada beyond its current parochial shortcomings which reflect critical ethical, social justice, and practical imperatives (Abdullahi & Kajberg, 2004; Carbo and Smith, 2008). It might lead to the development of systematic, cohesive, and deliberate actions in LIS education to diversity the focus of its curricula beyond its current North American geographical focus (Mehra, Olson, & Ahmad, 2011).

REFERENCES

- Abdullahi, I., and Kajberg, L. (2004). A Study of International Issues in Library and Information Science Education: Survey of LIS Schools in Europe, the USA and Canada. *New Library World*, 105(9/10), 345-356.
- Abdullahi, I., Kajberg, L., and Virkus, S. (2007). Internationalization of LIS Education in Europe and North America. *New Library World*, 108(1/2), 7-24.
- Aharony, N. (2012). Library and Information Science Research Areas: A Content Analysis of Articles from the Top 10 Journals 2007-8. *Journal of Librarianship and Information Science*, 44(1), 27-35.
- Alemu, G., Stevens, B., and Ross, P. (2012). Towards a Conceptual Framework for User-Driven Semantic Metadata Interoperability in Digital Libraries: A Social Constructivist Approach. *New Library World*, 113(1/2), 38-54.
- Association for Library and Information Science Education (ALISE). (2018). *ALISE School Representatives*. Retrieved August 31, 2018, from <https://www.alise.org/school-representatives>.
- Bazeley, P. (2017). *Integrating Analyses in Mixed Methods Research*. Thousand Oaks, CA: SAGE Publications, Inc.
- Buckland, M. (2012). What Kind of Science Can Information Science Be? *Journal of the American Society for Information Science and Technology*, 63(1), 1-7.
- Carbo, T. and Smith, M. M. (2008). Global Information Ethics: Intercultural Perspectives on Past and Future Research. *Journal of the American Society for Information Science & Technology*, 59(7), 1111-1115.
- Creswell, J. W., and Creswell, J. D. (2017). *Research Design: Quantitative, Qualitative, and Mixed methods Approaches* (Fifth Edition). Thousand Oaks, CA: SAGE Publications, Inc.
- Fidel, R. (2008). Are We There Yet?: Mixed Methods Research in Library and Information Science. *Library & Information Science Research*, 30(4), 265-272.
- Hirsh, S., Simmons, M. H., Christensen, P., Sellar, M., Stenstrom, C., Hagar, C., Bernier, A., Faires, D. Fisher, J., and Alman, S. (2015). International Perspectives in LIS Education: Global Education, Research, and Collaboration at the SJSU School of Information. *Journal of Education for Library and Information Science*, 56(Supplement 1), S27-S46.

- Mehra, B. (2008). *The Cross-Cultural Learning Process of International Doctoral Students: A Case Study in Library and Information Science Education*. Saarbrücken, Germany: Verlag Dr. Muller.
- Mehra, B. (2005). A Phase-Model of the Cross-Cultural Learning Process of LIS International Doctoral Students: Characteristics and Interventions. *Proceedings of the American Society for Information Science & Technology 2005 Annual Meeting: Sparking Synergies: Bringing Research and Practice Together @ ASIST '05*, Volume 42, Westin Charlotte, Charlotte, NC, October 28 – November 2, 2005.
<http://www.asis.org/AM05Proceedings/openpage.html>.
- Mehra, B., and Bishop, A. P. (2007). Cross-Cultural Perspectives of International Doctoral Students: Two-Way Learning in Library and Information Science Education, *International Journal of Progressive Education*, 3(1), February 2007, 44-64.
<http://inased.org/v3n1/mehrabishop.htm>.
- Mehra, B., Olson, H. A., and Ahmad, S. (2011). Integrating Diversity across the LIS Curriculum: An Exploratory Study of Instructors' Perceptions and Practices Online. *International Federation of Library Associations and Institutions (IFLA) Journal*, 37(1), March 2011, 39-51. http://www.ifla.org/files/hq/publications/ifla-journal/ifla-journal-37-1_2011.pdf.
- Mehra, B., and Tidwell, W. T. (2014). Mapping the Infospace of LIS Courses for Intersections of Health-Gender and Health-Sexual Orientation Topics. *Journal of Education for Library and Information Science*, Summer June 2014, 55(3), 191-211.
- Pearson, M., and Somekh, B. (2003). Concept-Mapping as a Research Tool: A Study of Primary Children's Representations of Information and Communication Technologies (ICT). *Education and Information Technologies*, 8(1), 5-22.
- Spurgin, K. M., and Wildemuth, B. M. (2017). Content Analysis. In B. M. Wildemuth (ed.), *Applications of Social Research Methods to Questions in Information and Library Science* (Second Edition) (pp. 307-317). Santa Barbara, CA: Libraries Unlimited.
- Van Uytvanck, D., Stehouwer, H., & Lampen, L. (2012). Semantic metadata mapping in practice: The Virtual Language Observatory. In N. Calzolari (Ed.), *Proceedings of LREC 2012: 8th International Conference on Language Resources and Evaluation* (pp. 1029-1034). European Language Resources Association (ELRA).
- Virkus, S. (2007). Collaboration in LIS Education in Europe: Challenges and Opportunities. *Proceedings of the World Library and Information Congress: 73rd IFLA General Conference and Council*. Libraries for the future: Progress, Development and Partnerships (pp. 19-23).

Training *Librarians of Tomorrow*: Collaborations between Brooklyn Public Library's Teen Internship Program and Pratt Institute's MSLIS Program

Leanne Bowler^a and Jennifer Thompson^b

^aPratt Institute, USA

^bBrooklyn Public Library, USA

lbowler@pratt.edu, JThompson@bklynlibrary.org

ABSTRACT

The paper presents the *Librarians of Tomorrow* project, a teen internship program at Brooklyn Public Library that engages Master of Library and Information Science students from Pratt Institute in New York City. The teen internship program draws from the local youth population, with one goal being to build a pipeline of future librarians drawn from the community. A second feature of the program is that it provides Library and Information Science graduate students with a practice-based learning experience in the highly diverse and global context of Brooklyn. The *Librarians of Tomorrow* project, in collaboration with Pratt Institute's School of Information, offers one example of how to bring a global perspective to LIS education. The paper discusses the methods for integrating this learning experience into course content within the MSLIS degree and concludes with preliminary observations about the Pratt/*Librarians of Tomorrow* collaboration and the practice-based learning experience.

TOPICS

Education of information professionals, public libraries, young adult services

INTRODUCTION

The conference theme for ALISE 2019 asks LIS researchers to consider learning in a global context. As the call for this conference suggests, "education for library and information science (LIS) is truly a global enterprise" (ALISE). This is certainly true for the information disciplines but we, the authors, offer an observation: Sometimes the global enterprise is right next door, in your own backyard. We ask, how might a LIS program help its students gain a deeper understanding of the international diversity within their own communities? One method is through practice-based learning experiences, where LIS students get out into the community and learn about diversity, cultural competencies, and global contexts *in the field*. This paper describes the

role of Pratt Institute in developing a practice-based learning experience for MSLIS students within the *Librarians of Tomorrow (LoT)* project at the Brooklyn Public Library (BPL). It discusses the methods for integrating the learning experience into course content within the MSLIS degree and concludes with preliminary observations about the *LoT*/Pratt collaboration and the practice-based learning experience.

THE PROJECT

The *LoT* project is a teen internship program at BPL, currently directed by Jennifer Thompson, the second author of this paper. The *LoT* project began in 2017, with Pratt Institute as a collaborator. The project is nearing the end of its second year and has engaged 115 teen interns and 12 MSLIS students. The teen internship program draws from the local youth population, with one goal being to build a pipeline of future librarians drawn from the community. A second feature of the program, and the one that concerns this paper, is that it provides library and information graduate students with a practice-based learning experience in the highly diverse and global context of Brooklyn.

The *LoT* project, in collaboration with Pratt Institute's School of Information, offers one example of how to bring a global perspective to LIS education. Brooklyn is one of five boroughs within the global city of New York, USA, and is an excellent example of our local/global principle. There are many languages spoken by Brooklyn residents, including Spanish, Chinese, Russian, French Creole, Italian, Polish, French, Arabic, Indic languages and Urdu (World Population Review). This linguistic diversity suggests that many in the population have strong links to places beyond the United States. Indeed, New York City is home to 3.1 million immigrants (World Population Review). Thirty-eight per cent of Brooklyn residents are foreign born (New York City). In this environment of diversity, LIS education must consider how to help students gain the cultural agility necessary for serving newcomers to the community - to understand how to best serve people who have moved from afar and bring their global experiences with them. The Pratt Institute's School of Information, through its collaboration with BPL's *LoT* project, offers an opportunity for students to experience issues associated with teen programming at the library, including the cultural contexts of teens. While not every teen involved with the *LoT* project will necessarily be from a family of newcomers, the diverse make-up of Brooklyn's population ensures a high probability that a certain number will be. BPL does not collect information about ethnicity or nationality, but they do know how many languages their teen interns speak. Out of the 115 teens who have participated in the *LoT* project, 70 (61%) speak a language other than English. Students in the MSLIS program at Pratt Institute have the opportunity to interact directly with these teens and gain practical, hands-on experience. Figure 1 below presents the timeline of Pratt student activities on the *Librarians of Tomorrow* Project.

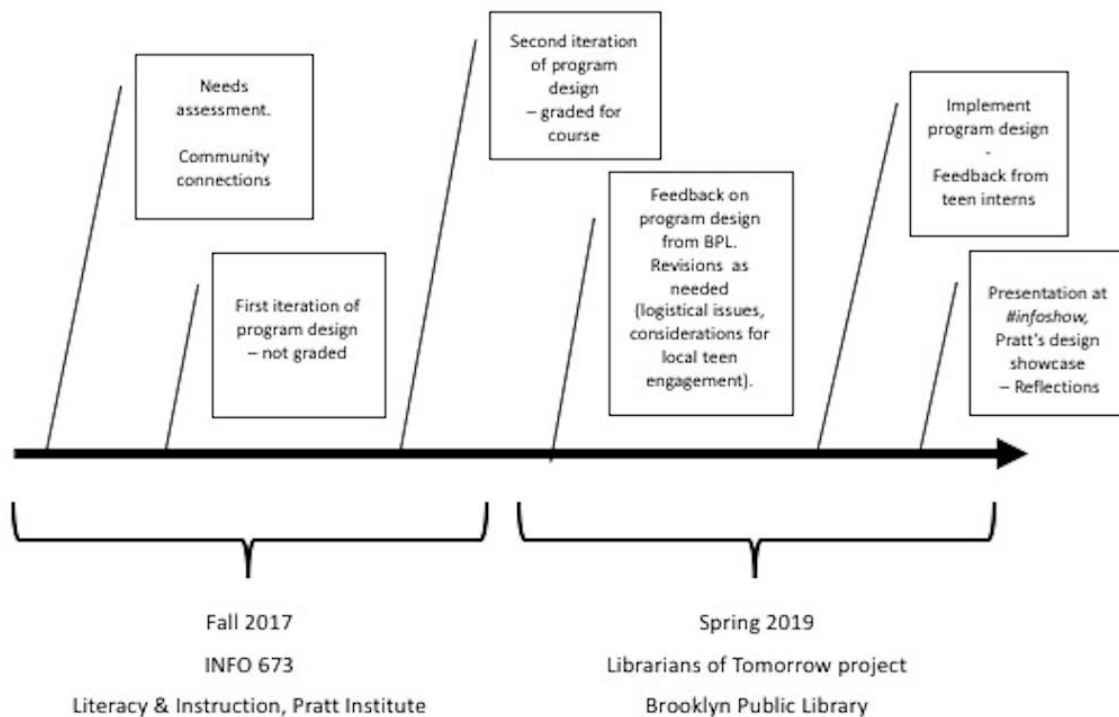


Figure 1: Timeline of Pratt student activities on the *Librarians of Tomorrow* Project.

For the past two years, Pratt Institute's role has been to connect MSLIS students with the *LoT* project through a design project in the class *Literacy and Instruction* (INFO 673), a course framed by Freire's critical pedagogy (1968). During the fall term, students work to deconstruct enactments of power, culture, and social justice within the context of learning in libraries through the design of a teen library program that targets literacy (print, visual, digital, data, etc.), but with the understanding that it is a prototype to be further refined in the field. In pairs, students develop a program prototype, applying the principles of outcomes-based planning and evaluation (Dresang, Gross, & Holt, 2006). Students can then elect to join the *LoT* team, working with Jennifer Thompson, the project's director at BPL, throughout the spring term, thus allowing them to bring their program to the intended audience – teens living in the five boroughs of New York City. LIS students are paid a nominal stipend supplied by the grant to facilitate the programs they designed, with the *LoT* teen interns serving as both audience and critic. The programs are presented multiple times with different groups of teens, allowing the LIS students to adjust their programs based on feedback from the field. LIS students reflect on their learning experiences at #infoshow, Pratt's annual showcase of student design work.



Figure 2: A Zine created by a teen intern at Brooklyn Public Library for *Tell Your Story! Zine Making Workshop*, a workshop developed and facilitated by Pratt students Emma Karin Eriksson and Manuela Aronofsky.

CONCLUSION

It is rare that design projects in a LIS class can be tested in the field with the very audience for which they were intended, especially when that audience is under 18. Our integrated approach helped to close the circle between theory and practice. Although not an internship in the traditional sense, where students complete a formal term of fieldwork as part of their degree requirements (Huggins, 2017), the *LoT* practice-based learning experience affords an easy entry point into experiential learning. It is not, however, meant to replace a full field experience. Rather, it provides a meaningful goal when completing a class assignment and an opportunity to gain an authentic taste of teen services, explore critical approaches to learning and culture, and do so in a highly diverse library setting. Student feedback thus far has been positive, with one student noting in the course evaluation that the real-life component of the learning task made it more concrete and understandable.

The principle difficulties we have encountered relate to logistics and the alignment of schedules and timelines for two large institutions. This disconnect may have prevented students from spending more time learning from the teens, discouraging a deeper knowledge about Brooklyn's diverse communities. Nevertheless, the theory-to-practice continuum afforded through the BPL/Pratt Institute collaboration enables a rich learning environment for LIS students.

ACKNOWLEDGEMENTS

Many thanks to the teen interns, library staff, and Pratt students who participated in this project. Their contributions are invaluable. This project is made possible by a grant to the Brooklyn Public Library from the Institute of Museum and Library Services RE-95-17-0046-17.

REFERENCES

- Association for Library and Information Science (ALISE). Retrieved March 2, 2019, from, <https://www.alise.org/2019-conference>
- Dresang, E. T., Gross, M., & Holt, L. E. (2006). *Dynamic youth services through outcome-based planning and evaluation*. American Library Association.
- Freire, P. (2018). *Pedagogy of the Oppressed*. 4th Edition. Bloomsbury Publishing USA.
- Huggins, S. (2017). Practice-Based Learning in LIS Education: An Overview of Current Trends. *Library Trends*, 66(1), 13-22.
- World Population Review. *Brooklyn Population 2019*. Retrieved March 2, 2019, from, <http://worldpopulationreview.com/boroughs/brooklyn-population/>
- New York City. Mayor's Office of Immigrant Services. *State of Our Immigrant City. Annual Report 2018*. Retrieved March 2, 2019, from, <https://www1.nyc.gov/site/immigrants/about/annual-report.page>

Teaching Leadership Lessons through the Camera Lens in a Global Information Context

Rajesh Singh^a and Gunilla Widén^b

^aSt. John's University, USA

^bAbo Akademi University, Finland

singhr1@stjohns.edu, gwiden@abo.fi

ABSTRACT

Movies appeal to people globally and can be used as a very valuable intellectual exercise in understanding the diverse workplace settings, stimulating curiosity towards other cultures, and learning the nuances of leading and managing in a global information context. This study demonstrates how a learning experience involving movies can be utilized in complementing existing pedagogical approaches for imparting leadership lessons. The findings from sixty LIS students' reflections reveal that a majority of students' (53 out of 60) perspectives about leadership either "changed" or "reinforced" their existing beliefs by studying leadership concepts portrayed in movies. Overall, the findings revealed students' critical thinking and take-away lessons about leadership regardless of their response about leadership perspectives (changed, reinforced, or unchanged). This study indicates that by utilizing media in leadership education through carefully crafted pedagogy, LIS instructors can provide students with more realistic examples of positive and negative leadership in a global context.

TOPICS

administration; pedagogy; online learning; students

INTRODCUTION

Leadership is typically taught as a part of the required management courses in LIS curriculum (Hicks & Given, 2013; Philips, 2012). While there are multiple approaches for teaching leadership in a face-to-face, blended, and online classroom, this study demonstrates how a learning experience involving movies can be utilized in complementing existing pedagogical approaches for imparting leadership lessons in a global information context. Movies appeal to people globally and can be used as a very valuable intellectual exercise in understanding the diverse workplace settings, stimulating curiosity towards other cultures, and learning the nuances of leading and managing in a global information context (Cardon, 2010).

The idea of using movies in leadership education is making inroads, as it conveys the concepts of leadership within a world where knowledge is visually constructed (Klenke, 2008). Although the topic of leadership has been a component of LIS curriculum, there is no evidence to suggest there is a wide use of curriculum involving movies to help students understand leadership concepts when it comes to imparting leadership education. This proposal presents the findings based on sixty LIS students' reflections of the leadership lessons they learned through movies in five different online courses between fall 2012 through fall 2018. It provides the logistics of using movies in assignment instructions and provides examples of students' reflections about leadership lessons learned through movies.

METHODS AND MATERIALS

The use of movie narratives can be a powerful medium to illustrate leadership themes and concepts and to show practical application of leadership theory (Huczynski & Buchanan, 2004). In keeping with this approach, students were provided an opportunity to evaluate and inspect the strengths and weaknesses of various characters and their actions within a contextual framework through watching movies. This memorable and entertaining way of learning through watching movies allowed for the exploration of complex and controversial leadership themes in an engaging manner.

Students were instructed to watch a movie through their "leadership lens" from a predetermined list of movies provided by the instructor. The movies included *12 Angry Men*, *Wall Street*, *Apollo 13*, *Freedom Writers*, *Dead Poets Society*, *Erin Brockovich*, and *Norma Rae*. Students had the option to study one of the movies from the above list. They were advised that the movie they chose would likely be entertaining, but that they should concentrate on watching for the essential management and leadership concepts they had learned, and how they can be manifested in real life (or at least as real life is depicted in the movies). Some of the questions they needed to reflect upon included:

What kinds of leadership behaviors/styles/skills are exhibited in the movie? Do they recognize any of the leadership and management theories that they've studied in action? Did watching this movie change their perspective on any facets of leadership or management? Will they be able to realistically apply their learning in current and future situations?

FINDINGS AND IMPLICATIONS

The study findings indicate that lessons learned through leadership narrative, metaphors and archetypes as shown in movies have a positive effect on students' learning. Students identified various leadership styles including authoritative, democratic, unethical, transactional, and transformational leadership and analyzed the strengths and weaknesses of those leadership styles as portrayed through various characters in the movies they watched. The findings revealed

that a majority of students' perspectives about leadership either "changed" (35 out of 60) or "reinforced" (18 out of 60) their existing beliefs. A small number of students indicated that their perspectives about leadership remained "unchanged" (7 out of 60). Overall, the findings showed that students demonstrated critical thinking skills and take-away lessons about leadership regardless of their response about leadership perspectives (changed, reinforced, or unchanged).

This study indicates that by utilizing media in leadership education through carefully crafted pedagogy, LIS instructors can provide students with more realistic examples of positive and negative leadership in a global context. Moreover, this approach also provides students opportunity to relay their personal reflections, anecdotes, and stories, and relate them with LIS leadership. Finally, this study also demonstrates that movies can be a powerful medium to illustrate concepts of leadership and can have a motivating effect on visual learners who may otherwise be bored or disengaged by more traditional pedagogies.

REFERENCES

- Cardon, P. W. (2010). Using films to learn about the nature of cross-cultural stereotypes in cross-cultural business communication courses. *Business Communication Quarterly*, 73(2), 150-165.
- Hicks, D., & Given, L. M. (2013). Principled, transformational leadership: Analyzing the discourse of leadership in the development of librarianship's core competences. *Library Quarterly*, 83(1), 7-25.
- Huczynski, A., & Buchanan, D. (2004). Theory from fiction: A narrative process perspective on the pedagogical use of feature film. *Journal of Management Education*, 28(6), 707-726. doi: 10.1177/1052562903262163
- Klenke, K. (2008). *Qualitative research in the study of leadership* (1st ed.). Bingley, UK: Emerald Group Publishing.
- Phillips, A. L. (2012). What do we mean by library leadership? Leadership in LIS education. *Journal of Education for Library and Information Science*, 55(4), 336-344.

Toward a Framework for Preparing Leaders in a Global Information Context

Rajesh Singh^a and Gunilla Widén^b

^aSt. John's University, USA

^bÅbo Akademi University, Finland

singhr1@stjohns.edu, gwiden@abo.fi

ABSTRACT

This proposal addresses a framework for conceptualizing the preparation of leaders for the library and information science (LIS) profession. The framework has three components – *curriculum, pedagogy, and assessment (CPA)*. Moreover, this framework is mirrored in examples from two LIS programs in both Finland and the U.S., and discusses how the future expertise of library and information professions can be foreseen in educational programs. This study demonstrates how LIS programs can utilize this framework in developing an intentional and holistic approach to guide, review and impart leadership education in a global information context.

TOPICS

administration; curriculum; education programs/schools; pedagogy

INTRODUCTION

The library and information service field is undergoing constant change. In IFLA's trend report (2017, 2018), the future will entail new technologies that will both expand and limit access to information, online education will democratize and disrupt global learning, while hyper-connected societies will empower new voices and groups, to mention a few challenges. Further, digitalization has brought new challenges meaning that library management also needs to balance new tasks with already existing services (Le, 2014). Thus, all these changes make it incumbent on library and information science (LIS) programs to equip prospective students with leadership and change management skills to lead their organizations into the future. Effective leaders are reflective, adaptive, visionary, innovative, and challenge the professional staff to be creative (Riggs 2008; Ammons-Stephens et al., 2009). This makes it imperative for LIS programs to take these skills into consideration and plan for suitable pedagogical approaches to support the leadership skills of students.

This proposal addresses a framework for conceptualizing the preparation of leaders for the library and information science (LIS) profession. Moreover, this framework is mirrored in examples from two LIS programs in both Finland and the U.S., and discusses how the future expertise of library and information professions can be foreseen in educational programs. The framework has three components – *curriculum, pedagogy, and assessment (CPA)*. Curriculum means specific content that students learn, pedagogy refers to how content is delivered, and an assessment is how students' learning is evaluated (Capper, Theoharis & Sebastian, 2006; Miele, 2019).

APPLICATION OF THE CPA FRAMEWORK IN PREPARING LEADERS

We aim to demonstrate an international approach in presenting how leadership skills are addressed in the U.S. and Europe. As the LIS education has long roots in both Finland and the U.S., we present how two LIS programs utilize the CPA framework in preparing prospective leaders. The Master's program in "Governance of Digitalization" from Finland prepares students for leadership positions in digitalization. Similarly, the advanced "Certificate in Management for Information Professionals (CMIP)" in the U.S. focuses on developing the leadership potential of mid-level information professionals and MS LIS students. Thus, the overall goal is not to compare these two programs but to present an intentional and holistic approach to guide, review and impart leadership education in LIS programs.

Curriculum

The Master's program in "Governance of Digitalization" focuses on the management of digital processes. Students also learn about information and knowledge management, new business models, and understanding changing information behavior, in addition to new participatory information services through various courses. The CMIP program consists of the management course required for the MS LIS, courses in knowledge management, marketing/advocacy, project management, as well as a project leadership capstone course.

Pedagogy

Leadership is part of several courses and not a separate topic in the Master's program in "Governance of Digitalization." Leadership is addressed in relation to different activities of an organisation, while relevant theories and research are presented. More importantly, leadership is put into practice through project work and seminars, with a peer-to-peer learning approach, and where the students are made aware of the importance of observing leadership skills to be able to better develop these skills. The CMIP program specifically focuses on developing students' leadership potential in all of its courses. Learning activities include problem solving with case studies on a variety of management topics. Additionally, students develop skills in creating a variety of highly relevant artifacts, including but not limited to a strategic plan, marketing plan,

project charter, knowledge management action plan, advocacy campaign proposal, change management plan, and so forth.

Assessment

Students work in various individual and collaborative projects. Their leadership skills are evaluated through several measures in both programs, as students document their learning reflections as a leader and a team member of the group. Through peer evaluation, students also evaluate their peers' work in collaborative projects, while teachers provide feedback on students' learning activities and presentations.

DISCUSSION AND IMPLICATIONS

In the era of ongoing and rapid changes in the information environment, it is important to emphasize and develop visionary, creative, and adaptive leadership (Riggs 2008, Ammons-Stephens et al. 2009). In keeping with this approach, both the above programs provide leadership skills in identifying, analysing, and solving complex management-level problems and how these are communicated professionally and in an international context. It is interesting to see that in spite of some differences in their pedagogical approaches, both of these programs provide a balance of theory and practice through various learning activities that require students to demonstrate a blend of creativity, collaboration, negotiation of ideas, and reflections of their own leadership learning. Furthermore, these programs put deliberate efforts in assessing students' leadership potential at the course level, program level, and in conjunction with LIS leaders and practitioners.

This framework offers several implications for leadership preparation in a global information context. For instance, LIS program administrators can use the framework in evaluating curriculum content by reflecting on how their program addresses leadership knowledge and skill. To what extent is this knowledge integrated throughout all the courses? To what extent do their courses and internship experiences help evolve students' leadership potential (Capper, Theoharis & Sebastian, 2006)? LIS educators can also use this framework to guide the assessment of their pedagogical approaches. Are the instructional methods adequate for developing leadership knowledge and skill development? In terms of assessment, questions to evaluate leadership potential can include: How are we measuring the leadership knowledge and skills of prospective leaders in our program? What data do we have to show that a particular course in the program, set of courses, or an entire program has increased the leadership knowledge and skills of students in a global information context (Capper, Theoharis & Sebastian, 2006)?

While it is obvious that lifelong learning is a crucial cornerstone of the LIS profession, the CPA framework can provide a deeper grounding of what it means to prepare leaders in a

global information context and can support the ability of future LIS professionals to lead and manage organizational activities. This study demonstrates how LIS programs can utilize this framework in developing an intentional and holistic approach to guide, review and impart leadership education to their students.

REFERENCES

- Ammons-Stephens, S., Cole, H.J., Jenkins-Gibbs, K., Riehle, C.F., & Weare, W.H. (2009). Developing core leadership competencies for the library profession. *Library Leadership & Management*, 23(2), 63-74.
- Capper, C.A., Theoharis, G., & Sebastian, J. (2006). Toward a fraemwork for preparing leaders social justice. *Journal of Educational Administration*, 44(3), 209-224.
- IFLA (2017). Riding the waves or caught in the tide? Navigate the evolving information environment. IFLA trend repport. Retrieved from <https://trends.ifla.org/insights-document>
- IFLA (2018). IFLA trend report 2018 update. Retrieved from https://trends.ifla.org/files/trends/assets/documents/ifla_trend_report_2018.pdf
- Le, P. (2014). Academic library leadership in the digital age. *Library Management*, 36(4), 300-314.
- Miele, A. (2019, January 19). What makes an online course great? SmartBrief. Retrieved from <https://www.smartbrief.com/original/2019/01/what-makes-online-course-great?amp>
- Riggs, D.E. (2008). The crisis and opportunities in library leadership. *Journal of Library Administration*, 32(3-4), 5-17.

How the Presentation and Metadata of a News Article Influences Perceptions of Fake News

C. Sean Burns and Renee Kaufmann

University of Kentucky, USA

sean.burns@uky.edu, renee.kaufmann@uky.edu

ABSTRACT

Fake news refers to content that is intentionally fake but that looks and feels like real news. The term has been used politically to discredit specific news articles, stories, or publishers. This is an in-progress quasi-experimental study that examines whether the appearance of metadata and how a news article document is styled influences different perceptions of a news article as fake news among participants with different political persuasions. The study could make important contributions to information literacy research and make a theoretical contribution to the role that documents play in political information.

TOPICS

information literacy; sociology of information; metadata; fake news; online news; documentation

INTRODUCTION

The term *fake news* has garnered some attention recently. Fake news refers to content that is intentionally fake, or disinformation (Allcott & Gentzkow, 2017; Fallis, 2015). However, the term is used politically to discredit specific news articles, stories, or publishers (Cooke, 2017). This political aspect is at the center of much of the current discussion of the issue (Allcott & Gentzkow, 2017; Torres, Gerhart, & Negahban, 2018). Consequently, legitimate news publishers are sometimes labeled *fake news* by politicians who oppose them and by political followers who may condemn those sources, articles, or story lines as *fake news*.

Intentional fake news has been defined as "fabricated information that mimics news media content in form but not in organizational process or intent" (Lazer et al., 2018, p. 1094). This implies two defining characteristics about news articles as documents. The first is the form, presentation, or style: i.e., the document layout, typography, the use and position of images, and branding. These are easily mimicked or fabricated using web technologies. The second, the "organizational process and intent" of a news item, is more social, historical, and institutional. A news article indicates, on the surface, that it is real journalism in its metadata—the information it

displays to signify its provenance can be traced to a trusted entity. These indicators include the headline, the byline, and publisher information. For example, news articles published by the *New York Times* or *The Wall Street Journal* display metadata that identifies their provenance, which is associated with a reputation that it follows the norms, conventions, and duties of established journalism, even if imperfectly. A fake news site may mimic the presentation, or the look and feel, of valid news sources like those listed above, but it cannot follow the process of real journalism and does not have the reputation to indicate that it does.

Thus, using Lazer et al.'s, (2018) definition, we have two methods to identify fake news: the look and feel of a news source, i.e., its form or style, and the indicators that highlight information about the provenance of the news article, i.e., its metadata. With respect to the political context of this discussion, we propose the following research question: To what extent do self-identified liberals, centrists, and conservatives differ in their perceptions of a news article as fake news with regard to information about the article's source (metadata) and the way the news article is presented (styled)?

Since an article's metadata indicates an article's provenance, and given that the provenance indicates whether a source is, on the surface, a trusted entity, then an article's metadata can help identify whether an article is perceived as fake news. Therefore, our first hypothesis is:

H1: The appearance of metadata on a document influences different perceptions of a news article as fake news among participants with different political persuasions.

Further, because an article's presentation (i.e., styling) may influence whether an article is perceived as fake news, our second hypothesis is:

H2: Document presentation influences different perceptions of a news article as fake news among participants with different political persuasions.

Lastly, we expect positive associations between the previous two hypotheses, and our third hypothesis is:

H3: The appearance of metadata and the way a document is styled influences different perceptions of a news article among participants with different political persuasions.

METHOD

This is a quasi-experimental study administered through an online survey with IRB approval. Participants are students at a large, research institution and are randomly assigned to one of four versions of the survey. Each version of the survey presents the same article from *The New York Times* on the Special Council investigation headed by Robert Mueller. The control

group (C) is presented with the article as it was published, excluding ads that were placed in the page. Three treatment groups randomly receive a version of the article without metadata (source information) (T1), a version of the article stripped of most styling (appears as if written by a typewriter) (T2), and a version of the article with neither metadata nor styling (T3). Data collection began on 2019/02/22 and concludes when we have reached 400 responses. There are currently 170 complete responses. We report only basic statistics and no inferential statistics until data collection is complete.

PRELIMINARY RESULTS

For the control and three treatment groups, participants lean conservative on a scale from 1 (liberal) to 7 (conservative) ($m_C = 4.54$; $m_{T1} = 4$; $m_{T2} = 4.31$; $m_{T3} = 3.95$). Self-identified conservative respondents in the control group ($n_C = 20$) more frequently claimed the article was fake news ($n_C = 7$) or maybe fake news ($n_C = 9$). We find a tentative effect in the treatment groups where self-identified conservatives in T1 (no metadata) and T2 (limited styling) more frequently claimed the article was not fake news ($n_{T1} = 9$; $n_{T2} = 10$). The majority of self-identified conservatives in T3 considered it maybe fake news ($n_{T3} = 9$).

Self-identified liberal respondents in the control group ($n_C = 13$) more frequently claimed the article as not fake news ($n_C = 8$). No self-identified liberal respondents in T1 claimed the article was fake news, but a small number did in T2 ($n_{T2} = 2$) and T3 ($n_{T3} = 3$). Most self-identified liberal respondents claimed the article was not fake news in these two groups ($n_{T2} = 10$; $n_{T3} = 8$) and some thought it was maybe fake news ($n_{T2} = 4$, $n_{T3} = 6$).

DISCUSSION

This preliminary analysis of an ongoing quasi-experimental study examines the effects that form, presentation/style, and/or metadata have on judgments about whether an article is considered to be fake news among participants with different political persuasions. At this point, there is some preliminary evidence that there will be a substantial and a statistical effect, and that presentation and the metadata of the document (i.e., the news article) and not the information in the document will explain much of the variation in judgments about fake news among participants with different political persuasions. The study could make important contributions to information literacy research and make a theoretical contribution to the role that documents play in political information.

REFERENCES

Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of Economic Perspectives*, 31(2), 211–236. <https://doi.org/10.1257/jep.31.2.211>

- Cooke, N. A. (2017). Posttruth, truthiness, and alternative facts: Information behavior and critical information consumption for a new age. *The Library Quarterly*, 87(3), 211–221.
<https://doi.org/10.1086/692298>
- Fallis, D. (2015). What is disinformation? *Library Trends*, 63(3), 401–426. Retrieved from
https://muse.jhu.edu/journals/library_trends/v063/63.3.fallis.html
- Lazer, D. M. J., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., ... Zittrain, J. L. (2018). The science of fake news. *Science*, 359(6380), 1094–1096.
<https://doi.org/10.1126/science.aao2998>
- Torres, R., Gerhart, N., & Negahban, A. (2018). Epistemology in the era of fake news: An exploration of information verification behaviors among social networking site users. *SIGMIS Database*, 49(3), 78–97. <https://doi.org/10.1145/3242734.3242740>

LatinXs Finding InformaXion in Boston (LatinXs buscando InformaXion en Boston)

Mónica Colón-Aguirre^a and Janet Ceja Alcalá^b

^aEast Carolina University, Greenville, NC, U.S.A

^bSimmons University, Boston, MA, U.S.A

colonaguirrem17@ecu.edu, janet.ceja@simmons.edu

ABSTRACT

Studies assert that Latinx are less likely to use libraries, yet the causes for this remain desperately unexplored. This work will identify the information needs of the Latinx community living in Boston in order to improve services to this community. Findings illustrate a complex relationship among multiple factors rooted in social class.

TOPICS

information needs, social justice, public libraries, archives

The information needs and library services to Latinx¹ communities in the United States have been studied in terms of legal information, health information, and English/Spanish literacy (Peterson, 2014). The anti-immigrant sentiment toward Latinxs fomented under the current presidential administration suggests that their information needs are actually more complex, and as such require that librarians and archivists perform highly specialized forms of literacy with records (Ceja Alcalá, Colón-Aguirre and Alaniz, 2018). In many cases, however, the information needs of these populations are not being addressed in libraries and archives, but instead by personal acquaintances and other gatekeepers at places such as corner stores and houses of worship (Adkins, Sandy and Depic, 2017).

This study documents and identifies some of the information needs of the Latinx immigrant community in Boston, Massachusetts. The data presented here reflect some preliminary findings from a qualitative study involving interviews with 13 participants, all Spanish-speaking Latinxs. In terms of demographics the majority of participants were female

¹ This work favors the inclusive term “Latinx” over the official U.S. Census verbiage of “Hispanic” in order to refer to those individuals who are “...of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.” (United States Census Bureau, 2018a).

and their countries of origin included: Puerto Rico, Colombia, Guatemala, El Salvador, Honduras, Mexico and Chile. The participants' average age was 47 and had lived in the Boston area for approximately 14 years.

A 2015 report by the PEW Research Center, found that Latinxs are less likely than other groups to know about the services offered by their public libraries. The root cause of this issue remains mostly unexplored. Possible causes are likely to be related to language, but access barriers and lack of cultural awareness regarding the services libraries and archives offer could also be linked to the findings. This situation makes it imperative for library and information science (LIS) professionals to explore the information needs of Latinx communities throughout the United States as they make up a large portion of the population and remain significantly underserved.

In the history of the United States, mobility and immigration from Latin American countries has been extensively studied, with estimates of hundreds of thousands of immigrants coming from various nations only in the early part of the 20th century (Massey, 1995). Today, Latinxs are a significant portion of the United States population. As of 2017 Latinx populations constituted 18.1 percent of the nation's total, with 58.9 million inhabitants; which makes it the largest ethnic or racial minority currently living in the United States. (United States Census Bureau, 2018b). In the city of Boston, the Latinx population is estimated to be around 122,317.

FINDINGS & DISCUSSION

It is important to frame the initial findings of this study by first noting that Latinx populations are not monolithic. They encompass various races, nationalities, and countries of origin, with each one influenced by their own histories and cultures, which go on to affect their lived experiences in the United States. For instance, migration flows originating in Latin America to the United States can be linked directly to the latter's foreign policy during the Cold War. The current migration crisis of Central American populations to the United States is an example of how such political interventions have an adverse effect on the livelihoods of working class and poor people who must leave their countries of origin for survival. It is not surprising, then, that some of the preliminary findings of this study indicate that one of the most salient features linked to the use of libraries and other information centers in Boston is related to social class. Two important and related manifestations of social class identified in our study included educational attainment and language.

Educational Attainment and Language

Participants with higher levels of education mentioned using library collections and facilities in Boston the most and at different points throughout their life. Those with lower levels of education mentioned library use mostly as a way to seek services for their children, but not for themselves. We also found among the study's participants that the majority of those in the lower educational attainment group indicated that Spanish is the only language they use to

communicate. Whereas the higher educational attainment group described both Spanish and English as the languages in which they communicate in their day to day lives.

Based on these initial findings, LIS professionals would need to reconsider the services and materials they offer patrons. This begins with educating future professionals by preparing them with the knowledge and skills to foster cultural competence and encourage non-English language acquisition. The situation is imperative, considering that Latinx populations living in the United States are estimated to steadily grow to 111.2 million individuals by the year 2060, which will be over a quarter of the United States population! At the same time, Latinx communities are less likely to learn English than other migrant groups mainly due to ethnic enclaves in cities around the United States (Massey, 1995).

Community engagement efforts are also essential to the future of LIS education if it is to respond to the needs of Latinxs and bridge linguistic differences. As pointed out by Montiel-Overall (2009), culturally competent librarians do not necessarily need to speak the languages of the members of the communities they serve. They do, however, need to engage various groups in their communities and find community members who can become advocates for libraries. These members, in turn, can become interpreters and translators. Other options for outreach focused on language would be to create bilingual catalogs (Berger in Cooke, 2017 p. 57). Although the optimal solution would be to hire more diverse librarians, those who have roots and connections to these communities, are familiar with their values, perceptions and needs and are also fluent in their native languages.

CONCLUSION

Our study suggests that awareness of social class which affect people's access to education is a major variable to address when preparing LIS students to be culturally competent in developing services for one of the largest underserved populations in this country. This begins with understanding that Latinx communities in the United States are a large, multicultural and multiracial group with unique histories and who are facing a variety of barriers to social mobility.

REFERENCES

- Adkins, D., Sandy, H. M., & Derpic, J. (2017). Information Sources of Latin American Immigrants in the Rural Midwest in the Trump Era. *The Library Quarterly*, 87(3), 243-256.
- Ceja Alcalá, J., Colón-Aguirre, M., & Alaniz, D. (2018). Immigrant Rights Advocacy as Records Literacy in Latinx Communities. *The Library Quarterly*, 88(4), 332-347.
- Cooke, N. A. (2016). *Information services to diverse populations: Developing culturally competent library professionals*. ABC-CLIO.

Massey, D. S. (1995). The new immigration and ethnicity in the United States. *Population and Development Review*, 631-652.

Overall, P. M. (2009). Cultural competence: A conceptual framework for library and information science professionals. *The Library Quarterly*, 79(2), 175-204.

United States Census Bureau (March 7, 2018a). Hispanic Origin. Retrieved from: <https://www.census.gov/topics/population/hispanic-origin/about.html>

United States Census Bureau (September 18, 2018b). Hispanic Heritage Month 2018. Retrieved from: <https://www.census.gov/newsroom/facts-for-features/2018/hispanic-heritage-month.html>

Designing Future Library Leaders: Investigating the Incorporation of Design Thinking and Methods in Master's Level Library Education

Rachel Ivy Clarke^a

^aSyracuse University School of Information Studies, USA

rclark01@syr.edu

ABSTRACT

MLIS graduates need to be collaborative, creative, socially innovative, flexible, and adaptable problem solvers—characteristics that may be achieved by incorporating design thinking into master's level library education. Yet explicit integration of design thinking and methods appears to be missing in MLIS degree programs. This paper presentation will report on findings from Designing Future Library Leaders, a project that investigated the current state of design thinking and methods in master's level library education in the United States through a field scan of existing curricula, a nationwide survey of library practitioners, and a national forum connecting MLIS educators and library professionals.

TOPICS

curriculum; education programs/schools

INTRODUCTION AND MOTIVATION

In the United States, master's level library education serves to prepare students to be not just practicing librarians, but future leaders in the library world. In the 21st century, these future leaders require new skill sets. MLIS graduates need to be collaborative, creative, socially innovative, flexible, and adaptable problem solvers—characteristics that are demonstrated by people with backgrounds in design (Bertot, Sarin and Percell 2015). Libraries are called to foster new organizational cultures that emphasize innovation, with design thinking as an integral part of this paradigm shift (Garmer 2016). Incorporating design thinking into master's level library education is critical in bridging connections between LIS education and these new models of 21st century librarianship.

Yet explicit integration of design thinking and methods appears to be missing in master's level library education. Design is conspicuously absent from textbooks on research methods for librarians, even recent publications (see for example Beck and Manuel 2008; Connaway and

Powell 2010; Pickard 2013). A curriculum review of the top 20 ALA-accredited MLIS programs revealed that none required coursework in design (Clarke, Lee and Mayer 2017). Outside of this, a few notable examples have recently emerged. In 2016, Simmons College offered an experimental summer course called “Library Test Kitchen” that offered students “the opportunity to experiment with human-centered design skills, ethnographic observation and interviews, rapid ideation, applied problem-solving, developing and pitching ideas, identifying assumptions, and design fictions.” (Simmons School of Library and Information Science 2016). In 2017, the University of Washington Information School introduced a full-term course in design methods for libraries and librarianship (Mills et. al. 2017). Perhaps most notably, the University of Maryland now offers a master’s level concentration in “youth experience (YX)” which draws on design methods and principles from the participatory design and user experience communities. However, the project’s focus on youth leaves other areas of librarianship unaddressed—other areas which may be viewed as design work (Clarke 2016; 2018).

As the future of librarianship progressively hinges on reimagining the profession in a design mindset, education for this perspective needs to be more systematically included in formal education. Tomorrow’s library leaders need more than the existing limited options. How can master’s level library education fill this void? This paper presentation will report on findings from *Designing Future Library Leaders*, a project funded by the Institute of Museum and Library Services that investigated the current state of design thinking and methods in master’s level library education in the United States.

PROJECT APPROACH

To identify gaps in existing MLIS curricula and explore possible approaches to incorporate design into master’s level library education, we undertook a three-phase approach. First, we conducted a field scan of existing coursework in master’s level library degree programs. Between July and December 2017, we compiled publicly available title and course description information that included the word “design” from all 60 ALA-accredited MLIS and equivalent programs in the United States, Canada and Puerto Rico. We then used an inductive card sorting process to identify similar courses and topical themes.

Next, we deployed a nationwide survey of library practitioners to solicit feedback regarding the interest in and use of design thinking and methods in library practice, and the use of and need for design skills and abilities in library practice. The questionnaire included questions about topics such as practitioners’ familiarity with design thinking and methods; source(s) of education for any exposure to design thinking and methods, and respondents’ thoughts regarding incorporating design thinking and methods into MLIS programs. The questionnaire was deployed online and was open for responses for approximately 10 weeks from January through March 2018.

Finally, we convened a national forum in March 2018 that brought together expert library educators, design educators and professionals, and library employers to discuss what elements might be necessary to incorporate design into MLIS curricula. Invited participants met for two days to review and discuss the results of the field scan, identify aspects of design education

relevant to MLIS education, share professional experiences, and brainstorm curricular approaches.

FINDINGS AND IMPLICATIONS

Design appears throughout MLIS curricula, although use of the term represents different applications and conceptual perspectives. There is a heavy emphasis on computing and technology-related topics, such as databases, human-computer interaction, web and internet, and information systems. Design also appeared frequently in the context of instruction and education topics. Only four courses were identified as stand-alone design courses. Of these, two were “special topics” courses, and three of the four courses specifically focused on design thinking.

Practicing professionals reported learning about design thinking and methods from a variety of sources. While some mentioned formal coursework in MLIS programs, many mentioned that their knowledge of design came from professional development sources at their workplaces, other libraries, or association conferences. There were also several mentions of informal or self-education through reading books, articles or blogs, or through conversations with colleagues. Many of these resources were non-library sources, such as the design firm IDEO or the d.school at Stanford University. 55% of respondents said they would be interested in design education targeted specifically for librarians, and most respondents (95.17%) were in favor of including design coursework in MLIS education programs, with 26.9% answering that it should be required and 68.27% that it should be offered but optional (such as an elective course).

Discussions among MLIS educators and professional librarians at the forum meeting revealed barriers to the inclusion of design in MLIS programs, such as students’ tendencies to fear failure, lack of institutional support, and issues of instructional expertise. Various means for integrating design into the MLIS program curricula were discussed, including the benefits and drawbacks of separate, specific design courses vs. the integration of design methods and techniques into existing topical coursework. Notably, the discussion also raised the idea of using design to help align library education and practice with the values of the American library profession and to support equity and inclusion.

CONCLUSION

The Designing Future Library Leaders project sought to investigate a perceived void of instruction in design thinking and methods in MLIS programs. As the application of design thinking and methods continues to increase in library practice, future librarians need education in this area. However, there are still many barriers to overcome. Although only a first step, the outcomes of this project help chart a course for increased consideration and incorporation of design in formal graduate library education. As these future library leaders face increasingly difficult challenges, education in design thinking for librarianship can help inform their decision-making and problem-solving in the 21st century.

ACKNOWLEDGEMENTS

This project was made possible in part by the Institute of Museum and Library Services [RE-98-17-0032].

REFERENCES

- Beck, S. E. and Manuel, K. (2008). *Practical Research Methods for Librarians and Information Professionals*. New York, NY: Neal-Schuman.
- Bertot, J.C., Sarin, L.C. and Percell, J. (2015). "Re-Envisioning the MLS: Findings, Issues, and Considerations." College of Information Studies, University of Maryland College Park.
<http://mls.umd.edu/wp-content/uploads/2015/08/ReEnvisioningFinalReport.pdf>
- Clarke, R. I. (2016). "It's Not Rocket Library Science: Design Epistemology and American Librarianship." Unpublished doctoral dissertation, University of Washington Information School.
- Clarke, R. I. (2018). "Toward a Design Epistemology for Librarianship," *The Library Quarterly: Information, Community, Policy* 88(1): 41-59.
- Clarke, R.I., Lee, J. H. and Mayer, K. (2017). "Design Topics in Graduate Library Education: A Preliminary Investigation." Presented at the Association for Library and Information Science Education conference, Atlanta, Georgia, January 17-20.
- Connaway, L. S. and Powell, R. R. (2010). *Basic Research Methods for Librarians, 5th ed.* Westport, CT: Libraries Unlimited.
- Garmer, A. K. (2016). "Libraries in the Exponential Age: Moving from the Edge of Innovation to the Center of Community." The Aspen Institute, Washington D.C.
http://csreports.aspeninstitute.org/documents/Libraries_Exponential_Age.pdf
- Mills, J.E., Clarke, R. I., Lee, J. H., Williams, H., Hendry, D. G., and Yip, J. (2017). "More Than Form and Function: Developing a Design Course for Graduate Library Education." Presented at the Association for Library and Information Science Education conference, Atlanta, Georgia, January 17-20.
- Pickard, A. J. (2013). *Research Methods in Information, 2nd ed.* Chicago, IL: Neal-Schuman.
- Simmons School of Library and Information Science. (2016). "Library test Kitchen 2016."
<http://www.simmons.edu/news/school-of-library-and-information-science/2016/august/library-test-kitchen-2016>

A Curricular Model in a “Social Justice and Inclusion Advocacy” Doctoral Concentration: Global Implications for LIS

Bharat Mehra^a, Jim Elmborg^a, Miriam Sweeney^a

^aUniversity of Alabama, USA

bmehra@ua.edu, jkelmborg@ua.edu, mesweeney1@ua.edu

ABSTRACT

The paper presentation introduces a doctoral curricular model of social justice scholarship in library and information science (LIS). The case-study highlights global implications of a “Social Justice and Inclusion Advocacy” concentration in the communication-and-information college-wide doctoral program in the School of Library and Information Studies at the University of Alabama. Actualities and potentialities of this unique progressive collaboration are elaborated to mobilize LIS worldwide in expanding its traditional definition, scope, representation, and relevance in the 21st century. It represents global possibilities of influencing newly emerging LIS educators, practitioners, administrators, and others to integrate a spirit/ethics of social justice in their work/practice/scholarship.

TOPICS

curriculum, pedagogy, social justice.

CONTEXT OF NEED

Today’s globally connected information society and the emerging social, cultural, political, and economic climate of the 21st century present an urgency for library and information science (LIS) educators and scholars to develop critical skills and competences in the how-to’s of conducting community-engaged, impact-driven scholarship that further principles (and actions) of social justice and inclusion advocacy (Castells, 2015; Elmborg, 2008; Jaeger, Shilton, and Koepfler, 2016; Mehra, 2015). LIS programs worldwide are still struggling with integrating social justice, social equity, inclusion advocacy, critical information literacies, and engaged scholarship while partnering with minority and underserved populations to make meaningful changes in the lives of their community stakeholders via the education and practice of information-related work, and their intersections thereof (Elmborg, 2006; Mehra, Rioux, and

Albright, 2009; Naidoo and Sweeney, 2015; Phillips and Anderson, 2018). Developing intentional, deliberate, systematic, and rigorous models, frameworks, theories, methods, and approaches in LIS education to further social justice and inclusion advocacy continue to pose serious challenges and draw resistance to its adoption and implementation (Bernier, 2019; Jaeger, Gorham, Taylor, and Kettnich, 2014; Mehra et al., 2014). Other problematic concerns in LIS education that have served as hindrances to social justice adoption worldwide relate to (Cooke and Sweeney, 2017; Mehra and Rioux, 2016; Roberts and Noble, 2016; Winston, 2005): poor understanding in applying appropriate theory and methods to extend existing entrenched canons of knowledge domains in LIS scholarship; availability of limited repertoire of poorly conducted or documented social justice research; random ad hoc instances of social justice in teaching without necessarily articulating values to scholarship; limited consideration to ethical leadership; amongst others.

SCOPE AND CONTENT

The paper presentation provides select insights to address these issues that have prevented the LIS professions (including LIS education) in moving forward to adopt a more fuller and matured integration of social justice and inclusion advocacy scholarship than what is currently practiced which is still much in its infancy (Rioux, 2010; Jaeger, Taylor, and Gorham, 2015). It presents a potentially applicable global model built on a case study and ongoing curricular developments in a recently approved “Social Justice and Inclusion Advocacy” concentration in the communication-and-information college-wide doctoral program in the School of Library and Information Studies (SLIS) at the University of Alabama (UA).

Important discussion includes:

- Historical and contextual background of the doctoral studies concentration in social justice/inclusion advocacy;
- Curricular development and current evolution for interdisciplinary and intercultural connections;
- Existing challenges and emerging opportunities;
- Issues in future operationalization/implementation.

The curricular model is presented for LIS professionals around the world to adopt in their own geographical and cultural settings to extend the impact of their LIS-related activities and initiatives. Additional actualities and potentialities of this unique progressive collaborative initiative are elaborated in mobilizing the LIS and communication professions worldwide in engaged social justice and inclusion advocacy scholarship to help expand their traditional definition, scope, extent, representation, and relevance in the 21st century (Cooke, Sweeney, and Noble, 2016; Gibson et al., 2017).

IMPLICATIONS

Ultimately, the “Social Justice and Inclusion Advocacy” doctoral concentration in the SLIS@UA represents global possibilities of influencing newly emerging LIS educators, practitioners, administrators, and others to integrate a spirit/ethics of social justice in their work, behaviors, practices, scholarship, and relationship with each other, and with the local, regional, national, and international communities in which we are connected. This vision is novel and innovative in its potentialities of worldwide impact in shaping future generations of LIS educators, scholars, researchers, and practitioners. Having said that, in addition to an expectation of a philosophical push along the lines of “build it and they will come”, there is an urgent need for identifying a “how-to” operationalize and implement a curriculum of social justice in LIS, “a fix or resolution” of sorts (paraphrasing an anonymous reviewer). This paper presentation provides the bridge as one concrete strategy to move us forward in that direction.

The paper presentation reflects a strong connection to the conference theme of “Exploring Learning in a Global Information Context” since a need for integrating social justice and inclusion advocacy in LIS education is a world-wide issue of concern. Future publications will share detailed dimensions of the curriculum and ongoing phases in the development of the “Social Justice and Inclusion Advocacy” concentration. Relevance to current and emerging issues in LIS education are highlighted in the discussion of the opportunities and challenges in operationalizing a potentially relevant model of curriculum development that is globally viable. The forward-thinking strategic curricular directions provide a direct course of action to overcome limitations of our historical and contemporary existence towards meaningful future growth of the LIS professions that is liberating in its self-efficacy, empowerment, and impact in community building and community development.

REFERENCES

- Bernier, A. (2019). Isn't It Time for Youth Services Instruction to Grow Up? From Superstition to Scholarship. *Journal of Education for Library and Information Science*, 60(2), 118-138.
- Castells, M. (2015). *Networks of Outrage and Hope: Social Movements in the Information Age* (2nd edition). Malden, MA: Polity Press.
- Cooke, N.A. and Sweeney, M.E. (eds). (2017). *Teaching for Justice: Implementing Social Justice in the LIS Classroom*. Sacramento, CA: Library Juice Press.

- Cooke, N.A., Sweeney, M.E. and Noble, S. U. (2016). Social Justice as Topic and Tool: An Attempt to Transform a LIS Culture and Curriculum. *The Library Quarterly: Information, Community, Policy*, 86(1), 107-124.
- Elmborg, J. K. (2008). Framing a Vision for 21st Century Librarianship: LIS Education in Changing Times. *The Serials Librarian*, 55(4), October 2008, 499-507.
- Elmborg, J. (2006). Critical Information Literacy: Implications for Instructional Practice. *Journal of Academic Librarianship*, 32(2), (2006): 92-199.
- Gibson, A. N., Chancellor, R. L., Cooke, N. A., Dahlen, S. P., Lee, S. A., and Shorish, Y. (2017). Libraries on the Frontlines: Neutrality and Social Justice. *Libraries*, 99. Retrieved March 8, 2019, from <http://commons.lib.jmu.edu/letfspubs/99>.
- Jaeger, J. T., Gorham, U., Taylor, N. G., and Kettlich, K. (2014). Library Research and What Libraries Actually Do Now: Education, Inclusion, Social Services, Public Spaces, Digital Literacy, Social Justice, Human Rights, and Other Community Needs. *The Library Quarterly: Information, Community, Policy*, 84(4), 491-493.
- Jaeger, P. T., Shilton, K., and Koepfler, J. (2016). The Rise of Social Justice as a Guiding Principle in Library and Information Science Research. *The Library Quarterly: Information, Community, Policy*, 86(1), 1-9.
- Jaeger, P. T., Taylor, N. G., and Gorham, U. (ed.). (2015). *Libraries, Human Rights, and Social Justice: Enabling Access and Promoting Inclusion*. New York: Rowman & Littlefield.
- Mehra, B. (ed.). (2015). *Library Trends: Social Justice in Library and Information Science & Services*, 64(2), Fall 2015.
- Mehra, B., Black, K., Singh, V., Nolt, J., Williams, K.C., Simmons, S., and Renfro, N. (2014). The Social Justice Framework in the Information Technology Rural Librarian Master's Scholarship Program: Bridging the Rural Digital Divides. *Qualitative and Quantitative Methods in Libraries Journal*, Special Issue 2014: Social Justice, Social Inclusion, 5-11.
- Mehra, B., and Rioux, K. (eds.). (2016). *Progressive Community Action: Critical Theory and Social Justice in Library and Information Science*. Sacramento, CA: Library Juice Press.
- Mehra, B., Rioux, K., and Albright, K. S. (2009). Social Justice in Library and Information Science. In M. J. Bates and M. N. Maack (eds.), *Encyclopedia of Library and Information Sciences* (pp. 4820-4836). New York: Taylor & Francis Group.
- Naidoo, J. C. and Sweeney, M.E. (2015). Educating for Social Justice: Perspectives from Library and Information Science and Collaboration with K-12 Social Studies Educators." *Journal of International Social Studies*, 5(1), 196-207.
- Phillips, A., and Anderson, A. (2018). Cyberbullying, Digital Citizenship, and Youth with Autism: Global LIS Education as a Piece of the Puzzle. *Proceedings of the Association for Library and Information Science Education (ALISE) Annual Conference: The*

- Expanding LIS Education Universe* (Compiled by Peiling Wang, Ashlea Green, & Shimelis Assefa) Denver, Colorado, February 6-9, 2018 (pp. 51-53).
- Rioux, K. (2010). Metatheory in Library and Information Science: A Nascent Social Justice Approach. *Journal of Education for Library and Information Science*, 51(1), 9-17.
- Roberts, S. T., and Noble, S. U. (2016). Empowered to Name, Inspired to Act: Social Responsibility and Diversity as Calls to Action in the LIS Context. *Library Trends*, 64(3), 512-532.
- Winston, M. (2005). Ethical Leadership: Professional Challenges and the Role of LIS Education. *New Library World*, 106(5/6, 234-243.

Integrating Metaliteracy into Knowledge Organization Curriculum: Designing Inclusive Curriculum for International Classrooms

Kristen Schuster^a and Kristine N. Stewart^b

^a King's College London, London, UK

^b Zayed University, Abu Dhabi, UAE

kristen.schuster@kcl.ac.uk, kristine.stewart@zu.ac.ae

ABSTRACT

This paper discusses strategies for using Metaliteracy frameworks to design more inclusive and diverse curriculum. Using long term observational research, we will discuss Metaliteracy alongside Constructive Alignment and Learning Oriented Assessment (LOA), two pedagogical models promoted by the Higher Education Academic (HEA) in the United Kingdom (UK). While we recognize the value of each pedagogical model, we argue that they have a significant limitation: They do not acknowledge diverse cultural perspectives on education. Considering the value of diversity in higher education will frame our suggestions for using these models to design more inclusive curriculum.

Following our discussion of pedagogical models, we will discuss our case study, which draws on our experiences evaluating a post-graduate course on metadata for cultural heritage organizations titled, From Information to Knowledge. This module is optional and open to all students in the Department of Digital Humanities (DDH) at King's College London.

Despite the challenges inherent to curriculum design, there are models and frameworks that can enhance instructor awareness about when, why and how they evaluate and adjust their course learning outcomes and assessment patterns. We will discuss how frameworks for developing curriculum (like Constructive Alignment) and theories for assessing student learning (like LOA) can enhance how instructors approach conceptualizing literacy and Metaliteracy practices amongst their students. This is particularly important in international and diverse classrooms. Based on our case study we will discuss strategies for facilitating discussion and revision that empowers English as a Foreign Language (EFL) students. We will focus our discussion on an analysis of whether LOA encourages EFL students to practice the critical reflective elements promoted through metacognitive elements in Metaliteracy theories.

TOPICS

pedagogy; students; information literacy; specific populations; metadata

Codifying Discrepancies among MEDLINE Platforms to Advance Instruction and Practice

C. Sean Burns ^a, Tyler Nix ^b, Robert M Shapiro, II ^a and Jeffrey T Huber ^a

^aUniversity of Kentucky, USA

^bUniversity of Michigan, USA

sean.burns@uky.edu, tnix@umich.edu, shapiro.rm@uky.edu, jeffrey.huber@uky.edu

ABSTRACT

MEDLINE is an essential bibliographic database for health professionals and is an indispensable part of clinical care. Despite that one of MEDLINE's main features is its use of MeSH, in practice, MEDLINE is offered on a number of platforms and each of these platforms takes very different approaches to using MeSH and in indexing other database fields, leading to variations in search results among the platforms. This project is based on a longitudinal study of these platforms with the goal of outlining how they differ and to provide guidelines for their use by instructors, students, and practitioners.

TOPICS

indexing; classification; database systems; information retrieval; curriculum

INTRODUCTION

MEDLINE is an essential, specialized bibliographic database for health and medical professionals. It is used as “a clinical care tool that health care professionals use to avoid adverse events, make changes to patient care, and answer clinical questions” (Dunn, Marshall, Wells, & Backus, 2017). MEDLINE and other sources are used to create products such as systematic reviews and these reviews are of higher quality when librarians and information specialists are involved in their production (Rethlefsen, Farrell, Trzasko, & Brigham, 2015). It seems that most systematic reviews are not created with the assistance of librarians or information specialists (Rethlefsen et al., 2015), which may be why systematic reviews as a research design are coming under increased criticism for being misleading, redundant, not useful, or statistically problematic (Annane, Jaeschke, & Guyatt, 2018; Chevret, Ferguson, & Bellomo, 2018; Elsner, 2018; Ioannidis, 2016). This also means that it is important to teach students in library and information science (LIS) programs how to use MEDLINE and other health, medical, and bioinformatic databases if librarians are to continue to contribute to and advance this type of research.

One of the main advantages that MEDLINE offers is the ability to search using Medical Subject Headings (MeSH). MeSH itself is organized as a tree-like thesaurus and contains sixteen branches or main categories (Chan & Salaba, 2016). MeSH headings may appear on a single branch of the tree or on multiple branches (U.S. National Library of Medicine, n.d.). This aspect of the MeSH thesaurus provides a way to increase search precision. In theory, this type of controlled vocabulary provides a complex, powerful, and predictable information retrieval device. However, in practice, it becomes complicated because MEDLINE is offered on multiple platforms including PubMed, ProQuest, EBSCOhost, Web of Science, and Ovid. Each of these platforms provides an unique interface to the MEDLINE records, and these interfaces offer different search functions and make different assumptions about how to search MeSH by default. For example, when searching a MeSH term in PubMed, the default is to automatically explode and include all narrower terms across all branches in the search results. However, on other platforms, like ProQuest, EBSCOhost, and Web of Science, terms are not automatically exploded. The implication is that queries that include only MeSH terms or MeSH terms in addition to other fields may return different records and/or different counts of records.

An additional complication is added because each platform indexes fields (author name fields, title fields, publication name fields, etc.) differently, and this may increase search result variation when comparing queries across platforms. For example, PubMed applies automatic term mapping (U.S. National Library of Medicine, n.d.), which means that uncontrolled terms are checked against multiple fields (or tables) when a query is executed. It is not always clear from the documentation how the other platforms index their fields. Another issue is that each platform offers different fields to search MEDLINE. For example, in PubMed's MEDLINE, users may select among five different Date fields, including Date-Completion, Date-Create, Date-Entrez, Date-MeSH, Date-Modification, Date-Publication, but in ProQuest's MEDLINE, there is only a single, less defined Date field.

Given the complexities introduced by the availability of multiple MEDLINE platforms, the purpose of this project is to examine why there are search result variations across the MEDLINE platforms in order to understand the differences between them and to produce clear guidelines for their use by students in LIS programs, for instructors teaching these platforms, and for practitioners using them in the field.

PROJECT BACKGROUND

We are conducting a longitudinal study (October 2018 – September 2019) of five MEDLINE platforms offered by PubMed, ProQuest, EBSCOhost, Ovid, and Web of Science. Our data includes 29 sets of search queries, five queries per set for each of the platforms, and is collected monthly. The searches are designed to be semantically and logically equivalent to each other on a per set basis. For example, one search set is designed to search each platform for the

MeSH heading *neoplasms* only without exploding the term. The search queries in the set differ only to match the syntax required by each of the platforms.

This paper will provide an overview of the longitudinal study by focusing on selected search sets in our study. One of these search sets includes a query that searches each platform for the MeSH term *neoplasms* AND the keyword *immune* AND limited by publication dates from 1950–2015. This query has produced inconsistent results across the platforms but the result counts are small enough (range of 169 to 184 records across the five platforms) to allow us to download the records and inspect them closely.

In a preliminary analysis, we have found that one reason why there are differences in search results for equivalent queries is because the platforms index their records differently. For example, for the search described above, EBSCOhost's MEDLINE returns 12 more records than PubMed's MEDLINE because EBSCOhost indexes the references lists and the term *immune* appears in the names of journal titles that have been cited by the retrieved record but not anywhere else (e.g., title, abstract, headings). It is debatable whether the appearance of a term in a journal title in a reference list makes EBSCOhost's approach to retrieve that record more or less relevant than PubMed's approach, but the implications are considerable when queries can retrieve thousands or more records and librarians, information specialists, and others need to sift through them to identify what is relevant. We will also discuss the search records for queries that only include MeSH terms on single and multiple branches. In these cases, we have found that some platforms take divergent approaches to these types of queries.

DISCUSSION

Each of these MEDLINE platforms is producing results inconsistent with the others, and it is not clear which platform is ideal for conducting systematic reviews or for providing an optimal “clinical care tool” (Dunn et al., 2017), even if such a thing as the latter exists. This research should lead to better guidelines on the selection and use of MEDLINE platforms and provide evidence-based support for instructors who teach these systems in LIS programs.

REFERENCES

- Annane, D., Jaeschke, R., & Guyatt, G. (2018). Are systematic reviews and meta-analyses still useful research? Yes. *Intensive Care Medicine*, 44(4), 512–514.
<https://doi.org/10.1007/s00134-018-5102-3>
- Chan, L. M., & Salaba, A. (2016). *Cataloging and classification an introduction*. Lanham, Md: Rowman & Littlefield Publishers, Inc.
- Chevret, S., Ferguson, N. D., & Bellomo, R. (2018). Are systematic reviews and meta-analyses still useful research? No. *Intensive Care Medicine*, 44(4), 515–517.
<https://doi.org/10.1007/s00134-018-5066-3>

- Dunn, K., Marshall, J. G., Wells, A. L., & Backus, J. E. (2017). Examining the role of MEDLINE as a patient care information resource: an analysis of data from the Value of Libraries study. *Journal of the Medical Library Association: JMLA*, 105(4), 336. <https://doi.org/10.5195/jmla.2017.87>
- Elsner, B. (2018). Systematic reviews for informing clinical practice. *Physiotherapy Research International: The Journal for Researchers and Clinicians in Physical Therapy*, 23(1). <https://doi.org/10.1002/pri.1703>
- Ioannidis, J. P. A. (2016). The Mass Production of Redundant, Misleading, and Conflicted Systematic Reviews and Meta-analyses. *The Milbank Quarterly*, 94(3), 485–514. <https://doi.org/10.1111/1468-0009.12210>
- Rethlefsen, M. L., Farrell, A. M., Trzasko, L. C. O., & Brigham, T. J. (2015). Librarian co-authors correlated with higher quality reported search strategies in general internal medicine systematic reviews. *Journal of Clinical Epidemiology*, 68(6), 617–626. <https://doi.org/10.1016/j.jclinepi.2014.11.025>
- U.S. National Library of Medicine. (n.d.). Automatic Term Mapping [Training Material and Manuals]. Retrieved March 14, 2019, from https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/020_040.html
- U.S. National Library of Medicine. (n.d.). The MeSH Tree Structure (continued) [Training Material and Manuals]. Retrieved March 12, 2019, from https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/015_025.html

Academic Library Trends in Conflict Zones

Baheya Jaber^a

^aThe University of Alabama, USA

bsjaber@crimson.ua.edu

ABSTRACT

Academic libraries operating in conflict zones especially in Palestine and neighboring countries are involved in transitioning from traditional models to improve their libraries' services and satisfy patron demand. The researcher reviewed the latest trends, the library and information science (LIS) literature in academic librarianship, and identified three trends to enhance their customer service component. The critical analysis emphasized building a model that focused on creating a comfortable and collaborative place for library patrons to satisfy their information needs. Local authority, political, economic, and cultural knowledge will enable selected trends to be embraced by librarians in conflict zones, and minimize their unintended negative consequences.

Keywords: LIS Education, Academic Libraries, Conflict Zones, Critical Analysis, Emerging Trends, Palestine

TOPICS

education; curriculum; pedagogy

INTRODUCTION

Rapid development in information technology, changes in higher education's teaching methods, and students' evolving needs (CSV Consulting, 2006) are impacting academic libraries operating in conflict zones. These libraries are involved in the transition process from traditional models of library practice, and are searching for the best models of practice to utilize, to improve their libraries' services to satisfy patron demand (Britto, 2011). This paper examines academic library trends, with specific attention given to libraries operating in Palestine and neighboring countries, and it will provide a better understanding of these trends in conflict zones.

METHOD

The researcher conducted an analytical-critical method which is the analysis of a discourse, it aimed to revealing and critiquing assumptions made from positions of economic and historical privilege. Content analysis and literature review of published works on the emerging trends in academic librarianship (C&RL, 2016) served as the basis for predicting future improvements to establish a norm for what libraries might be attempting to become.

ACADEMIC LIBRARY TRENDS

The academic library trends included the library commons approach, community involvement, and collection assessment. These trends were published by the Library and Information Science (LIS) literature such as the Association of College and Research Libraries (ACRL) 2016 (C&RL News, 2016), and other resources by (Dahlkild, 2011), (Forrest & Halbert, 2009), and (Schwartz, 2013). This review focused on how these trends can be utilized in conflict zones, the challenges that academic librarians serving in conflict zones encountered, and how they could effectively manage these challenges.

ACADEMIC LIBRARY TRENDS MODEL IN CONFLICT ZONES

The critical analysis of the literature were used to build an authentic model that focused on creating a comfortable and collaborative place for library patrons to facilitate their use of place and technology, to satisfy their needs, and provided for the growth of these libraries and the academic institutions they serve (Woodward, 2009).

The authentic model is called “Academic library trends model in conflict zones”. It aimed to establish a critical model for applying the selected library trends, genuine to the realities of conflict zones. Depending on the experience of the researcher as an academic librarian, she selected the trends most applicable for implementation by academic librarians operating in conflict zones (Jaber, 2017).

AUTHENTIC LIBRARY TRENDS MODEL IN CONFLICT ZONES

The authentic library trends model consisted of ten steps for authenticating library trends: identify a trend in librarianship, find the normative statements in that trend, identify the historic and economic privilege hidden in those norms, identify the distinct challenges existing in a particular conflict zone, communicate directly with local experts or consult scholarly/professional literature produced by local experts, identify internal and external factors, develop best practices for mitigating internal factors with the purpose that resolving internal factors will help resolve external factors by including both factors as part of the strategic planning of the academic institution, communicate the authentic trends with other librarians, archivists and LIS in conflict zones, implement the authentic trend, and assess the implementation of the authentic trend (Jaber, 2017).

Each authenticated trend which implemented this model explored the internal and external barriers that forbid academic libraries in conflict zones from applying these trends (Beiraghi, 2012); (Landgraf, 2017); (Qureshi, 2009), the suggestions to control these barriers (Agresta, 2014); (Ewanyshyn, 2007); (Stieg, 1992), (Stieg, 1994), with special awareness to academic libraries in Palestine and its neighboring countries (Bergan, 2000); (Watson, Hollister, Stroud, & Babcock, 2011).

RESULTS

This paper found that the library trend discourse did not consider the realities of conflict zones, the similarities of library services in conflict zones require more research, and domestic librarians established creative solutions to provide library services in conflict zones, and so, should feel empowered to critique these trends by merging their knowledge of emerging trends of LIS profession with domestic institutional awareness and regional focus.

This paper is the first to be conducted about academic libraries located in conflict zones, the critical analysis of the three most applicable academic library trends facilitated building an authentic model to improve the services offered by librarians, to meet the needs of local users, and to help facilitate the libraries transition from traditional to digital places. Furthermore, emphasizing local authority along with political, economic, and cultural knowledge will enable select academic library trends to be embraced by librarians in conflict zones and minimize unintended negative consequences associated with those trends.

RECOMMENDATIONS AND FURTHER RESEARCH

Recommendations included suggestions to assist solve the internal obstacles that academic librarians in conflict zones face, increase communities awareness in conflict zones, reinforce collaborative efforts, and future research projects. These will identify steps to take to ensure that awareness of these emerging trends and resulting actions to take to utilize these trends are available to libraries and librarians operating in conflict zones.

CONTRIBUTIONS TO LIS EDUCATION

This paper contributed to the current trends in academic librarianship by focusing on three of the latest trends that can be applied in conflict zones. By examining the political, economic and technological deficiencies in these areas, academic librarians in conflict zones are aware of these trends and are working to assist library patrons to satisfy their information needs, and to help them transition from traditional to digital spaces. Thus, this is reflected in the LIS education where LIS faculty, students, library practitioners, and patrons need to be educated about these issues and to be able to apply them to different scenarios.

The researcher who is an academic library practitioner in conflict zones specifically in Palestine, a current PhD student in the U.S., and a future faculty in the U.S. or Palestine, is combining all these academic librarianship experiences to bring a unique curriculum for education through this study. Additionally, the researcher is conducting a current study where she started to study the ACRL 2018 emerging trends, specifically fake news and information literacy.

The researcher is continuing to share the potential about the significant role of LIS educators to outreach and provide information literacy in a traditional and a non-traditional classroom settings. Academic librarians are proactive by being involved in the outreach programs to serving the higher education mission, by responding to the call of the development of information technology, to satisfy patrons evolving needs.

REFERENCES

- Agresta, M. (2014, April 22). What will become of the library? how it will evolve as the world goes digital. *Slate*. Retrieved from http://www.slate.com/articles/life/design/2014/04/the_future_of_the_library_how_they_ll_evolve_for_the_digital_age.html
- Beiraghi, M. (2012). Risk preparedness and heritage management in times of sociopolitical crisis: the role of experts . In *Protecting cultural heritage in times of conflict: Contributions from the participants of the international course on first aid to cultural heritage in times of conflict* (pp. 97-101). ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property).
- Bergan, E. (2000). Libraries in the West Bank and Gaza: Obstacles and possibilities. *IFLA Council and General Conference: Conference Proceedings, Jerusalem*, 1-15.
- Britto, M. (2011, December). Planning and implementation considerations for the information commons in academic libraries. *American Library Association*. Retrieved from <http://www.ala.org/tools/librariestransform/planning-and-implementation-considerations-information-commons-academic-libraries>
- CSV Consulting. (2006). *Community engagement in public libraries. A report on current practice and future developments* (MLA Publication No. 9654). Retrieved from www.mla.gov.uk/resources/assets/C/community_engagement_report_9654.pdf
- Dahlkild, N. (2011). The emergence and challenge of the modern library building: Ideal types, model libraries, and guidelines, from the enlightenment to the experience economy. *Library Trends*, 60, 11-42. doi: 10.1353/lib.2011.0027

Ewanyshyn, P. S. (2007, July 6). War time and its effects on libraries: A literature review.

Retrieved from <http://capping.slis.ualberta.ca/cap07/PeggySueEwanyshyn/reflection.html>

Forrest, C., & Halbert, M. (2009). In C. Forrest & M. Halbert (Eds.), *A field guide to the information commons* (pp. 3-214). Lanham: Scarecrow Press.

Jaber, B. S. J. (2017). *Critical analysis of academic library trends in conflict zones* (Master's thesis). Retrieved from the University of Alabama Libraries. (Accession No. ua.7026543)

Landgraf, G. (2017, March/April). 'Good trouble' as a goal for libraries. *American Libraries Magazine*, 48(3-4). Retrieved from <https://eds-a-ebSCOhost-com.libdata.lib.ua.edu/eds/pdfviewer/>

Qureshi, F. (2009). *An assessment of the destruction and rehabilitation of libraries during a period of armed conflict: A case study of Iraq's libraries 2003* (Doctoral dissertation). Retrieved from SOAS Research Online.

Schwartz, M. (2013, March). How to become a 21st century librarian. *Library Journal*.

Retrieved from https://www.libraryjournal.com/?detailStory=how-to-become-a-21st-century-librarian#_

Stieg, M. F. (1992). *Public libraries in Nazi Germany*. Tuscaloosa, Alabama: The University of Alabama Press.

Stieg, M. F. (1994, March). Public libraries under the Nazis. 14(1), 3-12.

Stieg, M. (1992). The Second World War and the public libraries of Nazi Germany. *Journal of Contemporary History*, 27, 23-40.

2016 top trends in academic libraries. (2016). *College & Research Libraries News*, 77(6), 274-281. Retrieved from

<http://libdata.lib.ua.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsbl&AN=RN606493987&site=eds-live&scope=site>

Watson, D., Hollister, R., Stroud, S. E., & Babcock, E. (2011). *The engaged university: International perspectives on civic engagement*. New York: Taylor & Francis.

Woodward, J. A. (2009). *Creating the customer-driven academic library*. Chicago: American Library Association.

Exploring LIS Research Education as Preparation for Practitioner Research

Nicole D. Alemanne, Changwoo Yang, and Xiaoai Ren

Valdosta State University, U.S.A.

ndalemanne@valdosta.edu, cyang@valdosta.edu, xren@valdosta.edu

ABSTRACT

This paper reports on continuing research into outcomes of teaching research methods to master's students in library and information science programs, expanding upon a project presented at ALISE 2018. Alumni of an ALA-accredited MLIS program were surveyed to explore their views of and engagement with research. Respondents reported comfort with important research methods concepts and activities after completing the research methods course, a generally positive attitude toward research, and the use of some research activities as practitioners.

TOPICS

academic libraries; curriculum; online learning; pedagogy; public libraries; research methods; special libraries

INTRODUCTION

This paper reports on continuing research into outcomes of teaching research methods to master's students in library and information science (LIS) programs. Alumni of the Valdosta State University (VSU) Master of Library and Information Science (MLIS) program were surveyed about their attitudes toward research and their use of research at work after taking the required research method course. The research expands upon a project presented at ALISE 2018 (Alemanne & Mandel, 2018). Approaching LIS from the global perspective and embedding cross-cultural understanding and respect for diversity into the curriculum demands supporting students in developing research skills so that they will be able to implement evidence-based practices as they move into professional roles.

BACKGROUND AND METHOD

LIS practitioners engage in research in multiple ways, such as being consumers of research, conducting research, and collaborating with academics. Research in the LIS field is important for creating new knowledge, connecting research and practice, and informing or improving practice (Powell, Baker, & Mika 2002). Studies such as Luo (2011) and Alemanne and Mandel (2018) report that LIS practitioners use research at work, although their research activities may focus more on activities such as reading research articles, applying research findings to improve work, and examining research articles to help patrons than on collecting, analyzing, and reporting on data. Research is important for LIS practitioners; Juznic and Urbanija (2003) report that US/Canadian LIS practitioners read research journals, apply research findings to their practice, and occasionally or frequently perform research. However, some studies have found a lack of practitioner publishing in peer-reviewed journals and distinct differences in research topics between practitioner and academic researchers (Clapton, 2010; Finlay, Ni, Tsou, & Sugimoto, 2013). Some studies have focused on analyzing existing MLIS research methods course descriptions, syllabi, and teaching methods across programs (Alemanne & Mandel, 2018; Mandel, 2017; Park, 2003). Despite uneven coverage of topics and course requirements across programs, findings show that MLIS research methods courses have outcomes related to practitioners consuming or conducting research (Alemanne & Mandel, 2018; Luo, 2011; Powell, Baker, & Mika, 2002).

Survey invitations were emailed to alumni of the VSU MLIS program in November 2018. The survey was adapted from Alemanne and Mandel (2018), with additional open-ended questions related to the VSU required research methods course. Respondents were also asked the type of library in which they work based on outcomes from Alemanne and Mandel. A total of 96 alumni participated in the survey and 64 completed the full survey, a 66.7% response rate. Alumni who work at academic libraries constitute the largest group of respondents (32), and 23 respondents work at public libraries. Nine respondents work in special libraries, archives, or other institutions.

FINDINGS

The survey explored respondents' view of research after completing the research methods course and their use of research as practitioners. Almost 100% report that research is important for the LIS field and 67% that it is important for their jobs (81% of academic librarians, 57% of public librarians, and 44% of special librarians).

Another aspect of respondents' views of research was determined through questions about their comfort in completing specific research tasks (Figure 1). When thinking about their comfort levels after taking the course, more than 50% of respondents feel very or somewhat comfortable in every research task. Most respondents are very or somewhat comfortable understanding the purposes of research (95%), reviewing the literature (94%), and research

ethics (94%). Respondents report being least comfortable with defining and operationalizing variables (55%), sampling (66%), and quantitative data analysis (66%).

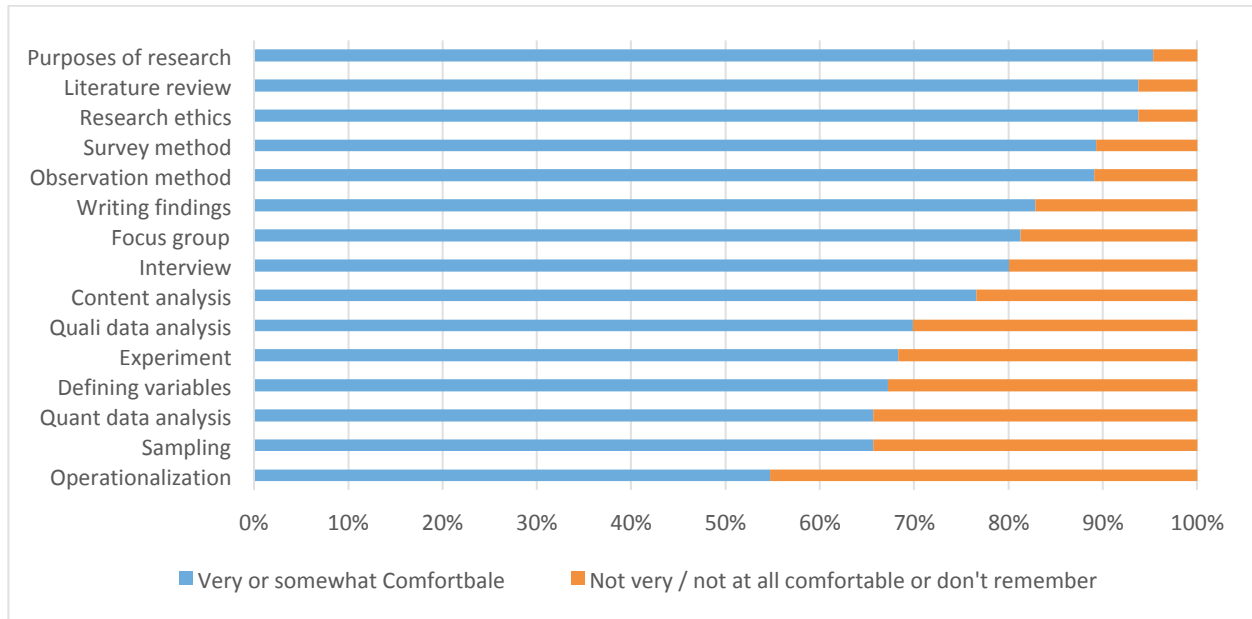


Figure 1. Reported Comfort with Research Concepts and Tasks after Taking the Research Methods Course.

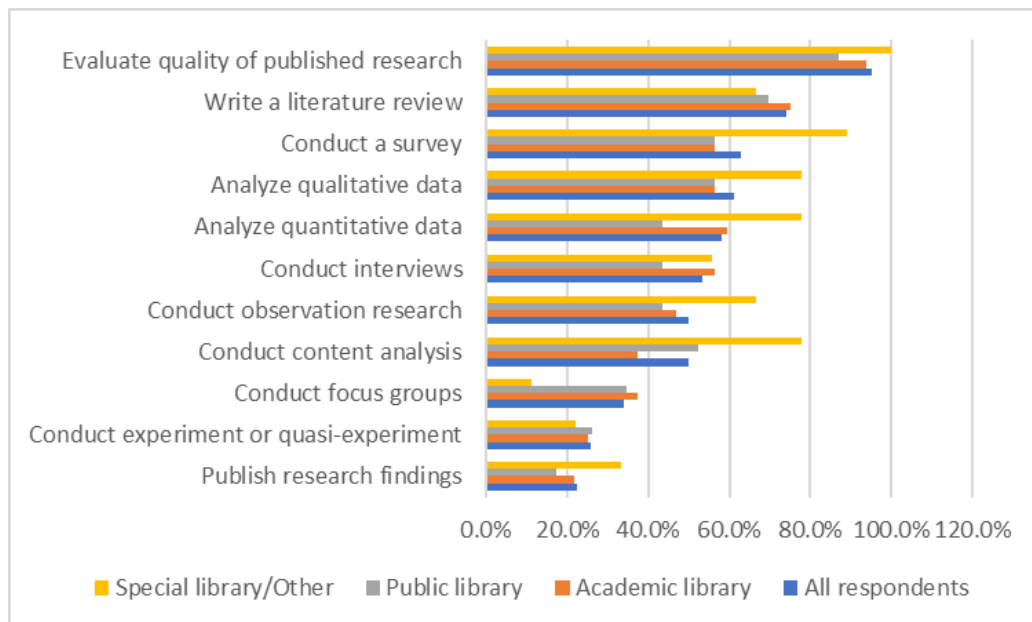


Figure 2. Percentage of Respondents Reporting Feeling “Very Comfortable” or “Somewhat Comfortable” With Completing Research Activities.

Respondents were also asked about their current comfort with typical research tasks. They report being most comfortable with evaluating the quality of published research and writing a literature review, and the least comfortable with publishing research findings (Figure 2). Those who work in public libraries were generally less comfortable with the activities; two activities with which public librarians appear to be relatively more comfortable (conducting experiments and focus groups) represent very few respondents.

In addition to research tasks, respondents were asked to report on their use of research-related activities at work (Figure 3). Accessing and reading articles are the top activities reported by both academic and public librarians. While respondents generally report comfort with many research tasks, actual use of research-related activities at work is relatively low.

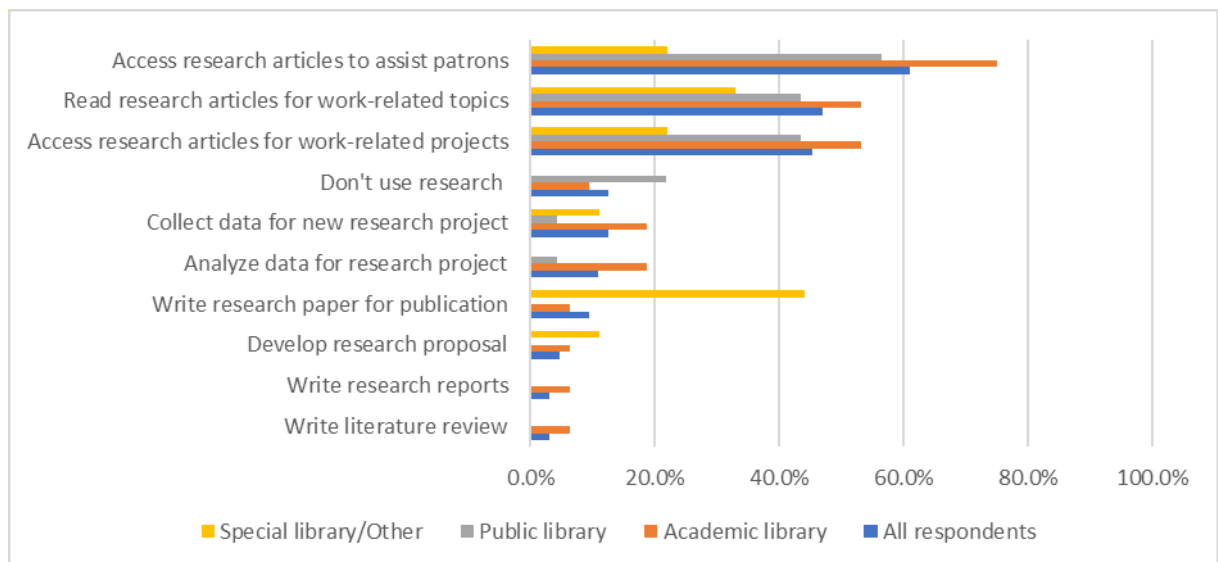


Figure 3. Respondents' Current Use of Research at Work.

Substantial numbers of respondents report that they do not participate in many of the activities at work, and public librarians were the least likely to report doing research activities (Figure 4). Almost 22% of public librarians report not using research at work (Figure 3), and collecting and analyzing data and writing up research was reported by few of the respondents. In general, respondents are more likely to be consumers of research than to conduct research activities.

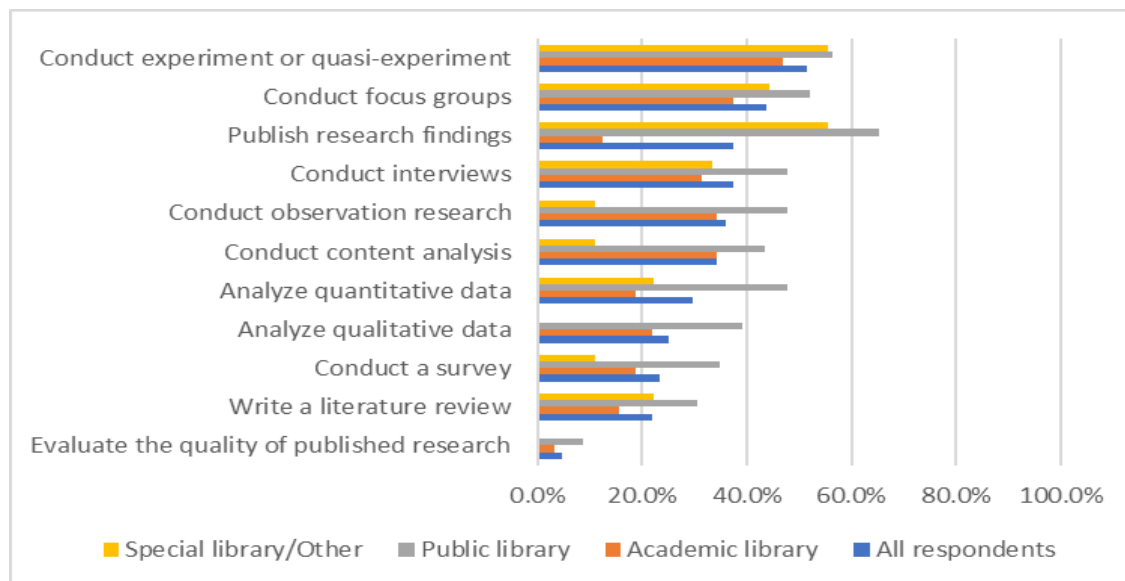


Figure 4. Percentage of Respondents Reporting “Do Not Do This” at Work.

DISCUSSION AND CONCLUSION

The results of this research showed respondents reporting comfort with important research methods concepts and activities after completing the research methods course, a generally positive attitude toward research, and the use of some research activities as practitioners. The next stage of analysis will combine the results of this phase with those of the initial project (Alemanne and Mandel, 2018) in order to expand sample sizes and compare results between programs. Further research to understand the interplay of specific course delivery methods and pedagogical methods and to explore improvements in course delivery would substantially expand our knowledge about the best ways to prepare LIS students to become research practitioners.

REFERENCES

- Alemanne, N. D., & Mandel, L. H. (2018). Developing research practitioners: Exploring pedagogical options for teaching research methods in LIS. *Journal of Education for Library and Information Science*, 59(3), 26-40. doi:10.3138/jelis.59.3.2018-0015.04
- Clapton, J. (2010). Library and information science practitioners writing for publication: Motivations, barriers and supports. *Library and Information Research*, 34(106), 7-21. doi:10.29173/lirg217
- Finlay, S. C., Ni, C., Tsou, A., & Sugimoto, C. R. (2013). Publish or practice? An examination of librarians' contributions to research. *Portal: Libraries and the Academy*, 13(4), 403-421. doi:10.1353/pla.2013.0038 Actions

- Juznik, P., & Urbanija, J. (2003). Developing research skills in library and information science studies. *Library Management*, 24(6/7), 324-331. doi:10.1108/01435120310486048
- Luo, L. (2011). Fusing research into practice: The role of research methods education. *Library & Information Science Research*, 33(3), 191-201. doi:10.1016/j.lisr.2010.12.001
- Mandel, L. H. (2017). Experiencing research firsthand: The “unClassroom” experiential learning approach to teaching research methods in an LIS Master’s program. *Journal of Education for Library and Information Science*, 58(4), 187-201. doi: 10.3138/jelis.58.4.187
- Park, S. (2003). Research methods as a core competency. *Journal of education for library and information science*, 44(1), 17-25. doi:10.2307/40323939
- Powell, R. R., Baker, L. M., & Mika, J. J. (2002). Library and information science practitioners and research. *Library & Information Science Research*, 24(1), 49-72. doi:10.1016/s0740-8188(01)00104-9

Re-attuning Students in the Information Literacy Classroom: A Theoretical Framework for Promoting Critical Thinking in a Post-Truth Era

Iulian Vamanu^a, Kathryn Heffner^b, and Katie Hassman^c

^aThe University of Iowa School of Library and Information Science, USA

^bThe University of Iowa School of Library and Information Science, USA

^cThe University of Iowa Libraries, USA

iulian-vamanu@uiowa.edu, kathryn-heffner@uiowa.edu, katie-hassman@uiowa.edu

ABSTRACT

The indifference, anxiety, and stress felt by students and the invisibility of marks of quality and value in online information environments pose instructional challenges that can get in the way of students' developing critical thinking skills. We suggest that current and future librarians consider the importance of three interrelated elements when designing information literacy environments: (i) students' active engagement with one another as a way of forming a community of like-minded people, (ii) the materiality constitutive of the educational place, and (iii) the practices involving students' embodied presence in the classroom. We describe an example of designing an information literacy instructional session based on these three elements.

TOPICS

education; information literacy; reading and reading practices

The challenges of teaching information literacy to college students in today's global information ecosystem are many and well documented. The sheer mass of information available online has contributed to the emergence of distracted reading habits (Hayles, 2010) and anxiety about interpreting digital information (Head, 2013). While they can locate information online, college students struggle to synthesize ideas and viewpoints from multiple sources (Rosenblatt, 2010). Evaluating sources remains a challenge, further complicated by the invisibility of the digital information creation processes and the proliferation of inaccurate information online (PIL). And while we know that college-aged students tend to be better than older adults at identifying factual news and opinions (Gottfried and Grieco, 2018), we also know that they report dissatisfaction, distrust, and indifference to online news that doesn't match their personal expectations and biases (Head et al., 2018). What's more, experience acquired in the past doesn't

seem to help in the current information environment. Indeed, the healthy skepticism our profession once encouraged may in some cases explain the overall success of online misinformation campaigns (boyd, 2018).

The indifference, anxiety, and stress students experience and the invisibility of marks of quality and value pose instructional challenges in the information literacy classroom that can get in the way of developing critical thinking skills necessary for success in the college and beyond. As we consider how to best prepare future librarians to teach information literacy to undergraduate students, we propose the use of a phenomenology-derived theoretical framework combining insights from two theoretical frameworks, “existential analytic” (Heidegger, 1996) and the “institutional model of pleasure” (Brown and Juhlin, 2015, 2018). In what follows, we elaborate on the framework and include an example of an information literacy activity developed based on concepts from our framework.

Heidegger (1996) famously proposed the concept of attunement (*Befindlichkeit*) through mood (*Stimmung*) to describe how the world becomes available to human beings and affects them. In particular, he argued that moods make possible and shape the various types of emotions humans can experience. Heidegger’s understanding of moods has informed a range of related approaches in English, Rhetoric, Communication, and Education Studies (e.g. Flatley, 2008, 2012; Highmore, 2017; Mansikka, 2009; or Rickert, 2013). We argue that such approaches can help us design information literacy instruction. Specifically, within an existential analytic framework we can make better sense of how students can change attitudes towards information and critical thinking in educational contexts. Rickert (2013) illustrates this point by emphasizing the role of various types of materiality (and their affordances) in affective re-attunement. In his discussion of “ambient rhetoric,” he claims that material assemblages (which may include human and non-human agents) “affect or transform” people’s ways of inhabiting their world, i.e. modulate their fundamental disposition concerning who they are and how they dwell in that world (p. xiii). Yet moods (and the affects they enable) are acquired and stabilized also through social interactions. Besides Heidegger’s “existential analytic,” we also draw on the “institutional model of pleasure” (Brown and Juhlin, 2015, 2018), according to which enjoyment is a skill people can only learn in the company of others and through engaging in a set of relevant activities.

Bringing together the theoretical insights from the above-mentioned authors, we suggest that in the process of designing and implementing information literacy instruction the educator needs to pay close attention to how she constructs the educational ambience. Her aim should be to facilitate students’ re-attunement to intellectual excitement in a way that promotes solid habits of critical thinking. In particular, instructor need to be aware of three interrelated elements. First, students engaging actively with one another enable the formation of a community of like-minded people, which is a necessary condition for experiencing excitement. Second, the since the classroom is an ambience modulating students’ way of being in that place, the instructor needs to reflect on what aspects of it, besides student interactions, enable that mood. Third, the instructors need to reflect on and include certain educational activities which do justice to students’ embodied presence in the classroom and are conducive to experiencing intellectual excitement.

Guided by these three elements, we designed an instructional environment that can potentially bring in students about a shift from an indifference mood to a counter-mood of pleasurable engagement with online information and critical thinking. We adapted an

instructional activity called The Source Deck developed by University of Virginia Librarians (Christensen, Burks, and Wolnick, 2015). The source deck is a physical deck of cards, each with an image of a digital or physical, academic or popular information resource. During the instructional sessions, we asked students to form small groups, move around the classroom, engage bodily with the cards, and explore their reactions to individual resources, paying specific attention to their emotional reactions, positioning or biases, and understandings of opposing perspectives. We also asked them to synthesize and develop multiple narratives built around the cards assigned to their group. Throughout the sessions, we invited the students to reflect on their experiences in a way that develops and reinforces metacognitive habits similar to those described in the Association of College & Research Libraries' "Framework for Information Literacy for Higher Education." We used observations and self-reporting tools to elicit students' feedback.

This project has theoretical implications, as it documents the role of moods and affects in students learning, as well as practical implications, insofar as it provides tools for designing information literacy instruction design, particularly in the current post-truth regime.

REFERENCES

- Association of College & Research Libraries. (2018, December 10). Framework for information literacy for higher education. Retrieved from <http://www.ala.org/acrl/standards/ilframework>
- boyd, d. (2018, March 9). You think you want media literacy...Do you? *Data & Society: Points*. Retrieved from <https://points.datasociety.net/you-think-you-want-media-literacy-do-you-7cad6af18ec2>
- Brown, B., & Juhlin, O. (2015). *Enjoying machines*. Cambridge MA: MIT Press.
- Brown, B., & Juhlin, O. (2018). What is pleasure? In M. Blythe and A. Monk (Eds.), *Funology 2. Human-Computer Interaction Series* (pp. 47-59). Springer.
- Christensen, M., Burks, T., & Wolnick, M. (2015). Getting carded: Threshold concepts in one-shot sessions. Presentation at LOEX Conference, Denver, Colorado. Presentation slides retrieved from <http://www.loexconference.org/2015/presentations/christensenGetting%20Carded%20Slides.pdf>
- Flatley, J. (2008). *Affective mapping: Melancholia and the politics of modernism*. Cambridge MA and London UK: Harvard University Press.
- Flatley, J. (2012). How a revolutionary counter-mood is made. *New Literary History*, 43(3), 503-525.

- Gottfried, J., & Grieco, E. (2018, October 23). Younger Americans are better than older Americans at telling factual news statements from opinions. Retrieved from <http://www.pewresearch.org/fact-tank/2018/10/23/younger-americans-are-better-than-older-americans-at-telling-factual-news-statements-from-opinions/>
- Hayles, N.K. (2010). How we read: Close, hyper, machine. *ADE Bulletin*, 150, 62-79.
- Head, A. (2013). Learning the ropes: How freshmen conduct research once they enter college. *Project Information Literacy Research Report*. Retrieved from http://www.projectinfoilit.org/uploads/2/7/5/4/27541717/pil_2013_freshmenstudy_fullreportv2.pdf
- Head, A., et al. (2018). How students engage with news: Five takeaways for educators, journalists, and librarians. *Project Information Literacy Report*. Retrieved from <https://www.projectinfoilit.org/uploads/2/7/5/4/27541717/newsreport.pdf>
- Heidegger, M. (1996). *Being and time: A translation of Sein und Zeit*. New York NY: State University of New York Press.
- Highmore, B. (2017). *Cultural feelings: Mood, mediation and cultural politics*. New York NY: Routledge.
- Mansikka, J. E. (2009). Can boredom educate us? Tracing a mood in Heidegger's fundamental ontology from an educational point of view. *Studies in Philosophy and Education*, 28(3), 255-268.
- Rickert, T. (2013). *Ambient rhetoric: The attunements of rhetorical being*. Pittsburgh PA: University of Pittsburgh Press.
- Rosenblatt, S. (2010). They can find it but they don't know what to do with it: Describing the use of scholarly literature by undergraduate students. *Journal of Information Literacy*, 4(2), 50-61.

Navigating the Role of Mobile Technologies in Shaping Information Behavior: A Meta-synthesis

Hsia-Ching Chang and Tara Zimmerman

Department of Information Science, University of North Texas, USA

Hsia-Ching.Chang@unt.edu, tarazimmerman@my.unt.edu

ABSTRACT

Mobile technology, primarily via smartphones, has become increasingly ubiquitous in the modern world, and this change is impacting information behavior in important ways. As LIS educators, we must study this new phenomenon and incorporate it in our teaching in order to stay current in the information science field. With this goal in mind, we used the relatively new meta-synthesis methodology to collect qualitative studies that examined the intersection of mobile technology and information behavior, systematically evaluating them for patterns and trends that provide insight into technology-driven change in behavior we are witnessing. Through this process we identified four primary ways mobile technology is affecting information behavior, and these will be incorporated into a graduate level Information Behavior course.

TOPICS

mobile systems; information seeking; information use; curriculum

INTRODUCTION

Mobile devices are a significant technology trend affecting the information profession (Abram, 2015). As ownership and use of Internet-connected mobile devices have increased in recent years, the mobile technology trend has dramatically affected information behavior. According to the Pew Research Center (2018), 95% of Americans own cell phones, 77% of which are smartphones, while about half of the American public have portable tablet computers. The popularity of smartphones is not surprising because unlike tablets, smartphones offer various ways of communication, changing how people interact with others and accomplish tasks. The reason for the widespread adoption of the smartphone is that people want online access while on the go, not merely from home, work, or school desktops. Based on eMarketer's report, users spend more time interacting with smartphones and apps than tablets and the mobile web; apps

account for more than 90% of time on smartphones (Wurmser, 2018). The increasing number of smartphone users and their significant use of apps is partially responsible for the observable change in information behavior. This trend is seen across a wide range of demographic groups, with one in five people using smartphones as their primary internet access at home (Pew Research Center, 2018). All of this taken together represents a dramatic shift in information behavior, which should be reflected in LIS education if the field is to remain current and inclusive of new and evolving mobile technology trends. This is particularly true in courses like Information Behavior, so we conducted research to inform the development of a mobile information behavior module in this course. We began by asking how mobile technologies are influencing information needs, search, seeking, and use, then reviewed recent literature on this phenomenon. We used the meta-synthesis methodology to gather concrete information from this previous scholarly work which can be then incorporated into our course.

RELATED WORK: HUMAN-MOBILE COMPUTER INTERACTION AS CONTEXT

A context reflects an information horizon in which a user can seek information through various information resources, such as a person's physical/online social network, printed documents, information search systems, and observations (Sonnenwald, 1999). The Context of Use in Human-Mobile Computer Interaction (Jumisko-Pyykko & Vainio, 2010) model examines the distinct contexts where a user interacts with a mobile information system. The model serves as a good guiding framework explaining the different ways a user interacts with mobile technology to fulfill his or her information needs.

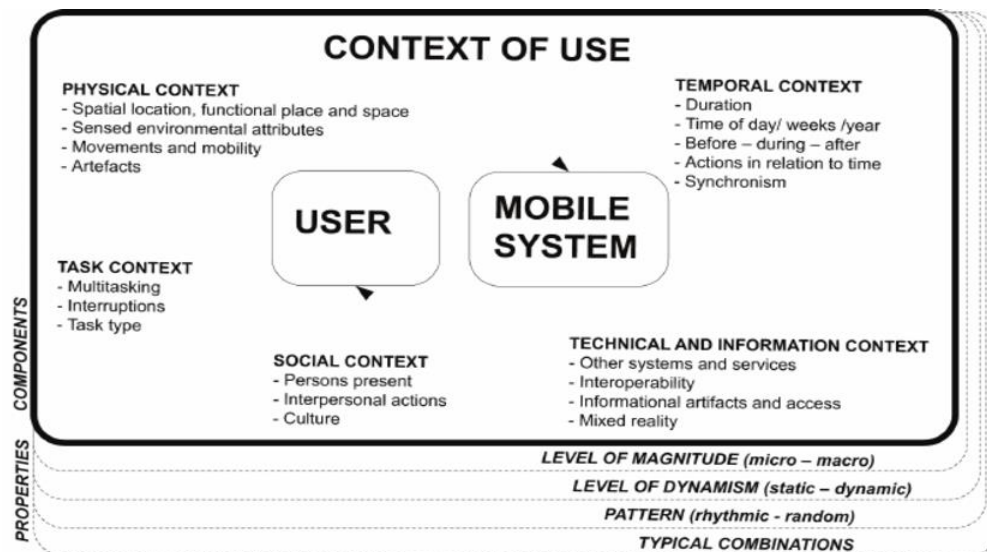


Figure 1. Context of Use in Human-Mobile Computer Interaction (Jumisko-Pyykko & Vainio, 2010, p. 9)

As shown in Figure 1, there are five contexts of use in human-mobile computer interaction (HMCI), including physical, temporal, task, social, and technical and information context. Related properties of context involve the level of magnitude, dynamism, pattern and typical combinations. Absar, O'Brien, and Webster (2014) suggested future research comparing information seeking behavior on different types of mobile devices. This study adopts this context of use in HMCI model as the guiding framework to conduct a meta-synthesis and focuses on two contexts, task context as well as technical and information context (Figure 1), in the initial analysis for identifying attributes of user interactions with different mobile technologies. It reveals a mobile information behavior trend that can be studied more specifically as mobile technologies evolve.

RESEARCH METHODOLOGY: META-SYNTHESIS

To the best of our knowledge, no study to date has systematically reviewed and analyzed the relevant literature on the nexus between mobile technologies and information behavior. This is the first attempt to examine the role of mobile technologies in shaping information behavior through analyzing qualitative work. We chose qualitative studies as the starting point because qualitative research focuses on “how” and “why” questions in depth.

Meta-synthesis is the process of collecting existing qualitative research on a specific topic and systematically analyzing it to gain understanding (Urquhart, 2010). This methodology provides a systematic way of reviewing large amounts of data and discerning information from it. We chose to use a meta-synthesis for this project in order to learn as much as possible about current research on the emerging phenomenon of mobile information behavior. Two researchers got involved in the research processes. Figure 2 demonstrates the step-by-step procedure we used for performing the meta-synthesis.

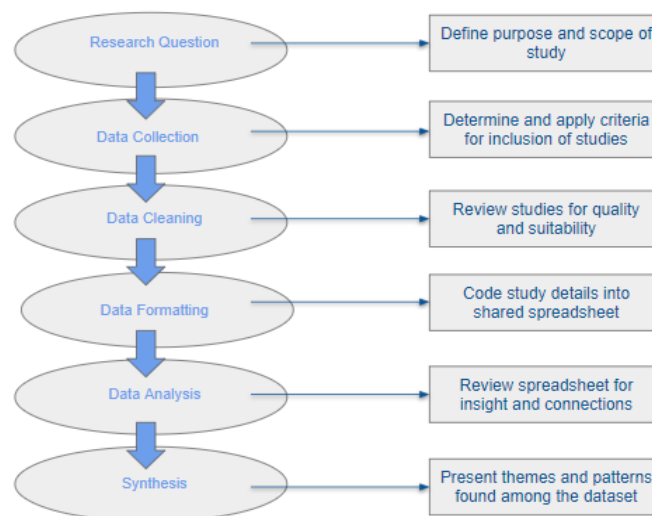


Figure. 2: Meta-synthesis Procedure

Key databases within the LIS field were selected for use in data collection, including Academic Search Complete, ACM Digital Library, De Gruyter Online, Emerald Journals, Library & Information Science Source, Library Science Database, Project MUSE, ScienceDirect Journals, and Taylor & Francis Online. Figure 3 illustrates the data collection process. The search for applicable articles began by using various combinations of keywords and phrases found to be linked with mobile technologies and information behavior. Iterative searches were performed using all possible pairings of the phrases mobile technology, mobile communication, mobile device, or smartphone with information behavior, information seeking, information search, or information use. Each of these searches was performed for “subject terms” and then within the “abstract.” This search yielded 61 articles.

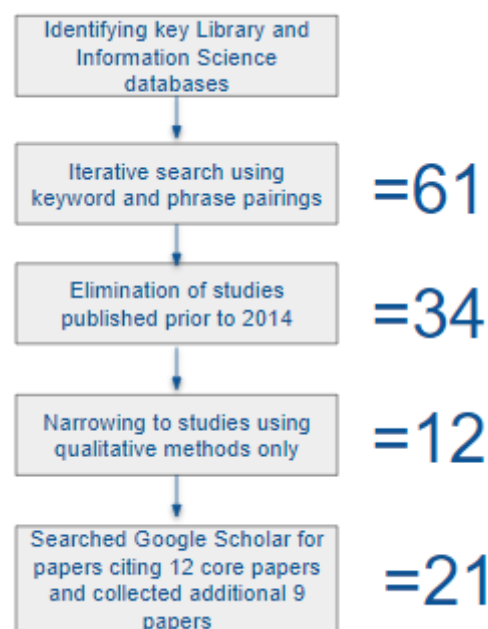


Figure 3. Data Collection Process

The next step was narrowing down the articles based on the publication year. All results published prior to 2014 were excluded, as we wanted to focus on current technology and developments in information behavior, which have evolved significantly in recent years. This narrowing left 34 articles in the dataset. At this point, the articles were reviewed for suitability to the methodology of meta-synthesis. Because meta-synthesis by definition gathers findings from qualitative studies, all studies that used quantitative methods were excluded. This reduced the field of suitable articles to 12. As a final step in data collection, we searched Google Scholar for new qualitative studies citing any of our 12 core papers, and this yielded an additional 9 articles. We then coded attributes of these 21 articles in order to gain better insight into their focuses, methodologies and findings.

For each article, seven key elements were identified and coded for meta-synthesis by two researchers: user group, focus of information behavior, type of mobile technologies studied,

methodology, participants, findings, and impact on learning. In the meta-synthesis, the intercoder reliability is 0.88, measured by Krippendorff's Alpha (Krippendorff, 2011). This indicates that agreement level between two researchers (coders) meets the reliability ($\alpha \geq 0.800$).

DATA ANALYSIS AND RESULTS

The complete meta-synthesis table containing the detailed coding scheme and information is presented in the Appendix. The focus of the information behavior studied in each of these articles varied. While eight studies examined information behavior as a larger phenomenon, others chose to highlight more specific aspects. For example, eight articles focused on information seeking, seven on information use, three on information search, and one on information sharing. Many of the articles had more than one focus.

The main focus of all the articles seems to center on information seeking and use behaviors of different participant groups. Groups studied included students (general, law, and medical), teens, low socioeconomic status people (Hispanics and Chinese), law librarians, physicians, mothers, people with psychosis, and early career PhD researchers. While most of these involved tasks at work or schools, other information tasks included personal health, tourism, social activities, entertainment, and basic daily needs such as transportation, location finding, and answering questions quickly on-site. Of the twenty-one articles reviewed, two focused exclusively on smartphones, two on iPad Minis, one on iPod touch and the rest on comparing multiple types of mobile devices, such as smartphones, tablets and laptops. Structured and semi-structured interviews were the primary data collection method used, but diaries, journals, open-ended questionnaires, usage observations, and focus groups were used as well.

Several overall themes emerged from the conclusions drawn in these articles. First, people rely on mobile technology throughout their day-to-day lives for information seeking and use. Perceived usefulness, personal experience, and job-related characteristics are significant indicators of smartphone use, with younger people even considering these devices extensions of themselves. Second, speed and convenience seem to drive decisions regarding which device is most useful to meet a given information need. For example, the small screens of smartphones are considered adequate for quick access to brief information, while tablets are preferred for reading denser information, such as pdf documents. Third, accessing social media with social apps is one of the most frequent uses for smartphones. Apps such as Facebook, Twitter, WhatsApp, and even ResearchGate are used to build and maintain social connections, access information, and collaborate with others. Fourth, smartphone use does not guarantee access to all necessary information. For example, smartphone users accessing library resources do not generally have successful search experiences. More importantly, access to smartphones alone does not reduce the digital gap for a population; they must also have access to reliable Wi-Fi, quality content in their language, and some degree of smartphone literacy.

IMPLICATIONS FOR LEARNING AND TEACHING

An overwhelming theme in this meta-synthesis is that across different demographics, mobile technology use is increasing and is clearly affecting learning and teaching scenarios. For young people who have grown up using mobile technologies, school and everyday life blends together as they use social media and smartphones throughout their days (Absar, O'Brien, & Webster, 2014). In this way, social and mobile technologies are influencing learning, teaching, and the greater education landscape. Schools of all types should be aware of these changes and actively incorporate mobile technologies into learning, taking advantage of the fact that learning is not confined to specific times or locations. However, teachers, professors, and administrators must also remember that training may be needed for students to effectively and securely use mobile Internet or apps and that reliable, open Internet access is required to support these activities. Creating a wider range of information resources using responsive design, for example, would increase usability of library resources by students working from smartphones with smaller screens (Twiss-Brooks et al., 2017).

Beyond schools, mobile technologies can be effective tools for ongoing education in the workplace. In the medical field, mobile learning has become ubiquitous and is changing how patients view healthcare and the role of their physicians. Mobile devices are greatly used in medical education as well as clinics, with use of trustworthy Internet sources of professional knowledge often considered a better option than consulting a colleague. Whereas the appropriateness of using mobile devices with patients was previously questioned by medical students and professionals, it is now widely accepted as a standard tool. In this same way, users of smartphones are constantly observing and learning socially constructed “right” and “wrong” public uses of their devices, prompting them to surreptitiously use or even keep them hidden. Rather than ignoring mobile devices or punishing those who use them, educators need to design learning activities that make productive use of this technology because smartphones and tablets are essentially personal learning tools that provide countless applications and opportunities for learning.

CONCLUSION

As LIS educators, it is crucial for us to monitor social and cultural changes that affect our field. The dramatic increase in mobile technology and resulting changes in information behavior are a prime example of this type of societal change. We identified instruction addressing the role of mobile technologies as a gap in our information behavior course and sought to fill that gap using a meta-synthesis of current qualitative studies to inform the instruction design. Using an iterative search process, we collected recent articles that studied the nexus between mobile technologies and information behavior. We were able to identify four key themes that emerged from the literature which we can now use to educate students about how people are using mobile devices as tools to meet their information needs and facilitate their learning efforts. We will incorporate these findings into a new module that will be included in our syllabus and course materials going forward and updated as new research becomes available.

REFERENCES

- Abbas, Z., MacFarlane, A., & Robinson, L. (2017). Use of mobile technologies by law students in the law library: An exploratory study. *Legal Information Management*, 17(3), 180-189.
- Absar, R., O'Brien, H., & Webster, E. T. (2014). Exploring social context in mobile information behaviour. In *Proceedings of the American Society for Information Science and Technology*, 51(1), 1-10.
- Abram, S. (2018) Librarianship: A continuously evolving profession. In Hirsh, S. (Ed.). *Information services today: An introduction (2nd ed.)*, Rowman & Littlefield Publishers, p. 41-52.
- Aref-Adib, G., O'Hanlon, P., Fullarton, K., Morant, N., Sommerlad, A., Johnson, S., & Osborn, D. (2016). A qualitative study of online mental health information seeking behaviour by those with psychosis. *BMC Psychiatry*, 16(1), 232.
- Bowler, L., Julien, H., & Haddon, L. (2018). Exploring youth information-seeking behaviour and mobile technologies through a secondary analysis of qualitative data. *Journal of Librarianship and Information Science*, 50(3), 322-331.
- Chase, T. J. G., Julius, A., Chandan, J. S., Powell, E., Hall, C. S., Phillips, B. L., Burnett, R., Gill, D., & Fernando, B. (2018). Mobile learning in medicine: An evaluation of attitudes and behaviours of medical students. *BMC Medical Education*, 18(1), 152-158.
- Demmans Epp, C., Mcewen, R., Campigotto, R., & Moffatt, K. (2016). Information practices and user interfaces: Student use of an iOS application in special education. *Education and Information Technologies*, 21(5), 1433-1456.
- Feng, Y., & Agosto, D.E. (2017). The experience of mobile information overload: Struggling between needs and constraints. *Information Research*, 22(2), paper 754. Retrieved from <http://InformationR.net/ir/22-2/paper754.html>.
- Griesbaum, J. (2017). Trends in e-Learning: Impacts of social mobile technologies on information behavior, formal learning and the educational market. *International Journal of Information and Education Technology*, 7(2), 123-129.
- Guerra-Reyes, L., Christie, V. M., Prabhakar, A., Harris, A. L., & Siek, K. A. (2016). Postpartum health information seeking using mobile phones: Experiences of low-income mothers. *Maternal and Child Health Journal*, 20(1), 13-21.
- Hayman, R. (2017). Early career researchers demand full-text and rely on Google to find scholarly sources. *Evidence Based Library and Information Practice*, 12(4), 256-258.
- Ho, C., Yu-Chun, L., Yu-Lan, Y., & Chen, M. (2016). Pre-trip tourism information search by smartphones and use of alternative information channels: A conceptual model. *Cogent Social Sciences*, 2(1), 1-19.
- Hult, H. V. (2016). ICT and learning in a changing healthcare landscape: Challenges and opportunities for physicians at work. *Journal of Library & Information Science*, 42(1), 44-47.
- Johnson, E. M., & Howard, C. (2019). A library mobile device deployment to enhance the medical student experience in a rural longitudinal integrated clerkship. *Journal of the Medical Library Association*, 107(1), 30-42.

- Jumisko-Pyykkö, S., & Vainio, T. (2010). Framing the context of use for mobile HCI. *International Journal of Mobile Human Computer Interaction*, 2(4), 1-28.
- Kim, H., & Zhang, Y. (2015). Health information seeking of low socioeconomic status Hispanic adults using smartphones. *Aslib Journal of Information Management*, 67(5), 542-561.
- Krippendorff, K. (2011). Computing Krippendorff's Alpha-Reliability. Retrieved from http://repository.upenn.edu/asc_papers/43
- Kumah, C., Beheshti, J., & Bartlett, J. C. (2017). Mobile device use to access information on well-being. In *Proceedings of the Association for Information Science and Technology*, 54(1), 726-727.
- Ma, D., Du, J.T., Cen, Y., & Wu, P. (2016). Exploring the adoption of mobile internet services by socioeconomically disadvantaged people: A qualitative user study. *Aslib Journal of Information Management*, 69(6), 670-693.
- Pew Research Center. (2018). Mobile fact sheets: Internet, broadband, and social media. <http://www.pewinternet.org/fact-sheet/mobile/> Accessed 03/08/2019.
- Shankar, S., O'Brien, H. L., & Absar, R. (2018). Rhythms of everyday life in mobile information seeking: Reflections on a photo-diary study. *Library Trends*, 66(4), 535-567.
- Sonnenwald, D.H. (1999). Evolving perspectives of human information behaviour: Contexts, situations, social networks and information horizons. In T.D. Wilson & D. Allen (Eds.), *Exploring the contexts of information behaviour: Proceedings of the 2nd International Conference on Research in Information Needs, Seeking and Use in Different Contexts*, 13-15 August 1998, Sheffield, UK (pp. 176-190). London: Taylor Graham.
- Tahamtan, I., Pajouhanfar, S., Sedghi, S., Azad, M., & Roudbari, M. (2017). Factors affecting smartphone adoption for accessing information in medical settings. *Health Information & Libraries Journal*, 34(2), 134-145.
- Tidal, J. (2017). One site to rule them all, redux: The second round of usability testing of a responsively designed web site. *Journal of Web Librarianship*, 11(1), 16-34.
- Twiss-Brooks, A. B., Andrade, J., Ricardo, Bass, M. B., Kern, B., Peterson, J., & Werner, D. A. (2017). A day in the life of third-year medical students: Using an ethnographic method to understand information seeking and use. *Journal of the Medical Library Association*, 105(1), 12.
- Urquhart, C. (2010). Systematic reviewing, meta-analysis and meta-synthesis for evidence-based library and information science. *Information Research*, 15(3), 708.

Appendix: Meta-Synthesis Table

Author(s)/ Pub. Year	User Group	Focus of Information Behavior	Type of Mobile Technology	Methodology	Participants	Findings	Impact on Learning
Abbas, MacFarlane, & Robinson, (2017)	Law librarians and law students	Information behavior	Smartphones, laptops, tablets	Interview (face-to- face or by phone); qualitative questionnaire	13 law librarians and 36 law students in UK	Smartphones most dominant mobile technology. Due to small screens, smartphones only used for short information searches; laptops or desktop PCs still preferred for studying and information creation activities.	Students' use of mobile devices is changing how learning and teaching take place.
Absar, O'Brien, & Webster (2014)	Students and non-students in university community	Information search and information use	Smartphones	Interview and diary study	19 mobile users, age 19-37, US students and non-students in university community	Social IB is defined both in terms of users' behaviors and motivations. Specific social activities included co-located mobile searching, searching on behalf of others, and sharing search results. Participants motivated to perform mobile information activities to connect with others as well as to avoid social interactions. There are many similarities between social and non- social IB, in terms of satisfaction and motivation. However, there were some differences in location, showing that non-social information activities often take place at home or on transit, when compared to social searches; social searches, on the other hand, often took place in vehicles with co- located others, where participants were prompted to either search on behalf of others, or share search results with them.	na
Aref-Adib, et al. (2016)	People with psychosis	Information seeking	Smartphones	Semi-structured interviews	22 persons, ages 18- 65, living near London with psychosis	Learning about medications and their side-effects was the most common topic of online inquiry. Google and Wikipedia are used to help participants make sense of their symptoms and mental health organizations. Those who searched the internet for mental health information do so because it provides current and in-depth information which is more accessible than other sources,	na

Author(s)/ Pub. Year	User Group	Focus of Information Behavior	Type of Mobile Technology	Methodology	Participants	Findings	Impact on Learning
						including clinicians. Expense of smartphone and data present barriers to some. Participants' experiences of finding and understanding information on the internet varied. Patients experienced anxiety and fear after accessing mental health information online; however, those who discussed information and collaborated with clinicians felt more empowerment and control, whereas those who did not share information with their clinicians felt more isolated.	
Bowler, Julien, & Haddon, (2018).	Teens	Information seeking	Smartphones and tablets	Secondary analysis of qualitative data	34 teens, ages 9-16, in the UK	Young people are adept at information search via mobile devices. Teens consider trustworthiness of the container of the information (digital infrastructure that holds the information) rather than the value of the informational content alone; quick "look up" search is predominant with little time spent evaluating information; fairly adept at information searching using mobile devices even with very little to no training; use of social media for information more common than Google search; young people blend task, purpose, and tools rather than separating and contextualizing online behavior.	For young people, school and everyday life are blending together through use of social media and mobile technologies.
Chase, Julius, et al (2018)	Medical students	Information use	iPad mini	Longitudinal survey with closed-ended and open-ended questionnaires	18 cohorts of medical students (275 in total) in London over three academic years	Medical students embrace mobile learning devices in the clinical setting and whilst it remains unclear if the total length of time spent on study increases, the devices had a positive effect on the perceived efficiency of students' work. Initial concerns about possible disadvantages of devices in clinical settings were largely unfounded, notably the perceived	Mobile learning is becoming a ubiquitous component of learning for medical students. Schools should be proactive in incorporating This aspect of learning, while keeping in mind the need for training and that universal

Author(s)/ Pub. Year	User Group	Focus of Information Behavior	Type of Mobile Technology	Methodology	Participants	Findings	Impact on Learning
						reaction by clinicians, patients or their relatives. WiFi availability, particularly in clinical areas, proved essential but limited, which needs to be addressed by medical schools in conjunction with placement providers.	internet access is integral to success.
Demmans Epp et al. (2016)	Students	Information behavior	Smartphones and iPod Touch devices	Teacher interviews and logging detailed usage of the app by each student.	23 students ages 12 to 21 using the MyVoice application on an iOS device while attending special education classes in Toronto, CA	Students engaged in atypical and unintended practices when using the app because they encountered challenges with information processing and with the interface. Abandoning activities was a strategic choice and unanticipated information practice associated with the application's integration into lessons. Students may have been confused by how information was presented in the device and chose to take photos when an instrumental task was absent.	When integrating apps into lessons, students may not understand how to use them as intended and may require guided practice.
Feng & Agosto (2017)	Students	Information behavior	Smartphones	Interview and contextual inquiry	9 adult students who are smartphone users in the eastern US	Mobile information tasks are closely related to the experience of mobile information overload. Mobile information overload is a prevalent phenomenon among smartphone users. Mitigating interventions for mobile information overload should aim at designing for personal boundaries and removing technological constraints.	na
Griesbaum (2017)	na	Information behavior	not specified	Literature review	na	Learners are empowered with choices but need to be focused and set limits on use. Technology offers some advantages in course offerings but MOOCs and apps should not replace face-to-face learning. Technology is also bringing more for-profit educators into the market.	Social and mobile technologies are influencing learning, teaching, and the education market overall. Mobile devices are personal learning tools with countless applications. Learning is no longer constrained by time and location. Ubiquitous computing

Author(s)/ Pub. Year	User Group	Focus of Information Behavior	Type of Mobile Technology	Methodology	Participants	Findings	Impact on Learning
							and the sensor web are predicted to be the next steps.
Guerra-Reyes et al. (2016)	Mothers	Information behavior	Smartphones	Interviews	10 low-income mothers in Indiana (US) with children 48 months and under	Low-income postpartum women rely on their smartphones to find online infant care and self-care health information. Websites replace pregnancy-related mobile applications and complement face-to-face information. Changes in searching behavior and multitasking mean information must be easily accessible and readily understood. Knowledge of page-rank systems and use of current and emergent social media will allow health-related organizations to better engage with low-income mothers online and promote evidence-based information.	na
Hayman, R. (2017)	Researchers	Information behavior	Smartphones	Structured interviews	116 early career researchers, age 35 or younger from United Kingdom, United States of America, China, France, Malaysia, Poland, and Spain; from various disciplines and held or previously held a research position and held or pursuing a doctorate	Limited use of smartphones for information seeking. About half reported use of smartphone for discovering scholarly sources; less likely to download or read full-text articles via smartphone; social media used to keep track of research trends, opinions, and new works. ResearchGate widely used. Rate of smartphone adoption for accessing scholarly materials varies by country.	na
Ho et al (2016)	Smartphone users	Information search	Smartphones	On-site observation and semi-structured interviews	21 smartphone users, ages 21 to 60 in Taiwan	Results suggest the pre-trip TIS appears in a diversity of search patterns with the usage of multiple information sources. The analysis revealed 10 activities characteristic of tourism information search (TIS) behavior: internal searches, mobiles searches, saving information in the smartphone,	na

Author(s)/ Pub. Year	User Group	Focus of Information Behavior	Type of Mobile Technology	Methodology	Participants	Findings	Impact on Learning
						preliminary collaborative TIS, barriers to TIS, bringing mobile search to an end, summarizing information, PC Internet search, advanced collaborative TIS, and searches via editorial communications.	
Hult, H. V. (2016)	Physicians	Information seeking, information sharing	Smartphones and tablets	Qualitative semi-structured interviews	15 Swedish resident physicians	Physicians use smartphones for collaboration as well as for work related discussions outside of work; use tablets for visualizing anatomy or sending images for direct expert opinion; some physicians co-searched information with patients, talking and learning together.	Health related information and communication technology is changing the healthcare and the role of the physician. Information and communication technology could be a useful tool for supporting workplace learning if fully utilized, which today it is not.
Johnson, E. M., & Howard, C. (2019)	Medical students	Information seeking, information search, information use	iPad Mini 3s	Mixed Methods (survey and structured learning journals)	9 third-year US medical students doing 7-month rural rotations	Mobile device deployments offer great opportunities for innovative medical education. Apps used at varying degrees of success. Increased use with patients over time.	Medical students immersed in a rural environment use tablets to enhance learning and serve patients.
Kim, H., & Zhang, Y. (2015)	Low socio-economic status Hispanics	Information use, information seeking	Smartphones	Semi-structured interview	20 participants earning less than \$30,000/yr and with no college degree in the US	Functionality/computing power, easy of use, ubiquity, privacy, and being economical are the five main characteristics that promote smartphone use for seeking health information within this population. Smartphones used to search a wide range of health topics via the web. Barriers encountered were small screens and difficulty opening and comparing information on multiple tabs/sites, as well as users' lack of smartphone skills, lack of understanding of search engines and search strategies, and perceptions of information overload.	na

Author(s)/ Pub. Year	User Group	Focus of Information Behavior	Type of Mobile Technology	Methodology	Participants	Findings	Impact on Learning
Kumah, Beheshti, & Bartlett, (2017)	Undergraduate students	Information behavior	Smartphones	Semi-structured interview	18 Canadian undergraduate students (12 female, 6 male), ages 18-24	Millennials use mobile devices extensively in support of well- being, searching for text and multimedia information, establishing and maintaining social connections, setting and pursuing fitness goals, and tracking nutrition and sleep routines. Searching on mobile devices was mostly done immediately, as soon as a need for information arose. Various apps used to support physical, psychological, and social well-being. Social media apps were used to stay connected to one's social network or to acquire and disseminate information.	na
Ma, Du, Cen, & Wu (2016)	Socioeconomical ly disadvantaged Chinese	Information behavior	Smartphones	Open-ended questionnaire and semi-structured interviews	32 socioeconomically disadvantaged people living in Nanjing, China, who either had not obtained bachelor's degrees, had a low annual income or were over 50 years old and who also play the lottery	Accessing information and services in places and times previously inaccessible was a primary smartphone-related characteristic that enabled disadvantaged people to adopt mobile technologies. Affordability is a vital consideration for socioeconomically disadvantaged people, as is encouragement from family, friends, and colleagues. Additional factors such as fashionableness and privacy were important factors affecting users' adoption. The limited amount of data available in participants' mobile packages and participants' limited access to Wi-Fi presented a barrier to use of mobile internet services, as did fear of new technology and lack of online help.	na
Shankar, O'Brien, & Absar, (2018)	Smartphone users	Information seeking, information use	Smartphones	Diary study with pre- and post- diary interviews	19 smartphone users in British Columbia, ages 19- 37	Smartphones used to communicate via social media several times each day (most popular behavior); other behaviors included browsing online news, looking up directions, verifying information, and consulting product reviews. Smartphones are perceived as	Considering their smartphones as a "third hand," many people use them almost constantly throughout the day. When they receive the message that public use of the

Author(s)/ Pub. Year	User Group	Focus of Information Behavior	Type of Mobile Technology	Methodology	Participants	Findings	Impact on Learning
						extensions of the mind and body, embedded in bodily rhythms and routines; smartphones are a "third hand," both enabling and constraining individuals' activities.	device is not appropriate, they often use it surreptitiously or hide it without turning it off.
Tahamtan, I., Pajouhanfar, S., Sedghi, S., Azad, M., & Roudbari, M. (2017)	Medical residents and interns	Information seeking	Smartphones	Semi-structured interviews	21 medical residents and interns in Iran	Eight factors were identified in the qualitative phase of the study including (1) perceived usefulness, (2) perceived ease of use, (3) training, (4) internal environment, (5) personal experience, (6) social impacts, (7) observability and (8) job related characteristics. Perceived usefulness had the strongest impact on attitude toward using a smartphone.	na
Tidal, J. (2017)	Students	Information use	Tablet, smartphone	Cognitive walkthrough	20 students at City of Technology (City Tech), NYC	Lack of a unified experience of website between tablet, smartphone, and desktop users, despite; smartphone users at a disadvantage in utilizing library resources. Not only do smartphone users have a smaller screen size and a touchscreen interface, but they also encounter specific problems with responsive design including its grid system, form functionality, and navigation.	na
Twiss-Brooks, A. B., Andrade, J., Ricardo, Bass, M. B., Kern, B., Peterson, J., & Werner, D. A. (2017)	Medical students	Information seeking, information use	Smartphones, handheld tablets, and laptops	Semi-structured interviews	68 third-year medical students in US	Participants choose technology for a particular information task by considering speed and convenience factors; resources that use responsive design or are configured for easy use on small screens were preferred for smartphones and tablets; easy of reading pdf documents on tablet mentioned; appropriateness of smartphones in clinical setting was unclear and made some students uncomfortable; smartphones frequently used for time management.	Responsive design for library resources would enhance usability on handheld devices. More licensed learning and information resources should be made accessible via handheld devices.

The Information Sharing and Use of Ethnic Minority with Small Populations

Yunfei Du^a and Ming Zhu^b

^aUniversity of North Texas, USA

^bYunnan University, China

yunfei.du@unt.edu, zhumi@ynu.edu.cn

ABSTRACT

This research project explored information sharing and use among Ethnic Minorities and Small Populations in China. 108 residents from Jinuo and Blang ethnic groups participated in the survey and 10 residents were chosen for in-depth interviewed. Research data suggested strategies on how marginalized and minority populations can be socially included and integrated in modern societies.

TOPICS

information seeking; information use; specific populations

INTRODUCTION

Digital humanities is an emerging interdisciplinary field rooted in information science and social sciences, such as history, literature, language, music, and cultural studies. Digital humanities research often involves digital archives and curation in information studies. Such One kind of digital humanities study is focused on underserved or marginalized populations, such as the Documenting Endangered Languages (DEL) projects on language and cultural preservation efforts that are sponsored by federal grants (National Science Foundation, 2018).

Libraries play important role in curating and preserving human and heritage. Currently, little has been published on LIS literature on how information is shared and used among underserved or marginalized populations around the world. A search against the Ebosco database found only 5 articles on information sharing among marginalized or underserved population, and all of them were related to health care.

Researchers from the University of North Texas and Yunnan University in China have been collaborating on information sharing and use among ethnic minorities with small populations in southwestern border of China. Among the ethnic minorities in China, there is a group called "Ethnic Minorities and Small Populations" (EMSP), with a total population of less

than 300,000. Most of EMSP groups live in remote areas. Some ethnic groups along with their language culture are in danger of disappearing.

This paper addresses the following research questions: 1) What are information resources for EMSP community members? 2) What factors influence EMSP community members in their information sharing and use?

METHODS AND RESULTS

To answer these research questions, the researchers chose Jinuo and Blang, two remote ethnic groups located in the Jinuo Mountain, Xishuangbanna, Yunnan Province, China. The researchers first selected 6 out of 11 villages where these two ethnic groups live, and then surveyed 108 participants. Most of the residents speak their own language other than official Mandarin Chinese, and survey data were collected via face-to-face interviews assisted by translators. After the survey data were collected, 10 participants were randomly chosen for an in-depth focus-group interview. Survey data were analyzed using SPSS for descriptive statistics. Focus-group interview transcripts and observation log data were saved for content analysis.

Survey results revealed that EMSP's information needs are focused on gaining working knowledge and skills, such as Planting and Farming (67.4%) and Cultural Tradition and Religion (49.4%). They use limited information sources, such as In-person communications within communities (73.1%), Family Members (88.9%) and Relatives (71.3%). They also emphasized that most of the information they would only communicate with their own ethnic group (59.3%).

Transcripts of in-depth interviews and observation logs found 6 themes that appears to influence information sharing and use among EMSP: Tradition, Knowledge Structure, Living Habits, Individual Experience, Relationship and Trust, and Ethnic Identity.

Traditions refer to the social customs and behavioral practices that EMSP gradually formed and consolidated in the history, and these customs and practices were closely integrated with their own racial characteristics. Traditions may modify individual needs in daily life, such as worshipping of nature, community elders, and their traditional ways of internal governing.

The Knowledge Structure refers to the common understanding that EMSP built through the experience accumulated by generations of daily life. The Knowledge Structure mainly relies on individual memory and oral stories among the ethnic group. Some special knowledge is shared as personal memory of the patriarch or the elderly, and other knowledge is mainly transmitted by the members of the ethnic group through word of mouth. The Knowledge Structure in the ethnic group greatly influences the judgment and choice of EMSP members on the information needs in everyday life. It also influences how EMSP uses information and internalize or transform it into its own cognitive structure.

Living Habits refer to the relatively stable behaviors and psychological traits that members of EMSP have in their daily life. One of the example of Living Habits is to practice a simple, natural-centered life. The long-term isolation from the outside world enforces such a living habit. Long-term stable Living Habits tend to directly affect EMSP's information needs for daily life.

Individual Experience refers to relatively fixed cognitive patterns and value judgments formed by members of EMSP for a long time. The knowledge and experience inherited from previous generations forms a relatively fixed cognitive structure among EMSP. This relatively

simplified cognitive structure makes it easier for them to apply and absorb simplistic, materialized information rather than complex and abstract concepts.

Relationship and Trust refers to the trust of members of EMSP on things inside and outside the community and with others. Information sharing was only based on the trust relationship within the ethnic group, which reduces the uncertainty they faced in the process of information dissemination. They usually do not cross this level of trust to exchange information with the outside world.

Ethnic Identity refers to strong pride and emotional attachment of members of EMSP to their own ethnic groups. To most EMSPs there was a certain alienation from the values of the outside world, which made it possible to block the dissemination of information or distort the information content, especially when it came to risk-taking and beneficial information.

In conclusion, the researchers believe this exploratory study advances the scope of LIS research in the areas of cultural study for minority and marginalized communities, curriculum on library services for underserved populations, and may pave way for future interdisciplinary research and doctoral education and collaborative projects related to information science, linguistic and digital humanities.

REFERENCES

National Science Foundation. (2018). Documenting engendered languages. Retrieved from https://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=12816&ods_key=nsf18580

Open Educational Resources: Barriers and Benefits in LIS Education

Grace Seo, Heather Moulaison Sandy, Guy Wilson

University of Missouri-Columbia, USA

zhousi@missouri.edu, moulaisonhe@missouri.edu, gcwilson@missouri.edu

ABSTRACT

Around the world, the cost of textbooks is prohibitive for aspiring scholars. In the United States, the Bureau of Labor Statistics (2016) indicates college textbook prices rose 88% between 2006 and 2016, approximately triple the rate of the Consumer Price Index (27%). Open Educational Resources (OER) can mitigate the textbook affordability problem and encourage student learning and success. This research explores benefits and barriers to OER and the OER use practice in LIS education, covering international trends and issues. Data regarding seven commonly-used English-language OER development platforms are discussed to inform professors' creation and adoption of OER in LIS or cognate disciplines.

TOPICS

education, scholarly communication, open source software

INTRODUCTION

The William and Flora Hewlett Foundation defines OER as teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others (Hewlett, 2013). Researchers have explored benefits and barriers to OER .

Benefits to using OER

Robinson (2015) highlights several benefits of OER adoption beyond:

- positive change in textbook quality (Bliss, Robinson, Hilton, & Wiley, Thanos, 2013)
- increasing access to core course materials for students who would otherwise forego or delay purchase (Berry, Cook, Hill, & Stevens, 2010)
- changing faculty engagement patterns with course curriculum by inviting them to develop customized OER (Robinson, Fischer, Wiley, & Hilton, 2014)
- allowing students to more efficiently use limited financial resources to maximize collegiate success (Hilton, Robinson, Wiley, & Ackerman, 2014).

These benefits, as they apply to LIS education, form a point of departure.

Barriers to using OER

A number of perceived barriers exist that inhibit OER adoption. One is the increased preparation time for selecting, revising, or developing OER. Faculty need to find and evaluate the resources that fit their course goals.

Lack of time and discoverability also play a role (Belikov & Bodily, 2016). A survey of 2,711 instructors across U.S. higher education institutions by the Babson Survey Research Group showed one significant challenge for OER adoption: lack of knowing where to find materials that allow instructors to share, remix and redistribute as well as how to determine which technology platform will fit with the OER project scope (Chatlani, 2018). Faculty need technology and information to distinguish OER from other digital content, must understand copyright to use and remix OER, understand digital accessibility standards, and also metadata tagging to develop OER.

Many OER repositories or platforms for faculty to adapt (or author) new OER materials exist, including institutional platforms to help them create and share the content – but is it worth the trouble to search if there is no usable content to be found anyway?

OER IN LIS EDUCATION

Anecdotally, there are few OER available to support LIS education even though the open aspect seems well-suited to the ethos of the field; to our knowledge, there currently is no research on OER in LIS education. An analysis of articles in LISTA (Library, Information Science and Technology Abstracts) from May 2018 reveals few from the peer-reviewed, scholarly literature. Largely informative in nature, these articles tend to be columns or short pieces in the practitioner literature that support professional work. Although many of these articles contain practical information on how OER are being supported on individual campuses, they do not help move LIS forward in terms of its use and understanding of OER.

LIS education must, therefore, be like other smaller disciplines and graduate studies, where few OER options exist (see Gallant & Lasseter, 2019). Few incentives exist for their creation, and they may fall into the categories of teaching or service for faculty authors. If writing textbooks is already a disincentivized area of the scholarly communication process in higher education, is software for textbook authoring robust enough to support it in the first place? Which platforms work best in which circumstances?

METHOD

As table 1 indicates, an analysis was carried out of seven top OER platforms (i.e., OER Commons, Top Hat, Lumen, VitalSource, Pressbooks, GitHub-Bookeditor and Rebus) over the course of 2018-2019. Data was collected on distribution formats, whether it was possible to edit existing OERs already in the platform, whether it was freely available or low-cost, if it was low-cost, what that cost was, the kinds of multimedia permitted in the platform, and the interactive aspects available. Platform selection and evaluation was empirical. There is a clear need for tools like Achieve's (2011) OER Rubrics to choose and assess the quality and suitability of OER tools.

RESULTS AND CONCLUSION

All of the platforms allowed for authoring content and five allowed existing OER to be edited. Distribution formats for OER content included PDF, HTML, EPub, proprietary formats,

and others. In terms of cost, four platforms allowed for freely available open access resources. Three platforms included mechanisms for charging students, and costs ranged anywhere from \$5 to about \$90 USD. Multimedia varied by platform, with images being allowed in all seven platforms. Video and links to video-sharing sites were also prevalent. VitalSource permitted slideshows and audio as well. Interactive components included the ability to post questions in a discussion forum and quiz functionalities or surveys. See Table 1.

Platforms	Distribution Formats	LTI (for Reading Content in LMS)	Cost to students	Multimedia	Interactive Components
OER Commons	HTML, PDF	Blackboard Canvas EdX Moodle Schoology	None	Images & Video	Definitions
Top Hat	Proprietary, epub	Blackboard Brightspace Canvas Moodle Sakai	None to about \$90	Images & links to YouTube or Vimeo.	Discussions & Questions (MC, Word Answer, Numeric Answer, Formula, Fill in the Blank, Matching, Click on Target [Hotspot], Sorting, Chemistry Response, Math Response, Graphing Response)
Lumen	Proprietary, some HTML	Blackboard Brightspace Canvas Moodle	\$5-\$25	Yes	Various question types, with a strong, WebWorks/WebAssign type tool as well.
VitalSource	Proprietary, epub	Blackboard Brightspace Canvas Moodle	\$5-\$15	Images, audio, video, slide shows.	Quiz and survey questions.
Pressbooks	PDF for Print (for print-on-demand), PDF for Digital Distribution, EPUB, EPUB 3 (beta), MOBI (Kindle),	Blackboard Brightspace Canvas Moodle	None	Images natively and video through H5P	Yes (H5P enabled)

	XHTML (web)				
Rebus	PDF for Print (for print-on-demand), PDF for Digital Distribution, EPUB, MOBI (Kindle), HTML, ODT	N/A	None	Dependent on Pressbooks tools.	Dependent on Pressbooks tools.
GitHub- Bookeditor	HTML, PDF, EPUB	N/A	None	Images & video	Possible with JavaScript programming.

Table 1. OER platform analysis table.

The results presented here are discussed in the context of LIS education, including the potential for leveraging the benefits of OER while mitigating the drawbacks. These results support LIS professors' understanding of OER use practice, with the potential to encourage the use of these platforms to improve teaching and learning in the field. Due to updates and upgrades, some data in this table may be out of date by the time of publication.

REFERENCES

- Belikov, O. M., & Bodily, R. (2016). Incentives and barriers to OER adoption: A qualitative analysis of faculty perceptions. *Open Praxis*, 8(3), 235-246.
<https://doi.org/10.5944/openpraxis.8.3.308>
- Berry, T., Cook, L., Hill, N., & Stevens, K. (2010). An exploratory analysis of textbook usage and study habits: Misperceptions and barriers to success. *College Teaching*, 59(1), 31-39.
- Bliss, T., Hilton, J., Wiley, D., & Thanos, K. (2013). The cost and quality of online open textbooks: Perceptions of community college faculty and students. *First Monday*, 18(1). Retrieved from <http://firstmonday.org/ojs/index.php/fm/article/view/3972/3383>
- Bureau of Labor Statistics. (2016). College tuition and fees increase 63 percent since January 2006. Retrieved from <https://www.bls.gov/opub/ted/2016/college-tuition-and-fees-increase-63-percent-since-january-2006.htm>
- Chatlani, S. (2018). Survey: OER adoption in higher ed still slow. Education Dive. Retrieved from <https://www.educationdive.com/news/survey-oer-adoption-in-higher-ed-still-slow/514978/>
- Hewlett (2013). *Open educational resources*. Retrieved from <http://www.hewlett.org/programs/education/open-educational-resources>

Hilton, J. L., Robinson, T. J., Wiley, D., & Ackerman, J. D. (2014). Cost-savings achieved in two semesters through the adoption of open educational resources. *The International Review of Research in Open and Distributed Learning*, 15(2). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1700>

Gallant, J., & Lasseter, M. (2019). 2018 USG Survey report on open educational resources. Retrieved from https://www.affordablelearninggeorgia.org/documents/2018_USG_OER_Survey.pdf

Robinson, T. J., Fischer, L., Wiley, D., & Hilton, J. (2014). The impact of open textbooks on secondary science learning outcomes. *Educational Researcher*, 43, 341-351.

Robinson, T. J. (2015). *The effects of open educational resource adoption on measures of post-secondary student success* (Doctoral dissertation). Retrieved from BYU ScholarsArchive. (Accession No. 5815)

Developing LIS Curricula for Information Professionals in Library Makerspaces

Marijel (Maggie) Melo

University of North Carolina at Chapel Hill, USA

Melo1@ad.unc.edu

ABSTRACT

Despite the increasing popularity of academic and public library makerspaces, there remains little formal preparation and/or classroom training for burgeoning information professionals and librarians to develop and run makerspace environments. Moreover, as makerspaces continue to be adopted in libraries, librarians and paraprofessionals will continue to see their job duties and responsibilities shift as user needs and services evolve. This paper centers on a graduate/undergraduate course for informational professionals interested in working within makerspaces. While makerspaces around the world tend to emulate makerspaces emerging from Silicon Valley, this paper will highlight a tension emerging from the development of the course: How do we prepare burgeoning information professionals to manage makerspaces while also remain critically and ethically aware of the biases and issues inherent to the maker movement?

TOPICS

Curriculum; Pedagogy; Critical Librarianship; Education; Information ethics; Students

MAKER MOVEMENT & THE GAP OF EDUCATIONAL PREPAREDNESS

Since the mid-2000s, the maker movement continues to impact how communities and libraries engage with tech-centric making on a global scale. Makerspaces are collaborative learning environments that highlight DIY creation through digital and fabrication technologies. These STEM-rich learning environments have been increasingly integrated into library ecosystems across the world since the impetus of the maker movement (Cun, Abramovich & Smith 2019). At the beginning of 2019, data was collected on U.S. state colleges and universities (784 institutions) to determine whether which institutions had makerspaces. It was reported that 41% of state universities and colleges have (or plan to have) one or multiple makerspaces (Melo & Rabkin 2019). Of the 41%, 31 institutions planned to open their first makerspace in the near future. However, despite the continued enthusiasm around makerspaces, there remains a gap in the educational preparation for upcoming and current professionals working in these environments.

In 2016, Koh Kyungwon and June Abbas investigated the educational preparation that information professionals received prior to working in their learning lab or makerspace. Specifically, the researchers queried 43 participants about whether their higher education curriculum readied them for their current roles. The results were remarkable: 64% of participants noted that their education was “somewhat relevant,” 14% said it “wasn’t relevant at all,” and 12% viewed it as “relevant.” Moreover, it was also reported that 74% of participants were asked to complete a task or do something in their makerspace that they did not feel adequately prepared to do (2016). The impetus of this makerspace course described below, along with similar LIS courses focusing on makerspaces, was developed with the intention to narrow the preparation gap that informational professionals experience.

COURSE OVERVIEW: INFORMATION PROFESSIONALS IN THE MAKERSPACE

This course is currently listed as a special topics class, and has an enrollment cap of 15 students (both undergraduate and graduate students can enroll). One course objective is for students to develop a generalist understanding of approaches to manage a makerspace and how to use the conventional tools therein. Students will engage with the conceptualization of makerspaces in a “T-shaped” manner. Vertically, students will develop a deep, practical and theoretical understanding of the makerspace and its remarkable adoption rate in libraries across the US; horizontally, students will develop a wide-range of technical skills in areas including fabrication (laser cutting, 3D printing, and sewing), circuitry (paper circuits, electronic textiles, and soldering), extended reality (AR/VR/MR), and microcomputing. Students will have developed a critical understanding of the affordances and limitations of the makerspace, while also working collaboratively and individually to engage with a wide-range of topics spanning from makerspace donor relations to ethical issues emerging from makerspaces (*e.g.* 3D-printed guns and VR harassment). The following learning objectives were listed for this course:

- Develop a theoretical, reflective, and practical understanding of makerspaces and their evolving role in libraries.
- Define key terms such as maker, makerspace, maker movement, and how these terms vary widely across cultures, communities, and regions.
- Develop skills and familiarity with a host of technologies conventionally found in makerspaces through a series of technical flash projects.
- Collaborate with colleagues and a UNC researcher to oversee the development of an end-to-end digital or physical deliverable.
- Create documentation for a makerspace that centers equitable, diverse, and inclusive practices. Compose a makerspace philosophy that captures their values and beliefs as a maker, human, and information professional.
- Articulate and identify ethical challenges that emerge within makerspaces and from the conventional makerspace technologies therein.
- Articulate the affordances and limitations of the maker movement phenomenon through critical inquiry and analysis.
- Engage in a pro-help, pro-question ethos throughout the course.

The course assignments reflect common projects that emerge from makerspaces. Course assignments are project based, and are integrated into the curriculum as “flash projects” where students learn a skill and produce a small deliverable (*e.g.* the 3D printing flash project could include a remix of an existing model on *Thingiverse* and the successful print of that modified object). The skills and experience developed during the flash projects then culminate in a team project where students are paired with a University of North Carolina at Chapel Hill community member with a “real” maker-based research need. Student teams will help their researcher by offering their technical expertise and their guidance on the end-to-end development of a physical or digital object. For example, a project idea could include helping a Public Humanities researcher to 3D scan artifacts found at the U.S.-Mexico border. The project deliverable would be 3D scans of 10 airtight, printable 3D models for the researcher to use during community talks and workshops. Additionally, at the end of the course, students will have crafted the following deliverables: a professional portfolio including a makerspace philosophy, staff training curricula, makerspace code of conduct, and a mission and vision statement for a hypothetical makerspace of their design.

CONCLUSION

The difficulty in developing a course on making is striking a balance between training burgeoning information professionals to perform their duties within this narrow, branded form of making, while also ensuring that we apply critical frameworks on the important issues that situate the maker movement: environmental concerns, the persistent underrepresentation of diverse communities, intellectual property, etc. (Radiecki 2018). Critical librarianship is an essential feature of this course in that the intent is to be mindful of these issues and of the ways to avoid repeating or exacerbating them further. Critical librarianship asks our field to consider not only inclusion and diversity (which are outcome based), but to question, challenge, and intervene through systems of structural inequities that undergird our libraries and pedagogy (Critlib). This course will undergo a re-making as scholarship and practices around makerspaces and libraries continues to evolve.

REFERENCES

- Britton, L. (2015). “Power, Access, Status: The Discourse of Race, Gender, and Class in the Maker Movement.” Retrieved from <https://tascha.uw.edu/2015/03/power-access-status-the-discourse-of-race-gender-and-class-in-the-maker-movement/>
- Cun, A., Abramovich, S., & Smith, J. M. (2019). An assessment matrix for library makerspaces. *Library and Information Science Research*, 41(1), 39-47.
- Critlib Critical Librarianship, in Real Like & on the Twitters. (n.d.). Retrieved from <http://critlib.org/about/>
- Edwards, M. M., & Thornton, E. (2013). Library outreach: Introducing campus childcare providers to the academic library. *Education Libraries*, 36(2), 4-16.

- Koh, K. & J. Abbas (2016). Competencies needed to provide teen library services of the future: a survey of professionals in learning labs and makerspaces.” *The Journal of Research on Libraries and Young Adults*, 7(2).
- Melo, M. & Rabkin, A (2019). Makerspaces in U.S. state universities.” Retrieved from <https://docs.google.com/spreadsheets/d/1NkcqlAIzTBPuYWt6ynUS1hcFmhhNJQnrvAVtwvZtiCE/edit#gid=1795024749>
- Radniecki, T (2018). Intellectual property in the makerspace. *Journal of Library Administration*, (58)6, 545-560.

Interrogating how Information (Re)produces Systemic Barriers within LGBTQ+ Communities to Inform Global LIS Education

Vanessa L. Kitzie, Travis L. Wagner, A. Nick Vera, and Valerie Lookingbill^a

^aUniversity of South Carolina, School of Library and Information Science, USA

kitzie@mailbox.sc.edu, wagnerl@email.sc.edu, veeraan@email.sc.edu, lookingv@email.sc.edu

ABSTRACT

This preliminary research examines the health information practices of South Carolina LGBTQ+ communities. Findings have the following implications for LIS education at a global level: building cultural competency regarding the role of information in marginalizing certain populations, and training students to engage in user outreach and advocacy. These implications address a global need for LIS education to encompass social responsibility and inclusion into program curricula.

TOPICS

community-led services; critical librarianship; information needs; information seeking; information use; social justice; specific populations

INTRODUCTION

Recognizing social responsibility and diversity as critical components of library and information science (LIS) education (ALA, 2004) at a global level facilitates meaningful cultural change through needs-based library service development (Vincent, 2015). This abstract contributes to this change by reporting on preliminary research examining the health information practices of South Carolina (SC) lesbian, gay, bisexual, transgender, and queer (LGBTQ+) communities. Findings build cultural competency (Cooke, 2016; Overall, 2009) among LIS professionals by exploring the role of information in marginalizing certain populations. Despite findings bound to a U.S. locale, professionals can draw broader implications about how the profession constructs relationships, services, systems, values, etc., that further oppress marginalized groups. Findings also yield implications informing global LIS education, including training students to engage in user outreach and advocacy.

This abstract addresses the following research questions:

1. How does sociocultural context shape the health information practices of SC LGBTQ+ communities?
2. What are the implications of research findings for LIS education?

LITERATURE REVIEW

Literature informing this project addresses health disparities of LGBTQ+ communities, information practices, and inclusion in LIS education.

LGBTQ+ communities face significant health disparities when compared to their heterosexual, cisgender peers (APA Public Interest Government Relations Office, 2013; Institute of Medicine, 2011; National LGBT Health Education Center, 2016). Systemic barriers produce these outcomes by reducing access to relevant health resources. Information constitutes one type of systemic barrier as LGBTQ+ people face challenges learning about their healthcare needs and navigating the healthcare system (Romanelli & Hudson, 2017). A lack of research exists examining LGBTQ+ health from an information perspective (Meadowbrooke, Veinot, Loveluck, Hickok, & Bauermeister, 2014).

An information practices approach is uniquely positioned to address this gap. This approach examines the relationship between individuals and sociocultural context. While nascent in its application to health, information practices have been used by researchers to examine youth parenting (Greyson, 2017) and ordering and reading health records (Huvila, Daniels, Cajander, & Åhlfeldt, 2016). Findings when applying an information practices perspective to LGBTQ+ populations demonstrate significant implications for fostering inclusive LIS practice (Kitzie, 2017).

LIS education has long struggled with inclusion (Vincent, 2015). Focusing on inclusion yields several benefits for the profession, including improved recruitment and retention from underrepresented populations, and increased relevance of libraries for surrounding communities. LIS research, curricula, and practice need to expand diversity rhetoric beyond demographics to examine specific populations marginalized in terms of information (Jaeger, Bertot, & Subramaniam, 2013). This understanding must extend to education-based advocacy – not only offering students the tools to understand how power operates within their communities but also to act in socially responsible ways that ingrain social justice into their workplaces (Cooke et al., 2015; Roberts & Noble, 2016).

This review suggests a necessary interrelationship between research and practice to foster core values of social responsibility and diversity within LIS education. Exposing students to research examining relationships between information and marginalization can foster cultural competencies necessary to provide relevant, community-centric services. Further, methodological techniques applied within such research can inform students' outreach to these

communities. This relationship is particularly salient within health librarianship, where LIS curricula remain underdeveloped (Ma, Stahl, & Knotts, 2018).

METHODOLOGY

This study reports on findings from ~30 ongoing interviews with SC LGBTQ+ community leaders using a semi-structured protocol. Sampling strategies align with those suggested for marginalized or “hidden” populations – purposive, snowball, and theoretical (Gahagan & Colpitts, 2017). The research incorporates an intersectional lens (Crenshaw, 1989), sampling for maximal variation among salient identity categories like race/ethnicity, age, and education. Data include transcripts from audio-recorded interviews and mapping exercises to triangulate data collection (Greyson, O’Brien, & Shoveller, 2017). Analysis is iterative and inductive, using the constant comparative method (Charmaz, 2014) to generate open codes followed by organizing codes into larger themes via axial and selective coding (Corbin & Strauss, 2015). The research employs internal and external auditing to establish trustworthiness (Cresswell, 2014).

FINDINGS (RQ1)

Preliminary findings uncovered dialectical relationships between the information practices of SC LGBTQ+ communities and sociocultural context. Communities experience a host of systemic barriers that (re)produce what information is available to them and how they interact with this information. Consider how participant Pat (pseudonym) describes their community’s limited available health information focusing on sexually transmitted infections (STIs) and HIV/AIDS:

Our community is ... considered this profit mechanism for a lot of companies, and a lot of health researchers ... perpetuate this ideology that black, queer, and trans people are ... inherently predisposed to being the carriers of these different infections ... That ... makes this cyclical ... relationship where it's like, "Well, most of the newly-diagnosed people are African-American or black." And I'm like, "But most of the people that you're testing are African-American or black."

Pat’s account illustrates several systemic barriers that operate at the intersection of multiple community identities, including race, class, sexuality, gender, and political ideology. These barriers produce a myopic information world for Pat’s community wherein the critical information created, sought, shared, and used relates to STIs and HIV/AIDS. Pat’s narrative uncovers another key research finding, which is that a lack of health information and knowledge is not inherent to underserved communities, but instead produced by a gap between what information and knowledge cultural insiders versus the community deem relevant.

IMPLICATIONS (RQ2)

Understanding the sociocultural factors shaping health information practices of LGBTQ+ communities has significant implications for LIS education globally. Findings suggest that deficit-based models of information behaviors and practice often found in LIS curricula should be revised to incorporate new approaches that highlight the role of systems in (re)producing information practices. These approaches will deepen students' understanding of how information operates in the lives of marginalized communities beyond demography, producing future practitioners who provide community-centric services.

Findings also have action-oriented implications for LIS education. Addressing Pat's narrative cannot be accomplished by solely giving their community information. Challenging students to act in light of these findings is critical as they will practice within institutions that mirror the systemic issues Pat and their community experience outside of the library. Knowing how to act in light of these issues will help prepare students to leverage their institutional power to begin to dismantle these structures.

REFERENCES

- ALA. (2004). Core values of librarianship. Retrieved June 30, 2019, from <http://www.ala.org/advocacy/intfreedom/statementspols/corevalues>
- APA Public Interest Government Relations Office. (2013). *LGBT health disparities*.
- Charmaz, K. (2014). *Constructing grounded theory: A practical guide through qualitative analysis* (7th ed.). Thousand Oaks, CA: Sage.
- Cooke, N. A. (2016). *Information services to diverse populations: Developing culturally competent library professionals*. Santa Barbara, CA: Libraries Unlimited.
- Cooke, N. A., Jardine, F., Jaeger, P. T., Shilton, K., Feltis, C., & Hamiel, M. (2015). The virtuous circle revisited: Injecting diversity, inclusion, rights, justice, and equity into LIS from education to advocacy. *The Library Quarterly*, 85(2), 150–171. <http://doi.org/10.1086/680154>
- Corbin, J., & Strauss, A. L. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Thousand Oaks, CA: Sage.
- Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist policies. *The University of Chicago Legal Forum*, 1989(1), 139–167. <http://doi.org/10.1525/sp.2007.54.1.23>.

- Cresswell, J. W. (2014). *Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: SAGE Publications.
- Gahagan, J., & Colpitts, E. (2017). Understanding and measuring LGBTQ pathways to health: A scoping review of strengths-based health promotion approaches in LGBTQ health research. *Journal of Homosexuality*, 64(1), 95–121. <http://doi.org/10.1080/00918369.2016.1172893>
- Greyson, D. (2017). Health information practices of young parents. *Journal of Documentation*, 73(5), 778–802. <http://doi.org/10.1108/JD-07-2016-0089>
- Greyson, D., O'Brien, H., & Shoveller, J. (2017). Information world mapping: A participatory arts-based elicitation method for information behavior interviews. *Library and Information Science Research*, 39(2), 149–157. <http://doi.org/10.1016/j.lisr.2017.03.003>
- Huvila, I., Daniels, M., Cajander, Å., & Åhlfeldt, R.-M. (2016). Patients reading their medical records: differences in experiences and attitudes between regular and inexperienced readers. *Information Research*, 21(1). Retrieved from <http://www.informationr.net/ir/21-1/paper706.html#.XRIOVZNKjHc>
- Institute of Medicine. (2011). *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding*. Washington D.C. Retrieved from www.iom.edu/lgbthealth
- Jaeger, P. T., Bertot, J. C., & Subramaniam, M. (2013). Preparing Future Librarians to Effectively Serve Their Communities. *The Library Quarterly*, 83(3), 243–248. <http://doi.org/10.1086/670699>
- Kitzie, V. L. (2017). *Beyond behaviors, needs, and seeking: A qualitative investigation of information practices among individuals with LGBTQ+ identities*. Rutgers. Retrieved from <https://rucore.libraries.rutgers.edu/rutgers-lib/53647/PDF/1/>
- Ma, J., Stahl, L., & Knotts, E. (2018). Emerging roles of health information professionals for library and information science curriculum development: a scoping review. *Journal of the Medical Library Association*, 106(4), 432–444. <http://doi.org/10.5195/jmla.2018.354>
- Meadowbrooke, C. C., Veinot, T. C., Loveluck, J., Hickok, A., & Bauermeister, J. A. (2014). Information behavior and HIV testing intentions among young men at risk for HIV/AIDS. *Journal of the Association for Information Science and Technology*, 65(3), 609–620. <http://doi.org/10.1002/asi.23001>
- National LGBT Health Education Center. (2016). *Understanding the health needs of LGBT people*.
- Overall, P. M. (2009). Cultural competence: A conceptual framework for library and information science professionals. *The Library Quarterly*, 79(2), 175–204.
- Roberts, S. T., & Noble, S. U. (2016). Empowered to name, Inspired to act: Social responsibility and diversity as calls to action in the LIS context. *Library Trends*, 64(3), 512–532. <http://doi.org/10.1353/lib.2016.0008>

- Romanelli, M., & Hudson, K. D. (2017). Individual and systemic barriers to health care: Perspectives of lesbian, gay, bisexual, and transgender adults. *American Journal of Orthopsychiatry*, 87(6), 714–728. <http://doi.org/10.1037/ort0000306>
- Vincent, J. (2015). Why do we need to bother?: Public library services for LGBTQI people. *Library Trends*, 64(2), 285–298. <http://doi.org/10.1353/lib.2015.0050>

We Need Them But What Are They?: A Conceptual Analysis of Diverse Books

E.E. Lawrence

Rutgers University, USA

e.e.lawrence@rutgers.edu

ABSTRACT

Use of the term “diverse books” has increased radically in the professional library discourse in recent years. In this paper, I ask what criteria we think a book must satisfy to be properly characterized as “diverse.” To begin answering that question, I conduct a preliminary conceptual analysis of “diverse books,” using the intuitive responses of MSLIS students in a class on genre fiction as a jumping-off point for philosophical inquiry. My aim is twofold: first, to kickstart the process of clarifying what we mean to talk about when we talk about diverse books and, second, to demonstrate how the LIS classroom can serve as a resource for populating the conceptual imagination.

TOPICS

critical librarianship; social justice; reading and reading practices

INTRODUCTION

Use of the term “diverse books” has increased radically within the professional library discourse since the advent of the *We Need Diverse Books* campaign in 2014. While efforts to promote children’s literature by and about people of color stretch back further (Mabbott 2017, 508), it is clear that LIS scholars and practitioners increasingly endorse the active inclusion of *diverse books* in library collections (see, e.g., Brown 2018; Fullerton et al. 2018; Cooke 2017, 63; and Ostenson et al. 2016). Much of this discussion, however, has proceeded despite a lack of definitional clarity around the concept of a “diverse book.” We thus find ourselves in something of a conceptual free-for-all that sometimes impedes the force of the political and ethical calls to action that result.

In order to productively intervene, I ask in this paper what criteria we in the library field think a book must satisfy to be properly characterized as “diverse.” To answer that question, I conduct an exploratory analysis of “diverse books” using the intuitive responses of MSLIS

students in two iterations of a class on genre fiction as a jumping-off point for philosophical inquiry. The aim of this investigation is twofold: first, to kickstart the process of clarifying what we (ought to) mean when we talk about diverse books and, second, to demonstrate how the LIS classroom can serve as a resource for populating the conceptual imagination. I conclude with some thoughts on future research directions and the largely untapped value of international librarians' perspectives on diverse literature.

DEFINING “DIVERSE BOOKS”

To identify potential definitions, I make use here of my own experience teaching a class on popular romance fiction. The 35-odd students in two sections were enrolled in a master's program in LIS. I have omitted a more granular description of these students *qua* sample because this project is not a qualitative study. Rather, I am drawing on classroom dialogue as a source of everyday intuitions that have expanded my own sense of the diverse books dialectic, as it were. (For more in-depth discussion of the use of pre-theoretic intuitions in philosophical research methodologies, see Climenhaga [2018], De Cruz [2015] and Pust [2000].)

Students participated in a classroom exercise during which the instructor presented a sequence of fictional works and asked students to explain why each of these did or did not constitute a diverse book. The subsequent conversation illuminated four heuristics commonly utilized to make that determination:

- (1) *the presence of representation* (i.e., Does this book represent members of particular [or particular kinds of] social groups?);
- (2) *the quality or authenticity of representation* (i.e., Does this book represent members of these social groups well?);
- (3) *the identity of the author* (i.e., Does this book's author identify as being from a social group that is underrepresented in the mainstream publishing industry?);
- (4) *the relationship between representation and the identity of the author* (i.e., Does this book's author identify as being from one or more of the social groups represented in the text?).

Each of these heuristics is indicative of necessary and/or sufficient conditions for a work's classification as a diverse book. Regarding the first heuristic—"the presence of representation"—it is worth noting that different speakers adopt broader and narrower views of the appropriate target of representation. For instance, some take representation of varied social groups to qualify a book as “diverse,” while others single out one or more groups that depart in some respect from the sociocultural mainstream (via, e.g., race, gender identity, and so on). There are also speakers who apply more stringent criteria such that the scope of “diverse representation” includes only those groups that are, e.g., underrepresented in mainstream publishing or subject to institutional oppression.

Note that all four heuristics, though different, serve to articulate judgments about what kinds of literature ought to be promoted in and by the library. In our professional context, it would seem that a book is diverse in virtue of some sociocultural feature(s) that we as librarians are morally called on to valorize in our collection development and readers' advisory practices.

CRITICAL IMPLICATIONS

Ultimately, this paper is less concerned with arriving at a single prescribed definition of “diverse books” than it is with fostering a deeper understanding of the multifarious (and often underspecified) uses to which we put the term. On the basis of my preliminary analysis, I posit that the definition of “diverse books” a particular speaker deploys is tightly linked to the course of action that speaker endorses. That is, the meaning we assign to the term is shaped by the changes we seek to bring about. The category “diverse books,” it would seem, is a fundamentally political one, aiming in each instance to capture some class of literary works that librarians must make an ameliorative effort to include in collections. Consequently, overly liberal definitions—that is, those that affirm maximally inclusive approaches to diversity (often as mere social difference)—threaten to weaken the very political project they intend to advance. This is because such definitions admit books for which no special effort is needed to ensure inclusion in library collections—books about, for instance, Italian Americans, or baseball players, or political extremists dedicated to reinforcing the hegemonic social position of their own ethnic groups. Significantly, pervasive ambiguity around one’s use of the term “diverse books” has a similar effect, since it marks the classification as one with perennially elusive or porous boundaries.

NEXT STEPS

The “diverse books” discussion initiated here calls for a wider look at applications of the term. My own future work will thus incorporate an examination of the concept-as-employed in the recent LIS literature and the *We Need Diverse Books* campaign, taking into account existing critiques of diversity talk in the discipline (see, e.g., Peterson 1999; Honma 2005; Pawley 2006; Hussey 2010; Hudson 2017). This critical literature review will aid in refining a taxonomy of uses of the term “diverse books,” the concomitant conditions that govern those uses, and the degree to which these succeed or fail in advancing social justice. That the term is a political or pragmatic one means we ought to transition from questions about common usage to questions about *normatively appropriate* or *politically expedient* usage, critically assessing which of the definitions on offer do the kind of work we need them to do.

There is also much room to examine the ways in which the demographics of librarianship shape our (and our students’) understanding of diverse books (see ALA 2012). Indeed, the social locations of the voices dominating the library profession—white, cis, straight, non-disabled, US-centric—inform and circumscribe our imaginations. More attention must be paid to global considerations related to social and historical contingency. We might ask, for instance, how conceptualizations of diversity embraced by librarians working outside of the United States

differ from our own, or whether the location or time in which a book was published should bear on its designation as “diverse” and in what way(s). Such an interrogation is likely to have significant implications for our professional and pedagogical practices.

REFERENCES

- American Library Association. (2012). Diversity counts report. Retrieved from <http://www.ala.org/aboutala/offices/diversity/diversitycounts/divcounts>
- Brown, A. K. G. (2018). Everyday decisions. *Reference & User Services Quarterly*, 58(2), 68-69.
- Climenhaga, N. (2018). Intuitions are used as evidence in philosophy. *Mind*, 127, 69-104.
- Cooke, N. A. (2017). *Information services to diverse populations: Developing culturally competent library professionals*. Santa Barbara, CA: Libraries Unlimited.
- De Cruz, H. (2015). Where philosophical intuitions come from. *Australasian journal of Philosophy*, 93(2), 233-249.
- Fullerton, S. K., Schafer, G. J., Hubbard, K., McClure, E. L., Salley, L., & Ross, R. (2018). Considering quality and diversity: An analysis of read-aloud recommendations and rationales from children’s literature experts. *New Review of Children’s Literature & Librarianship*, 24(1), 76-95.
- Honma, T. (2005). Trippin’ over the color line: The invisibility of race in library and information studies. *InterActions: UCLA Journal of Education and Information Studies*, 1(2). Retrieved from <https://escholarship.org/uc/item/4nj0w1mp>
- Hudson, D. J. (2017). On “diversity” as anti-racism in library and information studies: A critique. *Journal of Critical Library and Information Studies*, 1(1). Retrieved from <https://journals.litwinbooks.com//index.php/jclis/article/view/6>
- Hussey, L. (2010). The diversity discussion: What are we saying? *Progressive Librarian*, 34-35, 3-10.
- Mabbott, C. (2017). The We Need Diverse Books campaign and critical race theory: Charlemae Rollins and the call for diverse children’s books. *Library Trends*, 65(4), 508-522.
- Ostenson, J., Ribeira, R., Wadham, R., & Irion, K. (2016). Hunky Cajuns and gay sextons: Diversity as represented in adolescent book reviews. *Journal of Research on Libraries & Young Adults*, 7(3), 1-15.
- Pawley, C. (2006). Unequal legacies: Race and multiculturalism in the LIS curriculum. *Library Quarterly*, 76(2), 149-168.
- Peterson, L. (1999). The definition of diversity: Two views. A more specific definition. *Journal of Library Administration*, 27, 17-26.

Pust, J. (2000). *Intuitions as evidence*. New York, NY: Garland Publishing.

Effective Short-Term International Learning Experiences: Promoting Global Understanding and International Cooperation

Andrew J. M. Smith

Emporia State University, USA

asmith37@emporia.edu

ABSTRACT

Short-term international learning experiences can have a profound effect on student learning and professional identity. This paper draws on the author's experience with 17 such courses for 200 students to address all aspects of creating and managing an international learning experience from the academic and assessment considerations to handling logistics of travel and accommodation, constructing the itinerary, and creating opportunities for effective learning and international collaboration.

TOPICS

education of information professionals; pedagogy; curriculum; assessment of student learning; short-term study abroad; socio-cultural perspectives; information services; information practices

SHORT-TERM STUDY ABROAD

Although we live in a networked world with easy communication to any point on the globe, true understanding of our similarities and differences, and awareness of shared and unique problems, develops best when students are able to experience another culture directly. The powerful effect on student learning and understanding of even short-term learning experiences abroad has been demonstrated repeatedly, and accounts for the emphasis on study abroad programs within U.S. universities and the corresponding number of travel companies who are eager to arrange such programs (Twombly et al, 2012.)

Travel may broaden the mind, but the mind must be open to new experiences, to different points of view, to new awareness of shared problems, and to an alternative understanding of the learner's previous beliefs and experiences. How must students be prepared for a short-term learning experience? What form should the experience take? How do you make this experience truly an immersive class and not simply a sightseeing tour? How do you pay for the program? How do you set goals for the program and how do you assess the student learning? How do you protect your students during the experience and how do you help them reintegrate upon their return to the U.S.A.?

SLIM HISTORY OF STUDY ABROAD

The School of Library and Information Management (SLIM) at Emporia State University has a long history of involving students in international learning experiences. In the past fifteen years, almost 300 students have participated in 26 learning journeys to 11 different destinations. Since 2011, the current author has led 17 of these trips to three destinations with almost 200 students, and has helped with the creation and planning of trips to three more destinations. This paper presents some of the lessons learned from this extensive experience and indicates issues that must be addressed for successful short-term study abroad experiences for graduate students of library science.

CURRICULUM AND PEDAGOGY

The first thing that must be decided is the form the student learning will take. SLIM has experimented with both service learning and experiential learning, and now employs a model of experiential learning for all international experiences. Although service learning projects have many benefits, there can also be major barriers to success. Apart from language difficulties, which may be substantial, for example in a cataloging project, the nature of the projects themselves may limit the potential student participation. It can also be difficult to avoid the problems of imposing the American understanding of the task and its accomplishment which may be in conflict with the values and culture of the host country. It is also easy to become focused on accomplishment of the task itself, at the cost of student engagement and learning. While the students may gain work experience in the official task, they lose out on the broader learning of engaging with others with a different cultural perspective. The emphasis on peer to peer experiential learning immediately changes the power structure of the interactions and encourages the students in the role of learners, rather than visiting experts. This is vital to reinforce the professional value of the host country librarians and to foster the idea of cooperative problem solving.

LOGISTICS

Once the form of the trip is established, the next task is to address the trip logistics. While there are many options for companies that will prepare tour packages, the SLIM model has relied on in-house organization and extensive collaboration with librarians in the host countries. One

major reason for this is to limit the costs of the experience for the participating students. Another is that it promotes the philosophy of collaboration and mutual learning, and it is easier to plan activities that give the students time to talk to library colleagues and to form relationships. Where possible, SLIM students are also encouraged to explore on their own and to become a part of the local culture, even for a brief period of time. This has meant that most SLIM trips are centered on one location, rather than changing to new locations every day or every other day. As most of the SLIM graduate students maintain full-time jobs during their study, of necessity our international learning experiences have become standardized in to a 10-day field trip as part of a regular 2-credit hour class. This has proved to be the most efficient model for our students that allows the largest number of student the possibility of participating.

OTHER CONSIDERATIONS

There are many other essential topics that require examination beyond the length restrictions of this paper. These include creating learning objectives for the course; the various methods of assessing student learning that have been tried and those which have been found most effective; the necessary preparation of the students to travel outside the United States (and in some cases outside of their home state for the first time); strategies for effective debriefing of the students upon their return; and encouraging continued reflection and learning after the end of the semester. There also needs to be consideration of setting up and managing library, archive and museum visits and creating opportunities for students to meet their peer in the host country. Costs are a major factor, and great care must be exercised to ensure the viability of the international experience, while at the same time ensuring it is accessible to the largest possible number of students. Accessibility issues also include planning for students who are differently abled or who require accommodations to participate.

International learning experiences do not have to be big and spectacular to be effective. Perhaps the most important outcome for any international learning experience is the formation of relationships and the development of shared understanding. While some of these relationships may be brief, they are important nonetheless, and even a brief encounter may have a profound effect on student understanding of the core values of librarianship that are shared across cultures and national boundaries. Other relationships persist and result in collaborations that benefit librarians and library patrons in both countries.

REFERENCES

Twombly, S. B., Salisbury, M. H., Tumanut, S. D., & Klute, P. (2012). Study Abroad in a new global century: Renewing the promise, refining the purpose. *ASHE Higher Education Report*, 38(4), 1 – 152. DOI: 10.1002/aehe.20004

Framework of Mobile-based Learning (M-Learning): An Exploratory Study on the Use of Mobile Devices for University Students' Academic Learning

Wenqing Lu^a and Rong Tang^a

^aSimmons University, USA

wenqing.lu@simmons.edu, rong.tang@simmons.edu

ABSTRACT

This paper reports the results of 15 in-depth interviews with university students in the Greater Boston area regarding their mobile learning experiences, including the kinds of learning activities performed, and the advantages and challenges of m-learning. Mobile devices were used mainly for initial exploratory learning or a way for quick access and interacting with classmates. Participants avoided using mobile devices for complicated tasks or deep learning. The limited usability of mobile devices in supporting advanced learning is alarming. A conceptual framework of m-learning containing dimensions of *mobility and ubiquity*, *convenience*, *interaction and collaboration*, and *usability* was presented.

TOPICS

mobile system; online learning; ubiquitous computing

INTRODUCTION

Background.

M-learning refers to an education setting where learning occurs through utilizing mobile devices. Previous studies revealed that mobile devices were used primarily for personal (Evans, 2008) or informal learning purposes (Dabbagh & Kitsantas, 2012). There is limited empirical investigation into the extent to which mobile devices facilitate academic learning. Some researchers stressed smartphones' limitations due to small screens (Dukic, Chiu, & Lo, 2015), whereas others valued that mobile devices connect teachers and learners (Loomba & Loomba, 2009). While the "ubiquity" feature of on-demand mobile computing was deemed beneficial for learners (Hummel & Hlavacs, 2003), poor usability would be an obstacle for m-learning (Shackel, 2009). To date, there is no study investigated m-learning and its association with user

experience. This study fills this gap by examining m-learning and exploring usability requirements pertinent to its success.

Research questions.

The current study seeks to answer the following research questions:

RQ1. How do participants use their mobile devices to support their academic learning?

RQ2. What do participants perceive as the advantages and challenges of m-learning?

RQ3. What factors impact on the success of m-learning?

METHODOLOGY

In summer 2017, 15 semi-structured in-person or phone interviews were conducted with students from four universities in the greater Boston area. Each interview lasted 45-60 minutes. Seventeen questions were included in the interview, ranging from demographic background, history of using mobile devices for communication, experience with m-learning, and their thoughts on using mobile devices for academic tasks. Example interview questions were “What are the class-related activities have you tried on mobile devices?” and “Do mobile devices improve your access to the course content, the instructors and the classmates, compared to being without one?”. Coding was performed after interview responses were transcribed. For fixed response questions, coding categories were based on pre-defined options. For open-ended questions, descriptive coding involving assigning a label to summarize “the basic topic of a passage” (Miles, Huberman, & Saldana, 2014) was used.

Participants (11 female and 4 male) were in the age range of 20 to 45. Five were undergraduates and 11 were graduate students. Their majors ranged from arts and humanities, social sciences, to engineering and hard sciences. Participants came from multiple geographic regions of the world, including the Middle East, Asia, and United States. Smartphones were the most frequently used tool for m-learning (n=15), and iPhone was the most popular model (67%). Other phone models included Samsung (12%), LG, Huawei, and BLU. Tablets were also used by participants (n=8) for course-assigned readings. Kindle was the preferred tablet both as a device (38%) and as an app (50%).

RESULTS

M-learning activities.

Participants’ learning activities can be grouped into independent and collaborative learning (see Table 1). For solo learning, participants used their mobile devices for “reading on

the move” [P2], or to “make use of” [P12] their commuting time. Besides reading, participants (n=12) accessed learning management systems (LMS) and checked grades on their mobile devices. Participants (n=12) used phone camera to take pictures of their graded assignments [P14], blackboard notes [P9], or call numbers [P2]. For collaborative learning, participants (n=15) used their mobile devices to schedule teamwork activities, as they believed that inquiries by texting and calling ensured a timely response [P6]. Participants (n=11) used their phone to ask or reply to course or assignment related questions.

Independent Activity	#	%	Collaborative Activity	#	%
Reading e-materials	15	100%	Setting meeting time	15	100%
Accessing LMS, checking grades	12	80%	Q&A	11	73%
Taking photos of documents	12	80%	Social networking	10	67%
Searching for coursework	10	67%	Discussion	5	33%
Checking calendars, setting reminders	8	53%	Attending virtual classes	5	33%
Watching class videos	7	47%			
Accessing library resources	6	40%			
Writing papers	5	33%			
Posting to discussion boards	3	20%			
Taking quizzes	2	13%			

Table 1. Independent and collaborative m-learning activities.

M-learning activities were straightforward and interruptible. Reading when on the move could be easily stopped when “my subway station was near” [P13]. Limited input activities were used: Participants seldom reported carrying out heavy-duty tasks such as writing a paper, or taking a quiz. When they were actually involved in intensive learning, participants would “mute the phone” [P12] or “put it in the drawer” [P4] to avoid disruptions.

Advantages and Challenges.

Mobile devices support several but not all formal learning activities. P15 reported using her phone to record her thoughts for a paper while driving. Portability, instant access to learning information, and the convenience of taking notes and taking photos of learning documents were viewed as the advantages (see Table 2). Disadvantages included distraction and interruption (n=15).

A number of mobile specific usability issues prevented participants from learning efficiently. Typing on their phones required longer time because “the screen was small and the

keyboard was even smaller” [P11]. Mobile access to learning materials also proved difficult because the content was hard to view. Mobile unfriendly sites made participants stop using their phone to access library resources, “I can’t even find where to login on our library website” [P2]. Furthermore, since what they entered through a smartphone can be “easily changed or collapsed” [P11], participants were worried about “What if I made a typo?” [P5].

Category	Item	#	%
Advantages	Portability	15	100%
	Instant access	12	80%
	Convenient taking/sharing photos	12	80%
	Easy paper drafting/taking notes	6	40%
Challenges	Interruptions & distractions	15	100%
	Screen size	7	47%
	Information architecture	7	47%
	Format & delivery issues	5	33%

Table 2. Advantages and challenges of using mobile devices for learning.

DISCUSSION AND CONCLUSION

As one of very first studies investigating m-learning, the findings provide insights into various attributes of mobile technology in supporting academic learning. Through examining relevant dimensions including mobility & ubiquity, convenience, interaction & collaboration, and usability, a conceptual framework of m-learning was developed (see Figure 1). Facets of mobile solutions that help to empower learning by expanding its environments or enabling efficient content transfer are included, as well as dimensions (e.g., usability) where technological solutions have yet to be developed to facilitate deep learning.

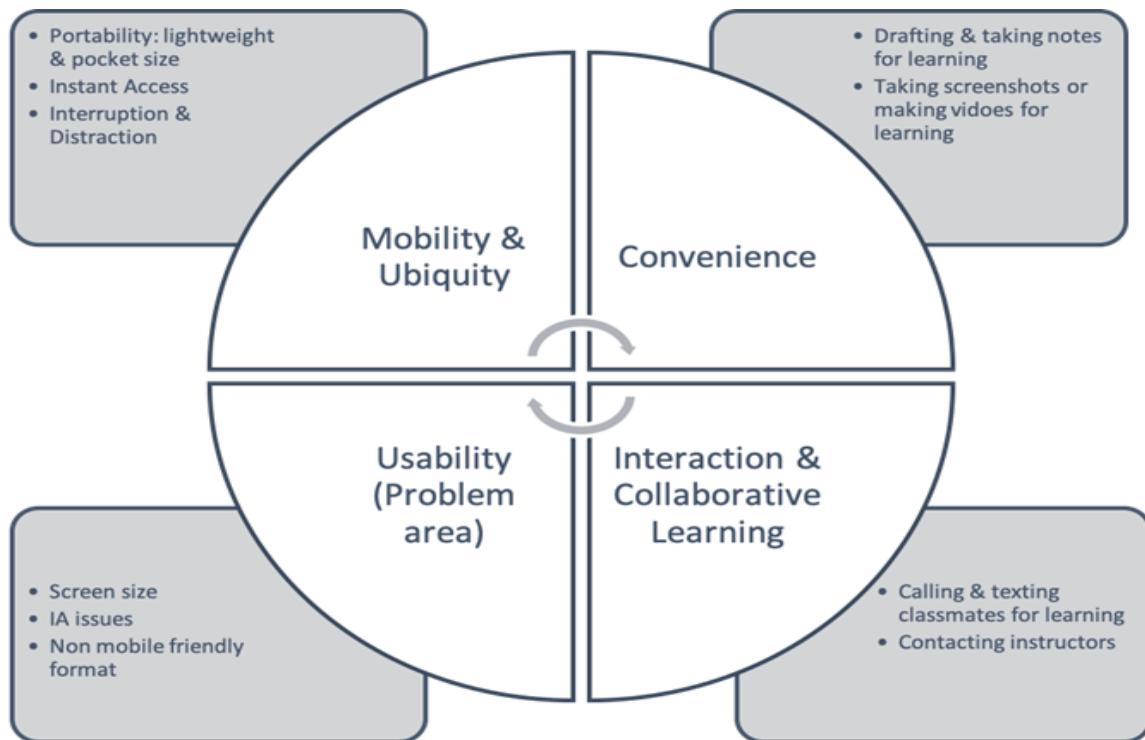


Figure 1. Conceptual framework for m-learning.

The present study shows that mobile devices function as a bridging mechanism between initial exploratory learning and formal systematic learning. These devices also enable a quick access and interaction with classmates. Nonetheless, “usability” of mobile devices or apps/sites was a problem area where multiple complaints were made. The limited usability of mobile device and LMSs presents a serious gap in facilitating more advanced m-learning. Findings of this study also helps to raise the awareness of higher education instructors about the prevalence of mobile devices used by their students for learning. In delivering their course materials and assignments through LMS, instructors should be mindful to take full advantages of m-learning while try to minimize problems associated with using mobile devices for academic tasks.

REFERENCES

- Dabbagh, N. & Kitsantas, A. (2012). Personal Learning Environments, social media, and self-regulated learning: A nautical formula for connectic formal and informal learning. *Internet and Higher Education*, 15, 3-8.
- Dukic, Z., Chiu, D. & Lo, P. (2015). How useful are smartphones for learning? Perceptions and practices of Library and Information Science students from Hong Kong and Japan. *Library Hi Tech*, 33(4), 545-561.

- Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. *Computers & Education*, 50(2), 491-498.
- Hummel, K. & Hlavacs, H. (2003). Anytime, anywhere learning behavior using a web-based platform for a university lecture. *Proceedings of the SSGRR 2003 Winter Conference*, L'Aquila, Italy.
- Loomba, K. & Loomba, P. (2009). Mobile learning in knowledge development scenario. *DESIDOC Journal of Library & Information Technology*, 29(5), 54.
- Miles, M., B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook*. (3rd Ed.). Los Angeles, CA: Sage.
- Shackel, B. (2009). Usability–Context, framework, definition, design and evaluation. *Interacting with Computers*, 21(5-6), 339-346.

The True Meaning of “Meta”: Contributions of LIS to Social Work Education in a Globalized Learning Environment

Keren Dali, Ph.D.

University of Denver, USA

Keren.Dali@du.edu

ABSTRACT

In light of the growing global interest in using technology for social justice and community engagement, this paper will focus on the potential contributions of information science to social work education and professional practice. It will demonstrate how information science approaches can help social workers revise their accreditation guidelines by organically integrating requirements for technology and information education, and it will introduce an example of a graduate course on technology and information taught by an LIS faculty member to SW students.

TOPICS

education; standards; students

SOCIAL WORKERS AND TECHNOLOGY EDUCATION

The international community of scientists and practitioners is readily embracing the influence of technology on social change, as evident interdisciplinary research collaborations and applied initiatives that harness technology for social justice. Both Canada and the U.S. are “at the cutting edge” of using the power of social media, other information and communication technologies (ICT), and artificial intelligence (AI) in suicide prevention, mental health, and criminal justice risk assessment, reducing loneliness, improving organizational efficiency in the human services, and identifying the role of information behaviors in social problems and corresponding solutions (e.g., CMAJ, 2018; Dali, 2018). The “concentration of researchers and AI talent” (Goddard, 2018, para. 3) in both countries is astounding.

And yet, the involvement of social work (SW) in “transformative social change” through technology integration (Cosner Berzin, Singer, & Chan, 2015) appears on a much smaller scale compared to other discipline (e.g., psychology, education, computer and information science).

The analysis of graduate programs in SW shows that aside from the external manifestations of omnipresent technology (e.g., course management software, e-portfolio, digital library resources, distance education), technology seems to be given little prominence in the SW curriculum. That is despite the fact that ubiquitous and inevitable innovations, ICT, constantly developing AI, and machine learning have restructured social and professional lives in every field of human activity, also encouraging active interdisciplinary collaboration in the areas of education, research, and professional practice (e.g., Khan, 2016; Michie et al., 2017; Rice & Tambe, 2017). Not immune to these changes, SW is affected by both increasing technological advances and concomitant interdisciplinarity, and the absence of technology-related contents and engagements in SW graduate courses creates a feeling of insulation and disconnect.

The slow pace of technological adoption may derive from the hesitation of “social work practitioners and scholars [...] to drive and fully embrace this movement” which, in turn, can be attributed to several factors: (1) “limited education and training” that render practitioners unable to incorporate technology effectively; (2) “limited exposure to innovative applications of technology to therapeutic work” and ensuing “misconceptions” and reservations; (3) a limited evidence base for the effectiveness of ICTs in social work (SW) interventions; and (4) limited financial resources (Cosner Berzin, Singer, & Chan, 2015). If we concede that personal attitudes, fear of technology and change, and inflexible mentality may present the greatest obstacle to professional change, then the most effective way to remedy the situation is to start early, by incorporating technology education by design, not as an add-on or bonus, into the SW curriculum. This is where the experience of information professionals and library and information science (LIS) faculty members can be particularly instrumental.

Much has been discussed about the potential of contributions of SW to the practice and education in the field of LIS (e.g., Dali, 2018; Enomoto, 2015; Westbrook, 2015). This paper, however, looks at the outflow of expertise and intellectual contribution from LIS to SW and examines how LIS can help with bringing SW education to the digital age and how integrating LIS approaches can restructure and revamp current accreditation standards for SW education in both Canada and the U.S.

The goal of this paper is two-fold. First, it will demonstrate how LIS-guided approaches can help social workers revise their accreditation guidelines by organically integrating requirements for technology and information education. Second, it will introduce an example of a graduate course on technology and information taught by an LIS faculty member to SW students.

Using comparative policy analysis as a research method and building on the modified policy content evaluation schema by the U.S. Centers for Disease Control and Prevention (CDC, 2018), this paper will comparatively review the U.S. CSWE Educational Policy and Accreditation Standards (2015) and Canadian CASWE-ACFTS Standards for Accreditation (2014) from the standpoint of their responsiveness to and reflection of the current state of technology and information in society and the need for professional qualifications that align with imperatives of the digital age (see abbreviations under References). Both accreditation documents will be critically analyzed in the context of current advances in ICT and AI affecting the practice of SW, the social environment, social justice, and social change. With these issues comprising the *raison d'être* of SW, it will be concluded that SW accreditation standards in both countries lag behind in terms of incorporating technology awareness and education, more so in

Canada than in the U.S. If accreditation standards are taken as stage-setters for SW programs, it is proposed that technology- and AI-driven change may not be reflected in the SW curriculum design in an adequate and timely fashion. As a result, SW graduates may remain unprepared to contend with current ethical, policy-related, applied, and training issues arising from technology- and AI-saturated practice environments. The paper will also point out specific sections in both accreditation documents that should be revised and suggest sample revisions.

One useful step to turning the state of technology education around would be collaborating with LIS faculty on the delivery of technology and information-related courses taught by LIS faculty to SW students. Two institutions – the U of Michigan and the Dominican University – currently offer dual degrees in SW/LIS. However, even schools that do not have formal dual degrees or minors in SW can establish a cross-listed curriculum which would benefit both disciplines. The paper will discuss a course called “Social Work in the Digital Age: Selected Issues,” which will focus on the changes introduced to

SW practice and education by social media, ICT, and AI, and foster critical thinking about information and technology in the human services. The course contents, goals, pedagogical methods, and learning outcomes will be addressed.

It is hoped that this paper will attract a wide audience of LIS educators and Ph.D. students interested in interdisciplinary teaching and cross-listed curricular offerings. In particular, it will be useful to those who seek to strengthen their collaborative relationships with SW programs, in light of the current global trends and the growing interest in the service of technology for social justice and community engagement.

REFERENCES

- Note:** CASWE-ACFTS (The Canadian Association for Social Work Education – l’Association canadienne pour la formation en travail social); CSWE (Council on Social Work Education). The Canadian Association for Social Work Education – l’Association canadienne pour la formation en travail social (CASWE-ACFTS). (2014). Standards for Accreditation. Retrieved from <https://caswe-acfts.ca/wp-content/uploads/2013/03/CASWE-ACFTSStandards-11-2014-1.pdf>
- CMAJ. (2018, January 29). AI opens new frontier for suicide prevention. News: Mental Health. Retrieved from <http://www.cmaj.ca/content/190/4/E119>.
- Centers for Disease Control and Prevention (CDC). (2018). Brief 3: Evaluating policy content. Step by step: Evaluating violence and injury prevention policies. Retrieved from <https://www.cdc.gov/injury/pdfs/policy/Brief%203-a.pdf>.
- Cosner Berzin, S., Singer, J., & Chan, C. (2015). Practice innovation through technology in the digital age: A grand challenge for social work. Grand Challenge for Social Work initiative. Grand Challenge 9: Harness technology for social good. Columbia, SC: American Academy of Social Work and Social Welfare. Retrieved from <http://aaswsw.org/wp-content/uploads/2013/10/Practice-Innovation-through-Technology-in-the-Digital-Age-A-Grand-Challenge-for-Social-Work-GC-Working-Paper-No-12.pdf>.

- Council on Social Work Education (CSWE). (2015). Education policy and accreditation standards for baccalaureate and master's social work programs. Retrieved from https://www.cswe.org/.../Accreditation/Accreditation.../2015.../2015EPAS_Web_FINA...
- Dali, K. (2018). Integrating social work perspectives into LIS education: Blended professionals as change agents." In Percel, J. et al. (Eds.), *Re-envisioning the MLS: Perspectives on the future of library and information science education*. *Advances in Librarianship*, 44, 83–121.
- Enomoto, J. (2015). What I learned as a social worker that helped me to become a better teaching librarian. *Florida Libraries*, 58(2), 14–18.
- Khan, A. (2016, September 1). Could artificial intelligence help humanity? Two California universities think so. *Los Angeles Times*. Retrieved from <http://www.latimes.com/science/sciencenow/la-sci-sn-usc-ai-social-good-20160831-snap-story.html>
- Michie, S. et al. (2017). The Human Behaviour-Change Project: Harnessing the power of artificial intelligence and machine learning for evidence synthesis and interpretation. *Implementation Science*, 12(121), 1-19.
- Rice, E., & Tamble, M. (2017, December 12). Forget killer robots, AI as a tool for social justice. *Huffington Post*. Retrieved from https://www.huffingtonpost.com/entry/forget-killer-robots-ai-as-a-tool-for-social-justice_us_5a2956a3e4b053b5525db7dd
- Westbrook, L. (2015). "I'm not a social worker": An information service model for working with patrons in crisis. *The Library Quarterly: Information, Community, Policy*, 85(1), 6–25.

Preparing Library Professionals for Data Literacy Leadership: Administrator Perspectives

John Marino^a, Sarah Evans^b, Jennifer Moore^b, Daniella Smith^a, Barbara Schultz-Jones^a, and Aaron Elkins^b

^aUniversity of North Texas, USA

^bTexas Woman's University, USA

john.marino@unt.edu, sevans14@twu.edu, jmoore42@twu.edu, daniella.smith@unt.edu, barbara.schultz-jones@unt.edu, aelkins3@twu.edu

ABSTRACT

Schools, public libraries, and other civic institutions are being called upon to improve efficiency and effectiveness with decision-making processes driven by data. The Preparing Librarians for Data Literacy Leadership Project was launched to prepare school and public library professionals for facilitating data-informed decision-making through the systematic development of competencies in the master's-level pre-service professional preparation programs at the University of North Texas and Texas Woman's University. This paper reports on a survey developed to investigate the use of data in decision-making processes and administered to school and public library administrators across the State of Texas.

TOPICS

public libraries; school libraries; administration; education programs/schools

INTRODUCTION

To meet standards for accreditation by the American Library Association (ALA), library professional training programs must provide curriculum that "is concerned with information resources and the services and technologies to facilitate their management and use" so that professionals "assume a leadership role in providing services and collections appropriate for the communities that are served"(American Library Association, 2015, p. 5) However, with no specific mention of competencies related to data as information resources, these may or may not be included in professional preparation programs.

Schools, public libraries, and other civic institutions are being called upon to improve efficiency and effectiveness with decision-making processes driven by data (Chant & Enis, 2014; Chiranov, 2014; Mandinach & Gummer, 2016; Means, Padilla, & Gallagher, 2010). Yet,

administrators in these institutions may not be adequately prepared to meet the demands of DDDM (Mandinach, Friedman, & Gummer, 2015). It is the role of the library professional in school and public library settings to connect people with information and tools; they are the logical leaders in providing services that support DDDM, empowering individuals and communities to make decisions, solve problems, and improve situations.

The project was launched to prepare school and public library professionals to facilitate DDDM. In the exploratory stage of the project, a survey was administered to administrators in schools and public libraries to assess their need for support in the use of data in decision-making within these settings. The survey was designed to answer the following research questions and to serve as a needs assessment in the development of a data literacy leadership curriculum:

- What are the data use and service needs in school and public library communities?
- How are data used to inform community-based decision-making?
- How do administrators feel about their own data literacy?
- How do administrators feel about their preparation for data-driven decision-making?
- What resources are available to administrators for data-driven decision-making?

DATA-INFORMED DECISION-MAKING IN SCHOOLS AND PUBLIC LIBRARIES

Data literacy requires the access, analysis, and application of data to the decision-making process (Mandinach, 2012) and suggests a set of competencies necessary for DDDM. Librarians are the logical leaders through provision of services that support DDDM. Efforts to connect available data to decision-making in community public library systems, such as Project Outcome (Public Library Association, 2018) and Measures that Matter (Institute of Museum and Library Services & Chief Officers of State Library Agencies, 2018), and in schools (Means, Chen, DeBarger, & Padilla, 2011; Means, Padilla, DeBarger, & Bakia, 2009) expose the need for library professionals to develop data literacy competencies. Notable efforts are underway to address data literacy at the individual level in schools with students (Fontichiaro & Oehrli, 2018) and in public library programs with users (Bowler & Acker, 2018). However, it is critical to recognize that these competencies are applied differently at the individual, staff, and organizational levels.

The data literacy leader initiates collaborative partnerships, serves as a consultant on DDDM, offers clear instructions on applying the principles of DDDM, and highlights the link between student data and instructional practice, all described by Dunlap & Piro (2016) as “pathways to data literacy.” Equally important in realizing the full potential of data literacy leadership: a positive self-perception of one’s own data literacy (Piro, Dunlap, & Shutt, 2014).

The Preparing Librarians for Data Literacy Leadership Project puts the focus on service at the staff and organizational levels, with focus on the coaching and collaborating role of the librarian in the facilitation of data-informed decision-making. Effectively, library professionals serve as coaches to teachers in schools using data to make instructional decisions or to colleagues using data to design programs/service in public libraries; also, as coaches to administrators in both settings using data to set and evaluate organizational improvement goals.

METHOD

A survey was developed to investigate the research questions and administered in the Fall of 2018 to school and public library administrators across the State of Texas. The survey required approximately ten minutes to complete. From a list of 7,954 school administrators from across Texas provided by the Texas Education Agency, 189 completed the survey (2.38% participation rate). From a list of 775 public library administrators across Texas provided by the Texas State Library and Archives Commission, 130 completed the survey (16.77% participation rate).

FINDINGS

Results suggest that administrators in both settings recognized the imperative to access, analyze, and apply data to inform decision-making within their organizations. Moreover, these administrators accessed routine and limited sources of data in the decision-making process, felt more confident in understanding the meaning of data sources than they did in applying these to decision-making processes, and attributed their data literacy skills to experience gained in-service versus their professional preparation programs. Public library administrators, in contrast with school administrators, felt they had few to no resources to support their DDDM efforts. A complete report on survey findings is forthcoming.

IMPLICATIONS

The implementation of the pre-service professional preparation pilot program to develop data literacy competencies in either school or public library settings in a systematic way at UNT and TWU is in process. It is expected to have a profound impact on practice, as graduates will be prepared to provide essential services in data use to their communities upon entry into practice. The training curriculum will then become a required component of the master's-level preparation program and serve as a model for broader implementation.

REFERENCES

- American Library Association. (2015). *Standards for accreditation of master's programs in library and information studies*. Retrieved from http://www.ala.org/educationcareers/sites/ala.org.educationcareers/files/content/standards/Standards_2015_adoption_02-02-15.pdf.
- Bowler, L., & Acker, A. (2018). Youth data literacy: Exploring data worlds at the public library. Retrieved from <http://www.youthdataliteracy.info/>
- Chant, I., & Enis, M. (2014). The numbers game. *Library Journal*, 139(8), 28-28.
- Chirnov, M. (2014). Creating measurement addiction – a tool for better advocacy and improved management. *Performance Measurement and Metrics*, 15(3), 99-111. doi:10.1108/PMM-05-2014-0016

- Dunlap, K., & Piro, J. S. (2016). Diving into data: Developing the capacity for data literacy in teacher education. *Cogent Education*, 3(1). doi:10.1080/2331186x.2015.1132526
- Fontichiaro, K., & Oehrli, J. A. (2018). Supporting librarians in adding data literacy skills to information literacy instruction. Retrieved from <http://datalit.sites.uofmhosting.net/>
- Institute of Museum and Library Services & Chief Officers of State Library Agencies. (2018). Measures that matter. Retrieved from <http://measuresthatmatter.net/>
- Mandinach, E., Friedman, J. M., & Gummer, E. (2015). How can schools of education help to build educators' capacity to use data? A systemic view of the issue. *Teachers College Record*, 117(4).
- Mandinach, E. B. (2012). A perfect time for data use: using data-driven decision making to inform practice. *Educational Psychologist*, 47(2), 71-85. doi:10.1080/00461520.2012.667064
- Mandinach, E. B., & Gummer, E. (2016). *Data literacy for educators: Making it count in teacher preparation and practice*. New York, NY: New York, NY : Teachers College Press.
- Means, B., Chen, E., DeBarger, A., & Padilla, C. (2011). Teachers' ability to use data to inform instruction: Challenges and supports. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.
- Means, B., Padilla, C., DeBarger, A., & Bakia, M. (2009). Implementing data-informed decision making in schools: Teacher access, supports and use. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.
- Means, B., Padilla, C., & Gallagher, L. (2010). Use of education data at the local level: From accountability to instructional improvement. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.
- Piro, J. S., Dunlap, K., & Shutt, T. (2014). A collaborative Data Chat: Teaching summative assessment data use in pre-service teacher education. *Cogent Education*, 1(1). doi:10.1080/2331186X.2014.968409
- Public Library Association. (2018). Project outcome. Retrieved from <http://www.ala.org/pla/initiatives/performance measurement>

A Longitudinal Study of Connectedness and Information Flow

Fatih Oguz^a and Ethan Lindsay^b

^aUniversity of North Carolina at Greensboro , USA

^bAppalachian State University, USA

f_oguz@uncg.edu, lindsayec@appstate.edu

ABSTRACT

Social networks formed in MLIS classroom settings can affect students' career trajectories after graduation. However, in online learning environments, students often feel isolated and disconnected from their peers. In fact, students who graduated from online or primarily online MLIS programs may not have access to resources such as employment opportunities that traditional peer networks offer. Despite the rise in enrollments in online courses and popularity of distance education in US colleges and universities, little research has been done to investigate the important role such social networks play in graduates' career and employment prospects. This study thus attempts to do so, by examining the career trajectories of graduates from six MLIS programs. In particular, it analyzes the ways in which social networking, especially in terms of the exchange of employment information, evolved over a 3-year period after graduation.

TOPICS

Education programs/schools; Online learning; Students

INTRODUCTION

Library and information science (LIS) programs in the United States (US) offer an array of graduate degree programs and specializations designed to prepare students for careers in librarianship, knowledge management, and information science. Since their inception in the late 1990s, online courses and even entire online graduate programs have become increasingly common in the LIS field (Kazmer, 2007; Oguz, Chu, & Chow, 2015). These online programs provide several advantages for students, especially those for whom jobs, families, geographical distance, or other factors make it difficult to attend on-campus classes. However, these online courses and degree programs pose some challenges as well. For example, in not interacting in the same face-to-face way that occurs in a traditional classroom, online students report a sense of disconnectedness and isolation (Oguz et al., 2015; Park, 2008; Slagter van Tryon & Bishop, 2009). For such online programs, there is the challenge of forming professional networks with instructors and peers to the same extent as those attending face-to-face classes (Oguz, 2015).

Such professional networks can be vital for attaining jobs and for advancing in one's career (Cannata, 2011; Granovetter, 1974, 2005)

When LIS programs lack residency requirements, students establish fewer social ties with their peers and do not have the same ability to leverage social networks instrumental to their professional careers (Emler & McNamara, 1996; Kazmer, 2006). On the other hand, students taking face-to-face classes have more opportunities to develop the kind of social networks that alleviate the challenges of loneliness and foster the development of supportive social networks (Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000; Kazmer, 2007).

Problem Statement

Finding employment is a function not only of strong academic preparation; it is also a function of the methods such as social networking used to obtain information about job openings (Granovetter, 1995; Huang & Western, 2011). Social networks developed through student-to-student, student-to-faculty, and professional interactions in face-to-face settings may influence students' career and employment prospects. Despite increasing online offerings, little research has been done to examine the differences in social networks of those who earned their degrees in different course or program modalities. This study uses a unique angle towards analyzing online education in the LIS field. It measures the extent to which online education in LIS programs is connected to graduates' success in forming social networks that they can use in the early years of their careers. In particular, the study compares social network characteristics (e.g., socioeconomic status of contacts, frequency and length of relationships with contacts) of graduates of online LIS programs with that of traditional face-to-face LIS programs.

The study draws upon theories about social networks from sociology, such as the strength of weak ties (Granovetter, 1983), social resources (Lin, 2000) and structural holes (Burt, 2009), and it also uses sociological research methods (ego-centric social network analysis). Until now, longitudinal analysis of ego-centric social networks with alter-alter ties has been very limited (Crossley et al., 2015).

This longitudinal panel research aims to develop a better understanding of the effect of differential access to resources available in social connections. The research focuses on connections used to exchange employment-related information upon graduation and two years after graduation. The following research questions guided the study:

- 1- What are the employment characteristics of MLIS graduates?
- 2- What are the socioeconomic characteristics of graduates' contacts?
- 3- How do socioeconomic characteristics of contacts change over time?
 - a. How do contacts' socioeconomic characteristics resemble that of the graduate?
 - b. Is there a relationship between different instruction modalities and socioeconomic characteristics of contacts and types of contacts?

METHODS

The study focused on graduates of LIS programs who completed their MLIS degree requirements in programs that offer courses partially online, completely online, or in-person. Students who graduated in the Spring or Summer 2013 semesters in six ALA-accredited programs in the US were invited to participate in the study. These programs were purposely selected not only to include those that are primarily online or mainly face-to-face, but also to include a range of online/face-to-face class ratios.

Since the research attempted to explore the connectedness of MLIS graduates and how it contributes to their employment prospects, an egocentric approach (Borgatti & Halgin, 2012; DeJordy & Halgin, 2008; Haythornthwaite, 1996) was selected to investigate the relationships that graduates had with others who provided assistance in their pursuit of new employment opportunities. This approach was suitable as it was not possible to describe the boundaries of the graduates' overall networks. To minimize the challenges of recalling data, graduates were asked to look back over the last six months (Burt, 1984) when identifying contacts with whom they exchanged information related to employment opportunities.

An online survey questionnaire was administered to collect the data. The questionnaire consisted of basic demographic questions about the respondent and two sets of multiple-response items adapted from Granovetter (1995) and Burt (1997) to measure tie strength (e.g., emotional closeness, relationship duration) with additional items created to address specific aspects of the research questions (socioeconomic status of contacts) and alter-alter relationships. Respondents answered close-ended questions which provided a limited number of opportunities for brief explanation or expansion.

Three schools provided contact information of their graduates whereas others offered to disseminate the questionnaire via their mailing lists. A total of 103 usable responses were received in the first year. This same panel of respondents were invited to participate in subsequent iterations of the survey. A total of 52 usable responses were received in the next year, and 44 in the final year of the study.

Data Analysis & Results

Complete data analysis is still being conducted, but the data analysis will be completed in time to present at the ALISE 2019 conference. The researchers expect to identify differences in graduate's social networks based on program modalities.

Responses related to graduates' personal social networks will be analyzed using E-Net (Borgatti & Halgin, 2012), a software program for analyzing ego-centric network data, and SPSS statistical analyses software. Analysis of alter variables will be analyzed using parametric and non-parametric tests as appropriate.

IMPLICATIONS AND RELATION TO THE CONFERENCE THEME

The study addresses the research needs around the social impact of online LIS programs. It supports teaching by examining personal and professional outcomes of students' experiences while in school. The findings of this research also can enhance information professionals' professional identity development as they grow in their positions and expand their social networks by examining evolution of their social networks. The study also supports research by providing a foundation for future studies, pointing to the need for further investigation into the socialization process in professional education, especially in an online environment, and its impact on professional development. It also suggests new areas of exploration.

REFERENCES

- Borgatti, S. P., & Halgin, D. S. (2012). An introduction to personal network analysis and tie churn statistics using E-NET. *Connections*, 32(1), 37–48.
- Burt, R. S. (1984). Network items and the general social survey. *Social Networks*, 6(4), 293–339. [https://doi.org/10.1016/0378-8733\(84\)90007-8](https://doi.org/10.1016/0378-8733(84)90007-8)
- Burt, R. S. (1997). A note on social capital and network content. *Social Networks*, 19(4), 355–373.
- Burt, R. S. (2009). *Structural Holes: The Social Structure of Competition*. Harvard University Press.
- Cannata, M. (2011). The role of social networks in the teacher job search process. *The Elementary School Journal*, 111(3), 477–500. <https://doi.org/10.1086/657656>
- Crossley, N., Bellotti, E., Edwards, G., Everett, M. G., Koskinen, J., & Tranmer, M. (2015). *Social network analysis for ego-nets*. Thousand Oaks: SAGE Publications Ltd.
- DeJordy, R., & Halgin, D. (2008). *Introduction to Ego Network Analysis*. Boston College and the Winston Center for Leadership and Ethics, Academy of Management PDW. Retrieved from <http://www.analytictech.com/e-net/pdwhandout.pdf>
- Granovetter, M. (1974). *Getting a Job: A Study of Contacts and Careers*. Harvard University Press.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory*, 1(1), 201–233.
- Granovetter, M. (1995). *Getting a Job: A Study of Contacts and Careers* (2nd ed.). University of Chicago Press.
- Granovetter, M. (2005). The impact of social structure on economic outcomes. *The Journal of Economic Perspectives*, 19(1), 33–50.

- Haythornthwaite, C. (1996). Social network analysis: An approach and technique for the study of information exchange. *Library & Information Science Research*, 18(4), 323–342.
[https://doi.org/10.1016/S0740-8188\(96\)90003-1](https://doi.org/10.1016/S0740-8188(96)90003-1)
- Haythornthwaite, C., Kazmer, M. M., Robins, J., & Shoemaker, S. (2000). Community development among distance learners: temporal and technological dimensions. *Journal of Computer-Mediated Communication*, 6(1). Retrieved from
<http://jcmc.indiana.edu/vol6/issue1/haythornthwaite.html>
- Huang, X., & Western, M. (2011). Social networks and occupational attainment in Australia. *Sociology*, 45(2), 269–286. <https://doi.org/10.1177/0038038510394029>
- Kazmer, M. M. (2006). Creation and loss of sociotechnical capital among information professionals educated online. *Library & Information Science Research*, 28(2), 172–191.
<https://doi.org/10.1016/j.lisr.2006.03.002>
- Kazmer, M. M. (2007). How do student experiences differ in online LIS programs with and without a residency? *The Library Quarterly*, 77(4), 359–383.
- Lin, N. (2000). Social Resources Theory. In E. F. Borgatta & R. J. V. Montgomery (Eds.), *Encyclopedia of Sociology* (2nd ed., Vol. 4, pp. 2790–2795). New York: Macmillan Reference USA.
- Oguz, F. (2015). Social capital deficit in online learning: An ego-centric approach to occupational attainment. *Education for Information*, 31(4), 227–244.
<https://doi.org/10.3233/EFI-150958>
- Oguz, F., Chu, C. M., & Chow, A. S. (2015). Studying online: Student motivations and experiences in ALA-accredited LIS programs. *Journal of Education for Library and Information Science*, 56(3), 213–231.
- Park, C. (2008). *The taught postgraduate student experience: Overview of a Higher Education Academy survey*. York: The Higher Education Academy.
- Slagter van Tryon, P. J., & Bishop, M. J. (2009). Theoretical foundations for enhancing social connectedness in online learning environments. *Distance Education*, 30(3), 291–315.
<https://doi.org/10.1080/01587910903236312>

Student-Constructed Classroom Guidelines: How to Involve Students in the Creation of a Tailored Classroom Environment

Emily Vardell

Emporia State University, USA

evardell@emporia.edu

ABSTRACT

When students begin a new class, they are often given a list of guidelines outlining how the classroom environment should look and how the students (and sometimes the instructors) should behave. These lists impose the instructor's preferences for classroom behavior on students and may exacerbate the inherent power dynamics at play in a classroom. In addition, instructor-created guidelines may not be sensitive to the cultural needs of students in our increasingly global classrooms. This paper presents a novel way of creating classroom guidelines by asking the students themselves to construct them on the first day of class. The themes that arose from the student-identified desires included respect for others, a safe environment, clear course structure, hands-on activities, course rigor, open food policy, clear explanations, opportunity for movement, and congenial group work. The suggestions offered in this paper can assist instructors in tailoring learning environments to students and creating a safe and inviting classroom culture from day one. Filling a gap in the literature, this work offers suggestions for student-centered classroom guidelines that reflect the desires of the contemporary graduate student.

TOPICS

education programs/schools, students, teaching faculty

BACKGROUND

In this age of flipped classroom environments, it is still true that on the first day of class most instructors distribute a preset syllabus and discuss their own preferences for what the classroom environment should look like. Researchers have begun to explore how to incorporate student-centered instruction from day one "asking students to help us create a team that will inspire each of them" (Tomlinson, 2018). Initial research has demonstrated that using an adaptive syllabus increases student engagement (Maniu & Raulea, 2019) and involving students

with the planning of courses enhances feelings of autonomy (Troisi, 2015). This study sought to identify what guidelines students themselves identify as important for building their graduate school classroom environments. Rather than imposing rigid classroom guidelines on these working adults, the instructor opened the floor for students to dictate their desired classroom environment.

METHODS

Over a two-year period as the instructor of seven different sections of the same introduction to library sciences course, the author asked students what they would like the classroom guidelines for that specific class to be. The students were all in their first semester of a Master of Library Science program, many of whom had been out of school for a while and/or were working professionals. Students were often a little shy at first, new to the idea that classroom guidelines could be student-constructed. When asked for examples, the instructor would provide prompts such as “How would you like you like your fellow students and/or the instructor to act? How would you like the classroom environment to look like?” Responses were collected orally and shared in a course-specific Google Document. This activity took about ten minutes on average to conduct.

RESULTS

The range of responses covered a host of classroom guideline-related areas. A total of 85 responses were collected across the seven sections of this introductory course. These responses were then hand-coded with an open coding approach to identify the main themes, which included respect for others, a safe environment, clear course structure, hands-on activities, high course rigor, open food policy, clear explanations, opportunity for movement, and congenial group work.

Student Identified Guidelines

The most popular request from students related to a desire for a respectful learning environment (n=24). This topic was mentioned in each of the seven sections without specific probing from the instructor. The direct quotes range from very broad (i.e., “be respectful”) to specific situations (e.g., “give the floor to someone else when two people start talking at once”). Specific examples of showing respect included not being on phones, “don’t hog talking time,” keep distracting laptop behavior to a minimum, be on time, and be patient with students and instructors.

The next most common request demonstrated students’ keen interest in a safe learning environment (n=22, also mentioned in all seven sections). Here students clearly articulated their desires for a safe space to ask questions and acknowledge that students come from a variety of backgrounds. One student requested that individuals would not “make assumptions about other people’s backgrounds, experiences, and opinions.” Relatedly, a student asked for an “understanding [that] we have different lived experiences and [to] check the assumptions we make about others.” In summary, students wanted a “safe space for sharing questions and

experiences.” While this may be something that an instructor says they want to create on the first day, by having these desires come directly from the students, the instructor can seek to create a safe learning environment by having students express their vision of what that looks like.

Students also shared requests for how the course would be structured (n=7). They asked for opportunities to learn “from a variety of sources and source types” and wanted to see “discussions about books and readings in face-to-face” class sessions. They had specific requests about how the class would be organized within the online course management software and asked for students to “post something early in the week so we can respond.” An instructor’s requests for students to post early during a module may fall on deaf ears, but it may enhance the likelihood of adherence if students hear suggestions for fostering richer online discussions directly from their peers.

Students shared an interest in hands-on activities (n=7). These included “break[ing] into small groups to talk about specific discussion questions before sharing with the class” and “opportunities to talk with others in the class - not just lecture and speakers.” One student requested “games - making learning fun.” These suggestions support continued use of the flipped-classroom pedagogical approach as a method that meets the interests of students.

DISCUSSION

One of the benefits of having students construct their own classroom guidelines is an enhanced sense of buy-in to what the instructor is hoping the classroom environment will look like. Instead of hearing from someone else how they should act, when a student hears it from a fellow student or even makes the request themselves, they may be more likely to adhere to the class-created guidelines without the instructor needing to constantly harp on their own desires for student conduct.

These student-created classroom guidelines outlined here, including respect for others, a safe environment, clear course structure, hands-on activities, high rigor for the course, open food policy, clear explanations, opportunity for movement, and congenial group work, demonstrate what students seek in contemporary classroom environments. Rather than imposing an instructor-created desired conduct list, this approach allows for the classroom culture to be sensitive to the needs of the students in that class. This could be especially helpful if the instructor is not as familiar with the cultures of their students in our increasingly global learning environments. While these requests were collected orally and in person, this type of work could also be done in an online-only classroom by asking students to add their requests to a shared document or post in an anonymous tool (e.g., PollEverywhere). Additional research should be conducted to determine the most effective way to collect student-created classroom guidelines and to analyze the effectiveness of this approach. The suggestions offered here can assist instructors in tailoring learning environments to students and creating a safe and inviting classroom culture from day one.

REFERENCES

- Maniu, I. & Raulea, C. (2019). Considering student voice in course co-design process. *ELearning & Software for Education*, 2, 245–250. doi: 10.12753/2066-026X-19-104
- Tomlinson, C. A. (2018). Owning the classroom together: Ask students how they can create a classroom that works for everyone. *Educational Leadership*, 76(1), 88.
- Troisi, J. D. (2015). Student management teams increase college students' feelings of autonomy in the classroom. *College Teaching*, 63(2), 83–89. doi: 10.1080/87567555.2015.1007913

Spreading Our Wings: ECU MLS Program in the Global Arena

Barbara Marson and Kaye Dotson
East Carolina University
marsonb@ecu.edu, dotsonl@ecu.edu

ABSTRACT

The importance of cultural competence in library practice has been noted by Montague (2013) and Overall (2009). Means of achieving such competence can be partially met by course content; however, research indicates that study abroad experiences can provide a richer experience. In addition, being able to complete an internship is another venue in which to broaden LIS education globally. Establishing connections and investigating possibilities are means to achieve global education goals. With these goals in mind, the MLS program at East Carolina University offered both study abroad and internship opportunities during the past three years.

TOPICS

Education of information professionals; Sociocultural perspectives

CULTURAL COMPETENCE

The importance of cultural competence in library practice has been noted by Montague (2013) and Overall (2009). Incorporating diversity within the LIS curriculum, including a diversity course, provides a foundation to the professional world outside both local and national boundaries. However, experiencing a different culture in person adds a dimension that courses cannot provide. Visiting or working in various types of libraries outside the U.S. also broadens students' perspectives of the profession on a global level.

STUDY ABROAD AND INTERNSHIPS

Both Farmer (2018) and Chancellor (2018) have recognized that study abroad experiences in LIS education can provide these perspectives. In 2017, the ECU MLS program partnered with the counselor education program in the College of Education to explore educational partnerships in Lisbon, Portugal. Portugal was selected as the first interdisciplinary study because it shares some similarities with important contextual parameters with eastern North Carolina, including industry transitions, an economy influenced by tourism and the coast and families dealing with poverty. Providing graduate students in Counseling, Educational

Leadership and Library Science with the opportunity to explore these issues in a European setting encouraged greater understanding of the depth of complexity presented by the concerns and the potential for shared learning, innovation and collaborative strategies to address these issues on the local and global stage. The study abroad programs are coordinated through the ECU Global Affairs Office and require submission of a proposal for approval.

As the first leap into the study abroad arena, the Lisbon initiative set the stage for a study abroad in Paris. The second initiative involved library science students only, from both ECU and other LIS programs. It built upon French connections that had been established by faculty both in person and via email. Paris' economic, political, and cultural prominence, breadth, and influence make it a significant player in global affairs. Additionally, the relationship between France and the United States dates to the beginnings of our country. This study abroad involved general comparisons of French and American libraries and visits to public, academic, and school libraries in Paris.

The third study abroad, again focusing specifically on libraries, took place in June 2019 in Florence, Italy. This third endeavor included collaboration with Dr. Anna Maria Tammaro, a LIS professor from the University of Parma. Florence is one city that provides diverse educational and cultural opportunities in a relatively compact area, with an emphasis on special collections. All three of these study abroad efforts have been rewarding and are serving as a foundation for the future, with a possible permanent rotation of the three locations.

During the same period of establishing the study abroad courses, a partnership with the American Library in Paris (ALP) evolved and formed the establishment of an internship at the ALP for ECU MLS students in the public library concentration. The ECU MLS program requires an internship of each student. In May to June 2018, two students interned; in March and June of 2019, two other students completed their internships. The program faculty are committed to continuing our alliance with the ALP.

BUILDING CONNECTIONS

Another area of a global connection that has been established is a visiting LIS professor from Nigeria. The impetus for this collaboration occurred during an IASL conference in 2016. During that time, faculty met Dr. Fadekemi Oyewusi and conversations led to discussions of this possibility. Dr. Oyewusi joined the faculty for both the 2018-19 and 2019-20 academic years.

Establishing connections is vitally important to moving forward and maintaining global initiatives. This was first evidenced by faculty visits to the American Library in Paris, with networking continued at IASL, and collaboration with Dr. Tammaro at ALISE. Looking toward additional opportunities, faculty have met twice with the library director at the American University in Paris regarding an internship for a student in the academic concentration for 2020. One connection can lead to another.

As Moore (2016) noted, a study abroad can broaden the student experience. This viewpoint can be expanded to internships as well. Through these global experiences and internships, students gain greater understanding of the depth of complexity presented by libraries worldwide, the wealth of knowledge contained therein, and an understanding of the ways people use and enjoy libraries.

As noted previously, faculty infuse diversity and global awareness when possible. Several students and alumni live in countries outside the United States as well, adding to this diversity. Faculty believe that providing this foundation and opportunities increases awareness of other professional avenues. For example, one alumna has accepted a three-year appointment as Director of Library Services at Shrewsbury International School – Riverside in Bangkok, Thailand. Another student applied to the same school for a one-year internship. One could argue that an awareness of the world beyond the U.S. has been enhanced by promoting global opportunities.

FUTURE

Moving forward, faculty realize that the program has undergone new initiatives in a relatively short period of time. At this point, plans are in process to survey both the participants of our study abroad courses and the internships. This survey will be conducted in July 2019. Gathering data will provide three years of feedback for the study abroad students and two years of data (four interns) for the interns at the American Library in Paris. The analysis of data will be completed in August 2019 and allow the program to build upon the global experiences in a systematic way.

REFERENCES

- Chancellor, R. (2018). Crossing the Globe: Why Studying Abroad Is Essential to the Future of LIS Education. *Journal of Education for Library & Information Science*, 59(3), 41–52.
<https://doi-org.jproxy.lib.ecu.edu/10.3138/jelis.59.3.2018-0012.05>
- Farmer, L. (2018). Go Glocal. *Knowledge Quest*, 46(5), 6–7.
- Montague, R. (2013). Advancing cultural competency in Library and Information Science. *IFLA WLIC 2013*. Retrieved from <http://library.ifla.org/274/1/125-montague-en.pdf>
- Moore, J. (2016). How studying abroad made me a better librarian. *College & Research Libraries News*, 77(6), 300–301. <https://doi-org.jproxy.lib.ecu.edu/10.5860/crln.77.6.9510>
- Overall, P.M. (2009). Cultural competence: A conceptual framework for Library and Information Science professionals. *Library Quarterly*, 79(2), 175–204.
<https://doi.org/10.1086/597080>

Cybersecurity and Information Assurance in Information Science Curricula

Unal Tatar and Abebe Rorissa

University at Albany, State University of New York, USA

utatar@albany.edu, arorissa@albany.edu

ABSTRACT

As a newly emerging and one of the fastest growing fields of study, cybersecurity/information assurance has plenty to offer in terms of teaching and research. If Library and Information Science (LIS) schools are to take advantage of this fast growth in the field by expanding their program and/or course offerings, thereby increasing their enrollments, and, indeed, provide their students with opportunities to be able to take advantage of the demand for skilled manpower in cybersecurity/information assurance, it is imperative for them to systematically approach the inclusion of courses and/or programs to their curricula. A component of this systematic approach is a closer examination of programs, concentrations, and courses in cybersecurity/information assurance currently offered at similar or peer LIS schools in order to identify best practices and gaps. The study reported here is a small but important part of this effort.

TOPICS

Information security; Cybersecurity; Education; Curriculum

INTRODUCTION

While the two domains, cybersecurity and information assurance, cannot be considered synonymous, they have enough overlap in terms of problems and issues addressed. For the purposes of this paper, we will use the two interchangeably. Where one of them is mentioned, it should be considered that we are referring to both, notwithstanding the fact that information assurance is not a new field and may be broader in scope.

As not only one of the newly emerging and fastest growing fields of study, cybersecurity, although narrower in focus than LIS, has plenty to offer in terms of teaching and research. Because of its novelty, several problems and issues have not yet been addressed adequately through research and teaching. It also suffers from the lack of an interdisciplinary perspective which emphasizes human, social, and economic aspects of society alongside technical ones. In most cases, cybersecurity programs put the emphasis on technologies rather than people or human factors.

What is more, cybersecurity is an emerging field with close to zero unemployment. In 2016, the National Initiative for Cybersecurity Education (NICE), which is led by the U.S. Commerce Department's National Institute of Standards and Technology (NIST), funded the CyberSeek website (Cyberseek, 2019) to provide detailed & actionable data about supply and demand in the

cybersecurity job market. Based on that data, there are an estimated 301,873 active cybersecurity job openings in the United States as of October 2018. The November 2018 *Cybersecurity Workforce Development* report of the New America Foundation contained the following data for specialists in cybersecurity: “In 2015, the anticipated global shortfall was expected to reach 1.5 million unfilled jobs by 2020; in 2017, the estimate was 1.8 million by 2022; and the estimated current-day gap is close to 3 million.” (Bate, 2018).

A much broader and interdisciplinary discipline such as information science, with its focus on information, people, technology, and their interactions, is a logical place for cybersecurity - the same way data science/analytics became an integral part of LIS curricula in recent years. While cybersecurity is relatively new, information science has reasonably well-established methods, theories, processes, tools, and the knowledge base that can be leveraged to find comprehensive solutions to problems in the cybersecurity domain. However, it is not clear the extent to which programs, especially those offered by LIS schools, are incorporating cybersecurity topics, issues, and problems in their courses and whether LIS schools are expanding their enrollments by offering cybersecurity focused programs or concentrations. Hence, there is a need for the current study. To guide the study, the following research questions were considered: To what extent do LIS schools cover cybersecurity in their courses/concentrations/programs at both the undergraduate and graduate (MS and Ph.D.) levels?

METHODS

Websites of all LIS schools in the United States of America (USA) were searched for courses, concentrations, and programs in cybersecurity and/or information assurance. With the help of two undergraduate and a graduate student, the two authors collected and conducted content analysis of the descriptions of each of the programs, concentrations, and courses with cybersecurity and/or information assurance as their main focus. We utilized the *specialty areas* and *knowledge/skills/abilities* identified in the NICE Cybersecurity Workforce Framework¹ (Newhouse, Keith, Scribner, and Witte, 2017) to guide our content analysis of descriptions of cybersecurity programs, concentrations, and courses. With respect to coding consistency or reliability, the two authors coded the entire set of descriptions independently first and then resolved any differences until a 100% agreement was reached.

PRELIMINARY FINDINGS

We are still at the initial stages of our data analysis. However, based on coding conducted on descriptions of programs, concentrations, and courses, we found that LIS schools in the USA have started to offer courses on cybersecurity, but the number of cybersecurity focused programs and concentrations are still low, and there is room for growth given the potential demand for graduates. The first stage of our analysis showed that the offered cybersecurity programs and concentrations are mostly at the graduate (master's, Ph.D., and graduate certificate) level while there are more

¹ <https://www.nist.gov/itl/applied-cybersecurity/nice/resources/nice-cybersecurity-workforce-framework>

courses offered on cybersecurity at the bachelor's level. The courses cover a broad area of cybersecurity from network security and cryptography to cybercrime, law, and privacy – which also reflects the interdisciplinary perspective of LIS schools.

A gap remains in terms of the topics that need to be covered if graduates of cybersecurity programs at LIS schools are to enjoy a competitive advantage in their search for positions that require acceptable levels of skills and knowledge in cybersecurity and/or information assurance.

IMPLICATIONS AND RECOMMENDATIONS

Findings of the current study will have curricular implications for LIS schools and career implications for students. LIS schools could use the findings to either revise their programs, concentrations, and courses (if they already have existing ones) and/or design new and more competitive as well as state-of-the-art ones that meet the needs of students and their potential employers. Although it is a field with a long history, like any dynamic discipline, Information Science itself is still evolving. Consequently, LIS schools are continuously adapting their programs to address new areas of research, teaching, and learning, such as cybersecurity, data science, and AI. We believe that our research will help LIS schools in their efforts to adapt as well as benchmark their current cybersecurity programs and set out a road map.

REFERENCES

- Newhouse, W., Keith, S., Scribner, B., & Witte, G. (2017). National initiative for cybersecurity education (NICE) cybersecurity workforce framework. *NIST Special Publication, 800*, 181.
- Bate, L. (2018). *Cybersecurity Workforce Development: A Primer*. New America Foundation. Retrieved from <https://www.newamerica.org/cybersecurity-initiative/reports/cybersecurity-workforce-development/>.
- Cyberseek. (2019). Retrieved from <https://www.cyberseek.org/>.

“Alexa, Where Do Babies Come From?” Investigating Children’s Practices with Intelligent Personal Assistants

Marie L. Radford^a, Diana Floegel^a, Sarah Barriage^b, and Daniel Houli^a

^aRutgers University, USA

^bUniversity of Manitoba, Canada

mradford@comminfo.rutgers.edu, diana.floegel@rutgers.edu, sarahbarriage@gmail.com,
daniel.houli@rutgers.edu

ABSTRACT

Intelligent Personal Assistants (IPAs) (including smart speakers like Alexa/Siri) are rapidly proliferating and are now available globally in ~80 countries. Library and Information Science (LIS) literature is only beginning to examine their impact, especially within the context of children and their learning, and to determine implications for LIS education. This paper reviews the current LIS literature on IPAs, presents results of an exploratory content analysis of customer reviews of Amazon’s Echo Dot Kids, and proposes a preliminary research agenda focused on children’s IPA use.

TOPICS

social software, information use, specific populations

INTRODUCTION

Intelligent Personal Assistants (IPAs) (including smart speakers like Alexa/Siri) are proliferating rapidly and available globally in ~80 countries. Millions of IPAs have been sold world-wide, although features differ by region (Amazon, 2019). Along with the rising popularity of smart phones and Bluetooth technology, IPA adoption is likely to continue. Scant Library and Information Science (LIS) scholarly literature has examined the implications and impact of IPAs regarding LIS education and libraries, or for children’s use and potential learning. This paper addresses these gaps by reviewing the current literature on IPAs, presenting results of an exploratory content analysis of reviews of Amazon’s Echo Dot Kids, and proposing a preliminary research agenda.

LITERATURE REVIEW

Individuals interact with IPAs based on needs, wants, and context. People across age groups use Alexa for weather forecasts, playing music, setting alarms, requesting information, and controlling other devices (Lopatovska & Oropeza, 2018; Lopatovska et al., 2018). The information retrieval capabilities of IPAs make the use of this technology a natural area of inquiry for LIS.

Libraries are well-positioned to introduce potential users to IPAs and their capabilities (Hennig, 2018; Hoy, 2018; Stephens, 2018), including school libraries (Scardilli, 2018). According to Allen and Sarang (2018), library users demonstrate interest in IPAs, especially when this technology is placed in the children's section, and potential uses include searching for information about user accounts and items in the library catalog.

Concerns surrounding integration of IPAs in library services include information accuracy, privacy, and security. Individuals report difficulties in obtaining high-quality, accurate information from IPAs, which, in some contexts, can result in harm (Boyd & Wilson, 2018; Reeves & Porcheron, 2018). However, some users value the experience more than the output (Lopatovska et al., 2018). IPAs pose significant privacy concerns that librarians can help users navigate (Enis, 2018). Security threats are salient, particularly because third-party vendors can link services to intelligent assistants; users may be exposed to often-unknown and unwanted entities (Chung et al., 2017). Other security concerns include: wiretapping, compromised devices, malicious voice commands, and voice recording (Chung et al., 2017). Additionally, children have included the unpredictability of and perceived lack of control over devices such as Alexa among their concerns about such "creepy" technologies (Yip et al., 2019). LIS educators can tackle these concerns by including IPAs in curricula that address access, information literacy, personal privacy, intellectual freedom, work, and play (Johnson, 2018).

Other emerging areas of inquiry specific to children and IPAs include: the gendered nature of interactions with female-sounding IPA "voices" (Abrahams, 2018; Gordon, 2018; Lafrance, 2016), confusion about human and machine-based feelings (Elgan, 2018), and strategies used in IPA communication breakdowns (Cheng et al., 2018). However, gaps remain in LIS scholars' understanding of how individuals, particularly children, learn from and interact with these systems and their implications for LIS services and education.

EXPLORATORY STUDY

To begin to understand children's interactions with IPAs, the research team conducted an exploratory content analysis of 100 Positive (P) and 100 Critical (C) reviews from a corpus of 1505 total reviews (1029 P, 476 C) of Amazon's Echo Dot Kids.¹ The team used the constant

¹ https://www.amazon.com/Echo-Kids-smart-speaker-Alexa/product-reviews/B077JFK5YH/ref=cm_cr_getr_d_paging_btm_next_2?ie=UTF8&reviewerType=all_reviews&filterByStar=positive&pageNumber=2. Note: Reviews were from 5/2018-1/2019, and were categorized by Amazon as Positive (P) or Critical (C).

comparisons method (Charmaz, 2014) to apply coding typologies from Common Sense Media (2017) and NPR (2018). Preliminary analysis focused on reviewers' reports of children's interactions with Alexa. Initial results suggest that children use Alexa (in descending frequency) to: play music, hear stories, get information/answers, connect with others inside the home, and play games. Reviewers, many of whom identify as parents/caregivers, report that children enjoy using Alexa (e.g., singing/dancing to music). One reviewer commented that her son was "dancing so hard it feels like the chandelier is going to fall down" (P84). However, reviewers report that children experience difficulties, mainly due to the device's limitations. They have trouble (in descending frequency): playing music, hearing stories, playing games, getting information, connecting with others inside/outside the home, and controlling lights/electronics. A reviewer noted that "kids cannot request songs of their choice" (C62) while another said that Alexa "has a hard time picking up the kids voices" (C68). One recounted a consequence of Alexa's limitations: "I have had several instances where my child was in tears because she felt that this Alexa didn't like her because she wouldn't do the right thing" (C15). Future research will build upon preliminary findings, utilizing the following research agenda that outlines topics/questions to better understand children's experiences with IPAs and implications for libraries/LIS education.

PRELIMINARY RESEARCH AGENDA

Children and Learning.

- What practices do children engage in with IPAs to support their informal/formal learning?
- How do children experience/perceive interactions with IPAs within learning contexts?
- What characteristics of IPAs support/hinder children's learning?

Critical Thinking and Social Justice.

- How do children's identities (e.g., gender, race) affect their interactions with IPAs?
- How do algorithmic biases affect children's interactions with IPAs?
- How do Amazon's profit motivations affect children's interactions with IPAs?

Technological/Privacy Concerns.

- What concerns do parents/caregivers have regarding their children's interactions with IPAs?
- What understanding do/should caregivers/children have of the proprietary nature of voice-recorded data?
- How well do IPAs understand children's voices/respond to information requests?

IPAs in Libraries/LIS Education.

- How are libraries using IPAs in services to children? Should they? What concerns exist?
- What is the potential of IPAs in addressing children's information needs?

- How should information about IPAs be integrated into LIS education?

CONCLUSION

While reviews provide insights into how children interact with IPAs, they center parents'/caregivers' perspectives removed from engagement. The research agenda addresses these limitations by centering children's practices and adopting more comprehensive approaches to understanding their interactions with IPAs, including those related to learning. To achieve insights into children's practices and their implications for library services and education, methods to extend the exploratory study will include ethnographic observation, conversation analysis of children's IPA interactions, and in-depth interviews with children/parents. Findings have global significance for LIS education, considering the ubiquity of IPAs and the need for information professionals to help individuals better understand the multifaceted implications of their use.

REFERENCES

- Abrahams, R. (2018, October 15). Alexa, does AI have gender? *University of Oxford*. Retrieved from <https://www.research.ox.ac.uk/Article/2018-10-15-alexa-does-ai-have-gender>
- Allen, S., & Sarang, A. (2018). Serving patrons using voice assistants at Worthington. *Online Searcher*, 42(6), 49-52.
- Amazon. (2019). Supported featured by country for "international version" echo devices. Retrieved from <https://www.amazon.com/gp/help/customer/display.html?nodeId=202207000>
- Boyd, M., & Wilson, N. (2018). Just ask Siri? A pilot study comparing smartphone digital assistants and laptop Google searches for smoking cessation advice. *PLoS One*, 13(3), <https://doi.org/10.1371/journal.pone.0194811>
- Charmaz, K. (2014). *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. 2nd ed. Thousand Oaks, CA: Sage.
- Cheng, Y., Yen, K., Chen, Y., Chen, S., & Hiniker, A. (2018). Why doesn't it work? Voice-driven interfaces and young children's communication repair strategies. *Proceedings of IDC '18*, Trondheim, Norway, June 19-22, 2018, <https://doi.org/10.1145/3202185.3202749>
- Chung, H., Iorga, M., Voas, J., & Lee, S. (2017, September). "Alexa, can I trust you?" *Computer*, 100-104.
- Common Sense Media. (2017). The Common Sense census: Media use by kids age zero to eight. Retrieved from https://www.commonsensemedia.org/sites/default/files/uploads/research/csm_zerotoeight_fullreport_release_2.pdf

- Elgan, M. (2018, June 24). The case against teaching kids to be polite to Alexa. *Fast Company*. Retrieved from <https://www.fastcompany.com/40588020/the-case-against-teaching-kids-to-be-polite-to-alexa>
- Enis, M. (2018). Voice activated. *Library Journal*, 143(6). Retrieved from <https://www.libraryjournal.com/?detailStory=voice-activated-technology-focus>
- Gordon, K. (2018, April 3). Alexa and the age of casual rudeness. *The Atlantic*. Retrieved from <https://www.theatlantic.com/family/archive/2018/04/alexa-manners-smart-speakers-command/558653/>
- Hennig, N. (2018). Siri, Alexa, and other Digital Assistants: The Librarian's Quick Guide. Santa Barbara, CA: Libraries Unlimited.
- Hoy, M. B. (2018). Alexa, Siri, Cortona, and more: An introduction to voice assistants. *Medical Reference Services Quarterly*, 37(1), 81-88.
- Johnson, B. (2018). Libraries in the age of artificial intelligence. *Information Today*, 36(1), 15-16.
- Lafrance, A. (2016, March 30). Why do so many digital assistants have feminine names? *The Atlantic*. Retrieved from <https://www.theatlantic.com/technology/archive/2016/03/why-do-so-many-digital-assistants-have-feminine-names/475884/>
- Lopatovska, I., & Oropeza, H. (2018). User interactions with "Alexa" in public academic space. *Proceedings of the 81st Annual Meeting of the Association of Information Science and Technology*, Vancouver, Canada, November 9-14, 2018, 309-318.
- Lopatovska, I., Rink, K., Knight, I., Raines, K., Cosenza, K., Williams, H., Sorsche, P., Hirsch, D., Li, Q., & Martinez, A. (2018). Talk to me: Exploring user interactions with Amazon Alexa. *Journal of Librarianship and Information Science*, <https://doi.org/10.1177/0961000618759414>
- NPR Smart Audio Report – Spring 2018 - https://www.nationalpublicmedia.com/wp-content/uploads/2018/07/Smart-Audio-Report-from-NPR-and-Edison-Research-Spring-2018_Downloadable-PDF.pdf
- Reeves, S., & Porcheron, M. (2018, December). Talking with Alexa: Stuart Reeves and Martin Porcheron listen to the "conversation." *The Psychologist*, pp. 37-39.
- Scardilli, B. (2018, September). The IoT space: New ways to connect to people and things. *Information Today*, 32(7), 26+.
- Stephens, M. (2018). Office hours. *Library Journal*, 143(3), 15.
- Yip, J. C, Sobel, K., Gao, X., Hishikawa, A. M., Lim, A., Meng, L., ... Hiniker, A. (2019). Laughing is scary, but farting is cute: A conceptual model of children's perspectives of creepy technologies. *CHI Conference on Human Factors in Computing Systems Proceedings*, Glasgow, Scotland. <https://doi.org/10.1145/3290605.3300303>

Diversity, Accessing Ability, and LIS Education Practices

Clayton A. Copeland and Kim M. Thompson

University of South Carolina, USA

copelan2@mailbox.sc.edu, kthompso@mailbox.sc.edu

ABSTRACT

All learners have varying needs/abilities. Universal Design for Learning (UDL) and “designing for diversity” employ a variety of instructional methods to eliminate barriers to learning and offer all students opportunities for learning success. Moreover, by allowing students to “see” the impact of social structure on realities, they impact and effect change toward inclusive societies that are designed by their own diversities. This presentation draws upon examples from LIS courses in Australia and the US to provide perspectives and examples of how to build a “diversity mind-set” in LIS courses and curricula.

TOPICS

curriculum; pedagogy; students

INTRODUCTION

There is a fairly popular billboard that visually shouts “Unsee this!” at drivers along highways-- enticing local businesses to rent that billboard space, as everyone who drives by will not be able to unsee/forget what they have seen. This same idea applies to fundamental theories of inclusion when applied in the Library and Information Science (LIS) classroom. The true impact of libraries and information or cultural heritage institutions is limited and even preferential if some individuals are excluded by another, perhaps less obvious sorting mechanism: factors that make them inaccessible to people with disabilities, or to those whose abilities are considered fundamentally different from others in the larger community.

Once students “see” inclusion as core to all library and information services --from ensuring our collections have inclusive multicultural content and speak to diverse audiences, to considering our stakeholder communities to include non-users as well as traditional user groups, to understanding usability and accessibility to be core to our decisions about information technologies-- it becomes very difficult for them to overlook or “unsee” these basic principles as they engage in practice as graduates. For example, an early inclusion framework is

Ranganathan's (1931) five laws of library science:

1. Books are for use.
2. Every person his or her book.
3. Every book its reader.
4. Save the time of the reader.
5. The library is a growing organism.

Reframings of Ranganathan's laws to suit the changing library and information science structures and technologies have emerged to include a systemic and service-based approach (Gorman & Crawford, 1995), a focus on media and social media (Simpson, 2008), and even reorder the laws to suit today's priorities in libraries (Connaway & Faniel, 2014), but Ranganathan's core principles focus on the dance between information/knowledge, the user, and the information agency, and how the role of the agency is to make it easy for any potential user to obtain and use information/knowledge. The basic premise is founded on inclusion, pure and simple, with usability and accessibility seeping through the foundation, ensuring ease of access and efficiency for all.

LIS educators use theoretical frameworks such as Ranganathan's five laws in foundational and core courses to help students feel and recognize the pulse of the librarian ethos: "This is bigger than cataloging and classification." "This is broader than simply developing a love of reading in library users." "Libraries of the future are going to look so different from the libraries of our childhoods, and you are going to be one of the ones creating that difference." Once they learn to feel this pulse and "see" the library as a growing organism they have the power to influence, they become players in designing a more diverse and flexible workplace and creating increasingly inclusive services and spaces. Grounded in principles Social Constructionism (Berger and Luckmann, 1966) and Explanatory Legitimacy Theory, (Depoy and Gilson, 2004), this work acknowledges the reality that societal values determine societal structures and functioning. This presentation then draws upon examples from LIS courses in Australia and the US to provide perspectives and examples of how to build a "diversity mind-set" in LIS courses and curricula.

PRESENTATION

Key questions include the following:

1. What are effective measures/strategies for inclusive teaching?
2. What are potential barriers or challenges within the process?
3. What are potential implications re: institutions, policies, technology, pedagogy, legalities, and socialization?
4. What are other contributing factors to barriers and successes?
5. For new instructors delving into teaching, what experiences could you share to help?
6. As LIS educators, what do we want and need to see in the future? What is needed in terms of inclusive teaching? What are future directions?

Areas of emphasis for exploration include: course content, synchronous and asynchronous communication, assignment and assessment design, and learning technologies.

Course content, for example, should be determined such that it is accomplishing the following: disseminating concepts of diversity, identity, and inclusion; is accessible, uses, and acknowledges biases; choices of text and media are made mindfully to include a range of materials to represent issues of race, gender, age, disability, cultural heritage. Effective communication practices, meanwhile, include use of weekly discussion boards, chats, online meetings, announcements, use of accessible course management systems, and ongoing communication about daily experiences with inclusion issues and solutions. Assignments and assessments should be directly related to learning outcomes, rooted in service-based learning with practical experiences embedded whenever possible, and should reflect consideration for diverse learning styles and needs. Likewise, learning technologies must be selected for their abilities to address diverse learning styles and needs. Learning technologies must have usability and accessibility design built-in, e.g., ADA compliance (or exceeding those basic requirements); Blackboard Accessibility metrics; allow flexibility when requiring students to present work using IT and social media). The legal definition of “accessible” is that “a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. The person with a disability must be able to obtain the information as fully, equally, and independently as a person without a disability.” (Burgstahler, 2017).

CONCLUSION

All learners have varying needs/abilities. Universal Design for Learning (UDL) and “designing for diversity” employ a variety of instructional methods to eliminate barriers to learning and offer all students opportunities for learning success. Moreover, by allowing students to “see” the impact of social structure on realities, they impact and effect change toward inclusive societies that are designed by their own diversities.

REFERENCES

- Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Garden City, NY: Doubleday and Company.
- Burgstahler, S. (2017, January 30). ADA compliance for online course design. Educause Review. <https://er.educause.edu/articles/2017/1/ada-compliance-for-onlinecourse-design>.
- Connaway, L. S., & Faniel, I. M. (2014). *Reordering Ranganathan*. Shifting user behaviors, shifting priorities. Columbus, OH: OCLC Research. <https://www.oclc.org/research/publications/library/2014/oclcresearch-reordering-ranganathan-2014-overview.html>
- DePoy, E., & Gilson, S.F. (2004). *Rethinking disability: Principles for professional and*

social change. Belmont, Thomson Learning, Inc.

Gorman, M., & Crawford, W. (1995). *Future libraries: Dreams, madness, and realities*. Chicago: American Library Association.

Ranganathan, S. R. (1931). The five laws of library science. London: Edward Goldston.

Simpson, C. (2008). Five laws. *Library Media Connection*, 26(7), 6.
<http://www.carolsimpson.com/5laws.pdf>

Needs Assessment of Library Data Services: Establishing a Curriculum Framework for RDMLA

Rong Tang^a and Zhan Hu^a

^aSimmons University, USA

rong.tang@simmons.edu, zhan.hu@simmons.edu

ABSTRACT

This paper reports the results of a needs assessment survey on research data management (RDM) services in libraries. Over 240 practicing librarians responded to the survey and outlined their roles and levels of preparedness in providing RDM services, challenges their libraries face, and knowledge and skills that they deemed essential to advance the RDM practice. Findings of the study not only provided valuable insights into the current RDM practices and librarians' views of RDM related training and professional development, but also formed the foundation for the RDMLA (Research Data Management Librarian Academy) curriculum framework.

TOPICS

data management; data curation; data visualization; academic libraries

INTRODUCTION

With the growing need in research data management, libraries started to provide data services to researchers within their institutions. According to Perrier, Blondal, and MacDonald (2018), “although libraries play a role in research data management (RDM) at academic institutions, they have experienced varying degrees of success with the development of RDM support and services given this expanded responsibility” (p. 173). In addition to multiple studies on perceptions of faculty or librarians in their endeavor of working collaboratively on RDM (e.g., Tenopir, Sandusky, Allard, & Birch, 2014; Antell, Foote, Turner, & Shults, 2014; Perrier & Barnes, 2018), there have been notable efforts of delivering RDM training for librarians worldwide. Existing RDM training programs include Research Data Management Training for Information Professionals by New York University (<https://compass.iime.cloud/mix/G3X5E/>), the MANTRA training (<https://mantra.edina.ac.uk/libtraining.html>) by University of Edinburgh, the RDMRose project (<http://rdmrose.group.shef.ac.uk/>) funded by JISC. NNLM (National Network of Libraries of Medicine) also sponsored Biomedical and Health Research Data Management for Librarians (<https://nnlm.gov/classes/biomedical-and-health-research-data-management-librarians>) and Research Data Management webinar series

(<https://nmlm.gov/classes/nmlm-research-data-management-webinar-series>). Nevertheless, the effort on developing a holistic, expandable, and openly accessible RDM curriculum created by multi-institutional practicing librarians is very limited. Furthermore, despite a few studies on global level RDM activities (e.g., Cox, Kennan, Lyon, & Pinfield, 2017; Tenopir, et al., 2017), empirical investigations into the current state of practice of library data services, specifically concerning the roles that librarians play in the RDM ecosystem and the fundamental knowledge and skills needed are still lacking. Through surveying practicing data librarians, the present study is a needs assessment of RDM knowledge and skills required of librarians. The study results helped to establish a curriculum framework pertinent to Research Data Management Librarian Academy (RDMLA), which is currently in production and expected to be launched in Fall 2019.

Established through a unique partnership among a LIS school, academic libraries, and a publisher, RDMLA (<https://rdmla.github.io/home/>) is a free online training program for information professionals throughout the world. RDMLA partner institutions include Harvard University, Simmons University, Boston University, Tufts University, MCPHS University, Northeastern University, Brown University, and Elsevier, which financially supported the program.

The present study addresses the following questions:

RQ1. What is the state of current practice of RDM services in libraries?

RQ2. What role do librarians play in providing RDM services?

RQ3. What knowledge and skills do librarians view as needed for RDM training?

RQ4. How do participants see the evolving role of RDM librarianship?

METHODOLOGY

This study features an online survey containing 19 questions inquiring into the current practice of RDM in libraries, how prepared librarians were in RDM, and knowledge and skills needed for RDM, and more. In May 2018, a call for participation was sent to various librarian communities through email posting, blog posts, listservs, and word of mouth. A total of 241 responses were received. Answers to questions were not mandatory, so the number of responses to each question varied. Authors coded responses and analyzed the data. Results are outlined below.

RESULTS

RDM services.

Sixty-three respondents reported the kind of RDM services their libraries offered. The frequently offered services included *RDM planning* (n=51, 80.95%), *data sharing and dissemination* (n=49, 77.78%), *data discovery and access* (n=42, 66.67%), *data preservation* (n=42, 66.67%), *metadata* (n=41, 65.08%), *data organization and curation* (n=37, 58.73%), and

data visualization (n=36, 57.14%). Participants indicated that the RDM tools provided by their institutions were *Data repositories* (n=44, 77.19%), *data processing software* (n=38, 66.67%), *data citation manager* (n=23, 40.35%), and *electronic lab notebooks* (n=21, 36.84%).

The most frequently reported challenges that libraries faced included *Capacity/bandwidth, and limited Staffing* (n=23, 42.59%), *marketing and outreach* (n=11, 20.37%), *upskilling staff* (n=9, 16.67%), *collaborative understanding* (n=8, 14.81%), *consistent service* (n=7, 12.96%), and *researcher's misconception of RDM services* (n=7, 12.96%).

Librarians' role.

As shown in Figure 1, a majority of the respondents (n=147, 61.51%) indicated their RDM role was “not developed.” and that they wished to have a more formal role (n=121, 88.32%). Sixty-one (70.11%) felt personally prepared to offer RDM services, whereas 26 (29.89%) claimed unprepared. Reasons for those feeling unprepared included *lack of training* (n=8, 31%), *lack of knowledge and skills* (n=7, 27%), *comfortable with providing basic service* (n=7, 27%), and *unprepared for advanced RDM* (n=5, 19%). Over 92% (n=111, 92.5%) indicated “very likely” or “somewhat likely” to participate in online RDM training, only three (2.5%) were “somewhat unlikely” or “very unlikely.”

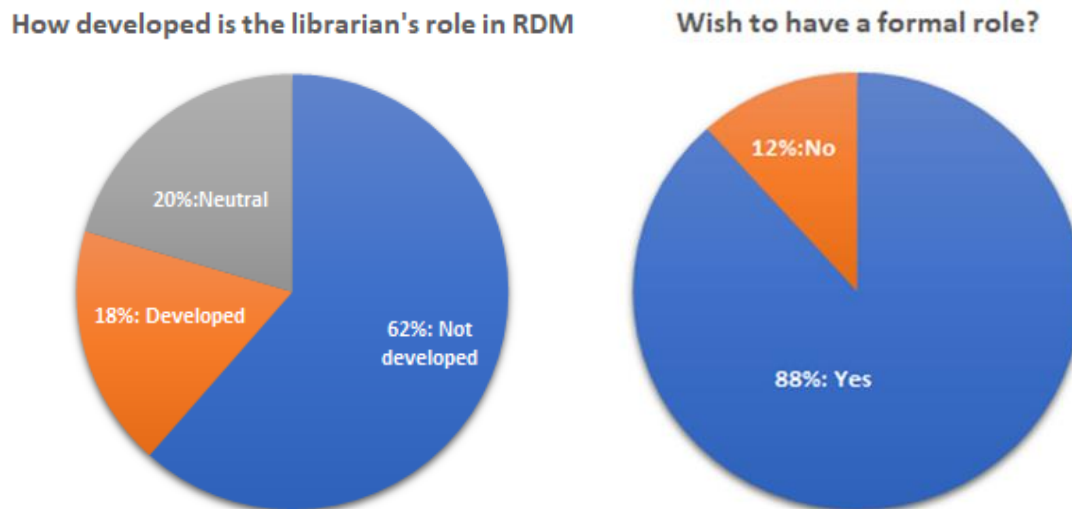


Figure 1. Librarians' Role in RDM Services.

Essential RDM knowledge and skills.

The most frequent responses discussing the three essential RDM skills were *data/file documentation* (n=17, 26.93%), *metadata* (n=13, 20.63%), and *DMPs* (n=13, 20.63%). Figure 2 includes the common responses.

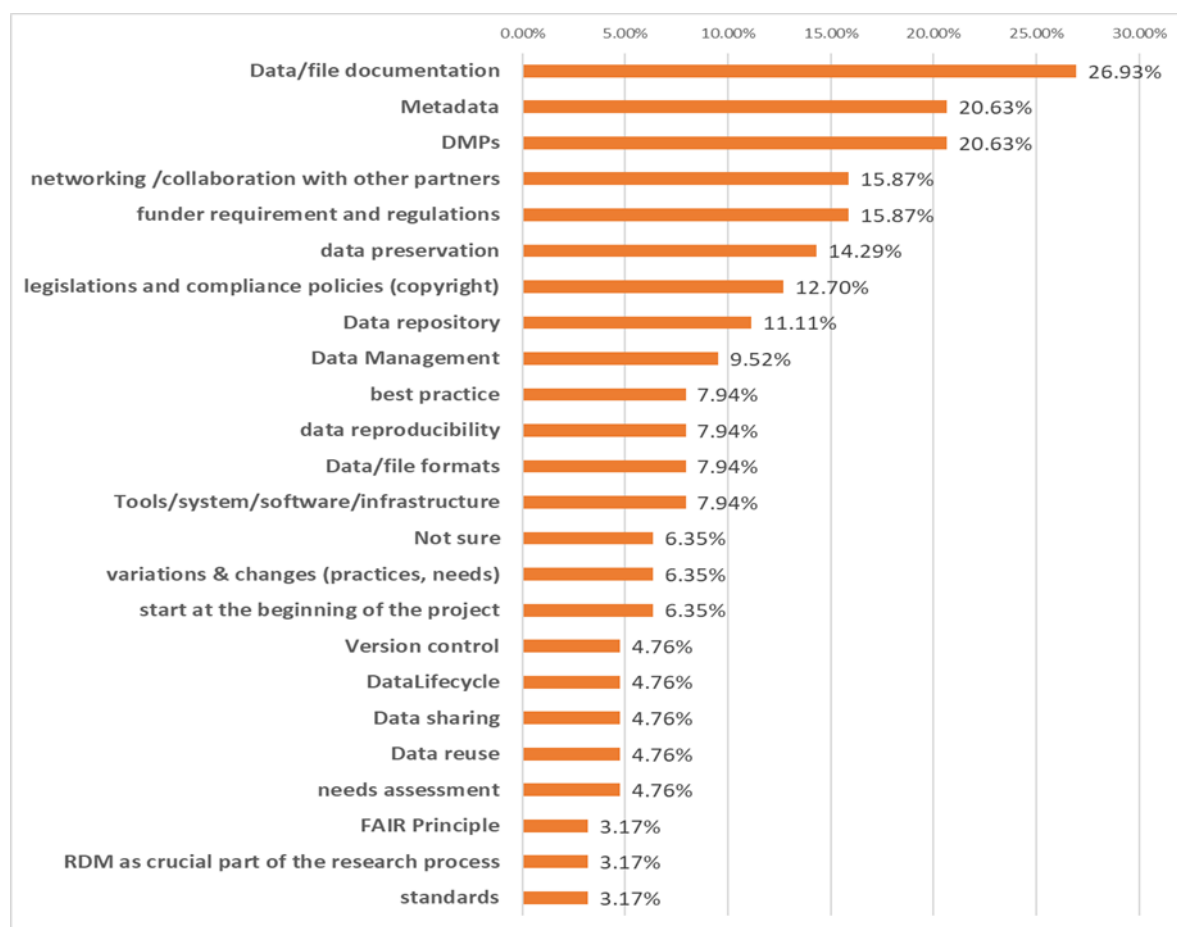


Figure 2. Essential RDM Knowledge and Skills.

As to what further RDM training was needed (see Figure 3), the most frequent answers were *advanced data management skills such as data analysis, preservation, acquisition and de-identification* (n=15, 22.73%) and *learning about DM or open source tools* (n=14, 21.21%).

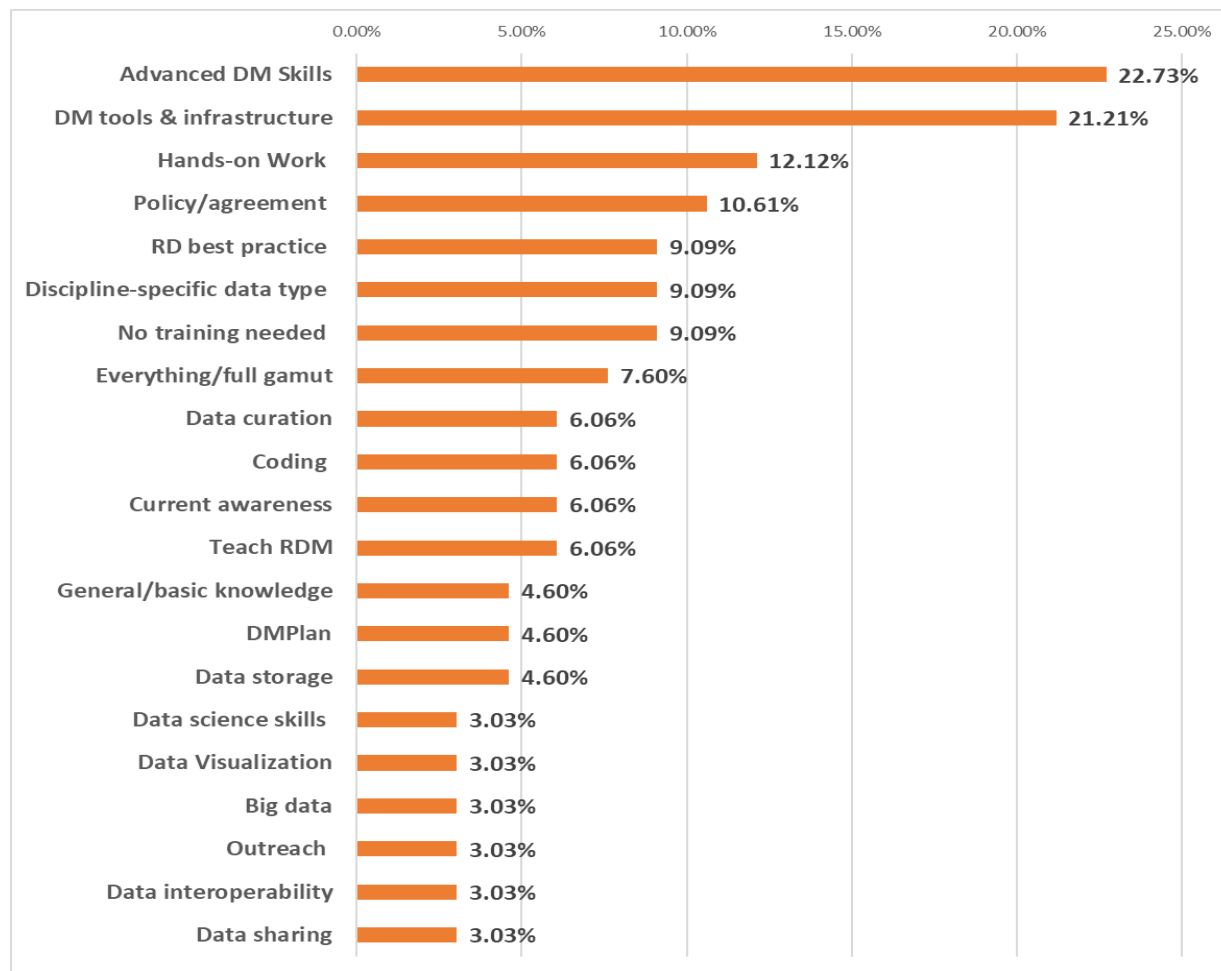


Figure 3. Common Responses to What Further RDM Training Needed.

Training for librarians and researchers.

As seen in Table 1, participants' top five responses about RDM training needed for librarians differed from their top five responses about RDM training needed for researchers. While *data service/science skills* (n=13, 22.95%) and *skills regarding data reference interviews* (n=11, 15.30%) are the top two most common responses on training needed for librarians, training on *data management and data processing* (n=12, 17.65%) and *data storage and data preservation* (n=11, 16.18%) were viewed by highest number of respondents as needed for researchers.

RDM Training for Information Professionals (n=61)	RDM Training for Researchers (n=68)
Data services/science skills (13, 22.95%)	Data Management/ Data processing (12, 17.65%)
Skills regarding data reference interview (11, 15.3%)	Data Storage / Data Preservation (11, 16.18%)
Basic training (8, 13.11%)	DMP (9, 13.24%)
Connecting with the researcher and faculty (8, 13.11%)	Data Sharing/Data Dissemination (9, 13.24%)
Depending on the knowledge that the librarians have, and their institutional needs (6, 9.84%)	Data File/Documentation (8, 11.76%)

Table 1. RDM Training for Librarians and for Researchers.

RDM evolving role.

With regard to librarians' evolving role in RDM, 11 (20.75%) stated "supporting researchers with RDM", while ten (18.87%) reaffirmed the "importance of the librarians' role in RDM". Nine (16.68%) suggested "connecting and partnering with others", and nine (16.68%) believed "librarians should be embedded in the research/data lifecycle."

Participants stressed librarians' valuable contribution to RDM. One participant stated, "I am the only librarian by degree in a data services group of six people; I think data viz, GIS, DH, etc. are attracting a wide variety of people, but RDM is a place where librarians excel because it speaks to our strengths for making information documented and discoverable. As collections are seen as data and data as collections ...we are key parts of the ecosystem."

CONCLUSIONS

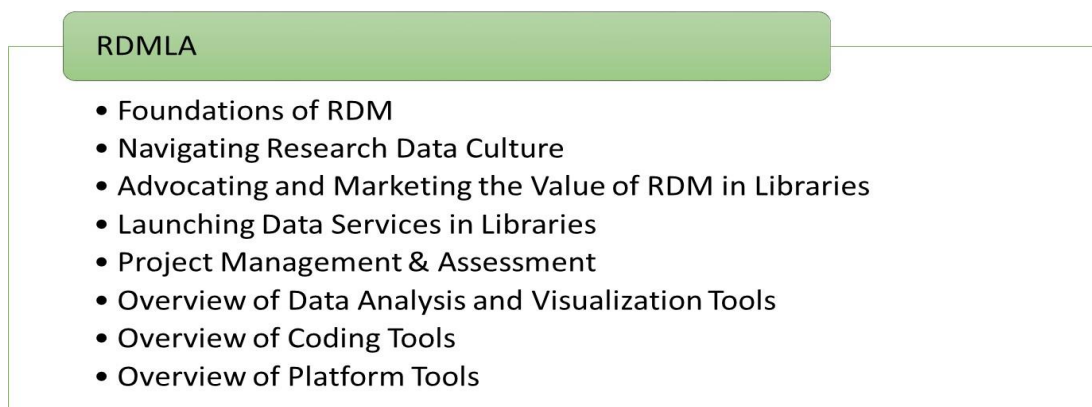


Figure 4. RDMLA Curriculum Framework.

Findings of the survey formed the foundation of the RDMLA curriculum framework, which includes eight units as shown in Figure 4. This study provides insights into the current RDM practices and challenges. With a majority of the respondents recognizing its importance and hoping to receive more training while expressing concerns of lack of bandwidth or capacity in this area, it is clear that in order to grow RDM services, the institutional commitment to resources and training opportunities is crucial. As an emergent profession, data librarians need to be nurtured and further trained. RDMLA is an effort to provide open education for librarians who strive for leading and providing high quality RDM services. Through RDMLA, librarians around the world will form a community of learning and cultivate the advancement of RDM.

REFERENCES

- Antell, K., Foote, J. B., Turner, J., & Shults, B. (2014). Dealing with data: Science librarians' participation in Data Management at Association of Research Libraries Institutions. *College & Research Libraries*, 557-574.
- Cox, A. M., Kennan, M. A., Lyon, L., & Pinfield, S. (2017). Developments in research data management in academic libraries: Towards an understanding of research data service maturity. *Journal of the Association for Information Science and Technology*, 68(9), 2182-2200. DOI:10.1002/asi.23781
- Perrier, L., & Barnes, L. (2018). Developing research data management services and support for researchers: A mixed methods study. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 13(1), 1-23.
- Perrier, L., Blonda, E., & MacDonald, H. (2018). Exploring the experiences of academic libraries with research data management: A meta-ethnographic analysis of qualitative studies. *Library and Information Research*, 40, 173-183.
- Tenopir, C., Sandusky, R. J., Allard, S., & Birch, B. (2014). Research data management services in academic research libraries and perceptions of librarians. *Library and Information Research*, 36, 84-90.
- Tenopir, C., Talja, S., Horstmann, W., Late, E., Hughes, D., Pollock, D., ... & Allard, S. (2017). Research data services in European academic research libraries. *Liber Quarterly*, 27(1), 23-44. DOI: 10.18352/Iq.10180

The Government Needs More Librarians: The Applicability of an MLIS Education in a Public Sector Setting

Cheryl Trepanier^a and Toni Samek^b

^aUniversity of Alberta, Canada

^bUniversity of Alberta, Canada

catrepan@ualberta.ca, asamek@ualberta.ca

ABSTRACT

Despite seemingly aligned information-related objectives and geographic proximity, the employment intersection between graduates of the University of Alberta's ALA-accredited MLIS program and the Government of Alberta, a major provincial public sector employer, has been limited.

Seeing an opportunity for MLIS graduate employment with the GOA, this research builds from an analysis of recruitment postings complemented with survey and interview findings from MLIS graduates now working at the Government of Alberta. The information garnered addresses how their MLIS prepared them for their work, where there were gaps, and what, if anything, they would have done differently to prepare for a public service career. Discussion focuses on the education, experience, and competencies sought by this public sector employer.

Covering multiple job levels, Government of Alberta recruiters often expressed a preference for a "library education" but it was seldom a mandatory requirement, nor was a masters-level education. Every job required additional experience or expertise, indicating that MLIS graduates interested in public sector work may have to develop additional experience elsewhere or be prepared to accept a lower-level entry position.

Information work in a government setting is not fundamentally different from traditional librarianship focused on public or academic institutions where, at the core, the aim is to make information accessible for the public good. However, findings indicate that the government employee is often required to further analyze information to support decision-making, requiring skills and competencies that many reported underdeveloped in their MLIS education including project management; business analysis and writing skills; technology; and policy development.

TOPICS

education; information use; continuing education; curriculum; education programs/schools

INTRODUCTION

With a mandate to develop reflective and inquiring library and information leaders, the School of Library and Information Studies (SLIS) at the University of Alberta in Edmonton offers the only American Library Association (ALA) accredited Master of Library and Information Studies (MLIS) program on the Canadian prairies and the only purely online MLIS offering in Canada. Meanwhile, Edmonton is a major public sector employer and the Government of Alberta (GOA) struggles to recruit qualified candidates into information management positions to fulfill its information management mandate. Despite these seemingly aligned objectives, the employment intersection between these institutions has been limited with the number of MLIS graduates¹ attaining employment with the government low compared to more traditional sectors.

METHODOLOGY

This research builds from an analysis of recruitment postings in the period 2014 to 2018, complemented with survey and interview findings from MLIS graduates now working at the GOA. The information garnered addresses how their MLIS prepared them for their work, where there were gaps, and what, if anything, they would have done differently to prepare for a public service career. Discussion focuses on the education, experience, and competencies sought by this public sector employer.

FINDINGS

Covering multiple job levels, GOA recruiters often expressed a preference for a “library education” but it was seldom a mandatory requirement, nor was a master’s-level education. Every job required additional experience or expertise, indicating that MLIS graduates interested in public sector work may have to develop additional experience elsewhere or be prepared to accept a lower-level entry position.

Information work in a government setting is not fundamentally different from traditional librarianship focused on public or academic institutions where, at the core, the aim is to make information accessible for the public good. However, findings indicate that the government employee is often required to further analyze information to support decision-making, requiring

¹ For the purposes of this research, MLIS degrees is used in a broader sense to include a group of closely related degrees including: Master of Library and Information Studies (MLIS); variants such as Master of Information Studies (MAS), Master of Information (MIS, MIST, or MI); the sister degrees, Master of Archival (MAS) and Master of Museum Studies (MMSt); and combined degrees such as Master of Business Administration (MBA)/MLIS, Master of Arts (MA)/MLIS, and MPA (Master of Public Administration)/MLIS.

skills and competencies that many reported underdeveloped in their MLIS education including project management; business analysis and writing; technology; and policy development.

RECOMMENDATIONS

The challenge and opportunity for LIS educators and students is to understand, identify, demonstrate and effectively communicate how what is learned in the context of traditional library skills can be strategically transferable to a government setting. Within MLIS courses, particularly required courses, curriculum needs to transcend ubiquitous attention to traditional librarianship and include holistic and alternative course content across information professions. The following suggestions, not intended as prescriptive but rather to foster further generation of ideas that are non-traditionally and practically focused, should be applicable to any ALA-accredited MLIS program.

Foundations of Library and Information Studies. “Familiarity with the history, philosophy, societal roles of librarianship” scored significantly lower in relevance than other learning objectives, therefore consideration might be given to shifting some of the focus from historical perspectives, such as the examination of the pioneers of librarianship, to something more contemporary and inclusive, such as:

- Consider the challenges/benefits of open data publication by a public sector body, or
- To what extent does the type of organization you work in impact how you enact your professional obligations as an information worker?

Incorporating a diverse composition of guest lecturers from a broad range of contemporary information sectors may also freshen perspectives and provide more robust exposure to the breadth of information-related opportunities.

Organization of Information. Expand the examination of controlled vocabularies beyond LCSH and CSH to consider a controlled vocabulary scheme or knowledge map from a private or public sector entity.

Reference and Information Services. The reference interview and ability to find information are core job components for many GOA employees in information-related roles, therefore exposure to these skills outside of traditional settings is desirable. A guest appearance demonstrating how someone uses reference interview or similar techniques in their job could be illustrative. An assignment choice might be to do an environmental scan on a relevant topic presenting the results as a business memo.

Management and Leadership. An optimal balance of theory and practical workplace practices and situations should drive curriculum choice. Examples or case studies from a range of information settings and judicious use of guest lectures to demonstrate leadership qualities could inject practical situations as well as exposure to various employment environments.

Advanced courses optionally made available inter-faculty² in specific areas such as human resource management, finance and budgeting, marketing, change management, business planning, and leadership are recommended to prepare students to optimal levels.

Introduction to Research. Respondents indicated that on-the-job sourcing information was different than LIS-based introduction to research, with less reliance on academic sources and a greater need to focus on experiential learning, human interactions, and collecting primary data to support decision-making. A relevant assignment might be to design, gather, and analyze information. For example, using a technology platform, a student group designs a survey around a given topic with members of another group taking the survey to provide data that can be analyzed. Being both administrator and participant of information gathering provides differing perspectives. Students would gain exposure to a technology instrument and statistical methods could be demonstrated using the data. Another assignment could be to write a funding application in real-time with local culture, politics and economics.

Capping ePortfolio. Enhancing the design, planning and creation of the e-portfolio of students' work as a project to be systematically managed using project management principles could layer-in required application of project management to the standard expectation of student reflection on program learning outcomes. More consciously using a project management technology platform would have the added benefit of adding to students' technology skill portfolio.

The theme of guest lecturers is prevalent amongst these suggestions – as part of a larger strategy of MLIS programs developing substantial, robust, and sustained relationships with diverse employers and alumni across the information professions and strategically inclusive of contemporary information-focused employers.

CONCLUSION

These suggestions are aimed at the mutual benefit of fostering raised employer awareness of the potential of MLIS graduates while strategically enhancing MLIS graduate preparedness for employment opportunities in the public employment sector that transcend traditional library settings.

² Such as the University of Alberta MBA/MLIS combined program

(Re) Shaping and Expanding LIS Education in the Caribbean: An Examination of Strategic and Transformative Responses of the DLIS, University of the West Indies, Mona

Paulette Kerr and Paulette Stewart

The University of the West Indies, Mona, Jamaica W.I.

paulette.kerr@uwimona.edu.jm, paulette.stewart@uwimona.edu.jm

ABSTRACT

Significant changes in LIS education in the last 2 decades have resulted from varied impacts and drivers. Bronstein speaks to an “information paradigm shift” towards more user-centered approaches in information delivery, a resulting transformation of the roles of information professionals and the nature of their work and their competencies (2007; 2009; 2015).

This paper details the recent experience of the Department of Library and Information Studies, (DLIS) at The University of the West Indies, (UWI) Mona, while responding to demands for a new and expanded LIS curriculum, repositioned itself as a “best- practice” model for pedagogy and program change within a Faculty of Humanities and Education. The paper examines the vision, mandates and drivers as well as strategic, and in some instances radical, and contentious responses of the DLIS to changing institutional, societal, and global expectations and needs. Processes, strategies and challenges involved in identifying broad and specific career needs for information professionals within the Caribbean are discussed.

Indicators of success are also addressed in relation to the drivers and mandates and include a new graduate program in Archives and Records Management, a cross-disciplinary undergraduate program in Information Studies, increased student intake from a wider cross-section of the Caribbean via online and blended offerings, and spinoffs such as development of SMART classrooms to facilitate online teaching and learning, increased uptake for professional development programs, and a repositioned DLIS within The UWI, Mona.

TOPICS

education programs/schools; online learning; pedagogy; continuing education; curriculum; standards

INTRODUCTION – EXPANSION AND CHANGE IN LIS EDUCATION

There is no dearth of literature on programmatic and curricula changes in LIS education which have taken place across regions, and in new and specific domains of the information profession, as well as the drivers behind these changes and how these changes reflect the expanded LIS reach. Three broad categories of change impacting the roles of information professionals, namely technological, demographic, and globalization, are discussed by Abels, Howarth and Smith (2016). The authors note that responding and adapting to these changes “will determine the success or failure of LIS education” (p84). These and other change drivers resulting in what Cherinet calls a “paradigm shifts in LIS professions” (2017, p.93), have impacted small national jurisdictions seeking to transform existing LIS programs. Rehman (2010), Mammo (2011), and Edegbo (2011) have examined redesigns of LIS programs in Kuwait, Ethiopia and Nigeria respectively, while Rajkoomar (2013) and Mbagwu, Okoye, & Anyanwu (2018) reported on changes in pedagogy towards online delivery in South Africa, and Nigeria. (Bronstein (2015) examined LIS courses in Israel, and noted that professionals were developed to work in advanced technological environments, but lacked competencies for personal growth and development. Other researchers have addressed how LIS programs have responded to institutional changes and market forces, which have resulted in the creation of non-traditional curricula such as archival studies, and digital curation (Fulton, et al., 2011). Evidence of the role and benefits of inter and cross disciplinary collaboration in the expansion of LIS education and shaping of information professionals has also been documented.

BACKGROUND: UNIQUE LIS EDUCATION IN THE CARIBBEAN

LIS education in the Caribbean, has evolved, with sustained efforts aimed at transforming programs to ensure relevance, since 1972, with the creation of the Department of Library and Information Studies (DLIS) at the University of the West Indies (UWI), Mona, Jamaica. Established with a mandate to develop information professionals throughout the English-speaking Caribbean, the DLIS is unique in its offerings as a regional, and yet global institution, as it has been shaped by an education system rooted in British practice, while continuously being impacted by US standards and practice over the last 30 years (Carroll, Kerr, Musa & Afzal, 2013). Responses of the DLIS over its brief history to national (including market driven), and regional demands, as well as the seeming contending cultural jurisdictions, and the resulting programmatic changes, have been documented by Heads of Departments including, Douglas (1992), Bennet and Ferguson (2000), Mohamedali (2004), Kerr (2012), and Stewart (2012). Significant changes include a name change, a graduate program developed primarily to satisfy the career needs of graduates of the longstanding undergraduate program, and the continuous addition of industry relevant courses. The overall aim has been to create and recreate LIS education towards realizing the mission of “equipping information professionals in the Caribbean to meet the challenges of the dynamic information environment” (DLIS, 2012).

CURRICULUM EXPANSION AND CHANGE AT THE DLIS

Major curricula and programmatic changes have also been realized in the last five years in undergraduate, graduate and continuing education offerings by the DLIS, not only to meet the needs of the 21st century Caribbean information professional, and a changing global information environment, but in response to local, institutional and societal expectations and demands. Mandates from key stakeholders at The UWI, Mona, focused on “redesign of curricula aimed at reaching new and different constituents” (Kerr, 2012). There were also national and regional mandates from industry partners for flexible and varied pedagogy for greater reach, as well as relevant programs and courses to meet the needs of major and potential employers of graduates including Archives and Special Collections.

Primary objectives therefore for reshaping the DLIS curriculum since 2014 were to equip students with a range of new and emerging, as well as foundational competencies and attitudes, including theoretical and practical knowledge, and highly specialized skill-sets. The need for a graduate program in Archives and Records Management came to the fore since no comparable program exists in the Caribbean, and the DLIS felt it necessary to provide a dedicated ‘space’ for the academic analysis of the unique Caribbean memory and recordkeeping practices, which emerge from the realities of the Caribbean experience, and which were not addressed in other international programs. A Caribbean-wide Needs Assessment confirmed the urgency of this change.

A collaborative, consultative approach was therefore employed with key stakeholders including UWI faculty, DLIS students and graduates, and national and regional employers of graduates as well as international faculty and practitioners. An iterative planning process included an intense curriculum review, identification of gaps, determination of new program offerings, and defining successful outcome indicators. For example, restructuring of, and in some instances termination of specific courses within existing programs were initiated based on feedback from employers of graduates as well as benchmarking against global standards including the ALA Core Competencies of Librarianship (2009) and the CAEP Standards (2019). Development of the new graduate program in Archives and Records Management was done within the framework of deep collaboration with the staff of The UWI Archives, who assisted with developing a funding proposal, identified key expert practitioners and faculty, for creating program content to ensure authenticity, and led in initial coordinating of the program in 2016. Significant changes in pedagogy towards online delivery of new and existing programs have transformed the face of the DLIS from near death experience with reduced student intake, to becoming a model for change and academic sustainability.

Major successes and outcomes are discussed in relation to vision and mandates. These include exciting directions in the DLIS curriculum, namely a cross-disciplinary undergraduate program in Information Studies, graduate program in Archives and Records Management, and new and reshaped courses in significant areas. Of note also, resulting from the mandate from the UWI and regional employers, is the significant increase in student intake in all programs via online, the installation of SMART classrooms to accommodate online students and increased number of participants for professional development in the Annual Summer Institute. Renewed

enthusiasm and dedication from faculty and staff is evident as they continue to shape and expand programs to ensure sustainability and relevance

Unsworth (2010) contends that multiple challenges face educators in the pursuit of innovation and change. The DLIS is no different and while successes are recorded, challenges remain including issues associated with “independence” of the Department, the quest for international accreditation, recruitment of faculty, and the ability to satisfy competing demands for change.

REFERENCES

- Abels, G.E., Howarth, L.C., & Smith, L.C. (2016). Envisioning our future and how to educate for it. *Journal of Education for Library and Information Science*, 57(2), 84-93. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ1096709.pdf>
- American Library Association ALA. (2009). *ALA's core competences of librarianship*. Chicago, IL: Author. Retrieved from: <http://www.ala.org/educationcareers/sites/ala.org/educationcareers/files/content/careers/corecomp/corecompetences/finalcorecompstat09.pdf>
- Bronstein, J. (2007). Current trends in library and information studies curricula around the world: Looking for the user-centred approach. *Journal of Information, Communication and Ethics in Society*, 5(2/3), 59-78. doi: 10.1108/14779960710837579
- Bronstein, J. (2009). Current trends in library and information studies curricula. *International Journal of Libraries and Information Studies*, 59(2), 78-87. doi: <https://doi.org/10.1515/libr.2009.008>
- Bronstein, J. (2015). An exploration of the library and information science professional skills and personal competencies: An Israeli perspective. *Library & Information Science Research*, 37(2), 130-138. doi:10.1016/j.lisr.2015.02.003
- Bailey, E.C. (2010). Educating future academic librarians: An analysis of courses in academic librarianship. *Journal of Education for Library and Information Science*, 51(1), 30-42. Retrieved from <https://www.questia.com/library/journal/1P3-1961881721/educating-future-academic-librarians-an-analysis>
- Bennett, H. & Ferguson, S. (2000). Professional education: The Department of Library and Information Studies (formerly the Department of Library Studies). Kingston, Department of Library and Information Studies.
- Carroll, M., Kerr, P., Musa, A. I., & Afzal, W. (2013). Commonwealth of uncertainty: How

- British and American professional models of library practice have shaped LIS education in selected former British Colonies and Dominions. *IFLA Journal*, 39(2), 121-133. doi: 10.1177/0340035213486405
- Cherinet, Y.M. (2018). Blended skills and future roles of librarians. *Library Management*, 1(1/2), 93-105. Retrieved from: <https://www.emerald.com/insight/content/doi/10.1108/LM-02-2017-0015/full/html?skipTracking=true>
- Council for the Accreditation of Educator Preparation. (2019). *2013 CAEP standards*. Washington, DC: Author. Retrieved from: <http://www.ncate.org/standards/introduction>
- DLIS, (2012). *Quality assurance self-statement report*. Kingston: Department of Library and Information Studies, The University of the West Indies, Mona.
- Douglas, D. (1992). The modern information professional in the Caribbean setting. In *State of the Modern Information Professional and the Information Profession* (1992-3). International Federation for Information and Documentation: Netherlands, Hague. Retrieved from: <https://files.eric.ed.gov/fulltext/ED356798.pdf>
- Edegbo, W.I. (2011). Curriculum development in library and information science education in Nigerian universities: Issues and prospects. *Journal of Library and Information Management*, 1(1), 82-96. Retrieved from: <http://www.indianjournals.com/ijor.aspx?target=ijor:gyankosh&volume=1&issue=1&article=007>
- Fulton, B. D., Botticelli, P., & Bradley, J. (2011). DigIn: A hands-on approach to a digital curation curriculum for professional development. *Journal of Education for Library and Information Science*, 52(2), 95-109. Retrieved from: https://www.jstor.org/stable/41308885?seq=1#page_scan_tab_contents
- Kerr, P. (2012). *Strategic repositioning: Crossing disciplinary, institutional and traditional boundaries in LIS education in the Caribbean*. Association for Library and Information Science Education ALISE Annual Conference, Dallas, Texas.
- Mammo, Y. (2011). Rebirth of library and information science education in Ethiopia: Retrospectives and prospectives. *International Information & Library Review*, 43, 110-120. Retrieved from: <https://daneshyari.com/article/preview/355827.pdf>
- Mbagwu, F.C., Okoye, I.B., & Anyanwu, A. (2018). Pedagogy in Library and Information Science Programme in Nigeria. *Library Philosophy and Practice E-Journal*, 1734. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1734/>

- Mohamedali, O. (2004). Adapting to Changes: DLIS Experiences in the Caribbean. *Journal of Education for Library and Information Science*, (45)2, 98-110. Retrieved from <https://www.jstor.org/stable/40323897>
- Rajkoomar, M. (2013). Blended learning in library and information Science (LIS) education and training. Proceedings from IATUL 2013: *International Conference on Effective Collaboration*, Cape Town, South Africa. Retrieved from: <https://docs.lib.purdue.edu/iatul/2013/>
- Rehman, S. (2010). Redesigning LIS curriculum for a changing market: the case of Kuwait University. *Libri*, 60, 298-305. Retrieved from: <https://www.degruyter.com/view/j/libr.2010.60.issue-4/libr.2010.025/libr.2010.025.xml>
- Stewart, P. (2012). Re-positioning LIS education in the Caribbean: Trends and developments. Presented at *The Department of Library and Information Studies Fortieth Anniversary Conference and Gathering of Graduates*. Kingston: The University of the West Indies, Mona.
- Unsworth, J. (2010). *Challenges in educating 21st century information professionals*. Retrieved from: <http://www.people.virginia.edu/~jmu2m/wuhan.jmu.keynote.short.pdf>

Serving the Community with Trustworthy Government Information and Data: What Can We Learn from the Public Librarians?

Xiaohua Zhu, Ellen Cowell, Kristen McBee, Jonathan Stewart Headrick, and Joseph Winberry
University of Tennessee, Knoxville, USA

xzhu12@utk.edu, vcowell@vols.utk.edu, kmcbee5@vols.utk.edu, jheadr11@vols.utk.edu,
jwinber1@vols.utk.edu

ABSTRACT

The role of public librarians in mediating and providing access to government information and data becomes more critical than ever in the face of new threats to the trustworthiness of government information and the availability of data. Interviewing reference librarians in four county library systems, the study tries to find out how library and information science (LIS) education can help future public librarians prepare for their roles in mediating government information and data in the global context.

TOPICS

Reference transactions; public libraries; education

The role of public librarians in mediating and providing access to government information and data becomes more critical than ever in the face of new threats to the trustworthiness of government information and the availability of data. Government agencies use their websites to disseminate most official documents and often use social media for information dissemination and communication. While using various informal venues strengthens the potential for public engagement compared to more traditional channels, it also increases the risk for the spread of misleading information. Meanwhile, although the open government data movement is gaining momentum, there are many additional barriers to using government data, namely lack of data literacy, especially for members of poor and marginalized communities. Lack of trust in government, troublesome information that goes viral, and public deficiencies in digital literacy skills are all causes for concern in today's information environment that faces the constant threat of "fake news."

Libraries have the expertise, central community position, and the reputation as information hubs to offer the best possible guidance and training to help patrons discern the trustworthiness of online government information. Librarians serve as de facto information literacy leaders in their communities, so having a good understanding of the current practices of

public librarians in regards to government information and data benefits the profession and LIS students. For this purpose, the research tries to answer the following questions:

RQ1: What roles do public librarians currently play in assisting their communities with trustworthy government information and data? For example, in what situations and how frequently do public librarians need to judge the trustworthiness of government information and data? How do librarians define/judge trustworthiness of government information and data? How do public librarians help their patrons discern trustworthiness? How do public librarians perceive the mediation role between government information and the community they serve?

RQ2: What challenges do public librarians face when providing access and mediating the use of open government data by the community? Including, to what extent do librarians feel confident about their skills and knowledge in helping patrons with government information and data? How has formal LIS education prepared them for the mediator role regarding government information and data?

In answering these research questions, the current study tries to find out how library and information science (LIS) education can help future public librarians prepare for their roles in mediating government information and data in the global context. In the past decade, LIS researchers, exemplified by the Information Policy and Access Center, have conducted several large research projects on the public libraries' services in helping communities and diverse population regarding information (iPAC, n.d.-a, n.d.-b). Researchers and educators have demonstrated the essential roles of public libraries in e-government, the feasibility of librarians to serve as the government information access points, and the specific methods for LIS programs to prepare students for the challenges in the e-government information environment (Bertot & Jaeger, 2012; Jaeger, 2008; Jaeger, Bertot, Shuler, & McGilvray, 2011; Snead, 2014). In particular, several authors have discussed the public's trust in public libraries (Jaeger, 2008; Jaeger & Fleischmann, 2007). Given the increasingly essential trust issues and data literacy issues discussed above, these topics call for renewed attention and in-depth investigation.

The study will use the interview method, conducting semi-structured interviews with public-service librarians, especially reference librarians, working in public libraries. Using a combination of theoretical sampling and convenience sampling strategies, researchers selected library systems in four counties in the southern United States to ensure both commonalities and variations of the study communities. The four counties are in two states; two in mostly urban areas with populations between 450 thousand and 650 thousand people, and their main library branches are both federal deposit libraries. The other two counties include both urban and rural areas with smaller populations of approximately 100 thousand, and their library systems do not serve as federal deposit libraries. Eight to ten reference librarians in each county are being interviewed, each interview lasting 30 to 45 minutes. Recorded interviews will be transcribed for data analysis purposes. In two counties, librarians from multiple library branches are involved. Researchers will employ the qualitative data analysis method, using inductive coding strategy to analyze the interview data, trying to gain a deep understanding of public librarians' roles, skills, and challenges in serving patrons with trustworthy government information. The findings and

results will be used to redesign a course on government information sources and create components of a course on data literacy.

REFERENCES

- Bertot, J. C., & Jaeger, P. T. (2012). Implementing and managing public library networks, connectivity, and partnerships to promote e-government access and education. In S. Aikins (Ed.), *Managing e-government projects: Concepts, issues and best practices* (pp. 183-199). Hershey, PA: IGI Global.
- Information Policy and Access Center. (n.d.-a). Government Information Service in the 21st Century. Retrieved from <http://ipac.umd.edu/our-work/government-information-service-21st-century>
- Information Policy and Access Center. (n.d.-b). Libraries and E-Government. Retrieved from <http://ipac.umd.edu/our-work/libraries-and-e-government>
- Jaeger, P. T. (2008). Building e-government into the Library & Information Science curriculum: The future of government information and services. *Journal of Education for Library and Information Science*, 49, 167-179.
- Jaeger, P. T., & Fleischmann, K. R. (2007). Public libraries, values, trust, and e-government. *Information Technology and Libraries* 26 (4), 34-43.
- Jaeger, P. T., Bertot, J. C., Shuler, J. A., & McGilvray, J. A. (2011). Case study in e-government education programs: Preparing future government information professionals. *Proceedings of the 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times*. ACM New York, NY.
- Snead, J. T. (2014). Public Libraries, Evaluation, and E-government. *The Library Quarterly: Information, Community, Policy*, 84 (4), 467-480.

Employer's Perspective on Data Science; Analysis of Job Requirement & Course Description

Sahar Behpour, Suliman Hawamdeh and Abbas Gourarzi

Department of Information Science
University of North Texas

Sahar.behpour@unt.edu, Suliman.Hawamdeh@unt.edu, Abbasgoudarzi@my.unt.edu

ABSTRACT

The strong interest in Data Science (DS) has led to the creation of a number of graduate and undergraduate programs within different academic disciplines. As academic institutions rushed to create such programs in an attempt to meet the increased demand for DS professionals, it is still not clear whether these programs are designed based on specific job requirements. In this study, we used Latent Dirichlet allocation (LDA) to conduct content analysis on job ads and program data-sets to identify terms used to represent hard and soft skills and their use in DS graduate course offerings. The findings from the study can be used to inform curriculum development of current data science programs.

TOPICS

Curriculum Development, Data Analytics, Data Science, Job Requirements, Latent Dirichlet Allocation, LDA, Skills and Competencies.

INTRODUCTION

The increased emphasis on data and its role in business and society has led to the development of a wide range of tools and methods to manage, process and manipulate data. Companies and public organizations realizing the importance of data science started to advertise for data scientists with lucrative salaries (Miller & Hughes, 2017). Burtch (2014) points out that the need for new and advanced methods, tools and technologies to manage and acquire knowledge and better understanding from unstructured big data is significantly increasing. The attractiveness of data science has been reflected in the title of a 2012 article in Harvard Business Review named “Data Scientist: The Sexiest Job of the 21st Century” (Patil and et al, 2012). High education institutions in response to the market increased demand for data science expertise created data science programs at the graduate and undergraduate level. The proliferation of data science programs by different schools and colleges across disciplines raised several questions related to the uniformity across these programs in terms of agreed upon set of skills and competencies, and

the extent by which these programs meet the job market needs and the expectation of employers. In an effort to address these questions, we conducted a study using more than 3000 job advertisements retrieved from LinkedIn with the data science terms mention in the title of the ad. The study used LDA and content analysis method to identify the types of skills and competencies needed from data science professionals as described in the job advertisements. The study also analyzed course descriptions of 20 Master programs in data science (MastersInDataScience.org). The analysis focused on the extent by which areas identified in the job ads are supported by the data science programs courses and specializations.

LITERATURE REVIEW

In a study by Tang, & Sae-Lim (2016) highlighted some of the existing gaps which attributed to the lack of soft and hard skills such as communication, visualization, and advanced analytics. a recent work by Chang, Wang, & Hawamdeh in 2018 using content analysis of job ads on LinkedIn shows the trends in data analytics and knowledge management jobs. A study by Chen et. al (2018) analyzed 298 job advertisement and review a number of courses, certificate and master's degrees in data science.

Data Science has different interpretations in different scientific communities. Several scholars suggested that data science is closely related to the discipline of statistics (Demchenko, et al, 2016; Cao, 2017). William S. Cleveland in (2001) proposed a new idea of changing the field of statistics to data science beside using technical works of computer science. Waller and Fawcett (2013) considered data science as a method to explore, solve, and predict the result of relevant problems with application of quantitative and qualitative methods. Dumbill, et. al. (2013) considered data science as a summation of three areas: analytics, infrastructure, and data curation.

As mentioned earlier, many universities launched graduate data science degree programs (Anderson et al.2014). Tang Rong and et al (2016) identified 30 different data science graduate degree programs in the US. Most of these programs are created as a collaboration between different schools and departments such as computer science, business, statistics, mathematics, arts, sciences, engineering, and LIS. Thornton (2015) in an article "The importance of a local Employer perspective" noted that the employers biggest challenges in the recent years is understanding the matches or mismatches between skills of employees and the needs of the employers. This is true for new and evolving disciplines such data science and data analytics. The interest in data science and data analytics can be seen as an expansion of the knowledge discovery activities of the field of the knowledge management. These areas are made popular by the exponential growth of digital information and the amount of data and information generated on daily basis.

METHODOLOGY

The study was carried out using LDA and content analysis methods to identify the types of skills and competencies needed from data science professionals as described in the job

advertisements. More than 3000 job ads were retrieved from LinkedIn job website over a one-year period. LinkedIn was chosen to conduct the study because of the increased popularity of the LinkedIn as a credible social networking website for professionals across industries. Using topic modeling in Python provides visualization of the key terms referred here as topics, that encompass the employers’ perspectives on data science. Content analysis was used to identify and classify key concepts from job ads and course descriptions for comparative purpose.

RESULTS AND DISCUSSION

The results from the study covered different aspects of data science job functions and requirements. In this paper we are only reporting on the analysis related to the extent by which keywords in the job ads are used in the course descriptions of the data science programs. Figure 1 and 2 show the top terms used to describe the soft and hard skills as stated in the job ads. Figure 3 shows the type of keywords used to describe the topics covered by the course descriptions. It is clear from the results that there are differences in the type of areas covered by the course descriptions from those identified in the job ads. Job ads tend to be more specific especially in the area of hard skills. Soft skills seem to fall within the expected general areas such as creativity, leadership, management, and communication.

The conclusion from this study is not conclusive and the work needs to be expanded further and covered in more details in another paper. However, the preliminary results show that there is a degree level of overlap between areas described in the jobs ads and those covered in the course description. This can be seen as a good indication that academic institutions are paying attention to the need of the employers.

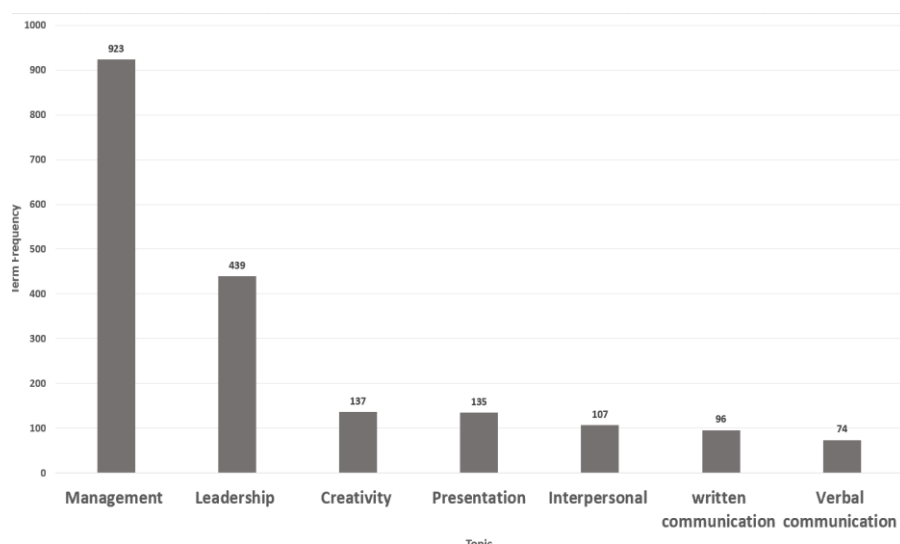


Figure 1. Terms Used Indicating Soft skills

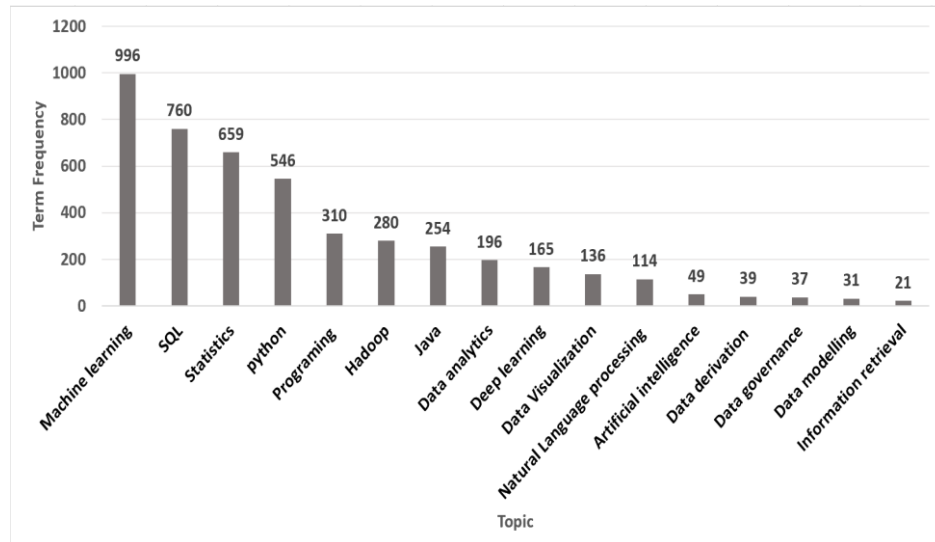


Figure 2. Terms Used Indicating Hard Skills

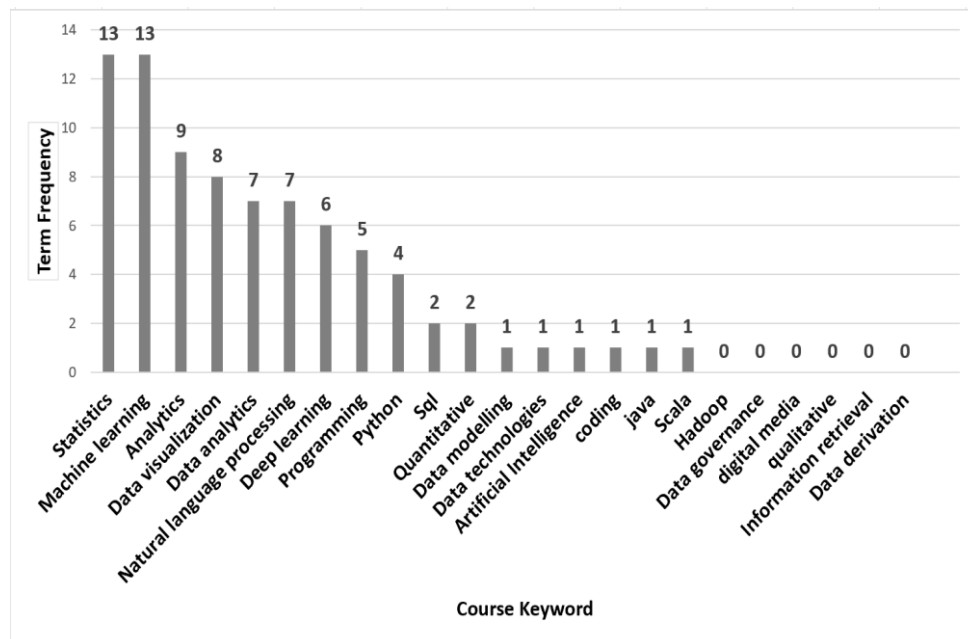


Figure 3. Key Areas Covered by Course Description.

REFERENCES

- Anderson, P., Bowring, J., McCauley, R., Pothering, G., & Starr, C. (2014, March). An undergraduate degree in data science: curriculum and a decade of implementation experience. In *Proceedings of the 45th ACM technical symposium on Computer science education* (pp. 145-150). ACM.
- Cao, L. (2017). Data science: a comprehensive overview. *ACM Computing Surveys (CSUR)*, 50(3), 43.
- Chang, H. C., Wang, C. Y., & Hawamdeh, S. (2018). Emerging trends in data analytics and knowledge management job market: extending KSA framework. *Journal of Knowledge Management*.
- Chen, et. al. (2018) Fundamentals of Data Science for Future Data Scientists. In *Analytics in Knowledge Management*, edited by Suliman Hawamdeh and Hsia-Ching Chang and published by Francis and Taylor Group, pp. 167-194.
- Cleveland, W. S. (2001). Data science: an action plan for expanding the technical areas of the field of statistics. *International statistical review*, 69(1), 21-26.
- Demchenko, Y., Belloum, A., Los, W., Wiktorski, T., Manieri, A., Brocks, H., ... & Brewer, S. (2016, December). EDISON DSframework: a foundation for building DSprofession for research and industry. In *Cloud Computing Technology and Science (CloudCom), 2016 IEEE International Conference on* (pp. 620-626). IEEE.
- Dumbill, E., Liddy, E. D., Stanton, J., Mueller, K., & Farnham, S. (2013). Educating the next generation of data scientists. *Big Data*, 1(1), 21-27.
- L.Burtch. 2014. The Burtch Works Study: Salaries of Data Scientists. Retrieved from http://www.burtchworks.com/files/2014/07/Burtch-Works-Study_DS_final.pdf.
- Miller, S., & Hughes, D. (2017). The Quant Crunch: How the demand for DSskills is disrupting the job market. *Burning Glass Technologies*.
- Patil, T. H. D. J., & Davenport, T. H. (2012). Data scientist: The sexiest job of the 21st century. *Harvard Business Review*.
- Tang, R., & Sae-Lim, W. (2016). Data science programs in US higher education: An exploratory content analysis of program description, curriculum structure, and course focus. *Education for Information*, 32(3), 269-290.

Thornton, A. (n.d.). The importance of a local perspective...Employer Skills Survey, (2015). Retrieved from <https://ukces.blog.gov.uk/2016/03/22/the-importance-of-a-local-perspectiveemployer-skills-survey-2015/>.

Waller, M. A., & Fawcett, S. E. (2013). Data science, predictive analytics, and big data: a revolution that will transform supply chain design and management. *Journal of Business Logistics*, 34(2), 77-84.

Going Against the Current of Hegemonic “White-Ism” Discourse: Global Implications of a Doctoral Program Journey from Critical Student+Guide Perspectives

LaVerne Gray^a and Bharat Mehra^b

^aSyracuse University, USA

^bUniversity of Alabama, Tuscaloosa, USA

lgray01@syr.edu, bmehra@ua.edu

ABSTRACT

This paper presents a critique of systemic LIS education and its hegemonic “White-Ism” discourse prevalent across the conceptualization and implementation of doctoral programs. The text illuminates the structural aspects of the doctoral experience beyond a singular narrative, to present implications for a global educational practice. The paper extends an auto-ethnographic approach to personal narrative and storytelling from the critical perspectives of a student+guide. It identifies challenges to overcome barriers in achieving milestones in the Ph. D. journey while exposing programmatic deficiencies in the process.

TOPICS

education; education programs/schools; curriculum; students; administration; social justice

HEGEMONIC ‘WHIT-ISM’ AND THE STUDENT+GUIDE

This paper presents a critique of systemic LIS education and its hegemonic “White-Ism” discourse prevalent across the conceptualization and implementation of doctoral programs. The text illuminates the structural aspects of the doctoral experience beyond a singular narrative, to present implications for a global educational practice. The text extends an auto-ethnographic approach to personal narrative and storytelling from the critical perspectives of a student+guide. It identifies challenges to overcome barriers in achieving milestones in the Ph. D. journey while exposing programmatic deficiencies in the process. The work adopts a discursive approach steeped in critical narratology (Fairclough, 2001; Gee & Handford, 2012) to discuss strategies that were adopted in navigating and circumventing a “White-Ism” hegemonic discourse (Fehn, Hoesterey, and Tatar, 2014; Mehra, forthcoming). It defines “White-Ism” in terms of a hegemonic immersion in an Anglo/Euro-centric LIS discourse and practice and its “closed-box”

knowledge permeating and dominating all areas of academic experience and reality (Mehra, 2016). Examples include obliteration of indigenous oral histories, integration of critical race theory and scholarship, and marginalization of action research, among others. The meaning of the word “hegemonic” is related to imbalanced power and suppression of everything outside established Anglo/Euro knowledge domains discounting other philosophical and methodological pathways (Flank, 2009). The paper uses “student+guide” to represent a collaborative partnership and intentionally avoids use of terms like “advisor” and “chair”, which often occur in LIS doctoral program policies, because it signifies top-down relationship promoting condescension and ignoring a mutual and shared vision.

SHARED JOURNEY

The journey in scholarly development for doctoral students in Ph. D. programs is a global phenomenon, grounded in the united expedition of student+guide. The lessons learned/applied in student+guide narrative(s) impact across disciplines. The joint endeavor articulated here reveals opportunities and successes in achieving significant milestones. It offers clarity in the experiences which are often misguided through traditional approaches. These approaches often stunt the philosophical growth necessary for significant contributions and disciplinary expansion. Insights into how this student+guide collaboration worked effectively while challenging “White-Isms” will be relevant to faculty members and doctoral students. The partnership featured a reciprocity of mutual growth in the student+guide journey that was marked by the finality of achievement in the crafting of a unique dissertation, the culminating product of doctoral education. The intellectual work represented a strong and much-needed innovative Black feminist voice and critical perspective to the study of LIS. Entitled “In a Collective Voice: Uncovering the Black Feminist Information Community of Activist-Mothers in Chicago Public Housing, 1955-1970” the dissertation is a one-of-a-kind exceptional gem of an example that applies critical race theory and social justice framework to push the boundaries of what we consider theory, methods, and knowledge domains in the limited conceptualization and practice of our professions (Gray, 2018, 2015). The model of a Black Feminist Information Community developed from a rigorous grounded theory application in archival research and discourse analysis is ground-breaking. It will serve as a foundation and paradigm for qualitative-historical research in LIS for years to come (Gray, 2018).

Generally speaking, structural milestones in a Ph. D. journey include completion of coursework (theory, methods, specialization, cognate), qualifying examination, development of dissertation proposal (problem statement, literature review, research methods, potential pilot, timeline), data collection and data analysis, and dissertation defense. Usually this journey begins in an immersive coursework experience where the philosophy of discipline is framed in a way to encourage reproduction of knowledge through theory and method. This is problematic because higher-level philosophical thinking as an aspect of personal voice in scholarly development is de-emphasized and completely marginalized. Discouragement through limiting the practice of research is often reflected through language, communication, signals, and behaviors of faculty, course instructors, and administrators. The personal voice value is, thus, not acceptable because it is considered outside the realms of traditional academic discourse within Anglo/Euro-centric

frameworks. Such behavior perpetuates violence against students' basic humanity and human dignity and personal voice which is intrinsic to who they are as human beings.

During the journey, the onus on the doctoral student is to contribute to the field with a complete understanding of disciplinary scholarship and how former successful students established their niche within the professional collegiate (Sugimoto, Russell, and Grant, 2009). In that way, the philosophical task becomes an exercise of fitting into preceding works, rather than the elevation and critique of their own systems of knowledge and research practices. The guide is supposed to provide affirmation and support as well challenge and elevate, countering the limitations found in the Anglo/Euro-centric deified curriculum and the "White-Isms" in specific cultural environments socialized within the toxic collegiate academy (Sugimoto, 2012). Further, their actions can assist in resisting stigmatization of notions of success by encouraging philosophical and intellectual rigor to develop scholarly thought.

CRITICAL-RESISTANCE NARRATIVE

Grounded in the philosophy of Michel Foucault's (1983, 1986) philosophy of knowledge and power, this work critically examines the hegemonic propositions of scholarly knowledge of theoretical and methodological paradigmatic constraints that foster a culture of philosophical duplication of effort (Habermas, 1991). The authors address this in the telling of their story of the journey exploring the themes of countering hegemonic knowledge representation in both the course-based learning space and the preparation of the dissertation. The partnership of resistance represented by student+guide demonstrates the necessity of challenging the environmental constraints and the limitations of so-called acceptable forms of knowledge acquisition and philosophical boundaries that bind scholarly development in LIS and communication professions. The account of that journey, reflectively and critically draws on the following themes:

- Paternalism in student development and guidance;
- Marginalization of any deviance from the "traditional" path;
- Knowledge limitations of canon LIS theoretical and methodological approaches;
- Hierarchy of knowledge at the exclusion of critical and humanistic/interpretive thought;
- Resistance to hegemony encompassing structural milestones and disciplinary theory and methods;
- Process-based performance based on discrete steps discounting the lived experiences.

The critical narratives of student+guide highlighted draw attention to an urgent need for LIS education to re-examine their rigidity of relevance to current and emerging issues in the 21st century, including their implementation of doctoral training and education processes, policies, and practices. This will help the professions develop resilience and further integrate diversity of discourse and social justice to stay relevant in the contemporary social, cultural, political, and economic landscape (Mehra, 2018). The text presents a frank and honest critique of select elements in LIS doctoral education. More such narratives need to come out of the closet for real and meaningful growth of the LIS professions.

REFERENCES

- Fairclough, N. (2001) Critical discourse analysis as a method in social scientific research, in R. Wodak and M. Meyer (eds) *Methods of Critical Discourse Analysis*, London: Sage.
- Fehn, A., Hoesterey, I., and Tatar, M. (2014). *Neverending Stories: Toward a Critical Narratology* (Princeton Legacy Library). New Jersey: Princeton University Press.
- Flank, L. (2009). *Hegemony and Counter-Hegemony: Marxism, Capitalism, and their Relation to Sexism, Racism, Nationalism, and Authoritarianism*. St. Petersburg, FL: Red and Black Publishers.
- Foucault M.(1983). The subject and power. In HL Dreyfus, P Rabinow (Eds.) *Michel Foucault: Beyond Structuralism and Hermeneutics*, (pp. 208–226). Chicago: University of. Chicago Press.
- Foucault M.(1986). Space, knowledge, power. In P. Rabimow (Ed.), *The Foucault Reader*, (pp. 239–56). New York: Penguin.
- Gee, J.P. & Handford, M. (2012). *Routledge Handbook of Discourse Analysis*. New York, NY: Routledge.
- Gray, L. (2015) Chicago Public Housing Library Movement, 1961-1969: A Social Network Analysis of Primary Source Documents. (Poster) 2015 iConference. March 24-27, Newport Beach California.
- Gray, L. (2018). The Voice of a Black Woman in Libraryland: A Theoretical Narrative, In R. L. Chou & A. Pho(Eds.), *Pushing the Margins: Women of Color and Intersectionality in LIS* (pp. 141-155). Sacramento, CA: Litwin Books, Library Juice Press.
- Gray, L. (2018). Uncovering Collective Voice: Using archives to explore community-based information environments of African-American Activist-Mothers in Chicago Public Housing, 1955-1970. World Library and Information Congress: 84th International Federation of Library Associations and Institutions (IFLA) General Conference, August 24-30, 2018, Kuala Lumpur Malaysia.
- Habermas, J. (1984) *The Theory of Communicative Action: Reason and the Rationalization of Society*. Boston, MA: Beacon Press.
- Mehra, B.(forthcoming). The “Non-White Man’s Burden” in LIS Education. *Journal of Education for Library and Information Science* (Special Issue,A Critical Dialogue: Faculty of Color in Library and Information Science. Edited by Nicole Amy Cooke and Jose Sanchez).

- Mehra, B. (2018). Emerging Voices in Diversity and Inclusion Leadership: Applications of the Strategic Diversity Manifesto (Editorial). Special Issue: From Diversity Theory to Diversity in Action. *International Journal of Information, Diversity, and Inclusion*, 2(4). Retrieved February 17, 2019, from <https://jps.library.utoronto.ca/index.php/ijidi/article/view/32200/24590>.
- Mehra, B. (2016). Cultural Re-Interpretation of Race/Ethnicity and Sexuality: A Gay South Asian “Voice” From Between a Rock and a Hard Place. In Diane L. Barlow and Paul T. Jaeger (eds.), *Celebrating the James Partridge Award: Essays Toward the Development of a More Diverse, Inclusive, Equitable Field of Library and Information Science* (Advances in Librarianship Series) (pp. 169-193), Volume 42. Bingley, United Kingdom: Emerald Group Publishing (December 2016).
- Sugimoto, C. R. (2012). Are You My Mentor? Identifying Mentors and their Roles in LIS Doctoral Education. *Journal of Education for Library and Information Education*, 53(1), 1-18.
- Sugimoto, C. R., Russell, T. G., and Grant, S. (2009). Library and Information Science Doctoral Education: The Landscape from 1930-2007. *Journal for Library and Information Science Education*, 50(3), 190-213.

Bonded Design in the University: Faculty and Information Technology Professionals Bonding Through Participatory Design

Valerie Nessel and J. Brice Bible

University at Buffalo, USA

vmnesset@buffalo.edu, bible@buffalo.edu

ABSTRACT

The participatory design approach, Bonded Design (BD), originally developed for use with intergenerational teams provides the framework for the Faculty IT Liaison Program, a project initiated in a large research university to encourage meaningful interaction between faculty and IT professional staff. BD was chosen for its adaptable methodology and its purpose in bringing together two disparate groups in the shared experience of a design team. Study findings indicate that the Bonded Design approach promotes deeper understandings and the generation of design ideas and innovations that might not be considered in a homogeneous peer environment.

TOPICS

information needs; information seeking; information use; user interfaces; information system design

INTRODUCTION

With the growing recognition of the User Experience (UX) movement (e.g., Bell, 2018; Lynch & Horton, 2016; Saanwald, 2017; Schmidt & Etches, 2014) and its emphasis on going beyond traditional user-centered design to actively engage users in all aspects of the design process, participatory design methods have experienced a resurgence. This paper presents a case study demonstrating how participatory design methods, specifically those of Bonded Design (BD), originally developed for use with intergenerational teams can be adapted for use in different contexts. The purpose of the BD methodology is to bring designers and users together in the shared experience of the design team in a mutual process of learning with the goal of designing more user-friendly technologies. As this case will show, such collaboration can also foster a deeper understanding and respect for each other's expertise, resulting in lasting, meaningful relationships.

The experience promoted a new way of learning about “the other”, thus directly relating to the conference theme, *Exploring Learning in a Global Information Context*.

SELECTED REVIEW OF THE LITERATURE – PARTICIPATORY DESIGN

Since the 1990s when participatory design (PD) methods gained prominence as a way to design user-centered technologies (Carmel, Whitaker & George, 1993; Muller & Kuhn, 1993; Schuler & Namioka, 1993; Soloway, Guzdial & Hay, 1994), PD has evolved to develop an assemblage of diverse approaches to encourage and support the direct involvement of users and designers/experts in the co-design, within different contexts, of a variety of products and services ranging from technology tools to social institutions (Robertson & Simonsen, 2012; Young, 2017). Participatory design approaches promote a design process that is not just human-centered, but rather, human-involved in which, “users are not simply viewed as objects of study but as active agents within the design process itself...so those who will be affected by change have an influence on the kind of changes that will be made (Marti & Bannon, 2009, p. 8). Recent examples include the design of more user-friendly systems with and for children (Yip, et al., 2016), in planning library services and spaces (Jacobsen & Miller, 2016; McLaughlin, 2015), in higher education (Nesset & Bible, 2018a, 2018b), and in computer learning (Guzdial, 2016).

The strength of participatory design lies in the fact that it is conducted in an operational environment where the solving of real-world problems requires innovative solutions to produce products and services that meet users’ needs (Bowler & Large, 2009). Thus, within the shared experience of the design team, participatory design’s inclusive methods such as mutual learning and learning-by-doing enable disparate user groups to meaningfully interact and learn from each other to achieve what could not be done alone or within their own peer groups (Large & Nesset, 2009; Large, et al., 2006; Nesset & Bible, 2018a, 2018b).

Bonded Design and The Faculty IT Liaison Program.

The Faculty IT Liaison (FITL) Program was created to bridge a gap that was revealed by a university-wide survey of faculty IT holdings and use: As it is faculty who must use various IT for their research, teaching, and everyday use, and while they may have specific ideas on how the technologies *need* to work to be effective tools, they may not have much knowledge about how they were *designed* to work. Conversely, IT professionals are experts in *how* the technologies are designed to work, but because their interactions with faculty are typically limited to trouble-shooting problems, may not be aware of how faculty are actually using them. Thus, it became apparent that there needed to be more in-depth communication and interaction between these two disparate groups. It was decided that a participatory design methodology would be the most appropriate means of promoting such communication and interaction, and more specifically, Bonded Design because of its efficacy in uniting disparate groups (children and researchers) in the shared experience of the design team.

METHODOLOGY

The Bonded Design methodology (Figure 1) is predicated on the fact that there is a significant gap in knowledge between the designers and users of technology that must be bridged. For example, while the designers understand how a given technology is designed to work, they need to understand how the users actually use it. Conversely, the users may want to use the technology in a certain way but perhaps do not have a sufficient grasp of its capabilities and limitations. So, as was discovered in the original studies (Large, et al. 2006, Large & Nasset, 2009), and confirmed in the university study, the design team experience is often one of learning about trade-offs and compromises.

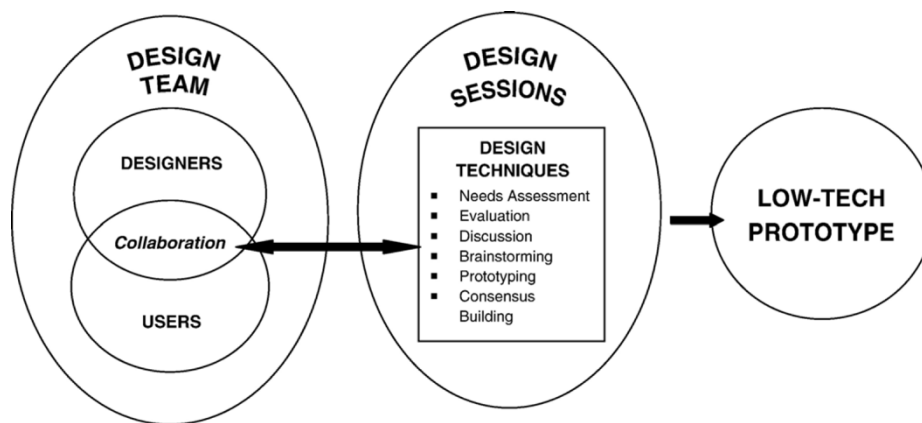


Figure 1. Bonded Design Methodology (Large, et al, 2006)

Needs Assessment.

The actual design sessions are informed by a needs assessment of the greater population. In the original studies, as one of the design session activities the young students polled their classmates for web portal design and functionality preferences. In the university setting, however, the needs assessment took the form of a university-wide IT survey administered to all faculty.

Design Sessions – Intergenerational Teams.

The Bonded Design methodology, as created based on the intergenerational team studies, consists of six design techniques done in the following order and repeated as necessary in an iterative process: 1) needs assessment; 2) evaluation of similar technologies; 3) discussion and explanation of those technologies; 4) brainstorming different ideas for the development of a low-tech prototype; 5) individual prototyping by drawing, working with modelling clay, or other

physical media; and 6) building consensus by discussing elements from the prototyping exercise to be included in the team final low-tech prototype design.

Design Sessions – Faculty IT Liaison Program.

While the same methods were used for the FITL Program, modifications had to be made. For example, in the intergenerational studies, the needs assessment was more of an add-on to the design sessions to foster team spirit. In the university, however, the needs assessment served a much more important purpose, not only as the impetus for the entire FITL Program but also in informing content. Furthermore, since the faculty members were already familiar with the technologies (email, storage, course management system) the second and third techniques of discussion and evaluation of the technologies were combined and shortened. For similar reasons, individual prototyping, which took the form of drawing, was moved before brainstorming so that team members could draw their own mental model of the *ideal* form of the technology under investigation. Individual presentation of each drawing was followed by team brainstorming of the ideas generated from the drawings. As part of the team evaluation, each team member wrote their three favorite design elements on sticky notes which they then placed under broad category headings. The final technique, consensus-building, happened during the team evaluation of the sticky notes when team members developed a final design, in this case, a list of suggested modifications to the technologies to make them more user-friendly. The adapted Bonded Design model is shown in Figure 2.

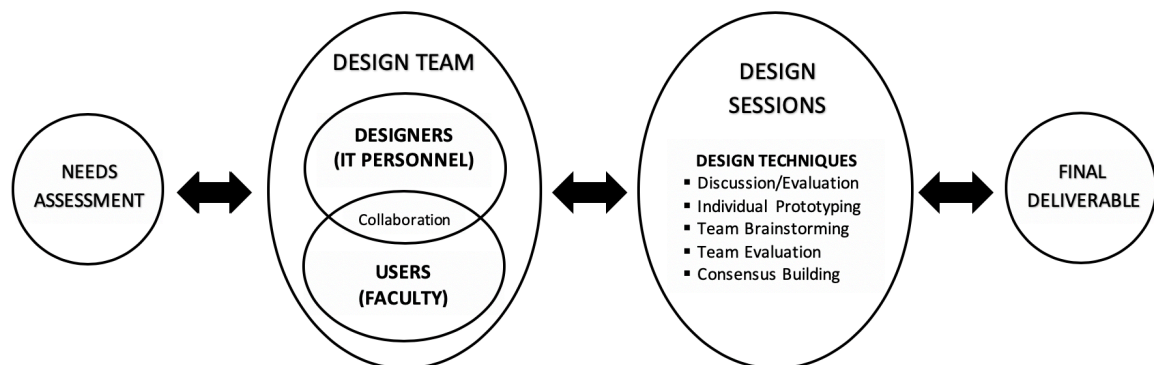


Figure 2: Bonded Design Methodology – Faculty IT Liaison Program ©

CONCLUSIONS

Preliminary results from the first and second iterations of the FITL program indicate that the Bonded Design methodology is a robust, user-centered and user-involved, results-oriented, cost effective, easily implemented, and transferable model applicable to different contexts to accomplish different deliverables. Moreover, a deliverable need not be a tangible item. For example, even if the FITL design teams had not produced anything tangible, just the fact that faculty and IT staff were communicating and interacting in meaningful ways made the Program a success.

REFERENCES

- Bell, S. J. (2018). Design thinking + user experience = Better-designed libraries: Librarians are not designers, but they can use certain design thinking principles to help facilitate positive experiences for their users. *Information Outlook*, 22(4), 4-6.
- Bowler, L. & Large, A. (2009). Design-based Research for LIS. *Library and Information Science Research*. 30: 39-46.
- Carmel, E., Whitaker, R. & George, J., (1993). PD and joint application design: A transatlantic comparison. *Communications of the ACM* 36(4):40-48
- Guzdial, M. (2016). *Learner-centered design of computing education: research on computing for everyone*. San Rafael, CA: Morgan & Claypool Publishers.
- Jacobsen, L. & Miller, K. C. (2016). A new way to improve library services: Conducting a participatory design study of faculty research practices. *Library Leadership & Management*, 30(3), 1-7.
- Large, A. & Nasset, V. (2009). Bonded Design. In M. Khosrow (Ed.), *Encyclopedia of Information Science and Technology*, 2nd Edition. Hershey, PA: Information Science Reference, 383-388.
- Large, A., Nasset, V., Beheshti, J., & Bowler, L. (2006). "Bonded Design": A novel approach to intergenerational information technology design. *Library and Information Science Research*, 28(1), 64-82.
- Lynch, P. J. & Horton, S. (2016). *Web style guide: Foundations of user experience design*, 4th Edition. London, UK: Yale University Press
- Marti, P. & Bannon, L. J. (2009). Exploring user-centered design in practice: Some caveats. *Knowledge, Technology and Policy*, 22, 7-15. DOI: 10.1007/s12130-009-9062-3.

- McLaughlin, J. E. (2015). Focus on user experience: Moving from a library-centric point of view. *Internet Reference Services Quarterly*, 20(1/2), 33-60.
- Muller, M. & Kuhn, S. (1993). PD. *Communications of the ACM* 36(6), 24–28.
- Nesset, V. & Bible, J. B. (2018a). Building understanding between users and designers through participatory design: The Bonded Design approach. In: Chowdhury G., McLeod J., Gillet V. & Willett P. (Eds.). *Transforming Digital Worlds. iConference 2018*. March 25-28, Sheffield, UK. *Lecture Notes in Computer Science*. Springer Publishing. 10766, 515-520. DOI: https://doi-org.gate.lib.buffalo.edu/10.1007/978-3-319-78105-1_56.
- Nesset, V. & Bible, J. B. (2018b). The Faculty IT Liaison Program: Using participatory design to build possibilities with technology. In: *A Profession and Discipline of Action: Proceedings of the International Conference on Knowledge Management (ICKM 2019)*, Vancouver, BC, Canada, 9-10 November 2019.
- Robertson, T., & Simonsen, J. (2012). Challenges and opportunities in contemporary participatory design. *Design Issues* 28(3), 3-9.
- Saanwald, S. (2017). Practical user experience design for school libraries. *Knowledge Quest*, 45(5), 38-47.
- Schmidt, A., & Etches, A. (2014). *Useful, usable, desirable: Applying user experience design to your library*. Chicago: ALA Editions, an imprint of the American Library Association.
- Soloway, E., Guzdial, M., & Hay, K. (1994). Learner-centered design: The challenge for HCI in the 21st century. *Interactions*, 1(2), 36–48.
- Schuler, D. & Namioka, A. (1993). *Participatory design: Principles and practices*. Hillsdale, NJ: L. Erlbaum Associates.
- Yip, J. C., Clegg, T., Ahn, J., Uchidiuno, J. O., Bonsignore, E., Beck, A., ... & Mills, K. (2016, May). The Evolution of Engagements and Social Bonds During Child-Parent Co-design. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 3607-3619). ACM.
- Young, S. W. H. (2017). Participatory design in action. *Library Journal*, 142(14), 26.

Copyright and LIS in a Global Context: Current Knowledge and Future Trends

Laura Saunders^a, Deborah Charbonneau^b, Allison Nowicki Estell^c, and Dick Kawooya^d

^aSimmons University, USA

^bWayne State University, USA

^cWentworth Institute of Technology

^dUniversity of South Carolina, USA

laura.saunders@simmons.edu, dcharbon@wayne.edu, estella@wit.edu, kawooya@sc.edu

ABSTRACT

Copyright impacts nearly every aspect of an information professional's job, across all settings. The centrality of copyright to the information professions suggests that LIS professionals need a strong grounding in this topic, and indeed the American Library Association considers knowledge of copyright to be a core competency. This interactive session will bring together four panelists who have each studied copyright knowledge and expectations in LIS from different perspectives. Together, they will share the results of five separate studies to provide a broad overview of the need for copyright knowledge in the field, and discuss the current preparedness of LIS professionals and students. The first panelist will report the results of a study on self-perceived copyright awareness and training needs of academic librarians highlighting copyright, fair use, and intellectual property. The second panelist will discuss the results of a content analysis of job postings for librarians, to examine trends in expectations for copyright knowledge.

Finally, two panelists will discuss a series of surveys that put copyright knowledge and literacy in a global context. The first survey gathered current practitioners' self-reported knowledge of copyright issues in the United States. Data from this study was pooled with data from the same survey distributed across 13 countries for a cross-country analysis. The second survey tested American LIS students' copyright knowledge and gathered their feedback on actual copyright instruction within their LIS programs. The survey of LIS students has been replicated in 14 countries and while data is still being analyzed, the researchers will share preliminary comparative data. After sharing the results of each of these above-mentioned studies, the panelists will discuss implications for LIS education. In an interactive portion, the panelists will share the copyright literacy survey so participants can test their own copyright knowledge. Panelists will also poll participants on their own experiences with copyright issues within the field and in the classroom, and time will also be allocated for open discussion.

TOPICS

copyright; intellectual property; students; curriculum

Core Skills Across Information Settings: What Academic, Public, and School Librarians Need to Know

Laura Saunders, Rebecca Davis, Melanie Kimball, and Rachel Williams

Simmons University, USA

laura.saunders@simmons.edu, rebecca.davis@simmons.edu, melanie.kimball@simmons.edu,
rachel.williams@simmons.edu

ABSTRACT

The Master of Science in Library and Information Science is a versatile degree, and LIS programs are challenged to offer curricula that support the wide range of career possibilities in a rapidly changing field. It is incumbent on LIS schools to ensure that their curricula are meeting the needs of the field. But which skills are core—meaning that all students should have a foundation in those skills, regardless of their area of focus or ultimate career path—and which are specialized, meaning that only professionals in specific positions are likely to need those skills? What skills and knowledge areas are common across different information settings, and how can LIS programs create curricula that lay a foundation of core competencies while also providing students the opportunity to develop the depth of knowledge and specialized skills necessary to specific settings?

This panel will share the results of a nationwide survey, in which over 2400 respondents, including LIS faculty, iSchool alums, internship and practicum supervisors, and other employers, ranked 53 skills on a scale of “core” to “specialized.” The panelists will compare and contrast the knowledge, skills, and abilities (KSAs) necessary to success across four information settings: public libraries, academic libraries, and special libraries, focusing on the answers provided by respondents currently working and teaching in those settings. The panel will examine which KSAs are common across settings, and which are specific to each setting. They will also discuss how the survey results align with emerging areas and trends in the field as identified in the literature and core professional documents such as ALA’s State of America’s Libraries, Pew Research Reports, and Ithaka S+R research reports. The panel will conclude by discussing how the survey findings could influence LIS curriculum.

In an interactive portion, the panelists will poll participants in real time about their impressions of what skills and competencies should be core or specialized, and panelists will respond to the poll results and questions. Time will also be allocated for open discussion.

TOPICS

academic libraries; public libraries; school libraries; special libraries; students; curriculum

Information Literacy in a Global Context: Incorporating the ACRL *Framework* into Preservice Education for Information Professionals

Melissa Gross,^a Don Latham,^a Heidi Julien,^b Bharat Mehra,^c Keren Dali,^d Yvonne Mery,^e Nicole Pagowsky,^e Carla Stoffle,^e Susan Rathbun-Grubb,^f and Elizabeth Burns^g

^aFlorida State University, USA

^bUniversity at Buffalo, USA

^cUniversity of Alabama, USA

^dUniversity of Calgary, CA

^eUniversity of Arizona, USA

^fUniversity of South Carolina, USA

^gOld Dominion University, USA

mgross@fsu.edu, dlatham@fsu.edu, heidijul@buffalo.edu, bmehra@ua.edu, keren.dali@alumni.utoronto.ca, ymery@email.arizona.edu, nfp@email.arizona.edu, stofflec@email.arizona.edu, srathbun@mailbox.sc.edu, eburns@odu.edu

ABSTRACT

This panel presentation will provide a brief overview of the *Framework*, followed by four presentations that explore theoretical and practical concerns that will be of interest to LIS educators. These presentations will serve as a foundation for a large group discussion of the implications of the *Framework* for LIS programs and the pedagogical challenges it represents. Heidi Julien will convene the session and lead the large group discussion. The panel presentations include the following:

- An Introduction to the *Framework*. Melissa Gross and Don Latham
- Teaching Librarians to Teach with the *Framework*, Yvonne Mery, Nicole Pagowsky, and Carla Stoffle
- Reference Course Redesign Using the Integrated Threshold Concept Knowledge *Framework*, Susan Rathbun-Grubb
- Framing Information Literacy Instruction: Preparing Pre-service Librarians PK-20, Elizabeth Burns
- Integrating the *Framework* into a Diversity Course For the Benefit of Praxis, Bharat Mehra and Keren Dali

HBCUs and LIS Education: Moving Forward

Dr. Ana Ndumu^a, Dr. Ismail Abdullahi^b, Dr. Renate Chancellor^c, Dr. Aisha Johnson-Jones^d

^aUniversity of Maryland, College Park, U.S.

^bNorth Carolina Central University, U.S.

^cCatholic University of America, U.S.

^dNorth Carolina Central University, U.S.

andumu@umd.edu, iabdullahi@nccu.edu, chancellor@cua.edu, aishajohnsonphd@gmail.com

ABSTRACT

For nearly 100 years, historically Black colleges and universities (HBCUs) have been instrumental in educating Black librarians. Besides providing LIS pedagogy, HBCUs foster many of the college graduates who chose librarianship. HBCU-based LIS programs include Hampton University (1925-1954), Alabama A&M University (1969-1982), the University of the District of Columbia (1969-1979), Clark Atlanta University (1939-2005), and North Carolina Central University (est. 1941). After the closing of all but one of these programs (at North Carolina Central University), there is a need to revitalize HBCU-LIS pathways.

This interactive discussion will center the contributions of HBCUs in LIS and provide new directions for educating and empowering Black librarians. Joining the panel via Skype will be Dr. Shaundra Walker and Tina Rollins, two HBCU-affiliated library directors. Attendees will learn about the HBCU Pathways Project, an effort that has resulted in evidence-based reports on ways to increase the matriculation of HBCU students into LIS programs. The ultimate goal of this project is to actuate racial diversity in the LIS field by providing insight for sustainable, reciprocal, and culturally responsive HBCU-LIS partnerships. In keeping with the conference theme of “Exploring Learning in a Global Information Context,” this panel will delve into Black librarianship in the globalized, 21st-century context.

TOPICS

education programs/school; pedagogy; students; social justice

The Agony and the Ecstasy of Publishing with Master's Students: The Importance of Scholarly Publishing for Global Information Professionals

Keren Dali^a, Jenny S. Bossaller^b, Nadia Caidi^c, Bharat Mehra^d, Kim M. Thompson^e

^aUniversity of Denver, USA

^bUniversity of Missouri, USA

^cUniversity of Toronto, Canada

^dUniversity of Alabama, USA

^eUniversity of South Carolina, USA

Keren.Dali@du.edu, bossallerj@missouri.edu, nadia.caidi@utoronto.ca, bmehra@ua.edu,
KimThompson@sc.edu

ABSTRACT

With the view of scholarly and professional publishing as a staple of educating global information professionals, this interactive engagement session (IES) will bring together an international team of five educators/former and current LIS journal editors to reflect on the highs and lows of engaging Master's students in the process of scholarly communication. Presenting both positive experiences and failed attempts, they will discuss the practical aspects, psychological struggles, and ethical implications involved in different publishing scenarios and types of collaboration. Former Master's students from three universities who have had positive publishing experiences will also participate via teleconferencing.

TOPICS

education; students; pedagogy; teaching faculty; scholarly communications

Layers of Advocacy: How Librarians Everywhere Can Make a Difference and Lessons for LIS Education

A.J. Million^a, Kristine N. Stewart^b, Kim M. Thompson^c, Heather Braum^c, Travis L. Wagner^c, Denice Adkins^d, Lauren Smith^e

^aUniversity of Michigan, USA

^bZayed University, UAE

^cUniversity of South Carolina, USA

^dUniversity of Missouri, USA

^eUniversity of Edinburgh, UK

millioaj@umich.edu, kristine.stewart@zu.ac.ae, kthompso@mailbox.sc.edu, hbraum@email.sc.edu, wagnertl@email.sc.edu, adkinsde@missouri.edu, lauren.smith@ed.ac.uk

ABSTRACT

Lobbying and advocacy are critical to the success of libraries, because they play a key role in communicating to decision-makers and communities why libraries are essential resources in an information-driven society. However, despite the importance of lobbying and advocacy to the profession, it is not always clear how library schools should teach about this aspect of librarianship. Taking an international, comparative approach, this panel discusses the complexities associated with lobbying and advocacy, as well as some challenges faced by LIS educators when teaching about the topic.

To make teaching about lobbying and advocacy in LIS easier, six panelists with experience in a range of political, social, and cultural contexts will talk about issues such as: levels of government where lobbying takes place; varying definitions of advocacy, especially across countries with different traditions of librarianship; and the time frame in which lobbying and advocacy efforts take place. Panelist presentations will emphasize “lessons learned” that can be used to teach LIS students how to cultivate support for libraries. Using panelist presentations as a starting point, this panel will include a follow-up discussion about teaching advocacy in LIS.

A primary goal of this panel is to identify powerful content for LIS curricula and instructional approaches that can support more effective advocacy. We will conclude by opening the door to audience participation with the purpose of integrating new ideas into the discussion.

TOPICS

education programs/schools; political economy of the information society; curriculum

In the Pursuit of Global Standards for LIS Education: What Does ‘Librarian’ Mean Around the World?

Anthony S. Chow^a, Clara M. Chu^b, Jaya Raju^c, Dick Kawooya^d, Ekaterina Shibaeva^e, Chris Cunningham^f

^aUniversity of North Carolina Greensboro (moderator), USA

^bUniversity of Illinois at Urbana-Champaign, USA

^cUniversity of Cape Town, South Africa

^dUniversity of South Carolina, USA

^eRussian State Library, Russia

^fUnaffiliated, USA

aschow@uncg.edu, cmchu@illinois.edu, jaya.raju@uct.ac.za, kawooya@sc.edu,
ShibaevaEA@rsl.ru, chris.cunningham.lis@gmail.com

ABSTRACT

The IFLA Building Strong Library and Information Science Education (BSLISE) Working Group continues to study what it means to be a librarian around the world. Results from a global survey disseminated in six different languages found that only 27% of participants held a terminal MLIS degree. Other differences in terms of professional qualifications and education will be shared by continent and region. Existing educational standards for LIS professionals were also gathered and global LIS leaders were interviewed about their thoughts on a set of internationally recognized standards for LIS education and potential ways to provide standardized training and education across the profession.

TOPICS

accreditation; curriculum; education; education programs/schools; standards; continuing education

Innovative Teaching Methods & Strategies that Work for LIS Education around the Globe

Abebe Rorissa,^a Hemalata Iyer,^a Shimelis Assefa,^b Kendra Albright,^c and Nadia Caidi^d

^a University at Albany, State University of New York, USA

^b University of Denver, USA

^c Kent State University, USA

^d University of Toronto, Canada

arorissa@albany.edu, hiyer@albany.edu, Shimelis.Assefa@du.edu,

kalbrig7@kent.edu, nadia.caidi@utoronto.ca

ABSTRACT

LIS education in North America and the rest of the world come in different forms and shapes. Degrees offered, the names of programs, the academic unit to which programs are attached, the delivery model employed, the types of courses in the curriculum, and the composition of core versus electives, etc., vary greatly. With such profound diversity in LIS curricula, this panel explores innovative methods and strategies around technological, pedagogical, and content knowledge that work across LIS degree offerings around the world. The panel is designed to be more interactive to allow rich engagement with participants.

TOPICS

methods and strategies; education programs/schools; pedagogy; curriculum

Curricula Models and Resources Along the Data Continuum: Lessons Learned in the Development and Delivery of Research Data Management and Data Science Education

Bradley Wade Bishop^a, Suzie Allard^a, Karl Benedict^b, Jane Greenberg^c,
Nancy J. Hoebelheinrich^d, Xia Lin^c, and Bruce Wilson^e

^aUniversity of Tennessee-Knoxville, USA

^bUniversity of New Mexico, USA

^cDrexel University, USA

^dKnowledge Motifs, USA

^eOak Ridge National Laboratory, USA

wade.bishop@utk.edu, sallard@utk.edu, kbene@unm.edu, janeg@drexel.edu,
nhoebel@kmotifs.com, xlin@drexel.edu, wilsonbe@ornl.gov

ABSTRACT

There continues to be a critical demand for data managers, data curators, and data scientists. This panel addresses the education that needs to be delivered to help students and practicing professionals fill these roles, explores the existing resources available to educators, and provides an interactive environment to discuss the issues. The Institute of Museum and Library Services recognized the need for LIS educators to create the conduit to advance the entire research enterprise by building capacity in data management and data science. They funded projects to develop curricular models and related materials to educate the next generation of information professionals including: LIS Education and Data Science for the National Digital Platform¹; Development of an Enhanced and Expanded Data Management Training Clearinghouse for Earth Science Information Partners (ESIP)²; User Experience and Assessment³, Data Curation Education in Research Centers⁴, and Geographic Information Librarianship⁵.

Attendees will learn about existing training materials and will be encouraged to brainstorm how to infuse and integrate research data management and data science into existing LIS programs and courses. A group discussion will consider the following questions:

- What research data management and data science education exists in other programs?
- How do we get LIS students more engaged in these data careers?
- Do other materials exist that could be included in the ESIP Clearinghouse?
- What can be learned from the ESIP example?

RE-70-17-0094-17¹; LG-70-18-0092-18²; RE-20-16-0036-16³; RE-02-10-0004-10⁴; RE-05-12-0052-12⁵

Embracing Diversity: What it Means for New LIS Professionals and the Organizations that Hire Them

Anthony Chow^a, Wanda Brown^b, Jaya Raju^c, Lorie Roy^d, Theo Bothma^e, LaTasha Velez^f,
Dick Kawooya^g, Beatriz Guevara^h

^a University of North Carolina Greensboro, USA

^b Winston Salem State University, USA

^c University of Cape Town, South Africa

^d University of Texas Austin, USA

^e University of Pretoria, South Africa

^f University of North Carolina Greensboro, USA

^g University of South Carolina, USA

^h Charlotte Mecklenburg Public Library, USA

aschow@uncg.edu, brownwa@wssu.edu, jaya.raju@uct.ac.za, loriene@ischool.utexas.edu,
theo.bothma@up.ac.za, lmvelez@uncg.edu, kawooya@sc.edu, bguevara@cmlibrary.org

ABSTRACT

Our presentation will bring together a panel of diverse and global views on diversity from a broad set of racial, cultural, and geographic perspectives. While there is a growing body of research that supports the value of more diverse work environments, less is known about the conditions necessary to support the success of new LIS professionals that help diversify their work environments, what challenges library organizations face in inviting this diversity, and what can be done to best support these LIS professionals and their organizations.

TOPICS

critical librarianship; social justice; education; continuing education; administration, curriculum; education programs/schools

Leadership During Organizational Restructuring of LIS Programs

Rong Tang^a Sandra Hirsh^b Xia Lin^c Kate Marek^d Howard Rosenbaum^e

^aSimmons University, USA

^b San José State University, USA

^cDrexel University, USA

^dDominican University, USA

^eIndiana University, USA

rong.tang@simmons.edu, sandy.hirsh@sjsu.edu, linx@drexel.edu, kmarek@dom.edu,
hrosenba@indiana.edu

ABSTRACT

This panel session features LIS program leaders sharing information about their leadership experiences during organizational restructuring either at their school/department level or at the university/institutional level. They will describe their past or current experiences with reorganization, and discuss the approaches/strategies they used to ensure successful organizational transitions while also maintaining or boosting faculty/staff/student morale. Panelists will present how they handle respective program changes, how they communicate the proposed changes to their communities, and what specific obstacles and challenges they encounter during the restructuring process. The panel session will end with a discussion with the audience about the specific set of leadership skills and strategies that would be useful during organizational changes.

The objectives of this panel session are: (1) Through sharing experiences on the history and process of the organizational restructuring, identify common environmental factors that trigger the organizational change; (2) Identify a common set of challenges and opportunities for LIS program restructuring; (3) Identify successful leadership strategies, communication processes, and problem-solving approaches pertinent to organizational restructuring; and (4) Engage with the audience to exchange ideas and experiences related to effective leadership during organizational restructuring of LIS programs. The topics that the panelists will address include: (1) History and background of organizational restructuring; (2) The extent to which the organizational restructuring has an impact on different constituents of the program; (3) Challenges, obstacles, and gaps in the restructuring process; (4) Successful leadership strategies and communication approaches; and (5) Lessons learned. Presentations from the panelists will take 60 minutes. Interaction with the audience will follow after the presentation. The audience will be involved in a discussion during which they will share their experiences and thoughts about the topic of leadership through organizational restructuring.

Spilling the Tea: LIS Professionals Speak Out on the Good, the Bad, and the Ugly in LIS Education

Shari Lee^a and Renate Chancellor^b

^aSt. John's University, New York, USA

^bCatholic University of America, District of Columbia, USA

ABSTRACT

For LIS faculty, a fundamental goal in teaching is to engage, challenge, and inspire students to become diligent and dynamic information professionals. As a result, faculty often strive to create learning environments that engender critical thinkers and ethical decision makers in the hope that they will become competent, service oriented, information professionals. In facilitating this agenda, we frequently evaluate course content in an effort to provide the clearest possible instruction and positive course experience. Faculty therefore rely heavily on feedback from students. Not only do we scrutinize course evaluations, but many of us also solicit additional feedback from students. As appropriate, revisions are made to the syllabus, course content, and the curriculum. We also bring practitioner expertise into the classroom, as practitioners have their own unique impact on students. According to Ramasamy (2017), students get engaged with a teacher who is currently working/specializing in the topic being discussed in the classroom. However, while we bring professionals to the classroom, their perspective is often missing from the feedback and data we gather from course evaluations. We contend that this perspective is of value to the teaching and learning environment, and one that can provide crucial information to improve the learning experience as well as the curriculum. Students provide a familiar perspective; professionals would provide a new perspective. Specifically, they can discuss what happened after they graduated; went through the job seeking process; entered the field; and began working. How prepared were they for what they encountered on the job. In what ways did their library program prepare them? In what ways did it fail them? What was their experience a year later? Two years later? We have gathered a panel of six recent LIS alumni that represent a global view of the field and LIS education, who will not only answer these questions, but also share their ideas about LIS education. Panelists: Nicholas Alexander Brown, Anastasia Chiu, Christina Gavin, Jhani Miller, Emily Wagner, and Heather Wiggins.

TOPICS

pedagogy; curriculum; education programs/schools

REFERENCE

Ramasamy, K. (2017). Can practicing LIS professionals and preaching LIS professionals come together for providing better learning experience for students? - A model. *International Journal of Science and Humanities*, 3(1&2), pp. 243–252.

Including Disability in LIS Education and Workplaces: From Local Concerns to Global Vision

Keren Dali^a, Kim M. Thompson^b, Mirah J. Dow^c, Brady Lund^c, Kevin J. Mallary^d

^aUniversity of Denver, USA

^bUniversity of South Carolina, USA

^cEmporia State University, USA

^dUniversity of Tennessee, Knoxville, USA

keren.dali@du.edu, thompsom@mailbox.sc.edu, mdow@emporia.edu, blund2@g.emporia.edu, kmallary@vols.utk.edu

ABSTRACT

Local variations notwithstanding, workplace disability exclusion is a global phenomenon. Despite continuous attempts to increase the participation of disabled LIS faculty and staff in workplaces, both recruitment and retention efforts fall short. Despite tremendous documented successes with regard to including students with disabilities in LIS programs and users with disabilities in libraries, archives, museums, and information organizations, the situation of faculty and staff with disabilities remains neglected. Attempts to quantify workplace exclusion may be misleading since many faculty and staff choose not to disclose their disability, fearing negative consequences for their career prospects. Bullying and discrimination, added to physical and mental health challenges, can be particularly marginalizing. These observations emerge in different countries and regions, including Canada, the Caribbean, Israel, South Africa, UK, and the U.S. The heartening trend of expanding diversity conversations on campus and at LIS workplaces often exclude disabled employees, be they academics or professionals, which results in a serious marginalization of disabilities even in the context of diversity efforts. Similarly, discussing global LIS education and professional practices, we leave employees with disabilities out. As a result, our global vision is regrettably fragmented and excludes an international community of talented and productive individuals who, in some countries, represent the largest minority group. Striving for a truly global and inclusive educational, professional, and information environment, LIS community members could begin by counteracting the view of the world as exclusively able-bodied. This ALISE Academy workshop takes concrete steps in this direction by going beyond politically correct, theoretical, or conceptual discussions, and addresses the existing gaps and deficiencies in the state of disability inclusion. The session is intended for academic and professional administrators of all levels; future leaders, including beginner faculty, and Ph.D. and master's students; and any educator or practitioner interested in disability at the workplace.

Scientists, Institutional Repositories and Data Management Practices

Devan Ray Donaldson

Indiana University Bloomington, USA

drdonald@indiana.edu

ABSTRACT

In this Early Career Development project, Dr. Devan Ray Donaldson will conduct a three-year empirical investigation into the use of data repositories by scientists. The research will investigate how institutional repositories (IRs), data management plans (DMPs), and librarian expertise support the sharing and preservation of research data. The research will expand knowledge about scientists' data needs and practices in domains where attitudes toward data sharing are currently evolving and shifting (e.g., atmospheric science, chemistry, computer science, ecology, and neuroscience). The investigation will inform best practices for librarians who decide which data repositories to recommend to researchers, what features to add to IRs, when to use IRs for handling research data, and when alternative data repositories are more appropriate. This project includes three related studies. Table 1 maps the studies to the research questions, methods, and outcomes.

This research is supported by the Institute of Museum and Library Services Laura Bush 21st Century Librarian Program (#RE-37-19-0082-19).

Study	Research Questions	Methods	Outcomes
A	1) What features do scientists think are necessary to include in data repository systems and services to help them implement the data sharing and preservation parts of their DMPs?	Focus Groups	Data Repository Appropriateness Rubric Draft
B	2) How do institutional, domain, domain-agnostic, and/or commercial data repositories compare in providing these features?	Rubric development and testing	Rubric assessment
C	3) How do scientists use IRs during DMP implementation? 4) What barriers arise as scientists use IRs during DMP implementation? 5) How do IR staff interpret and respond to information about scientists' use of IRs?	Multiple-case study	Recommendations and decision support tool

Table 1. Mapping of project studies, research questions, methods, and outcomes

Transforming Libraries into Community Anchors in Rural Texas (TLCART)

Carol Perryman^a and Ling Hwey Jeng

^aTexas Woman's University, School of Library and Information Studies, Denton, Texas, U.S.A.
cperryman@twu.edu, ljeng@twu.edu

ABSTRACT

Lack of access to increasingly digital services and resources contributes to growing disparities for small and rural communities across the United States, impacting residents' quality of life. As community anchor institutions, rural librarians with expertise in digital literacy and a deep understanding of their unique communities can be an important part of efforts to improve quality of life for residents. However, traditional library education does not include the development of students as future leaders of community growth. Informed by prior efforts in Appalachia and Kentucky, the IMLS funded program *Transforming Libraries into Community Anchors in Rural Texas (TLCART)* supports community engagement and the use of information and communication technology in small rural communities in Texas. A cohort of students were selected based on their location, ethnicity, and a track record of community engagement, to engage in community development activities including needs assessment, stakeholder analysis, grant writing, and project planning, all within their own communities. Direct and indirect assessments are designed based on learning outcomes and participation. Evidence gathered from community needs assessment will inform future research efforts in determining and providing services, and establish a new model for LIS education that includes facilitative practitioner development.

TOPICS

Education programs; public libraries; community engagement

The Latinx Literacy in Libraries and Archives Project

Janet Ceja Alcalá^a, Rebecca Davis^b, Mónica Colón-Aguirre^c, and Danna Leal Cisneros^d

^{abd}Simmons University, Boston, USA

^cEast Carolina University, North Carolina, USA

janet.ceja@simmons.edu, rebecca.davis@simmons.edu, colonaguirre17@ecu.edu,
danna.leal@simmons.edu

ABSTRACT

The Latinx Literacy in Libraries and Archives project is an exploratory study that seeks to understand how the information practices of Latinx¹ communities can inform the advocacy work conducted by archivists and librarians in Boston, Massachusetts. In particular, we are interested in understanding how Latinx migrant populations navigate the built environment to access information about their host city and how this insight can be used to create more inclusive library and archives spaces, affect local policy, and build stronger communities. This poster reports on the design of the study and discusses some of our initial findings. The project uses interviews, mental maps, and secondary sources, which are analyzed through qualitative coding. Scholarly discussions in the fields of archival studies and library and information science are increasingly focusing on social justice praxis, this project contributes by addressing the relationship between equity of access to information and geographic literacy.

¹ Latinx is a gender neutral or non-binary term used to replace the traditional female “a” and male “o” in Spanish. This work uses Latinx over the official US Census term “Hispanic.”

Try It Before You Buy it: Library Residencies as Experiential Learning

Laura Tadena and Natalie Hill

The University of Texas at Austin, USA

l.tadena@austin.utexas.edu, n.hill@austin.utexas.edu

ABSTRACT

Librarian positions are becoming increasingly technical and advanced as libraries meet the evolving needs of their diverse sets of users, making truly entry-level positions incredibly challenging to find, especially at top research institutions. The career limitations that many new LIS graduates face is problematic, especially for those individuals without prior academic or specialized library experience. This poster will showcase the pilot program of the University of Texas Libraries' residency program from the perspective of the two inaugural Consuelo Artaza and Carlos Castañeda Diversity Resident Librarians. It will highlight how residency programs are a way to address gaps in experience for new graduates and allow early career librarians to explore and identify areas within academic librarianship through experiential learning without having to commit to a "librarian track" too soon. The poster will provide suggested on-boarding and orientation procedures, present a sampling of residency projects, insight into the assessment of the pilot program, and highlight acquired skills during the first year of the residency. The poster will also reflect on challenges and limitations present in residency positions.

TOPICS

academic libraries; continuing education; social justice

Improving the Health Literacy of Refugee Women: A Pilot Project

Margaret Sullivan Zimmerman

The University of Iowa, USA

margaret-zimmerman@uiowa.edu

ABSTRACT

Refugees are at a heightened risk for a number of negative health outcomes including diabetes, obesity, and chronic disease. Due to displacement and acculturation stress, refugees are unlikely to be able to seek necessary information and care requisite to good health. The purpose of this project was to pilot a health literacy training for refugee women that will be delivered by library science students. The goal was twofold: to create a replicable curriculum designed to improve health literacy and outcomes of refugee women and their families, and to promote health librarianship and working with disadvantaged populations to library students. The program was developed by examining scholarly literature, collaborating with experts, and using resources from other programs. Materials were available in English, Spanish, and Swahili. Local refugee resource organizations were contacted to find women that were willing to participate. The students were recruited by the project leader from the Library and Information Science department where she is faculty. Participants were pre- and post-tested immediately before and after the program to demonstrate learning during the project period. Then, they were interviewed after the last class and asked for comprehensive feedback on the relevance and helpfulness of the program to their lives. This feedback will be incorporated heavily into the next iteration of this project, planned for the academic year of 2019 – 2020.

The major accomplishments of this program were as follows:

- Four LIS students participated, all of whom stated that they were more likely to consider health librarianship as a profession and felt that their understanding of programming geared towards disadvantaged populations was greatly increased.
- Twelve immigrant and refugee women from four countries participated. The women reported an increased understanding of the content, increased self-efficacy regarding seeking medical information, and a statistically significant increase in health literacy test scores.
- The participants provided robust feedback relevant to the further development of course content.
- Most importantly, the participants enjoyed the program and seemed truly engaged with the materials. This project did much to increase the comfort of the refugee and immigrant women that participated in the pursuit of health information

TOPICS

community engagement; social justice; specific populations; education; information needs.

Heritage Monitoring Scouts: Assessing Citizen Science Programs Utilizing Outcome-based Evaluation and Self Determination Theory

Dr. Laura Clark^a, Sarah Miller^b

^aAbraham Baldwin Agricultural College, Tifton, USA

^bFlorida Public Archaeology Network, St. Augustine, USA

laura.clark@abac.edu, semiller@flagler.edu

ABSTRACT

The Florida Public Archaeology Network (FPAN) developed the Heritage Monitoring Scouts program to provide a citizen science program to communities interested in preserving cultural heritage. This program is volunteer based and provides information to the Florida Department of Historical Resources. Many of the sites are located on public lands or cemeteries.

The focus of the program has been to address the effects of climate change, development, and other naturally occurring events that degrade and destroy important cultural places. Current hurricanes and weather events such as flooding have demonstrated the significance of this program. The before and after documentation has been vital to creating awareness of cultural heritage resources.

Utilizing the Outcome-based Planning and Evaluation model, programs were examined for perceived benefits (Gross, Mediavilla, & Walter, 2016). The Self-Determination Theory provided a model for program success focusing on intrinsic motivation. These two models help provide context to the participants' experiences and program success (Deci & Ryan, 1985). These models can help inform other outreach citizen science programs on best practices for future development.

Over the course of two years, seven programs throughout the state of Florida were evaluated utilizing a two phase process of surveys and interviews. Sixty-seven participants filled out surveys. Seventeen participants responded to phone calls to participate in interviews. There were two groups that experienced a life condition benefit from being part of these programs. Most program participants experienced a feeling that they were making a difference.

TOPICS

cultural heritage; citizen science; community programming

Caregivers' Perceptions of Children's Programming at the Destination Archaeology Resource Center

Dr. Laura Clark^a, Mike Thomin^b

^aAbraham Baldwin Agricultural College, Tifton, USA

^bUniversity of West Florida, Pensacola, USA

laura.clark@abac.edu, mthomin@uwf.edu

ABSTRACT

K-2 programs using experiential learning in museums provide hands-on education that demonstrate strategies archaeologists use in the field. Many of these activities involve practicing underlying concepts that help facilitate research, are rooted in science, and allow children to think critically as they go through a process of discovery.

These programs focus on activities that are appropriate for K-2 children. Interpretive information is provided in the programs at an appropriate level the age group can understand. Each program follows these criteria:

1. The books and activities take into account the developmental stages of the children.
2. The program message focuses on communicating a message of historic preservation.
3. Creating activity intensive programming that focuses on experiential learning.

The children's programs were assessed using surveys and interviews to inform the program director on improvements. The results revealed the importance of knowledgeable staff that have a responsive nature to children and caregivers. Another important finding in the interviews revealed the great disparity of science-based programs for very young children. These findings can help other organizations focused on public archaeology or historic preservation develop and evaluate successful experiential programs modeled on the three established criteria.

TOPICS

children's services; museums; education

Examining Disciplinary Cooperation in Grant-Funded Human Health Research: A Text Mining Approach

Danielle Pollock

Simmons University, USA

danielle.pollock@simmons.edu

ABSTRACT

Approaches to scientific research involving cooperation between scientists from multiple disciplines are becoming increasingly recognized as vital for addressing large scale, complex scientific challenges in a global environment (see Fiore, 2008; Sharp, Jacks, & Hockfield, 2016). Information professionals are well-equipped to play an expanding role in these collaborations (Allard & Pollock, 2018) and understanding patterns of adoption of cross-disciplinary approaches as well as funding agency support for disciplinary cooperation can help them in identifying emerging research areas as well as potential barriers to such research.

This poster presents preliminary results from a study conducted to explore the utility of employing text mining techniques to examine grant data in order to identify trends in disciplinary cooperation in the area of human health. Quantitative analysis was conducted on the full text of publicly available grant abstracts from the National Institutes of Health (NIH) to help identify potential areas of emerging cross-disciplinary research and understand the evolving vocabulary scientists use when describing research involving multiple disciplines in applications for funding. Methods, challenges, and next steps are discussed.

REFERENCES

- Allard, S., & Pollock, D. (2018). Team Science: Development of an immersive curriculum for information professionals to play an expanding role in scientific collaboration. In *Proceedings of the 2018 ALISE Annual Conference* (pp. 175-180). Seattle, WA: ALISE.
- Fiore, S. M. (2008). Interdisciplinarity as teamwork: How the science of teams can inform team science. *Small Group Research*, 39, 251-277.
- Sharp, P., Jacks, T., & Hockfield, S. (2016). *Convergence: The future of health*. Cambridge, MA: MIT.

The Role of the Academic Librarian in Online Courses

Jennifer Elaine Steele

The University of Southern Mississippi, USA

jennifer.e.steele@usm.edu

ABSTRACT

One of the largest factors impacting learning in a global context has been the emergence of distance education. As of Fall 2016, over 6 million students in the United States were enrolled in at least one online course (Seaman, Allen, and Seaman, 2018). With the rise in online education, library services to distance students are becoming increasingly important. Whether they are providing instruction or research assistance to distance students, academic librarians are now playing an active role in online course management systems (York and Vance, 2009). However, different views exist regarding the appropriate role an academic librarian should play in an online course. The proposed study will utilize an online survey of faculty, students, as well as academic librarians regarding the use of a librarian in an online course. Questions will focus on strategies for using librarians in online courses, which strategies were successful and which were not, and gather perspectives from faculty, students, and librarians themselves in order to better establish best practices for providing the growing number of distance education students with the library services they need.

TOPICS

academic libraries; curriculum; education; education programs/schools; online learning; pedagogy; students; teaching faculty

REFERENCES

- Seaman, J.E., Allen, I.E., and Seaman, J. (2018). Grade change: Tracking online education in the United States. Babson Survey Research Group. Retrieved from <https://files.eric.ed.gov/fulltext/ED580852.pdf>
- York, A., and Vance, J. (2009). Taking library instruction into the online classroom: Best practices for embedded librarians. *Journal of Library Administrators*, 49(1): 197-209. Retrieved from http://works.bepress.com/cgi/viewcontent.cgi?article=1005&context=amy_york

Small and Rural Public Libraries: Supporting Community Health and Wellness

Noah Lenstra^a, Ellen Rubenstein^b, Christine D'Arpa^c, Susan K. Burke^b

^aUniversity of North Carolina at Greensboro, US

^bUniversity of Oklahoma, US

^cWayne State University, US

njlenstr@uncg.edu, erubenstein@ou.edu, Christine.DArpa@wayne.edu, sburke@ou.edu

ABSTRACT

Distance from metropolitan areas has been found to correlate with health outcomes, with rural areas rating the worst in national health rankings. Rural residents are less likely to have easy access to health professionals, with 77.2% of rural counties in the U.S. in “health professional shortage areas” (ALA, 2017). While public libraries do not typically provide health care (with some exceptions), they do commonly assist patrons in finding health information. Because libraries are often the most valued organizations in their communities (Pew Research Center, 2013) as a resource available to all and used by many, they are well positioned to address health and wellness needs through public programs.

Small and rural libraries are often staffed by non-MLIS librarians, have fewer resources to support training and networking, and staff may be unaware of best practices related to health and wellness programming. In order to increase opportunities and education for staff in these libraries it is crucial to understand how public library staff currently develop, deliver, and assess these programs. This research examines how small and rural public libraries support community health and wellness through public programs, and seeks to:

- Obtain an in-depth understanding of health and wellness programs in small and rural public libraries
- Learn how libraries collaborate with outside organizations to provide such programs and how public library staff view their roles and responsibilities in offering them
- Learn the perspectives of outside collaborators who partner with libraries
- Understand the perspectives of patrons who use or do not use library programs for health and wellness information and lifelong learning

This research will comprise at least 16 case studies of library systems and individual public libraries in small and/or rural areas in Michigan, North Carolina, Oklahoma, and Vermont. Four individual libraries from each state will be studied, and, where applicable, their library systems, enabling comparisons across different regions of the country with variations in state health profiles and state-level library infrastructures.

The study will result in an educational model that will 1) teach librarians and other library staff how to effectively develop, assess, sustain, and extend programming and services; 2) inform library practices and LIS pedagogies; and 3) inform potential partners how to work with small and rural libraries to develop and implement health and wellness programs. The researchers will also develop training modules for LIS educators and students in collaboration with partners in the four state libraries that will include information about best practices for funding, partnering, planning, advertising, and assessing health and wellness programming.

The Three P's: Public Libraries, Partnerships, and (Health and Wellness) Programs

Noah Lenstra^a, Ellen Rubenstein^b,

^aUniversity of North Carolina at Greensboro, US ^bUniversity of Oklahoma, US
njlenstr@uncg.edu, erubenstein@ou.edu

ABSTRACT

In recent years many public libraries have begun offering a number of health and wellness programs, often immersing participants in healthy activities like yoga, dancing, gardening, walking, biking, and more. As integral community entities, libraries have implemented these programs to contribute to the overall health of their constituencies. However, it is nearly impossible for libraries to do this on their own; in most cases public libraries partner with other public institutions, nonprofits, healthcare agencies, and local businesses to build their capacity to implement and to sustain such programs.

Within LIS there is a fair amount of literature related to partnerships in general, and some of the research encompasses the roles of libraries in this arena, but often health and wellness is not a focus, and even less attention is paid to immersive, active programs. Many disciplines outside of LIS address health and wellness, including public health, medicine, social work, and psychology, but rarely do libraries appear in their discussions of collaborative endeavors. Yet, libraries are actively pursuing partnerships on many levels to become more involved in the health of their communities.

Based on a survey of 1418 public libraries in the United States and Canada, this poster reports on the open-ended responses of 419 librarians located on the Eastern Seaboard of the United States, and illustrates how public libraries are building health and wellness programs through partnerships. Commonalities among the reasons why libraries offer these programs other than for fun, to bring more people into the library, or to contribute to the health of their communities, include building community partnerships and collaborations with other town/city departments, nonprofits, local and state government, and local businesses. Respondents described using locations other than the library such as local fitness clubs and city parks, and (especially in New England) enacting StoryWalks along local rail trails, the farmers' market and on college campuses.

The size of the library dictated how employees developed programs and worked with partners, with larger libraries using teams or departments to create activities with collaborators, and smaller ones using fewer staff, in some cases the lone librarian. Other libraries encouraged all staff to initiate programs and relationships, as well as utilize volunteers for implementing them. Libraries also experienced some barriers when working with partners, such as finding instructors, whether volunteer or paid; and in rare cases, working with town officials with liability concerns. Other issues included being able to coordinate with partners who could help do things such as clear gardens, provide free programming, and promotion of the library and its programs.

In delving into the challenges and successes of libraries currently implementing these programs, this research offers insights that can inform both practice and LIS education.

“I Asked My Mom A Hundred Times To Put It On YouTube”: Unboxing Videos in Early Childhood

Sarah Barriage

University of Manitoba, Canada

sarahbarriage@gmail.com

ABSTRACT

Unboxing videos are an increasingly popular type of media consumed by young children worldwide. According to the most recent Common Sense Media survey, 34% of children eight years of age and younger in the United States often or sometimes watch this type of video online. When targeted to children, these videos feature products such as Shopkins, L.O.L. Surprise balls, and other toys being unpackaged and assembled on camera.

This poster will present a case study of Rosabella, a 6-year-old girl who enjoys watching unboxing videos on YouTube and creating her own videos when she receives new toys. Data were collected through interviews, participant-generated photography, and photo-elicitation. Rosabella described engaging in a variety of information activities related to her interest in unboxing videos, including information seeking, creation, and sharing. For instance, she described watching CookieSwirlC, a popular YouTube channel with over 11 million subscribers. She also described ways in which her information activities are both facilitated and restricted by her parents. For example, Rosabella’s parents facilitate her information creation activities by recording her as she unpackages new toys. They also restrict her information sharing activities; Rosabella expressed a strong desire to share her unboxing videos with others, stating “I asked my mom a hundred times to put it on YouTube.” However, her mom said that the videos are “just for family.”

Drawing on the case of Rosabella, this poster will also present a research agenda for further explorations of the unboxing video phenomenon as it relates to young children’s information practices.

TOPICS

information needs; information seeking; information use; special populations

Exploring Reference and Information Service in a Global Information Context

Amy VanScoy^a

^aDepartment of Information Science, University at Buffalo, USA

vanscoy@buffalo..edu

ABSTRACT

Reference and information service (RIS) is a global phenomenon. Some studies have taken a global perspective on the work (e.g., Sanders et al., 2013). However, in-depth study of RIS tends to have an ethnocentric focus. This work-in-progress examines conceptualizations of RIS by 70 experienced librarians in Slovenia, South Africa, and the United States using Q methodology. Following Q methodology procedures (Stephenson 1935; Watts & Stenner 2005), data for this study are collected using a card sort and brief interview. The cards consist of 35 statements that reflect the breadth of conceptualizations of RIS represented in the literature. Data are analyzed using a web app designed specifically for Q methodology to identify clusters of similar conceptualizations. Interview data are analyzed qualitatively to interpretation of the profiles generated by the web app. Participants from South Africa and the United States were distributed fairly evenly among the factors. The preliminary results reveal that conceptualizations of RIS cross boundaries of culture, indicating the potential usefulness of a more global approach to professional education and professional development.

TOPICS

information services; libraries in the developing world

REFERENCES

- Saunders, L., Kurbanoglu, S., Jordan, M. W., Boustany, J., Chawner, B., Filas, M., Grgic, I., Haddow, G, van Helvoort, J., Kakouri, M., Landøy, A., Minch, K., Oliver, G., Polydoratou, P., Repanovici, A., Vanderkast, E., Todorova, T., Virkus, S., Wolodko, A, & Zivkovic, D. (2013). Culture and competencies: A multi-country examination of reference service competencies. *Libri*, 63(1), 33-46.
- Stephenson, W. (1935). Correlating persons instead of tests. *Journal of Personality*, 4(1), 17-24.
- Watts, S., & Stenner, P. (2005). Doing Q methodology: theory, method and interpretation. *Qualitative Research in Psychology*, 2(1), 67-91.

Bridging the Digital Divide: Understanding Public Library Users' Technology Needs and Purposes Through Critical Race Theory

Raymond Pun

California State University, Fresno and Channel Islands, USA

raypun101@gmail.com

ABSTRACT

This dissertation-in-progress research seeks to address the impact of the digital divide on ethnic communities living in Fresno County, California. This qualitative research study seeks to address the following questions: what are potential barriers in using public library's technology resources experienced by ethnic communities in Fresno County, and what are ethnic communities' perspectives, purposes and beliefs in using technologies in the public library? The study frames critical race theory to understand the social relationships and structures of inequities of the digital divide in Fresno by exploring the human stories and narratives from people of color experiencing the issue deeply and how they use the public library's technology resources purposefully and personally. This research contributes to existing studies of how a global issue such as the digital divide impacts local communities from various ethnic groups including migrant and immigrant ones, and their information seeking behaviors and needs.

TOPICS

critical librarianship; social justice; information policy; public libraries

Evaluating the Effectiveness of Collaborative Learning in Online Asynchronous Courses

Xiaoai Ren

Valdosta State University, USA

xren@valdosta.edu

ABSTRACT

Many empirical research has been conducted to investigate the sense of community in online learning environment, and its impact on students' success. In those studies, collaborative learning is often identified as an effective way to foster the sense of community, therefore to improve students' overall learning experience and learning outcome in online classroom. But it remains unclear how online instructors can evaluate the effectiveness of the collaborative learning activity they implemented in their classroom and to revise or improve the activity accordingly. This study sets out to answer this question by looking at an online course taught in a fully online asynchronous MLIS program. The effectiveness of collaborative learning activities implemented in this course was investigated using multiple research methods. First, students in this online course were surveyed about their perception, satisfaction, and expectations of collaborative learning experience and their sense of online learning community. Secondly, the online course discussion board was examined using content analysis to identify the occurrences of knowledge sharing, knowledge creation, and social learning happened during the discussion. Next, self-selected students will be interviewed to get further understanding on what factors contribute to their success or failure in this online course. The ultimate purpose of this case study is to develop a tool set that MLIS online instructors can customize and use to evaluate their courses and to improve their students' overall learning experience and outcome.

To Share or Not to Share?: A Comparative Analysis of Data Sharing Factors by Different Academic Positions

Yunseon Choi^a, Changwoo Yang^a, and Youngseek Kim^b

^aValdosta State University, Georgia, USA

^bUniversity of Kentucky, Kentucky, USA

yunchoi@valdosta.edu, cyang@valdosta.edu, youngseek.kim@uky.edu

ABSTRACT

The significance of sharing research data has been critically discussed since data sharing is an essential matter in scientific research where the process needs to create and use the vast amount of data in data-intensive research environment. The institutional or disciplinary context is important to understand research practices and data re-use in scientific fields which encourages collaboration among researchers and promotes their research. However, there have been little studies on data sharing behaviors within institutional or disciplinary context. This study develops a research model based on the integration of institutional theory and the theory of planned behavior by focusing on the community norm of data sharing. This research investigates how essential data sharing factors including regulative pressure by journals, normative pressure, scholarly altruism, perceived career benefit and risk, and perceived effort differ across diverse academic positions such as graduate/post-doctoral researchers, and assistant, associate, and full professors. The survey was conducted with researchers in U.S. academic institutions in STEM disciplines, such as physical sciences, biological sciences, engineering, health sciences, and social sciences, and the total of 1,656 responses were collected. A Multivariate Analysis of Variance is employed to examine the hypothesized relationships between data sharing behaviors and academic positions in the research model. This research will provide theoretical and practical implications for encouraging data sharing in research communities and developing data sharing policies for funding agencies, journal publishers, and academic institutions.

Towards Quality: A Project to Systematically Develop Quality Matters Skills and Capacities for an Online Department

Kyle M. L. Jones^a, Angela Murillo^a, and Ayoung Yoon^a

^aIndiana University-Indianapolis (IUPUI), USA

kmlj@iupui.edu, apmurill@iu.edu, ayyoon@iupui.edu

ABSTRACT

A three-person faculty team from the Department of Library and Information Science (DLIS) at Indiana University-Indianapolis (IUPUI) is developing Quality Matters competencies and peer-training artifacts to help design and evaluate online courses. DLIS teaches graduate students online; however, the department recently developed an undergraduate minor and major in the broad area of "data studies," which will include online courses. There is a significant need in the department to develop new courses and to do so according to best practices, which the Quality Matters program has identified.

Through its 41 standards, Quality Matters sets research-based expectations for how online courses should be developed, though it makes no claim to the substantive content of a course. Certified Peer Reviewers use the Quality Matters rubric to evaluate courses and make recommendations for the improvement of courses. The rubric covers eight categories: 1. Course Overview and Introduction; 2. Learning Objectives; 3. Assessment and Measurement; 4. Resources and Materials; 5. Learner Engagement; 6. Course Technology; 7. Learner Support; and 8. Accessibility

Each team member is working to achieve Certified Peer Review status, develop standards-based courses, and build artifacts (e.g., course site templates) aligned with Quality Matters standards to improve online education in the department. The team is sharing its work with institutional colleagues and developing peer-to-peer workshops. The poster will describe the team's motivation, goals, successes, pain points, and work-to-date.

TOPICS

online learning; standards; administration

Infusing Diversity, Cultural Competence, and Social Justice into an LIS Curriculum

Nicole D. Alemanne, Colette Drouillard, and Xiaoai Ren

Valdosta State University, USA

ndalemanne@valdosta.edu, cldrouillard@valdosta.edu, xren@valdosta.edu

ABSTRACT

This poster reports on research being conducted by faculty in the Valdosta State University (VSU) Master of Library and Information Science (MLIS) program on identification and implementation of best practices for infusing concepts of diversity, cultural competence, and social justice into the VSU MLIS curriculum. It is essential that as emerging professionals, students in our MLIS program see themselves reflected in the curriculum and master theoretical and practical knowledge to be able to develop inclusive library collections, services, and programs that reflect diverse patrons' lived experiences and provide opportunities for all patrons to understand the experiences of people whose identities differ from theirs. This infusion of diversity, cultural competence, and social justice concepts plays a key role in the VSU MLIS curriculum and we strive to ensure it occurs in both core courses (required for all students) and elective courses.

Research in progress for three courses is highlighted: an elective course on multicultural children's literature, a core course that fulfills the program's collection development requirement, and an elective course on services to diverse populations that is being developed. These represent three approaches to infusing concepts of diversity, cultural competence, and social justice into the curriculum: continual improvement of electives that focus on the concepts; revision of core courses to explicitly address the concepts; and development of new courses that expand our focus on the concepts. Research methods include reviews of the literature, expert interviews, content analyses of syllabi, and surveys of LIS programs.

Users' Hidden Needs: An Investigation of Information Sharing Behaviors on Online Participatory Platforms

Yunseon Choi

Valdosta State University, USA

yunchoi@valdosta.edu

ABSTRACT

As a marketing strategy, Word-of-Mouth is a valuable source which affects the decision before making the purchase, and its significant influence on consumers' buying decision has been prominently discussed in such areas as marketing and advertising. Online reviews can be referred to as the new Word-of-Mouth in the Digital Age. Word-of-Mouth became more critical, as the quality of online reviews is relatively credible. Despite the proven evidence of online reviews as a successful strategy for supporting a decision for purchasing products, the helpfulness of online reviews has not been well understood within the Library communities. This study examines the helpfulness of online reviews as the new Word-of-Mouth to investigate whether online reviews would be useful to understand user needs in selecting books. Understanding user needs and the patterns in sharing information about books is significant in organizing and providing effective access to resources in libraries. This study aims to classify the characteristics associated with user sentiments and attitudes by modeling behavior features on online platforms. This study will contribute to user studies regarding illustrating underlying patterns and trends of users' information sharing behaviors.

The Portrait of Global Cultural Leaders & the Framework of Cultural Leadership in the 21st Century: And their Influence on Preparing Cultural Human Resources in China

Jing Zhang and Jiaqi Liao

Sun Yat-sen University, Guangzhou, China

zhangj87@mail.sysu.edu.cn, liaojq7@mail2.sysu.edu.cn

ABSTRACT

The global cultural development in the 21st century is extremely diverse. As a kind of soft power representing national image and national identity, cultural competition is also becoming fiercer together with the enhanced diversity of cultural development and the influence of cultural communication empowered by the Internet. Therefore, to cultivate cultural confidence domestically and to build cultural leadership abroadly have become key cultural strategies and policies adopted by various nations.

Cultural leadership can be manifested at individual level and overall level, the former centers on cultural leaders while the latter focuses on the whole cultural human resources, both are core to the discourse right for cultural leadership of a nation or a region. And also point to the fundamental key issue of preparing cultural human resources in the new era.

Based on this global background, we believe that to investigate, to picture and to construct the portrait of global cultural leaders and the framework of cultural leadership in the 21st century can help to, firstly, comprehensively understand the status of global cultural leaders, and secondly, effectively provide references to the education and preparation of cultural human resources for Chinese cultural industry.

Information Seeking Behaviors in Different Study Settings

Yiwei Wang, Jiqun Liu, Chirag Shah

Rutgers University, USA

yw498@scarletmail.rutgers.edu, jl2033@scarletmail.rutgers.edu, chirags@rutgers.edu

ABSTRACT

Empirical studies of information seeking and retrieval (IS&R) behaviors that invite real users are generally conducted in two types of settings: laboratory setting and remote setting. In lab studies, participants are usually invited to a computer lab and perform search tasks on a device provided by the researcher. In remote studies, participants are instructed to work at their own work or home environment using their devices. Their information seeking behavior and experience are often captured by browser plugin and (sometimes) coupled with online diaries (e.g., He & Yilmaz, 2017). While the lab setting gives researchers a great amount of control, it is often criticized for being too artificial which may potentially lead participants to behave unnaturally. However, there has not been clear evidence that if study settings affect how participants look for information online. This poster reports on a work in progress investigating the influence of study settings on users' online information seeking behavior. Thirty-six college students finished four search tasks individually in a 1-2-week period. Two tasks were completed in a computer lab while the other two were completed at a location of their choice. They were also interviewed about their experiences in two different settings. This study will provide implications to both future IS&R study design and results interpretation. Preliminary results showed that participants spent more time on web sources when they worked remotely. They felt more relaxed in the remote setting while were also frequently distracted by text/SNS messages or other things at school or home.

REFERENCE

He, J. and Yilmaz, E. (2017). User behavior and task characteristics: A field study of daily information behavior. In proceedings of the ACM Conference on Human Information Interaction and Retrieval, 2, 67-76.

TOPICS

interactive information retrieval; information seeking; research methods

Building a Culture-Rich Environment in the Organization and Selection of Books: An Analysis of GoodReads Reader Reviews on Multicultural Books for Children

Yunseon Choi and Colette L Drouillard

Valdosta State University, USA

yunchoi@valdosta.edu, cldrouillard@valdosta.edu

ABSTRACT

It is essential that all children see themselves reflected in collections, services and programs developed by librarians. Multicultural literature serves as a powerful tool in enabling children to gain a better understanding of both their own culture and the cultures of others. Through this deeper knowledge, relationships can be strengthened, bridging the gap between children from diverse cultural backgrounds. In order to make informed decisions, librarians have used book reviews and award lists from authoritative sources to guide book selection decisions. As GoodReads, a social website for “readers and book recommendations,” has become more popular, the online reader ratings and reviews have received a great deal of attention in the business domain due to their perceived influence on customer purchasing decisions. Few studies have been done that look at the potential of online book reviews such as those shared by readers on GoodReads for library book selection and organization. Given the potential commercial, library, and academic interest in GoodReads, this research seeks to identify insights into reader ratings and reviews that analysis could provide. To ascertain the significance of the customer ratings and reviews on Goodreads we will investigate subjectivity and polarity of online reviews with neutral, positive, or negative sentiment with a list of books selected for American Library Association (ALA) Youth Media Honors and Awards for multicultural literature (Pura Belpré, Coretta Scott King, Schneider, and Stonewall). The study contributes to increasing awareness of the potential and challenges associated with using online reader reviews for library book selection.

The Use of STEM Programming to Create Global Citizens

Savanna Draper and Thura Mack

University of Tennessee, Knoxville, USA

sdraper1@vols.utk.edu, tmack@utk.edu

ABSTRACT

A global citizen sees the world through a wide lens. This view is critical if teachers are to educate their students about their roles in a global society. Academic libraries can play a part in educating for global citizenship by facilitating STEM programs and conferences for educators. At the University of Tennessee, The Big Orange STEM Saturday for Educators (EduBOSS) provides an opportunity for teachers to participate with an experiential learning method which can serve as a model for their schools to use in helping students acquire a global thinking practice. The EduBOSS initiative creates a standard of practice and dialogue among various entities of STEM communities. This educational concept is creating a practice that puts a standard into place so students and teachers get consistent information and guidance about STEM college expectations and careers.

Foundation of EduBOSS

STEM programming fosters significant relationship building between academic libraries and K-12 schools, area STEM businesses and organizations, and campus departments. EduBOSS, which can be replicated at other institutions, is proving to be a successful model that is sustained through strategic partnerships and is creating a community of practice that promotes STEM teaching and learning.

Using Educators as a Tool

Educators are vital in producing global citizens. Academic libraries are getting better at addressing this trend and working to provide programs that will aid educators. Educators are responsible for cultivating students' experiences to see beyond their norm. The University of Tennessee's EduBOSS program invites educators to an academic library setting to have conversations about their needs. We provide space for them to meet with experts and design customized learning experiences that they can transfer back to the classroom. This method is called inquiry-based instruction which expands on what educators already know about STEM topics. It is becoming a benchmark for emerging STEM literacy elements and practices.

Creating Global Citizens

Educators use the takeaways gained from the EduBOSS conference and implement them into their classrooms. This helps reinforce students' engagement in STEM topics. Connecting students with these real-world experiences helps them recognize how they can fit into global communities. These new applications help to grow their interest and encourages them to seek more opportunities to learn about STEM in higher education.

What do Global Researchers Mean When They Say Online Learning?

Vandana Singh

University of Tennessee, Knoxville, USA

vandana@utk.edu

ABSTRACT

Apparently, 46 different things! This work in progress poster will present a visualization of the overtime growth of definitions of “Online Learning”. Through a systematic literature review of the past 25 years (1993-2018), we have discovered that 37 peer-reviewed publications defined online learning in 46 different ways. In this poster, we will present these definitions and results of content analysis on these definitions. Content analysis of these definitions revealed 18 different key terms are used to define online learning. We also present temporal and global trends in the use of these key elements while defining Online Learning. We will discuss the similarities and differences in these definitions and elucidate a concept map about essential elements in the definitions of online learning. It is important to understand the growth of the concept of online learning because of the confusion that arises because of a lack of agreement on what constitutes online learning. As is evident from this research, a variety of terms are used to describe teaching and learning that occurs in a nontraditional physical classroom setting. The overlapping definitions, concepts, elements and inconsistent use of terminology causes confusion and leads to a continuation of unsure descriptive narratives from global researchers, further muddying the waters.

The Use of Investigation Video Games to Teach Reasoning Skills in the LIS Classroom

John Burgess and Anna Grace Wallace

University of Alabama, USA

jtfburgess@ua.edu, agwallace1@crimson.ua.edu

ABSTRACT

For librarians engaging in research support and reference services, effective use of reasoning skills is essential to a successful outcome. Abductive reasoning is used to clarify the patron's request, deductive reasoning is used to select the best resource from among relevant library or publicly available holdings, and inductive reasoning is used during the search process to revise the search string based on the search results. Despite being essential, reasoning skills are difficult to teach in a classroom setting, and few tools exist that are specifically designed to teach these skills for LIS professionals. Using roleplaying exercises is one approach to teaching reasoning skills, but doing so has significant limitations. These include scheduling difficulties for asynchronous classroom environments, the challenges in public performance for students working to overcome social anxiety, and the considerable class time required for repetition-based skill learning. This work-in-progress poster discusses the feasibility of using commercially available video games that feature investigation mechanics as a way to teach reasoning skills to students of research support and reference. The concept under investigation is that commercially available games, being designed for entertainment value, are more engaging and available on more platforms than traditional educational games. Using these games to supplement formal instruction provides students with opportunities to practice individually and at their own pace, providing a pedagogical reinforcement tool with flexibility and appeal. Next steps include evaluating student performance in course assignments with and without the use of video game support.

Public Librarians: Toward a Typology of Professional Identity

Cameron M. Pierson

Victoria University of Wellington, Wellington, NZ

cameron.pierson@vuw.ac.nz

ABSTRACT

Librarian professional identity formation can be understood as a process over time influenced by social interaction. Librarianship, therefore, provides a common context for individual identity development. As this service-oriented profession faces persistent change, understanding of practitioner identity is key to understanding the interaction between the librarians who compose the library-as-intuition and those they serve. Therefore, it is ever more relevant to examine how self-perception of professional identity may inform a typology of practitioners, what the distinctions are between these practitioner-types, and why these distinctions exist. The issue of defining the librarian is historic. Previous strands of research have attempted to characterise an archetypical librarian with little success. Efforts thus far, however, have not utilized professional identity as a lens to examine the practicing librarian to address how self-perception influences behaviour and therefore interaction between practitioner, as the institutional embodiment of libraries, and the public.

This research utilizes a mixed-methods approach to investigate the professional identity of public librarians in New Zealand. Phase one utilised a questionnaire operationalizing aspect of Pierson's (2019) model of librarian professional identity. Phase two identified respondents from the questionnaire for interviews to explore responses and individual identity perception as a public librarian in New Zealand. Preliminary results suggest little overt reflection on professional identity and its influence on interpersonal interaction between practitioner and patron. Furthermore, emerging trends also suggest a pattern of arrangement of perception wherein some practitioners view a separation between their professional and personal identities, some practitioners do not, while others perceive a fluctuating separation.

Exploring Influences of the Social Context on Task-Based Information Seeking Behavior

Eun Youp Rha and Nicholas Belkin

Rutgers, The State University of New Jersey, USA

eunyoup.rha@rutgers.edu, belkin@comminfo.rutgers.edu

ABSTRACT

Task has been known as a fundamental concept that helps understand information seeking behavior, as it triggers people's information seeking activity. A number of studies highlight relationships between task and information seeking, examining how task types and qualities of task performers influence information seeking and searching behavior. However, little is known about effects of the social context of task on information seeking behavior. Therefore, this study explores social aspects of task-based information seeking behavior, particularly how individuals' cognition and behavior are influenced by their social background when they engage in tasks. The main theoretical framework of the study is cognitive sociology that recognizes individuals' socio-mental acts shaped within their thought communities throughout their socialization. The study design is a qualitative case study using a cross-context comparative approach. Two disciplines in academia, humanities and natural sciences, were selected as the types of thought communities to be compared. The research subjects were 6 humanities scholars and 6 natural scientists working at the same university in the US, all tenured. They participated in either an individual in-depth interview (up to 2 hours) or a diary study (one month) that inquired of their perceptions and actions related to a particular task. The analysis is conducted according to three research questions: differences of individuals' understanding of a task (RQ1), identification of information problems (RQ2), and choice of action for information seeking and use (RQ3). This study will contribute to theoretical and empirical understandings of social aspects of task-based information seeking behavior.

#Metoo: People's Concerns, Emotions, and Shared Information on Twitter

Iman Tahamtan

University of Tennessee Country, Knoxville, TN, USA

tahamtan@vols.utk.edu

ABSTRACT

This study uses text mining to explore the tweets posted and shared by people regarding the #MeToo movement. We used the Twitter's Application Programming Interface (API) to collect English language tweets that contained #MeToo or MeToo keywords. Using RStudio, 17956 tweets (re-tweets excluded) were retrieved and analyzed. The data was cleaned, tweets with more than 5 hashtags and screen names with multiple tweets were excluded, resulting in 10952 tweets. The most frequently shared words were #metoo (n=10701), women (n=2728), movement (n=1879), sexual (n=1330), harassment (n=818), rape (n=724), accused (n=717), don't (n=678), people (635), and stand (n=510). The most frequent negative sentiments were harassment (n=638), rape (n=575), assault (n=280), abuse (n=239), afraid (n=212), uncomfortable (n=172), allegations (n=165), bad (n=136), hurts (n=136) and wrong (n=133). The top positive sentiments were support (n=223), love (n=119), powerful (n=86), golden (n=73), survivor (n=68), respect (64), safe (57), free (53), protect (53) and supporting (n=50). The network analysis of keywords with a correlation of higher than 0.6 demonstrated 5 clusters of keywords: {study, hurts, mentor, afraid, @nypost}, {#metoo, forces, legal, test}, {represent, caught, middle, accusers, unions}, {#fightfor15, standing, UK, workers, fighting}, and {teaching, consent, debate, kids}. Results demonstrated the major topics shared by people on Twitter regarding sexual harassment and the MeToo movement. For example, one cluster pointed to a recent study which indicated managers are afraid of mentoring women after the #MeToo movement.

The Implementation Plan of E-learning to Fulfill New Demands of Librarians' Continuing Education in City Library Network Building

Jing Zhang, Siyu Li, Qianli Lin, Liqiong Tan

Sun Yat-sen University, Guangzhou, China

zhangj87@mail.sysu.edu.cn, lisy25@mail2.sysu.edu.cn

ABSTRACT

The changing trends in a rapidly evolving information society ask the LIS education to play a more and more important role in directing LIS professional not only by providing renowned degree programs in LIS schools but also by leading advanced continuing education for librarians.

Under the background of China's public culture policies, GuangZhou started to build a public library services system named "Guangzhou City of Libraries" in 2015. The current situation of human resources is the key problem to be solved, specifically, the severe shortage of workforce, the professionalism disqualification, and the unsatisfactory continuing education (Zhang, et.al., 2019a). According to the status survey, the continuing education which is mostly provided by local library associations, cannot satisfy the needs which manifests in limited coverage of training themes and audiences (Zhang, et.al., 2018).

This is a further study based on the data and results of the series of formal studies conducted by the authors. An implementation plan of librarians' continuing education for "Guangzhou City of Libraries" in the next two years has been drafted with a part of a detailed plan using e-learning to help make the continuing education professional, systematic, thematic, long-term tendency and extensive and fulfill new demands.

This e-learning part, together with the whole draft implementation plan, will be presented to an advisory group. Adopting questionnaire and interview as the methods, the opinion of the advisory group on the feasibility, availability, validity, authority and risk of using e-learning in continuing education for large number of librarians in "Guangzhou City of Libraries" will be collected and analyzed. The opinion on the implementation plan of e-learning to fulfill new demands of librarians' continuing education will be summarized and discussed.

LIS Education in the UAE: Exploring School Librarian Qualifications and Opportunities

Kristine N. Stewart^a, Mireille El Najjar^b, Suhaila Al Mansoori^c

^aZayed University, Abu Dhabi, UAE

^bHorizon Private School, Abu Dhabi, UAE

^c Zayed University, Abu Dhabi, UAE

kristine.stewart@zu.ac.ae, mireille.elnajjar@gmail.com, suhaila.almansoori@zu.ac.ae

ABSTRACT

School libraries provide resources designed to support curriculum, students, and staff and are ideally run by professionally trained school librarians. However, professional qualifications required of school librarians vary greatly, based on the type of school, but also where (in the world) the school is located. In the USA, school librarians are usually expected to earn a master's degree in library science from an American Library Association (ALA) accredited program and have a teaching certification and/or license to work as a school media specialist. In the United Arab Emirates (UAE), there are no accredited LIS programs and presently, no LIS programs at all (the last unaccredited program was discontinued in 2018).

This works in progress poster reports findings from the first nationwide survey of school librarians in the UAE. Data is being collected through interviews, surveys, and observations during professional development seminars provided to school librarians. Preliminary findings from this mixed-methods study highlight the vast differences in school librarian qualifications within the UAE and suggest the need for more professional development opportunities as well as an accredited LIS program within the country. The opportunities and challenges for LIS education within the UAE are discussed along with the potential roles of local and government authorities and councils (e.g. Ministry of Education, Department of Education and Knowledge, and Knowledge and Human Development Authority) in school librarians' qualifications and trainings. Difficulties that may be encountered when using international frameworks to provide LIS education while honoring local customs and cultures will also be discussed.

TOPICS

school libraries; continuing education; education programs/schools; community and civic organizations

Impact of a Study Abroad Course on Cultural Sensitivity

Jennifer Luetkemeyer and Rebecca Jordan

Appalachian State University, Boone, NC, USA

luetkemeyerjr@appstate.edu

ABSTRACT

Our study investigates the cultural sensitivity of master's students enrolled in a short-term faculty-led study abroad. Participants ($n = 7$) include graduate students enrolled in library sciences and reading education master's programs. Pre- and post-course measures of cultural sensitivity, students' reflection on their own cultural heritage, and experiences interacting with another culture while abroad will be assessed. The central theory of this study is that as one's experience of cultural difference becomes more complex and sophisticated, one's potential competence in intercultural relations increases (Bennett, 1986, 1993). This competence is vital in school-based professionals given the multiculturalism present in today's schools. We will examine students' intercultural sensitivity using the Developmental Model of Intercultural Sensitivity (DMIS) which posits that individuals move through six orientations around cultural difference (Bennett, 1986). The first three (denial, defense reversal, and minimization) can be considered ethnocentric whereas the final three (acceptance, adaptation, integration) can be considered ethno-relativistic. As teachers interact with people from other cultures, they will be better prepared to interact with children, families, and colleagues from other cultures. Mixed methods will be used to analyze data. Participants' personal cultural narrative and international journals will be analyzed using thematic coding, while t-tests and descriptive analysis will be performed on quantitative measures. Anticipated outcomes include greater intercultural sensitivity. Results will be disaggregated across educational experience.

REFERENCES

- Bennett, M. J. (1986). A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relations*, 10(2), 179–196.
- Bennett, M. J. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In R. M. Paige (Ed.), *Education for the intercultural experience* (pp. 21–71). Yarmouth, ME: Intercultural Press.

Criteria Used for Selecting e-book Products: Connection between Practices and Formal Education in LIS Schools

Mei Zhang

University of Wisconsin- Madison, Information School, U.S.

mzhang48@wisc.edu

ABSTRACT

This work-in-progress research focuses on exploring the selection criteria used by academic librarians to purchase e-book products, and then exploring the influence of formal education on librarians' selection practices. This research, based on one-on-one interviews with 20 librarians from 19 different institutions, has collected information on the selection criteria for e-book product purchasing. Particularly, this poster will present four criteria that were not fully explained in previous studies, including: content, perpetual access, copyright of embedded multimedia, and relationships with a provider. Then this research will examine how library school collection development textbooks represent e-book selection strategies by analyzing the selection criteria discussed in the textbooks used in collection management courses from four ALA-accredited programs. This poster will present the similarities and differences between criteria from textbooks and criteria used in practice.

Investigating the States of Task-based Search Interactions: A Behavioral Economics Approach

Jiqun Liu and Yiwei Wang

Rutgers, the State University of New Jersey, NJ, USA

jl2033@scarletmail.rutgers.edu, yw498@scarletmail.rutgers.edu

ABSTRACT

How users think, learn, and make decisions when interacting with search systems is central to the area of Interactive Information Retrieval (IIR). Many cost-benefit analyses, simulation models, and recommender algorithms were built upon numerous unrealistic assumptions about human capacity in multiple aspects and ignored the potential impacts of cognitive biases and boundaries of human rationality (Liu & Shah, 2019). Thus, several fundamental questions still persist: why do users learn and behave in the way they do in real-life situations? What are the states (e.g., mental states) of search interactions that contextualize and shape users' search strategies and performances? In this work, we seek to build and empirically test a behavioral economics framework, aiming to answer the questions and address the limitations of previous studies by (1) linking the "isolated" insights from IIR studies together under a broader, mathematically rigorous theoretical umbrella, (2) bridging IIR with the insights from behavioral economics and cognitive psychology (e.g., theories and evidences about the features and limitations of human cognition and perception). Within the behavioral economics framework of search interaction, we aim to answer the following more specific research questions: (1) What are the mental states of search interactions in complex search tasks? (2) How are these mental states associated with users' varying expectation levels/criteria of satisficing in terms of usability and system performance? (3) What are the impacts of users' cognitive biases on the transitions of their mental states and associated search tactics in task-based search interactions? The ultimate goal for this line of research is to develop an adaptive state-based intelligent system that can dynamically generate system supports for users based on their (1) overarching task environments; (2) long-term knowledge structures; (3) immediate states of search tasks/interactions (e.g., mental states, encountered problems).

REFERENCE

Liu, J., & Shah, C. (2019). Investigating the impacts of expectation disconfirmation on Web search. In *Proceedings of the ACM Conference on Human Information Interaction and Retrieval* (pp. 319-323). ACM: New York, NY.

TOPICS

interactive information retrieval; information seeking; behavioral economics

Integrating Orientation Content into a Required First Semester Online Course to Support New Online Graduate Student Success

Colette L. Drouillard and Linda R. Most

Valdosta State University, USA

cldrouillard@valdosta.edu, lrmost@valdosta.edu

ABSTRACT

The Valdosta State University MLIS program is a fully online asynchronous program. It was created in the early 2000's to meet the needs of Georgia academic and public library paraprofessionals who required the MLIS degree to progress in their careers. Because many of these employees were unable to relocate for an out of state face-to-face (F2F) MLIS program or enroll in one of the limited number of online MLIS degree programs -- most required at least some scheduled weekly synchronous online course participation --the state and the university chose to create this MLIS program as both asynchronous and online but originally with a required F2F four-weekend Foundations course.

In 2010 Foundations moved fully online with a weekend on-campus orientation. By 2017, the program was drawing a pool of applicants from 30+ states so a F2F orientation no longer made financial or pedagogical sense. Initially online orientation ran prior to the first week of classes. Two semesters later, we decided to integrate orientation content into the Foundations course to provide a more appropriate mode of reaching the students at their point of need. This poster will document the evolution of orientation from F2F to online and its ongoing integration into the course. Our goal for students' first semester experience is to utilize a series of online labs to increase their interaction with the material and their connection to the program by scaffolding content, discussions and assignments relevant to the course, the overall program, and university processes and procedures.

First Gen, PhD: Understanding the Information Horizons of First-Generation Graduate Students Pursuing Research-Intensive Careers

Michelle Parker^a and Danielle Pollock^b

^aUniversity of Tennessee, Knoxville, USA

^bSimmons University, USA

mparke48@vols.utk.edu, danielle.pollock@simmons.edu

ABSTRACT

How do first-generation college students make the transition to graduate school, and subsequently, research-intensive professions? What information sources are sought and what barriers are experienced by this diverse population as they enter the global community of scholars? Information science researchers have recognized the responsibility to understand and provide support for the information needs of first-generation college students; however, much of the LIS research to date has been conducted at the undergraduate level (see Ilett, 2019). Less is known about the information needs and practices of those first-generation students who decide to pursue graduate education, and subsequently, research-intensive careers. This poster presents a method for studying first-generation graduate students' information needs in early career decision making, drawing from the information horizons framework developed by Sonnenwald (1999) to examine when first-generation graduate students make significant education and career-related decisions, sources used when seeking career-related information, the role of individuals and information and communication technologies (ICTs) in this information seeking, and the impact of personal and professional values on graduates' decisions in pursuing research-intensive professions and early professional positions.

REFERENCES

- Ilett, D. (2019). A critical review of LIS literature on first-generation students. *portal: Libraries and the Academy*, 19(1), 177-196.
- Sonnenwald, D. H. (1999). Evolving perspectives of human information behavior: Contexts, situations, social networks and information horizons. In *Exploring the contexts of information behavior: Proceedings of the Second International Conference in Information Needs* (pp. 176-190). London: Taylor Graham.

Academic Censorship and the Construction of an Alternative Chinese Narrative: A Preliminary Analysis of *China Quarterly*

Pei-Ying Chen^a and Kai Li^b

^aIndiana University, Bloomington, USA

^bDrexel University, USA

peiychen@iu.edu, kl696@drexel.edu

ABSTRACT

The expanding censorship in China and its potential threats to democracy and freedom has been of growing concerns along with the rise of China in global politics, economics, and sciences. Parallel to this is the attempt of Chinese authorities to promote the “Chinese model” and construct an alternative Chinese narrative different from the Western mainstream. In this research-in-progress project, we focus on one of the recent controversies centered around academic censorship of the high-profile *China Quarterly* published by Cambridge University Press as a case in point to examine how academic censorship, including self-censorship of Chinese authors, might be complementary to constructing an alternative narrative about China. Specifically, we look at the correspondence and trace the changes between research topics (censored vs. uncensored) and the author’s nationality (China-based vs. foreign-based). The analysis is based on bibliometric data of 1713 research articles published in *China Quarterly* between 1960 and 2017 indexed in Web of Science, including title, abstract, author keywords, year of publication, cited references, as well as author information (e.g., full name and affiliated institution). We expect to find the emergence and declines of specific topics along with the corresponding changes in authorship over time. Given the emphasis on intellectual freedom in education for information and library science, this research project should serve to advance our understanding of the relationship between academic freedom, academic censorship, and the narrative construction of a rising authoritarian regime.

Usability as a Method to Analyze a Library Search Box and Interfaces

Kenneth Haggerty

University of Memphis, Memphis, USA

khggerty@memphis.edu

ABSTRACT

Usability testing is a valuable tool to measure the satisfaction and ease of use of a website or application. In the library setting, usability can be used to help librarians learn how easily patrons are able to navigate a library website. In a usability study on the library search function for an academic library, the researcher of this study conducted a task analysis and think-aloud interviews with 20 participants (10 undergraduates and 10 graduate students/faculty/staff) to measure the intuitive design, efficiency of use, and ease of learning of the search box and interfaces. Participants were asked to conduct a total of nine searches. The first six searches asked users to find a specific resource using the University Libraries search box. The last three searches asked users to search for topics of interest while thinking aloud, meaning they were encouraged to share their opinions on the search functionality and interfaces as well as anything pertaining to the University Libraries.

The goal of the study was to answer two research questions: 1) If unprompted, do participants use the existing tabs (QuickSearch, Journal Titles, Databases) in the existing default search box? 2) When prompted, do users understand and value additional search tabs in the existing default search box? After an initial analysis, the researcher was able to gain an idea of the searching habits of the students, faculty and staff and was able to draw three primary conclusions to help with the future design of a new search box. First, the students, faculty and staff rarely use the links located below the search box on all three tabs. Thus, these links should be revised or removed. Second, the students, faculty and staff rarely use the journal titles tab. Third, although students, faculty and staff use the databases tab more often than the journals tab, almost half of users had never or almost never clicked on the database tab.

Every library is unique and needs to take steps to understand the searching habits and information literacy abilities of its patrons. This study gave the researcher an understanding of the usability issues students, faculty, and staff encounter while searching for information on the University Libraries website. Thus, going forward the researcher can develop a library search box that is simplified and requires less understanding of scholarly communications.

“What I Wish I Had Seen”: Slash Fanfiction Writing as Queer World-Building

Diana Floegel

Rutgers University, New Brunswick, USA

djfl85@scarletmail.rutgers.edu

ABSTRACT

This exploratory study examines how queer slash fanfiction writers reorient heteronormative entertainment media (EM) content to create queer information worlds. Constructivist grounded theory was employed to explore queer individuals' slash fanfiction reading and creation practices. Slash fanfiction refers to fan-written texts that recast heteronormative content with queer characters, relationships, and themes. Theoretical sampling drove ten semi-structured interviews with queer slash writers and content analysis of both Captain America slash and material features found on two online fanfiction platforms, Archive of Our Own and fanfiction.net. “Queer” serves as a theoretical lens through which to explore non-heteronormative perspectives on gender and sexuality. Participants' interactions with and creation of slash fanfiction constitute world-queering practices wherein individuals reorient heteronormative content, design systems, and form community while developing their identities over time. Findings suggest ways in which queer creators respond to, challenge, and re-orient heteronormative narratives perpetuated by EM and other information sources. This pilot study only begins to explore the topic with ten interviews. The participant sample lacks racial diversity while the content sample focuses on one fandom. However, results suggest future directions for theoretical sampling that will continue to advance constructs developed from the data. The research contributes to emergent perspectives on information creation and queer individuals' information practices. In particular, findings expand theoretical frameworks related to small worlds and ways in which members of marginalized populations respond to exclusionary normativity.

“They Don’t Even See Us”: Intersectional Approaches to Understanding Disability in LIS

Amelia N. Gibson and Kristen Bowen

University of North Carolina at Chapel Hill, USA

angibson@email.unc.edu, klbowen2@live.unc.edu

ABSTRACT

Although the field of library and information science (LIS) has long claimed an interest in equity, its theorization of disability, race, and gender has largely ignored critical intersectional frameworks (e.g., Crenshaw (1989) and Hill Collins (2012)). LIS education has also largely ignored complex critical examinations of identity - especially critical examinations of race and disability (Gibson, Hughes-Hassell, & Threats, 2018). This poster summarizes a portion of the findings from the authors’ ongoing study about the information seeking and sharing experiences of autistic people (<https://autisticadvocacy.org/about-asan/identity-first-language/>) and their families in North Carolina. Using Gibson and Martin’s (2019) information marginalization framework the authors explore how issues such as endemic lack of Spanish-speaking staff, lack of material and service support for disabled people, over-policing disabled people of color, and biases related to race, parenting, and disability work to marginalized disabled people of color in public information spaces, rendering them both invisible and hyper-visible. The authors integrated these findings into a new course on disability and information which, among other things, addressed the implications of disciplinary and individual frameworks for understanding, researching, and practicing at the intersections of race, gender, ability/disability, nationality, economic status, and language in information spaces and systems.

TOPICS

critical librarianship; information rights; social justice; community engagement

REFERENCES

- Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: a black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics. *University of Chicago Legal Forum*, 1989(1), Article 8.
- Gibson, A. N., & Martin, J. (2019). Re-Situating information poverty: Information marginalization and parents of individuals with disabilities. *Journal of the Association for Information Science & Technology*, 70(5). <https://doi.org/10.1002/asi.24128>
- Gibson, A. N., Hughes-Hassell, S., & Threats, M. (2018). Critical race theory in the LIS curriculum. In J. Percell, L. Sarin, P. Jaeger, & J. Bertot (Eds.), *Advances in Librarianship Volume 42*, Re-Envisioning the MLIS: Perspectives on the Future of Library and Information Science Education. Emerald.
- Collins, P. H. (2012). Social inequality, power, and politics: Intersectionality and American pragmatism in dialogue. *Journal of Speculative Philosophy*, 26(2), 442-457.

The Hoax and the President: Historical Perspectives on Politics, Truth, and Academia

SIG Sponsors:

Historical Perspectives SIG (Anthony Bernier, San Jose State University, USA; Jenny Bossaller, University of Missouri, USA)

Presenters:

Dr. Sharon McQueen (Biographer and Sociocultural Historian, USA)
Dr. Mark Peterson (Woodrow Wilson Presidential Library & Museum, USA)

ABSTRACT

McQueen recounts the sensational “Great Moon Hoax” of 1835, reported in six daily installments in *The Sun* in which Sir John Herschel, renowned British astronomer, discovered life on the moon—life so strange and marvelous that it almost defied belief (Copeland, 2007). The story caused a sensation around the country, and around the world. Within a few decades, “sensationalism” became known as a style of journalism meant to excite and entice the public with misleading headlines, faked pictures, faked interviews, and faked stories (Mott, 1950). Elements of the Moon Hoax remain in our current news landscape. This sociocultural history traces instances of fake news throughout history, examines commonalities, delineates major themes, and explores what the long history of fake news has to teach us today, ultimately asking how studying the history of fake news might assist today’s librarians.

Peterson discusses the changing practices of librarianship in early research institutions in the United States and the role that libraries played in important political decisions of the early 20th century. A new model of inquiry and also library collection development arose in the last decades of the nineteenth century with the establishment of Johns Hopkins University, followed by the Ivy Leagues. Their influential students included Woodrow Wilson, twenty-eighth president of the United States whose administration included politicians, bankers, and academics whom he met as a history professor and then president of Princeton University. Peterson will discuss how library practices in these early research institutions supported, but also limited, Wilson’s most influential ideals and accomplishments, such as the Paris Peace Conference and the League of Nations.

REFERENCES:

- Copeland, D. (2007). “A Series of Unfortunate Events: why people believed Richard Adams Locke’s ‘Moon Hoax,’” *Journalism History* 33(3): 147.
- Mott, F.L. (1950). *American Journalism: a history of newspapers in the United States through 260 years, 1690 to 1950*. New York: Macmillan Company.

Archival Learning in a Global Context

SIG Sponsor:

Archival / Preservation Education (Sarah Buchanan, University of Missouri, USA)

Presenters:

Sarah Buchanan (University of Missouri, USA), Reem Alkhaledi (University of North Texas, USA), Andrea Copeland (IUPUI, USA), Suliman Hawamdeh (University of North Texas, USA), Johnathan Thayer (Queens College, USA), Ayoung Yoon (IUPUI, USA)

ABSTRACT

The Archival / Preservation Education SIG panel explores ongoing developments and innovative classroom pedagogy in teaching preservation and archival studies. Panel includes four presentations of 15 minutes each plus moderated Q&A. Presentations address the role and outcomes of original research assignments, teaching preservation online, a networked curriculum survey, and developing digital hands-on learning experiences; presenters bring perspectives from four states.

“Stepping into Original Research in Archival Practice” by Sarah Buchanan discusses application of the SAA GPAS framework to the design of an Archival Studies specialization in concert with programmatic student learning outcomes. The presentation assesses the role, origins, and outcomes of two years of students' original research papers on local/global issues and considers gaps in archival curricular studies and research on the archival profession.

“The Challenges of Teaching Preservation Online: Best Practices and Lessons Learned” by Reem Alkhaledi and Suliman Hawamdeh considers the preservation of three types of materials: physical printed formats, electronic material such as films, videos, and microforms, and digital material stored in databases and digital repositories. Presenters discuss the challenges involved in teaching preservation online and the ability to provide rich content.

“A Networked Survey of Archival Studies Curriculum: A Case Study from Queens College, CUNY” by Johnathan Thayer asks how do we best facilitate and navigate connections between students with global information contexts and work environments? The presenter reviews the results of a two-part GSLIS survey and invites participants' perspectives, ultimately seeking to extend our networks as archival educators beyond the walls of our classrooms (physical or virtual) and into an increasingly competitive and global job market.

“Online Archival Education and the Challenge of Meeting Experiential Learning Expectations” by Ayoung Yoon and Andrea Copeland discusses the process and strategies of developing an online archives management specialization as a part of a 100% online master's program. Our institution has employed strategies used in the online master's program and developed several new strategies while still conveying core archival concepts and theories.

The moderator facilitates Q&A within and across the four presentations.

Chatman Revisited: Re-examining and Resituating Social Theories of Identity, Access, and Marginalization in LIS

SIG Sponsor(s):

Multicultural, Ethnic, and Humanistic Concerns (Nicole Cooke, University of South Carolina, USA, Amelia Gibson, University of North Carolina Chapel Hill, USA, Joe Sanchez, Queens College (CUNY), USA)

Presenters:

Shawne Miksa (University of North Texas, USA), Bharat Mehra (University of Alabama, USA), LaVerne Gray (Syracuse University, USA)

ABSTRACT

Elfreda Chatman's work was among the first in information science to thoroughly and explicitly address information access and marginalization as social processes. In defining her theories of Information Poverty, Life in the Round, and Normative Behavior, Chatman introduced a number of important concepts to the discussion around information poverty and access, including *social norms*, *small worlds*, and *defensive information behaviors*. While Chatman's work began to describe the form and implications of power and social influence for information seeking and access, it was limited by many of the same commitments to colorblindness and the assumption of neutrality as other contemporaneous works of the time. Often sidestepping examination of race, sexuality, and gender identity, it more commonly cited other factors, such as stigma, income, and specific social norms and values as contributing to information access and poverty. This perspective made sense in light of the epistemic LIS culture that emphasized colorblindness and individuality and demonstrated a tenuous relationship with race, or "demographic" categories and concerns. Issue contributors are exploring the question, "How do identity and social structures (such as power, privilege, and policy) combine to enact systems of information access and marginalization?"

Panelists and contributors to this special issue are LIS faculty from around the United States, with an abundance of teaching, research, and service contributions. Among their commonalities is their gravitation to the work of Dr. Elfreda Chatman. Some knew Chatman as graduate students, others have been drawn to her work because they saw themselves represented in the groups Chatman chose to study. Whether they agree or disagree with Chatman, there is no question that they have been inspired and/or influenced in some way by her work.

TOPICS

specific populations; critical librarianship; research methods; information needs

Global Learning: The School Library as an Exploration Hub

SIG Sponsors:

School Library SIG (Elizabeth Burns, Old Dominion University, USA)

School Library SIG (Maria Cahill, University of Kentucky, USA)

Presenters:

Sue Kimmel^a, Marcia Mardis^b, Barbara Schultz-Jones^c, & Lois Wine^a (Old Dominion University^a, Florida State University^b, University of North Texas^c, USA)

Rita Soulen (East Carolina University, USA)

Jenna Kammer (University of Central Missouri, USA)

ABSTRACT

Researchers will share papers exploring the SIG theme, *The School Library as an Exploration Hub*. This interactive SIG session includes presentation of each research paper followed by open dialogue and Q&A regarding issues raised by the papers, implications for practice, and future areas for research. The following papers were selected for presentation:

School Librarians Making Global Connections: Conjecture Mappings and Researcher-Practitioner Partnerships - **Kimmel, Mardis, Schulz-Jones, & Wine**

How do school libraries impact learning outcomes? Conjecture mapping combined with Research Practitioner Partnerships (RPP) provides a design-based means to identify, explore, and document effective practices. Researchers share conjecture maps developed from compiled educational research to theorize school-based malleable factors to impact student learning.

Thinking Globally to Explore Dissemination of a Model of Mentoring and Collaboration for New Teachers - **Soulen**

The AASL Standards identify collaboration as best practice and recommend building a trusting relationship with colleagues. As a causal model, *A Continuum of Care: School Librarian Interventions for New Teacher Resilience* provided targeted interventions for first year teachers as a special population. This study explored the effect of mentoring toward collaboration by school librarians for new teachers to increase resilience, decrease burnout, and increase retention.

Transformative learning for pre-service school librarians: Understanding experiences that enhance self-awareness and global consciousness - **Kammer**

Transformative learning, an adult education theory, describes how a “disorienting dilemma” can significantly change one’s perspective. In this study, students in a school library program were asked to identify learning experiences that helped them transform or expand their self-awareness. Findings imply that students are impacted by the aesthetic dimension, where they actually saw different ways of doing things in the library they could connect to their own practice.

TOPICS

curriculum; data visualization; education; pedagogy; school libraries

Exploring Innovative Pedagogies in a Global Information Context

SIG Sponsor:

SIG Innovative Pedagogies (Conveners: Kevin Rioux and Rajesh Singh, St. John's University, New York, USA)

Presenters:

Kyungwon Koh, University of Illinois at Urbana-Champaign, USA; Alaine Martaus, University of Illinois at Urbana-Champaign, USA; Denice Adkins, University of Missouri, Columbia, USA; Nina Exner, Virginia Commonwealth University, USA; Vandana Singh, University of Tennessee, Knoxville, USA; Kristen Schuster, King's College, London, UK; Brittany Kelley, King's College, London, UK

ABSTRACT

SIG Innovative Pedagogies offers a panel that includes four sets of speakers who examine innovative pedagogies for LIS education in a global information context. Each presentation features a different innovative pedagogical approach. Presentations are followed by an interactive discussion period, and attendees are invited to continue the conversation after the program via Twitter. Kyungwon Koh and Alaine Martaus discuss *Design thinking for teaching the foundations of librarianship*, showing how design thinking can be a tool of innovation for teaching core courses in LIS graduate programs. Their talk also features examples of how they applied design thinking in their course designs, and includes details about course assignments, student projects, and reflections. Denice Adkins and Nina Exner show how *Using Library Carpentry methods and resources in the LIS classroom* can be used for technology training in LIS education programs. This presentation provides an overview of the Library Carpentry instructional approach and shows how it is different from traditional LIS classroom instruction. Adkins and Exner conclude with an overview of Library Carpentry lesson design principles and standards that can be used for LIS classrooms and LIS practitioner training. Vandana Singh discusses *Integrating professional librarians into open source software (OSS) communities*. Singh notes that professional librarians are increasingly integrated into OSS communities, and she shows how this integration has inspired an innovative participatory action model for OSS that can be used to guide curricula for current LIS students as well as continuing education programs for working practitioners. In *Gender, community and narrative: Exploring the social aspects of fanfiction*, Kristen Schuster and Brittany Kelley show how creative aspects of fanfiction contributes to the development and maintenance of social networks, which in turn facilitates deeper and transferrable forms of learning and literacy. In this talk, Schuster and Kelley combine learning theory and information behavior models into a framework for teaching literacy and information-seeking practices.

Resources for Teaching in a Rapidly Changing Global Tech Services Environment

SIG Sponsor:

Technical Services Education SIG (Karen Snow, Dominican, USA; Heather Moulaison Sandy, University of Missouri, USA)

Presenters:

Gretchen L. Hoffman (Texas Woman's University, USA), Athena Salaba (Kent State University, USA), Sarah W. Sutton (Emporia State University, USA)

ABSTRACT

The global information context is changing rapidly, and resources to support instruction relating to the evolving standards and practices in technical services are in high demand. What do we need and how robust are the resources that are available? What can and should Technical Services educators do to best prepare information professionals in the face of this evolving context, world-wide? This panel will address these and other questions related to materials used for teaching technical services courses, while also considering the audience for the materials, from three complementary perspectives.

Drawing from an analysis of existing courses offered by Master's programs in LIS, competencies developed by professional organizations, job descriptions, relevant literature, and feedback from students and instructors, the first panel presentation will take a look at the current state of information organization education, including resources used, topics covered, and training gaps. The second panel presentation will reflect on technical services instruction for school and public librarians in particular, exploring the relationship between theory and practice for cataloging instruction. The third panel presentation will address the topic of providing Open Educational Resources (OERs), highlighting the panelist's experiences on a university's OER task force and as a grant recipient. The results shared will consist of a perspective of graduate LIS faculty on institutional OER initiatives, which are usually focused on undergraduate education, particularly in the sciences, as well as a view of creating OERs for a graduate level LIS course on a technical services topic

The session will be co-moderated by the SIG sponsors. The moderators will introduce the topic, providing initial background and insight on the problem of the rapidly-changing field of technical services and the educational needs. Time at the end will be reserved for interaction with the audience.

TOPICS

cataloging; curriculum; pedagogy

More Data, More Problems: Strategically Addressing Data Ethics and Policy Issues in LIS Curricula and Courses

SIG Sponsors:

Information Ethics SIG (Kyle Jones, Indiana University-Indianapolis (IUPUI), USA)
Information Policy SIG (Nicole Alemanne, Valdosta State University, USA; Jenna Kammer,
University of Central Missouri, USA)

Presenters:

Yasmeen Shorish and Grace Barth (James Madison University, USA)
Natalie Greene Taylor and Loni Hagen (University of South Florida, USA)
Toni Samek, Ali Shiri and Carolin Huang (University of Alberta, Canada)

Discussants:

John Burgess (University of Alabama, USA)
Emily Knox (University of Illinois at Urbana-Champaign, USA)
Natalie Greene Taylor (University of South Florida, USA)

ABSTRACT

Library and information science (LIS) schools are revising undergraduate and graduate curricula and individual courses to prepare students for data-centric careers, as well as to participate in a data-driven society. To meet these new challenges, programs are developing courses on, among other things, data curation, analytics, visualization, algorithm design, and artificial intelligence. While such changes reflect new workforce and society needs, it remains to be seen whether or not such efforts adequately address the very real and serious ethics and policy issues associated with related data practices (e.g., privacy, bias, fairness, and justice).

The Information Ethics SIG and the Information Policy SIG have merged to present a panel on data ethics and policy issues in LIS education. In this session, two recent books on information ethics and information policy will be discussed to bring context to the panel, three papers will be presented, and the audience will have an opportunity to participate in a structured discussion. The papers will address three topics that explore the implications and concerns of living in a data-driven society: collaborative strategies for contributing to the data ethics education landscape, young adult information privacy concerns when using mobile devices, and artificial intelligence and social responsibility. The structured discussion will invite participation on issues raised by the papers, as well as implications for practice in LIS education.

Youth Services in the Global Learning Community

SIG Sponsor:

Youth Services SIG (Conveners: Kyungwon Koh, University of Illinois at Urbana-Champaign, USA; Abigail L. Phillips, University of Wisconsin-Milwaukee, USA)

Presenters:

Maria Cahill (University of Kentucky, USA), Kristie L. Escobar (Florida State University, USA), Lesley S. J. Farmer (California State University Long Beach, USA), Kasey Garrison (Charles Sturt University, Australia), Karen W. Gavigan (University of South Carolina, USA), Mary Howard (University of Kentucky, USA), Soohyung Joo (University of Kentucky, USA), Rachel M. Magee (University of Illinois Urbana-Champaign, USA)

ABSTRACT

The Youth Services SIG proposes a panel of six presentations focusing on youth, learning, and information in a global context. The purpose of the SIG session is (a) to present a diversity of current research that investigates youth learning in a global context, and (b) to engage the audience in discussing to what extent our teaching, research, service efforts account for the global context and exploring future directions for youth services in equipping contemporary young people for this diverse and global world.

The peer-reviewed projects featured in the panel demonstrate youth services librarianship plays a critical role in youth learning in a global context, whether through public library story time, new literacy and fake news curriculums, community engagement and informal learning programs, graphic novels, or young adult literature on or for LGBTQAI+ (an inclusive term that refers to most all sexual and gender identities). Each presentation addresses this year's conference theme, Exploring Learning in a Global Information Context, in a different, yet significant manner. These projects highlight how youth-centered librarianship promotes learning, global citizenship, global literacy, and cultural understandings and diversity—key competencies in the global information context.

The panel will begin with a brief introduction by the moderators (5 minutes). A presentation on each project will follow (maximum 10 minutes per project—total 60 minutes). Finally, the panelists will engage the audience, opening the floor to questions and discussions on the implications for LIS educators and researchers (25 minutes).

TOPICS

children's services; school libraries; public libraries; young adult services; information literacy; reading and reading practices; community engagement; education programs/schools

Exploring OER Strategies to Enable the Recasting of the Core Graduate Library Management Course

SIG Sponsor:

Curriculum (Linda Lillard & YooJin Ha, Clarion University of Pennsylvania, USA)

Presenters:

Michael Miller (Bronx Community College, USA), Linda Lillard (Clarion University of Pennsylvania, USA), Cecilia Salvatore (Dominican University, USA), YooJin Ha (Clarion University of Pennsylvania, USA)

ABSTRACT

At a recent administrative library council meeting of an urban university, a representative from that system's graduate program in library and information science indicated that the library management course could be refreshed. They asked how the campus library leaders could assist in updating that curriculum. Inspired by the vibrant activity of the Open Educational Recourses (OER) maelstrom across that university, it was suggested that the ailing management course could be updated with refreshed, current management concerns and delivered in an up-to-date and flexible OER package. The panel consisting of LIS educators and practitioners will discuss how this could be accomplished.

TOPICS

LIS curriculum; OER, library management, practitioner, job preparation, LIS graduate

How Effective is Study Abroad as a Pedagogical and Experiential Learning Tool in LIS Education?

SIG Sponsor:

International Library Education (Dick Kawooya, University of South Carolina, USA)

Presenters:

Elizabeth Jenny Bossaller, (University of Missouri, USA), Jennifer Luetkemeyer (Appalachian State University, USA), Kim Thompson (University of South Carolina, USA), Marie L. Radford (Rutgers University, USA), Lisa Hussey (Simmons College, USA), & Renate Chancellor (Catholic University of America, USA).

ABSTRACT

As the conference theme implies, internationalization of LIS education is a critical part of preparing graduates for the fast-changing environments in which libraries and other cultural institutions operate. This session sponsored by the International Library Education SIG focuses on experiences and impact of study abroad programs on students and program coordinators. The fundamental question is how effective is study abroad as a pedagogical and experiential learning tool? Panelists will address that question through the lens of students and program coordinators that recently completed study abroad experiences. The panel brings together faculty coordinator of study abroad programs in selected LIS schools across the country. Where possible, faculty coordinators will bring students that completed a study abroad program to be part of the session. The panel represents diverse programs ranging from European to South American locations (Costa Rica; Italy, Ireland/United Kingdom; Germany, and South Korea). They also represent different LIS areas from archives to international LIS education. The goal of the session is to reflect on the programs, what has been learned and other lessons gleaned collectively and individually. The session will be chaired by the SIG chair who will do the introductions and provide background information to contextualize the goals of the program. Each panelist will be asked to share their experiences and what has been learned from the program and how it has enriched the learning environment in the LIS program.

TOPICS

education; political economy of the information society; pedagogy

Development of Research Competencies among Academic Librarians

Nina Exner

University of North Carolina, Chapel Hill, USA

nexner@live.unc.edu

ABSTRACT

Academic librarians are often expected to do research, and research is one of the ALA core competencies of librarianship. But most librarians take at most one class in doing research. Therefore, academic librarians may not be prepared for researching and publishing. This dissertation asked the question: How do academic librarians develop competencies necessary for success in their initial efforts to do research? Two subquestions emerged: (SQ1) how do academic librarians experience their early research projects, and (SQ2) what personal attributes and contextual factors help academic librarians succeed in their research?

This study interviewed academic librarians who had succeeded in research. Secondary interviews with peers and supervisors explored librarians' research contexts. Cultural Historical Activity Theory (CHAT) was the theoretical lens for thematic analysis. The analysis used both deductive and inductive passes through the data for methodological triangulation, then aligned the codes to the CHAT framework for structure.

This study built a CHAT-informed view of the researching activities of academic librarian researchers. Many of the constructs are similar to what one might expect in "traditional" research, but are experienced differently in the practitioner environment. Key differences occur in the Subject's mindstate and in the Division of labor of the researcher-librarian.

This study also found that the experience of being a researcher-librarian one of learning while doing, shaped by the library context. The practitioner must make several successive attempts at research and then synthesize the understanding they have created with each attempt into a whole understanding of how research happens. The learning is not complete with a single success in researching, so successive attempts bring in new experiences as the librarian again approaches and works through uncertainty in their researching activities.

TOPICS

research methods; academic librarians; scholarly communications; continuing education

Values in Knowledge Organization Standards: A Value Analysis of Resource Description and Access (RDA)

Brian Dobreski

Syracuse University, Syracuse, NY, USA

bjdobres@syr.edu

ABSTRACT

Knowledge organization standards are important community artifacts that set forth agreed upon specifications and protocols, and though they may appear neutral they have been shown to harbor specific perspectives. These perspectives are often covert but hold implications for the ways in which knowledge is conceptualized, organized, and represented. Values are deeply held preferences for ways of acting and ways of being, and represent an effective lens for examining the perspectives embedded in societal practices and artifacts. To date, however, knowledge organization standards have not been approached through value analysis. This study addresses this gap through an examination of the influential library standard Resource Description and Access (RDA), specifically focusing on what values are present within this standard, how these values are communicated, and how they are recognized and responded to by practitioners. To address these questions, a qualitative, exploratory, multiphase study was conducted, utilizing value and rhetorical analyses of the text of RDA as well as open-ended interviews with RDA practitioners. Findings show that RDA upholds its design principles through the expression of principles-based values and values associated with user needs. In their usage of RDA, catalogers place greater emphasis on access and values associated with users and their perspectives. At the same time, the relative absence of asserted community values such as privacy illustrates the challenged nature of human values in knowledge organization standards. Findings from this study demonstrate the integral nature of values in standards, and position value analysis as a useful methodology in the critical study of standards in all domains. In raising questions about the role of human values in knowledge organization standards, this study contributes to ongoing discussions of information ethics and professional values.

TOPICS

cataloging; metadata; information ethics; critical librarianship

Examining the Red Thread of Information in Young Children's Interests: A Child-Centered Approach to Understanding Information Practices

Sarah Barriage

University of Manitoba, Canada

sarahbarriage@gmail.com

ABSTRACT

This dissertation explored 5- to 7-year-old children's information experience related to their individual interests. Using task-centered activities, participants articulated information wants that included descriptions, procedures, and explanations. They described information activities that involved information seeking (things, people, and experiences that "can tell you stuff") and use (applying information to their activities and sharing information with others). Children faced challenges related to their own capabilities and skills, constraints of information sources, and parental restrictions when engaging in information activities, while enablers included the child's personality, affordances of technology, and parental support.

TOPICS

information needs; information seeking; information use; special populations

Civil Rights Collecting Institutions and the Facilitation of Public Engagement in the American South

Jeff Hirschy

University of Alabama, USA

jhirschy@crimson.ua.edu

ABSTRACT

Across the American South, civil rights memory institutions created by city and state governments and private organizations, preserve and communicate complex civil rights histories. Each of these institutions, for different reasons, influenced by their particular cultural, historical, and community contexts, emerged to preserve and present this information to their communities. In addition to their individual contexts, each institution has various organizational and community contexts, for example mission statements or community support and interest, that helps to drive their relationships with their communities. Throughout the South, these historical and cultural contexts and elements DO inform how civil rights memory institutions interact with their communities, and researchers.

These various elements and contexts preside over and govern a complex series of relationships between civil rights memory institutions, their communities, and the generation of new ideas and concepts. Examples of this can be seen at the Birmingham Civil Rights Institute in Birmingham, Alabama and the Mississippi Civil Rights Museum in Jackson, Mississippi. Understanding these elements and contexts and the roles they play in these situations and others are extremely important in an age of social justice and information decolonization and liberation in the American South and the wider world.

TOPICS

archival arrangement and description; education; community engagement; social justice; museums

Dark Arts: Artists' Information Practices in the Care of Digital Artworks and Archives

Colin Post

University of North Carolina at Chapel Hill, USA

ccolin@live.unc.edu

ABSTRACT

Artists increasingly use digital technologies to make art, with implications not only for how art is created and experienced, but also for the long-term preservation of a digital visual arts heritage. Due to the rapid pace of technological development, digital artworks require preservation attention before they would typically enter into cultural heritage organizations, potentially altering these institutions' collection and conservation practices. Often, artists and small galleries act as the first stewards of these works, gaining new skills and finding information resources to address digital preservation issues shortly after the point of creation. For both the present and long-term care of digital artworks, existing conservation and preservation approaches are ill-equipped to attend to the particularities of digital technologies and the shifting ways in which digital art is being created, shared, and experienced by artists and audiences. To guide these new approaches, this research seeks to better understand the social, cultural, and technological factors impacting artists as they care for their artworks and archival materials early on. The research employs a case study design of Paper-Thin, a dynamic artist-run platform that includes an online virtual reality gallery and site-specific installations. The case comprises semi-structured interviews with the artists and curators, a collection of information resources used by the artists in the creation and care of their artworks, and the artworks themselves. Situational analysis methods are applied to position artists' information practices within the context of broader information worlds, examining how arts communities, socioeconomic factors, and various technologies all shape the ongoing care of digital artworks. The information worlds of these artists encompass traditional art world stakeholders, as well as many new kinds of communities like technology developers and social media users. While collectors, commercial galleries, and museums still play prominent roles, artist-run networked repositories like Paper-Thin have staked out alternative spaces for exhibiting artworks and experimenting with digital technologies. Although these artworks circulate outside of traditional cultural heritage institutions, this research highlights the viability of post-custodial strategies for information professionals in these artists' information worlds, such as helping artists to gain skills or to access resources crucial for digital preservation tasks.

TOPICS

information practices; archives; museums; community engagement; social software; sociology of information

Understanding the Knowledge, Skills, and Abilities (KSA) of Data Professionals in United States Academic Libraries

Hammad Rauf Khan

University of North Texas, USA

hammadkhan@my.unt.edu

ABSTRACT

Over the years the library profession has rapidly changed with the advent of technologies. Technology has altered or even at times replaced accustomed duties of librarians, for example, manual card catalogs with bibliographic databases; library building with digital library; library newsletters with social media and so on. Change is not always the easiest thing to accept and libraries tend to be traditional rather than trend-setting innovators. Academic libraries are undergoing numerous changes as a result of big data, data science, e-science, and e-research. Library directors need to re-evaluate the libraries long term goals based on new objectives of data-driven science at their institutions. The current change we are witnessing in academic libraries are new job titles relative to providing data support and the development of research data services (RDS). Library and Information Science (LIS) educators are expected to equip their graduates with the necessary knowledge, skills, and abilities (KSAs) to succeed in the changing job environment. Competencies are holistic concepts where competence embeds skills and skills are precise and definite abilities. This study applies the KSA framework for eScience professionals to data service positions in academic libraries. Understanding KSAs needed to provide data services is of crucial concern. Developing competencies based on KSA could provide a framework for understanding the scope of work data professionals are expected to perform in the academic library. This research uses a mixed methods approach to understand the work-related competencies of data professionals in academic libraries through content analysis of job advertisements and a survey questionnaire. The competencies discovered through this research could be of great significance for LIS educators in need of developing curricula to better prepare students to fill data service positions in the 21st century academic library.

TOPICS

data management; data science; big data; academic libraries

Cooperative Catalogers' Lived Experience Implementing Resource Description and Access: Developing Best Practices for Creating Global Metadata

Kristine M. Woods

Emporia State University, Emporia, USA

kwoods3@g.emporia.edu

ABSTRACT

Through the lens of Bijker's (1995) social construction of technology theory, this phenomenological study examines the lived experience of catalogers implementing Resource Description and Access (RDA) to create bibliographic records that are interoperable within and outside of library catalogs. During this transformative time, even the models and principles on which RDA is based are evolving. RDA is the first step in improving access to information and it continues to evolve in order to meet its stated objectives. Other standards for encoding and systems for displaying bibliographic data must also further develop to effect the change. This study sought to capture the perspectives and lived experiences of catalogers in multiple types of libraries fulfilling their foundational purpose: to create metadata that improves accessibility to quality information resources for all. RDA has fundamentally changed the way catalogers and metadata specialists describe resources. In combination with the proliferation of information in the world, this creates a twofold problem. First, it is difficult for catalogers and metadata specialists to follow new cataloging codes that are evolving and have multiple models for implementation. The conceptual models on which the new cataloging codes such as RDA are based have changed and require new assumptions, theories, models, practices, and tools. Secondly, the public is more challenged than ever to access trustworthy information. When taken together, this twofold problem forms a new reality for librarianship and the rapidly changing nature of the information ecosystem. While there have been some online questionnaires and informal surveys used to investigate catalogers' implementation efforts using new cataloging codes, there is a need for research-based evidence about the firsthand experiences of catalogers and metadata specialists who have used new cataloging codes. The purpose of this study was to investigate the lived experience of catalogers' and metadata specialists' implementation of RDA and to fill the gap in the literature. The results of this study provide essential information pertaining to the struggles and successes of those in the cataloging field upon which best practices for RDA implementation may be developed. The central research question for this study was: What are the meanings, structures, and essence of the lived experience of catalogers and metadata specialists implementing Resource Description and Access (RDA)?

TOPICS

cataloging; metadata; linked data; library technology systems; social justice; information ethics

Serious Leisure, Information Practices and Embodiment: A Study of Amateur Classical Musicianship

Brian Griffin

University of Toronto, Canada

brian.griffin@mail.utoronto.ca

ABSTRACT

People enjoy leisure activities, like sports and the arts, because lifelong learning enhances well-being. However, many physical activities cannot be learned from a book and require learning from others in a community of practice. These observations motivate my research questions: What are the information practices and role of the body in physical activities, and how are information practices in physical leisure both embodied and socially constructed within a community of practice? I analyze the case of amateur classical musicians, making theoretical, methodological, and empirical contributions to library and information science. First, my dissertation's theoretical framework advances library and information science by connecting recent literatures on information in everyday life to sociological explanations of leisure as fields of practice with their own contextualized information meanings. Second, my dissertation highlights the need for methodological innovations to study information practices in physical activities. While few information science studies of embodied activities use methods to capture physical information, sociology of sport research emphasizes observant participation and use of media-enhanced interviewing. My observant participation and interviews with amateur classical musicians confirm the promise of these methods. Finally, my dissertation is the first study of the information practices of amateur classical musicians that considers both exosomatic and embodied information as well as the social world meanings in musical information practices, including musicians' use of new media and technology. I find that not only are musicians' information activities embedded in a community of practice with shared meanings and expressions of identity, status, and membership, but that musicians are more likely to use video as an information source compared to those who are engaged in non-physical recreational activities. This dissertation adds to library and information studies and the interdisciplinary literature around physical leisure activities by making new connections between these two areas.

TOPICS

information needs; information seeking; information use; social media; sociology of information

School Librarians' Impact on Students' English & Math Achievement

Lois D. Wine

Old Dominion University, Norfolk, VA, USA

lwine004@odu.edu

ABSTRACT

This study uses a rigorous quasi-experimental matching design to determine if full-time certified school librarians impact fourth grade and fifth grade student achievement scores on English/language arts or mathematics end-of-grade (EOG) state achievement tests. Using a matched pairs design, results provide an estimation of causal effects in a nonrandomized study, as individual students in elementary schools with and without full time certified school librarians are matched and achievement scores are compared.

TOPICS

research methods; school libraries; education programs/schools; students; curriculum

In a Collective Voice: Uncovering the Black Feminist Information Community of Activist-Mothers in Chicago Public Housing, 1955-1970

LaVerne Gray

Syracuse University, USA

lgray01@syr.edu

ABSTRACT

In 1963, a group of African-American mothers seeking equity of access, voiced to city officials the need for their neighborhood to have a library. One speaker asserted that the lack of access to a library center would hinder community education. The campaign of these women exemplify what Belenky, Bond, & Weinstock (1999) call the tradition that has no name. This research extends the event by examining the Chicago Public Housing communities they inhabit, as an information nexus. The research addresses the questions: How did African-American activist-mothers residing in Douglass area Chicago public housing build information networks to inform activism? and How does the metaphor of voice support activities in community building? This select historical case study, explores the metaphor of voice in the Black feminist tradition (Collins, 1998, 2000) by uncovering information space(s) and providing context to their collective activism.

The theoretical lens is informed by intersections of information and community, social justice, and race and gender. Borrowing from the constant-comparative grounded theory approach (Charmaz, 2011; Corbin & Strass, 2008), uncovering collective voice involved an iterative process of deconstructing data through the development of a three-phase, eight-step evidence inquiry and analysis process. Through rigorous analysis, the formulation of the Black Feminist Information Community (BFIC) model emerged with five meta-level themes (Place/Space, Voice, Information, Belief System, and Self and Community Mobilization). The meta-level themes reflect the importance of collectivism, engagement, and voice in community-based activism. The study significance reflects the recognition of the voice of the researcher and the activist-mothers under study. The BFIC model contributes to the information science theoretical landscape by offering a bottom-up view of information space and demonstrating the representation of information in marginalized communities.

TOPICS

social justice; community engagement; specific populations; sociology of information; research methods; archives

Cognitive Authority in Online Social Media during Severe Weather

Carrie A. Boettcher

Emporia State University, Emporia, KS USA

cboettch@emporia.edu

ABSTRACT

Severe thunderstorms in the Midwest and South of the United States reveal situations with a high degree of uncertainty and concern beckoning a continued need to improve understanding of the ways the severe weather enterprise seek, utilize, and disseminate information during severe weather events. The increasing use of online social media (OSM) during emergency or potentially threatening situations creates conditions in which emergency planners and responders need a high level of investigative skill to weed through a dynamic information landscape to determine the quality of information to contribute to improved situation awareness. This weeding process transforms the big data environment of OSM to focused information retrieval. This study investigated indicators of quality in OSM during severe weather situations to identify how OSM impacts the information behavior of the severe weather enterprise of the U. S. Specifically, this study investigated how a particular element of the severe weather enterprise in the Midwest, the integrated warning team (IWT), identifies relevant information in OSM during severe weather events.

This study explored the application of an information framework that extends cognitive authority to the Twittersphere where author is potentially unknown. Wilson's (1983) cognitive authority theory and Bonnici's (2016) CAF-QIS framework served as lenses to identify factors of quality that inform decisions of credibility and trustworthiness in second-hand knowledge from cognitive authority sources in OSM. The current study advanced the understanding of cognitive authority (Wilson, 1983) in OSM and the CAF-QIS framework (Bonnici, 2016) by exploring the application of the model in the Twitter environment during a severe weather event focused on the information use of the IWT.

REFERENCES

- Bonnici, L. J. (2016). Subjectivity filtering: Finding cognitive authority in online social media opinion posts. *Proceedings from the Document Academy*, 3(2), 1-20.
- Wilson, P. (1983). *Second-hand knowledge: An inquiry into cognitive authority*. Westport, CT: Greenwood Press.

TOPICS

information seeking; information use; social media; linked data

Archives in Libraries: The Impact of a Parent-Child Relationship on Corporate Identity and User Perception

Ashley Todd-Diaz

Emporia State University, Emporia, KS, USA

atodddia@emporia.edu

ABSTRACT

Archives are educational, scholarly, and culturally significant resources that afford the user opportunities to engage in informal learning, develop information literacy and critical thinking skills, encounter one-of-a-kind materials, and interact with history. However, research has shown that in the United States (U.S.) there is a lack of awareness for these affordances compared to the information resources available in libraries, museums, and other cultural heritage organizations. Both libraries and archives share a focus on organizing and providing access to information; however, they possess equal and distinct professional identities, organizations, values, and curricula. Despite these differences, the majority of academic archives in the U.S. are located within the physical and organizational structure of the library. This places archives in a parent-child relationship with libraries that introduces a dynamic of physical and organizational subservience that has the potential to introduce power dynamics, political negotiations, and complex corporate identities for users to navigate. Despite the large impact this parent-child structure may have on internal operations and user perception, this dynamic between libraries and archives has previously not been studied empirically.

This original dissertation research used Cyert and March's (1963) behavioral theory of the firm and Freeman's (1984) stakeholder theory as a theoretical framework to explore the physical and virtual power structures and dynamics within libraries that have an archives unit. This study used a collective case study methodology that employed three complementary investigations to examine the perspectives of corporate identity messaging crafted by libraries and archives units, library administrators throughout the administrative chain between the head of the archives unit and the library dean, and archives users. This poster will provide an overview of the study's key findings and implications for theory and practice in relation to some of the core concepts of archival science.

REFERENCES

- Cyert, R., & March, J. G. (1963). *A behavioral theory of the firm*. New Jersey: Prentice Hall, Inc.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Cambridge, UK: Cambridge University Press.

TOPICS

archives; academic libraries; administration

Examining the Notion of the Boundary Object in Information Systems: The Transdisciplinary Oeuvre of Cognitive Science

Laura Ridenour

University of Wisconsin-Milwaukee, USA

ridenour@uwm.edu

ABSTRACT

This work examines the complex nature of the transdisciplinary area of cognitive science. It synthesizes theoretical underpinnings from philosophy of science and knowledge organization with more technical methods and approaches from informetrics and data science into a mixed- and multi-method study starting with a dataset drawn from the Web of Science® database (WoS®). The theoretical notion of the boundary object (BO) is used to frame identifiable shared notions in information systems, as BOs are entities of interest to and acted upon by multiple social worlds that transcend boundaries (Star & Griesemer, 1989). In this case, boundaries are classificatory scaffolding imposed by the WoS® and the National Science Foundation (NSF) classification system. Data were compiled using a seed and expand approach surrounding journal names containing the string “cogni*” between 2006 and 2017. From this, title noun phrases within each distinct classificatory space of the top level of the NSF taxonomy were analyzed, then reanalyzed against citation data. This examination provides insight into what makes an area of research interdisciplinary by identifying and examining boundary objects within cognitive science. Findings indicate that diseases, their measures, and methods of study are BOs. Implications from this work include methods to triangulate topics of interest to multiple communities of practice and identify changes in trends in published research in an increasingly rich information ecology. Work done here presents the development of methodology to pinpoint the proverbial unknown needle (or needles) in a haystack of big data.

TOPICS

altmetrics; classification; natural language processing; sociology of information; scholarly communication

The Influence of Socio-Technical Environments on the Information Behaviors of Black Gay Men

Megan Threats

University of North Carolina at Chapel Hill, Chapel Hill, USA

meganv@live.unc.edu

ABSTRACT

Young Black men who have sex with men (YBMSM) are disproportionately affected by the HIV epidemic in the United States. YBMSM have a one in two chance of becoming infected during their lifetime compared with one in five among Latino MSM, and one in eleven among White MSM (Hess et al, 2017). HIV/STI information is a critical resource for YBMSM affected by the HIV epidemic. Recent studies suggest that telehealth modalities are opportune for delivering tailored, culturally-sensitive HIV/STI prevention and treatment information. Telehealth modalities, including smartphone applications, offer the opportunity to reach YBMSM who may be difficult to access by traditional means such as in-person, venue-based interventions. To improve our understanding of the potential efficacy of disseminating HIV/STI information via technology-based HIV/STI interventions among YBMSM, this study investigates how and where they access and interact with HIV/STI information. An online survey (n=74) and semistructured, in-depth interviews were carried out with 22 YBMSM (ages 18-34) living in the state of North Carolina.

TOPICS

Information seeking; information use; social media; information needs; specific populations; information practices

Rising Together: Community Resilience and Public Libraries

Beth Patin

Syracuse University, Syracuse, USA

bjpatin@syr.edu

ABSTRACT

This dissertation explored the phenomenon of community resilience and how public libraries, as FEMA-designated essential community organizations, enhanced community resilience. These phenomena were studied by answering the following research questions:

1. What actions have public libraries taken during and after extreme events to support their communities?
2. What services have public libraries provided to their communities during and after extreme events?
3. What roles have public libraries played in their communities during and after extreme events?
4. How do public library directors/managers think public libraries enhance community resilience and build adaptive capacities?
5. How do disaster responders think public libraries enhance community resilience and build adaptive capacities?

Through a multi-method qualitative approach, this work utilized content analysis and interviews to determine the actions, roles, and services public libraries provided throughout disasters; as well as, how public libraries enhanced community resilience. This work bridges the gap between research and practice by being the first qualitative study in community resilience investigating the role of public libraries across multiple disasters types and settings. The results of this project identified and then verified the adaptive capacities public libraries exhibit to enhance community resilience. A couple of highlights from the findings include:

- The actions of libraries often shifted when faced with a disaster: hours of operation, policies about computer use, and changes in patron privileges.
- Every library director believed public libraries added to community resilience in four areas: economic development, social capital, information and communication, and community competence.

TOPICS

public libraries; critical librarianship; risk management; information needs

A Quantitative Examination of Software-Method Packages in Psychological Research Articles

Kai Li

Drexel University, Philadelphia, USA

kl696@drexel.edu

ABSTRACT

Quantitative science studies have developed unbalanced interests in scientific knowledge, focusing on the impact of scientific outputs and distribution of knowledge products, rather than how such knowledge is produced. The lack of research in the latter aspect is an important reason for the growing gaps between the quantitative and qualitative communities of science studies, which have prevented quantitative researchers from developing deeper insights into the nature of scientific knowledge and communication. I propose to examine how research objects related to scientific knowledge production, including research method and software entities, are represented and distributed in full-text scientific publications.

This research will develop a machine learning pipeline to extract method and software entities from a large-scale full-text scientific publication corpus, as the foundation for the rest of this study. A semi-supervised learning approach will be adopted to learn these entities using an iterative manner. Based on the extracted entities, quantitative analyses will be conducted to examine the relationships among the presence and form of these research objects and the conditions in which scientific knowledge is produced, as informed by theories developed from both communities of qualitative and quantitative science studies. I am specifically interested in how the lifecycle of these scientific objects could influence the ways in which these objects are represented (as citation or mention) in scientific publications.

This research will broaden the scope of quantitative science studies by introducing new objects into the existing research frameworks and provide a new, science as practice perspective on the quantitative understanding of scientific knowledge. Both benefits will contribute to a more comprehensive view of science that are derived from an integration of different theoretical and methodological traditions of science studies.

TOPICS

bibliometrics; machine learning; natural language processing

Foregrounding Data Curation to Foster Reproducibility of Workflows and Scientific Data Reuse

Michael R. Gryk
University of Illinois, Urbana-Champaign USA
gryk2@illinois.edu

ABSTRACT

Scientific data reuse requires careful curation and annotation of the data. Late stage curation activities foster FAIR principles which include metadata standards for making data findable, accessible, interoperable and reusable. However, in scientific domains such as biomolecular nuclear magnetic resonance spectroscopy, there is a considerable time lag (usually more than a year) between data creation and data deposition. It is simply not feasible to backfill the required metadata so long after the data has been created (anything not carefully recorded is forgotten) – curation activities must begin closer to (if not at the point of) data creation. The need for foregrounding data curation activities is well known. However, scientific disciplines which rely on complex experimental design, sophisticated instrumentation, and intricate processing workflows, require extra care. The knowledge gap investigated by this research proposal is to identify classes of important metadata which are hidden within the tacit knowledge of a scientist when constructing an experiment, hidden within the operational specifications of the scientific instrumentation, and hidden within the design / execution of processing workflows.

Once these classes of hidden knowledge have been identified, it will be possible to explore mechanisms for preventing the loss of key metadata, either through automated conversion from existing metadata or through curation activities at the time of data creation. The first step of the research plan is to survey artifacts of scientific data creation. That is, (i) existing data files with accompanying metadata, (ii) workflows and scripts for data processing, and (iii) documentation for software and scientific instrumentation. The second step is to group, categorize, and classify the types of "hidden" knowledge discovered. For example, one class of hidden knowledge already uncovered is the implicit recording of data as its reciprocal rather than the value itself, as in magnetogyric versus gyromagnetic ratios. The third step is to design/propose classes of solutions for these classes of problems. For instance, reciprocals are often helped by being explicit with units of measurement. Careful design of metadata display and curation widgets can help expose and document tacit knowledge which would otherwise be lost.

TOPICS

data curation; user interfaces; classification; abstracting; metadata; ontologies

Predicting Scientific Evolution by Understanding its Driving Factors

Jianguen He

Department of Information Science, Drexel University, United States

jianguen.he@drexel.edu

ABSTRACT

Background: The increasing availability of big scholarly data and computational methods offer unprecedented opportunities to understand the mechanism of how science advances and predict critical scientific dynamics. However, our understanding of driving factors behind scientific development is limited and predictions driven by big scholarly data are rarely made.

Goals: This proposed research aims to (1) provide computational approaches to measuring driving factors (novelty and uncertainty) in science from multiple perspectives, (2) build predictive models for future trends and dynamics in science based on representations of scientific knowledge, and (3) build a context-environment by visual analytics to support qualitative and in-depth analytics of the driving factors and predictions.

Methods: The research represents scientific knowledge as a system of scientific discoveries, assertions, and topics along with their status of novelty and uncertainty. Novelty and uncertainty are identified and measured from the full text of scientific publications and scholarly networks using representation learning and computational linguistics. Their roles and interactions in scientific development are examined over time. Based on the representations of scientific knowledge, I build predictive models for the trends of rising and falling and for the dynamics of convergence and divergence in scientific development. In addition, the measured factors and prediction results are integrated into temporal visualizations so as to effectively and intuitively validate, analyze, and understand the roles of the driving factors and prediction results in a concrete context.

Significance: The metrics and empirical studies of driving factors in science will offer a deeper understanding of how science advances at multiple levels of granularity. The data-driven evidence derived from the studies can complement related theories from philosophy and sociology studies of science. Predictions made based on the understanding will have practical implications for individual scientists to identify research opportunities and for research policymakers to optimize the allocation of research resources. The visualization designs and tools will serve as platforms for validating and analyzing not only metrics and predictive models developed in this research but also other existing and newly developed ones.

TOPICS

big data; machine learning; informetrics; data visualization; bibliometrics; natural language processing

Study Setting and Task Configuration for Task-based Information Seeking Research

Yiwei Wang

Rutgers University, USA

yw498@scarletmail.rutgers.edu

ABSTRACT

Users look for information to finish a task or goal related to their work or everyday lives. Task-based information seeking (hereafter TBIS) is a research area that takes into account the characteristics of the underlying tasks that motivate users to look for information. Knowing the relationships between information seeking behaviors and task characteristics could inform system design that personalizes information to suit users' task at hand. When designing a TBIS study, researchers need to consider several components-such as study setting and task configuration-that can be authentic (i.e., part of users' real life) or synthetic (i.e., something created and provided by the researcher). Each type of setting or task configuration has its strengths and limitations. For instance, the lab setting is an artificial environment not familiar to the participants while it allows researchers to eliminate potential confounding variables brought by the environment.

This dissertation examines how study settings and task authenticity impact users' search behaviors (e.g., page dwell time), task perceptions (e.g., expected difficulty), and task experiences (e.g., engagement). Thirty-six university students finished a 2x2 repeated design study. Each participant completed two search sessions: one lab session in which they finished two search tasks individually in a computer lab and one remote session in which they finished two tasks at a remote location of their choice. One of the two tasks in each session was brought by themselves (authentic task) and the other was assigned by me (simulated task). To ensure that their search behaviors are comparable, all tasks were evaluative tasks which were tasks that required users to evaluate several options belonging to the same category. Their search activities were logged by a browser extension and their task perceptions and experiences were collected by five-point scale questions before and after each task. Preliminary analysis showed that 1) participants' task perceptions were significantly different between authentic and simulated tasks; and 2) multiple aspects of their search behaviors-such as the number of pages visited and dwell time on pages-were significantly affected by task authenticity, study setting, or both.

TOPICS

interactive information retrieval; information seeking; research methods

Author Index

Author	Page(s)
Abdullahi, Ismail	197
Adkins, Denice	199, 250
Al Mansoori, Suhaila	236
Albright, Kendra	201
Alemanne, Nicole D.	68, 224, 252
Alkhaledi, Reem	247
Allard, Suzie	202
Arias-Hernandez, Richard	5
Assefa, Shimelis	201
Barriage, Sarah	148, 218, 258
Barth, Grace	252
Behpour, Sahar	177
Belkin, Nicholas	233
Benedict, Karl	202
Bernier, Anthony	246
Bible, J. Brice	188
Bishop, Bradley Wade	202
Boettcher, Carrie A.	266
Bossaller, Jenny S.	198, 246, 255
Bothma, Theo	203
Bowen, Kristen	245
Bowler, Leanne	28
Braum, Heather	199
Brown, Wanda	203
Buchanan, Sarah	247
Burgess, John	231, 252
Burke, Susan K.	216
Burns, C. Sean	40, 58
Burns, Elizabeth	196, 249
Cahill, Maria	249, 253
Caidi, Nadia	198, 201
Castillo, Ruth	19
Ceja Alcalá, Janet	44, 209
Chancellor, Renate	197, 205, 255
Chang, Hsia-Ching	78
Charbonneau, Deborah	194
Chen, Pei-Ying	242
Choi, Yunseon	222, 225, 228
Chow, Anthony S.	200, 203
Chu, Clara M.	200
Clark, Laura	212, 213
Clarke, Rachel Ivy	48

Author	Page(s)
Colón-Aguirre, Mónica	44, 209
Constantino, Chris	16
Cooke, Nicole	248
Copeland, Andrea	247
Copeland, Clayton A.	153
Cowell, Ellen	174
Cui, Can	5
Cunningham, Chris	200
Curtin, Lisa	23
D'Arpa, Christine	216
Dali, Keren	125, 196, 198, 206
Davis, Rebecca	195, 209
Dobreski, Brian	257
Donaldson, Devan Ray	207
Dotson, Kaye	142
Dow, Mirah J.	206
Draper, Savanna	229
Drouillard, Colette L.	224, 228, 240
Du, Yunfei	93
El Najjar, Mireille	236
Elmborg, Jim	52
Escobar, Kristie L.	253
Estell, Allison Nowicki	194
Evans, Sarah	129
Exner, Nina	250, 256
Farmer, Lesley S.J.	253
Floegel, Diana	148, 244
Garrison, Kasey	253
Gavigan, Karen W.	253
Gibson, Amelia N.	245, 248
Goudarzi, Abbas	177
Gray, LaVerne	183, 248, 265
Greenberg, Jane	202
Griffin, Brian	263
Gross, Melissa	16, 196
Gryk, Michael R.	272
Guevara, Beatriz	203
Ha, YooJin	254
Hagen, Loni	252
Haggerty, Kenneth	243
Hassman, Katie	74
Hawamdeh, Suliman	177, 247
He, Jiangen	273
Headrick, Jonathan Stewart	174

Author	Page(s)
Hebert, Holly	1
Heffner, Kathryn	74
Hill, Natalie	210
Hirschy, Jeff	259
Hirsh, Sandra	204
Hoebelheinrich, Nancy J.	202
Hoffman, Gretchen L.	251
Houli, Daniel	148
Howard, Mary	253
Hu, Zhan	157
Huang, Carolin	252
Huber, Jeffrey T.	58
Hussey, Lisa	255
Iyer, Hemalata	201
Jaber, Baheya	62
Jeng, Ling Hwey	208
Johnson-Jones, Aisha	197
Jones, Kyle M.L.	223, 252
Joo, Soohyung	253
Jordan, Rebecca	237
Julien, Heidi	196
Kammer, Jenna	249, 252
Kaufmann, Renee	40
Kawooya, Dick	194, 200, 203, 255
Kelley, Brittany	250
Kerr, Paulette	168
Khan, Hammad Rauf	261
Kim, Youngseek	222
Kimball, Melanie	195
Kimmel, Sue	249
Kitzie, Vanessa L.	105
Knox, Emily	252
Koh, Kyungwon	250, 253
Latham, Don	16, 196
Lawrence, E.E.	111
Leal Cisneros, Danna	209
Lee, Shari	205
Lenstra, Noah	216, 217
Li, Kai	242, 271
Li, Siyu	235
Liao, Jiaqi	226
Lillard, Linda	254
Lin, Qianli	235
Lin, Xia	202, 204

Author	Page(s)
Lindsay, Ethan	133
Liu, Jiqun	227, 239
Lookingbill, Valerie	105
Lu, Wenqing	119
Luetkemeyer, Jennifer	237, 255
Lund, Brady	206
Mack, Thura	229
Magee, Rachel M.	253
Mallary, Kevin J.	206
Mardis, Marcia	249
Marek, Kate	204
Marino, John	129
Marson, Barbara	142
Martaus, Elaine	250
McBee, Kristen	174
McQueen, Sharon	246
Mehra, Bharat	23, 52, 183, 196, 198, 248
Melo, Marijel (Maggie)	101
Mery, Yvonne	196
Miksa, Shawne	248
Miller, Michael	254
Miller, Sarah	212
Million, A.J.	199
Moore, Jennifer	129
Most, Linda R.	240
Moulaison Sandy, Heather	96, 251
Murillo, Angela	223
Ndumu, Ana	197
Nesset, Valerie	188
Nix, Tyler	58
Oguz, Fatih	133
Pagowsky, Nicole	196
Parker, Michelle	241
Patin, Beth	270
Perryman, Carol	208
Peterson, Mark	246
Phillips, Abigail L.	253
Pierson, Cameron M.	232
Pollock, Danielle	214, 241
Post, Colin	260
Preshia, Chance	16
Pun, Raymond	220
Radford, Marie L.	148, 255

Author	Page(s)
Raju, Jaya	200, 203
Randolph, Karen	16
Rathbun-Grubb, Susan	196
Reed, Karen	1
Ren, Xiaoi	68, 221, 224
Rha, Eun Youp	233
Ridenour, Laura	268
Rioux, Kevin	250
Rooney, Mollie	16
Rorissa, Abebe	145, 201
Rosenbaum, Howard	204
Roy, Lorie	203
Rubenstein, Ellen	216, 217
Salaba, Athena	251
Salvatore, Cecilia	254
Samek, Toni	164, 252
Saunders, Laura	194, 195
Schultz-Jones, Barbara	129, 249
Schuster, Kristen	57, 250
Seo, Grace	96
Shah, Chirag	227
Shapiro II, Robert M.	58
Shibaeva, Ekaterina	200
Shiri, Ali	252
Shorish, Yasmeen	252
Sikes, Scott	19
Singh, Rajesh	33, 36, 250
Singh, Vandana	230, 250
Smith, Andrew J. M.	116
Smith, Daniella	129
Smith, Lauren	199
Snow, Karen	251
Soulen, Rita	249
Steele, Jennifer Elaine	215
Stewart, Kristine N.	57, 199, 236
Stewart, Paulette	168
Stoffle, Carla	196
Sutton, Sarah W.	251
Sweeney, Miriam	52
Tadena, Laura	210
Tahamtan, Iman	234
Tan, Liqiong	235
Tang, Rong	119, 157, 204
Tatar, Unal	145

Author	Page(s)
Taylor, Natalie Greene	252
Thayer, Johnathan	247
Thomin, Mike	213
Thompson, Jennifer	28
Thompson, Kim M.	153, 198, 199, 206, 255
Threats, Megan	269
Todd-Diaz, Ashley.....	267
Trepanier, Cheryl.....	164
Vamanu, Iulian	74
VanScoy, Amy.....	219
Vardell, Emily	138
Velez, LaTasha	203
Vera, A. Nick.....	105
Wagner, Travis L.....	105, 199
Wallace, Anna Grace.....	231
Wang, Yiwei	227, 239, 274
Widén, Gunilla	33, 36
Williams, Rachel	195
Wilson, Bruce	202
Wilson, Guy.....	96
Winberry, Joseph.....	174
Wine, Lois D.	249, 264
Woods, Kristine M.....	262
Yang, Changwoo	68, 222
Yoon, Ayoung.....	223, 247
Zhang, Jing	226, 235
Zhang, Mei.....	238
Zhu, Ming.....	93
Zhu, Xiaohua.....	174
Zimmerman, Margaret Sullivan.....	211
Zimmerman, Tara	78

Author-Added Keyword Index

Keyword	Page(s)
#metoo	234
academic freedom	242
academic librarians	256
academic libraries	19, 62, 195, 196, 215, 261
accreditation	125, 200
ACRL Framework for Information Literacy for Higher Education	1
administration	33, 36
administrators	267
advocacy	199
alternative librarianship	164
Appalachian region	19
archaeological field methods	213
archaeology	213
archival education	247
archival science	247
archival studies	247
archives	44, 259, 267
artists' archives	260
assessment	36, 116
asynchronous	240
barriers	96, 203
behavioral economics	239
behavioral theory of the firm	267
benefits	96
bibliographic databases	58
big data	261
Bijker's (1995) social construction of technology (SCOT) theory	262
Black feminism	265
bonded design	188
boundary objects	268
Brooklyn Public Library	28
Canada	23
careers	203
Caribbean	168
case-study	52
cataloging	257
cataloging education	251
challenges and opportunities	204
Chicago public housing	265
child welfare workers	16

Keyword	Page(s)
child-centered research.....	258
children	148
children's programming.....	213
children's books	228
China	242
Chinese narrative.....	242
citizen science	212
civil rights.....	259
classroom culture.....	138
classroom environment	138
classroom guidelines.....	138
cognitive authority	266
cognitive sociology.....	233
collaborative learning	221
collaborative projects	19
collection development	238
communications	204
community engagement.....	197, 208, 217, 253
community informatics	208
community partnerships	28
community resilience	270
comparative librarianship.....	199
competencies	164
computational reproducibility	272
conceptual analysis.....	111
conceptual framework of M-Learning	119
conflict zones	62
connectedness	133
constructive alignment	57
content analysis.....	148
continuing education	216, 229, 235
copyright	194
copyright literacy.....	194
core competencies	195
course evaluation.....	221
credibility	266
crisis informatics	270
critical analysis.....	62
critical librarianship	245
critical narratology	183
critical race theory	220
critical thinking	74
cultural competence.....	224
cultural competition.....	226

Keyword	Page(s)
cultural development	226
cultural heritage	212, 213
cultural human resources	226
cultural leader	226
cultural leadership	226
cultural sensitivity	237
curricula	48
curricular model	52
curriculum	33, 36, 125, 145, 164, 200, 201, 205
cybersecurity	145
data curation	202, 272
data ethics and policy	252
data librarian	261
data librarians	157
data literacy	129, 174
data management	202
data management plans	207
data professional	261
data science	177, 202, 250, 268
data services	261
data sharing	222
data skills capacity building	202
data-driven decision-making	129
data-informed decision-making	129
design projects	28
design techniques	188
design thinking	48
digital art	260
digital divide	220
digital humanities	19
digital preservation	260
digital youth	218
disability	206, 245
disasters	270
discrimination	203
distance education	215, 223, 230, 247
distance learning	240
diverse workforce	203
diversity	111, 153, 224, 248
diversity management	206
doctoral concentration	52
doctoral program	183
documentation	40

Keyword	Page(s)
e-book	238
early career.....	210
early childhood.....	218, 258
education.....	145, 199, 200, 203, 211, 245
education programs	36
education programs/schools	197, 200, 201
educational accreditation	236
educators.....	229
Elfreda Chatman.....	248
embedded learning	198
emerging research trends	214
emerging technologies	101
emerging trends	62
employment outcomes	133
employment readiness	195
equity	245
eScience.....	261
ethics	198
ethnic communities	220
ethnic minorities and small populations.....	93
evaluation	5
everyday life context.....	258
evidence analysis	265
experience sampling.....	16
experiential learning.....	210, 255
exploration	210
fair use.....	194
fake news	40, 246, 253
fanfiction	244
feminist voice	265
first-generation college students.....	241
Framework for Information Literacy	196
gap.....	177
geographic literacy	209
global	183
global citizen	229
global citizenship	253
global diversity.....	203
global learning	230
global librarianship.....	219
government employment.....	164
government information	174
government librarianship	164

Keyword	Page(s)
graduate curriculum	168
graduate students	241
graphic novel	253
grounded theory	265
health	105
health literacy	211, 216, 217
health sciences	214
hegemony	183
Heritage Monitoring Scouts	212
higher education	196
historical case study	265
history	246
HIV prevention and treatment	269
human information behavior	148
ICT use	16
identity	232
inclusion	153
inclusion advocacy	52
individual interests	258
informal learning	253
information & communication technology	263
information access	245
information activist community	265
information behavior	78, 225, 266
information behaviors	269
information creation	244
information environment	168
information ethics	252
information experience	258
information horizons	241
information in everyday life	263
information literacy	1, 40, 74, 243
information literacy instruction	196
information marginalization	245
information needs	44
information policy	252
information practice	263
information practices	105, 209, 218, 244, 258
information professionals	168, 206
information quality	266
information retrieval	58
information security	145
information seeking	78, 241, 245

Keyword	Page(s)
information seeking behavior	227, 233
information sharing	93, 225
information standards	257
information technology education	5
information use	93
information worlds	260
innovation	201
innovative learning	188
institutional theory	222
instruction	58, 74
instructional design	223
intellectual property	194
intelligent personal assistants	148
interactive information retrieval	239
intercultural relations	237
interdisciplinary research	268
interdisciplinary teaching	125
international	23
international cooperation	116
international librarianship	199
internationalization	255
internships	142
intersectionality	245
job preparation	254
job preparedness	194
job requirements	177
knowledge organization	257, 268
lab studies	227
language	245
Latinx	44, 209
leadership	33, 36
leadership strategies	204
learning	78, 253
learning objectives	177
learning oriented assessments	57
lgbtq	105
LGBTQAI+	253
librarians	232
librarianship	111, 164, 232
libraries	44, 267
library and information science curriculum	224
library and information science education	252
library and information science students	224
library cataloging	262

Keyword	Page(s)
library data services	157
library instruction	19
library management course	254
library-science education.....	116
LIS.....	52
LIS curricula	101, 168
LIS curriculum	23, 68, 164, 250, 254
LIS education	5, 62, 68, 78, 96, 129, 153, 164, 168, 183, 194, 195, 205, 207, 208, 226, 235, 236, 238, 255
LIS education practices.....	153
LIS educators	206
LIS graduate	254
LIS practitioners	68
LIS professional	200
LIS programs.....	204
LIS research.....	256
LIS schools	145
lobbying.....	199
machine learning	273
makerspace	101
mapping United States	23
marginalized populations	248
master students	198
matched pairs	264
MEDLINE	58
memory institution.....	259
mentoring.....	203
MeSH	58
metaliteracy.....	57
methods and strategies	201
MLIS programs.....	48
MLS student instruction.....	1
mobile technology	78
mobile-based learning (M-Learning)	119
multicultural literature	228
multiculturalism.....	237
museum programming.....	213
navigating uncertainties	256
new literacy	253
nineteenth century	246

Keyword	Page(s)
novelty	273
OER	96, 254
OER platforms	96
online courses	215
online education	221, 223
online learning	33, 133, 230
online news	40
online participatory platforms	225
online review	228
online social media	266
online teaching	247
open government data	174
organizational culture	203
organizational restructuring	204
organizational structure	267
orientation to LMS	240
outcome-based evaluation	212
outreach	229
Palestine	62
participatory design	188
partnerships	216, 217
pedagogy	33, 36, 101, 197, 201, 205, 231, 250
pilot	211
post-custodial cultural heritage	260
practice-based learning experience	28
practitioner	254
practitioner research	256
pre-service education	196
predictive models	273
preservation curriculum	247
privacy	252
professional development	223, 229
professional identity	232
programming and outreach	216
provenance	272
public libraries	174, 195, 216, 217, 220, 270
public library services system	235
public programming	217
public sector employment	164
public sector librarianship	164
publishing	198
Q methodology	219

Keyword	Page(s)
qualitative methods	105, 148
qualitative research	217, 220
qualitative research methods	258
quality matters	223
quasi-experimental	40
queer	244
racism	203
RDA	257
RDMLA (Research Data Management Librarian Academy)	157
reasoning skills	231
reference	231
reference and information service	219
refugees	211
remote studies	227
research agenda	148
research data management	157
research libraries	246
research methods	68
research methods learning	256
research support	231
researcher-practitioner partnerships	249
residency programs	210
Resource Description and Access (RDA)	262
resources for teaching technical services	251
retention	203
rural communities	208
scholarly communication	198, 271
school librarians	236, 249, 264
school libraries	195, 249
school library	264
school library education	249
school library research	249
science of science	273
science studies	271
scientific collaboration	214
scientific data reuse	272
scientific evolution	273
scientometrics	271, 273
searching as learning	239
selection criteria	238
Self Determination Theory	212
self-censorship	242
self-directed learning	210
sensationalism	246

Keyword	Page(s)
sexual assault	234
sexual harassment	234
short-term study abroad.....	116
smart speakers	148
social context of task.....	233
social inclusion	93
social justice	52, 105, 197, 224, 253, 259
social justice information	265
social media.....	234
social movement.....	234
social networking site.....	228
social networks	133, 234
social work	16, 125
Spanish-speakers	44
special libraries.....	195
specific populations: HBCUs	197
stakeholder theory.....	267
standards	200
STEM.....	229
storytime.....	253
student achievement.....	264
student support	240
student-constructed	138
students.....	33
study abroad.....	142, 237, 255
study setting	274
tailored environments	138
task authenticity	274
task-based information seeking	274
teaching and learning.....	205
teaching education	229
technical services education.....	251
technology	125, 220
telehealth	269
text mining	214, 234
theory of planned behavior	222
theory-practice gap.....	198
think aloud	243
trust	174
Twitter.....	266
unboxing videos	218
uncertainty.....	273
undergraduate and graduate programs.....	177

Keyword	Page(s)
undergraduate curriculum	168
United Arab Emirates	236
universal design for learning	153
University of the West Indies Mona Jamaica	168
upcycling	207
usability	243
usability of mobile devices for learning.....	119
users	267
values	257
video games	231
visiting scholar	142
visual analytics.....	273
wellness	217
women	211
Woodrow Wilson	246
workflows	272
workplace inclusion.....	206
young adult literature	253
youth	253
youth services	253
“global” intersections.....	23
“White-Ism”	183

ALISE Research Taxonomy Index

Keyword	Page(s)
abstracting	272
academic libraries	19, 68, 157, 195, 207, 210, 215, 229, 254, 256, 261, 267
accreditation	200
administration	33, 36, 129, 203, 204, 223, 254, 267
archival arrangement and description	247, 259
archives	247, 260, 265, 267
artificial intelligence	177, 252
assessment of student learning	116
big data	234, 261
cataloging	251, 257, 262
censorship	242
children's services	213, 224, 228, 253
classification	58, 272
collections development	224, 238
community and civic organizations	16, 226, 236
community engagement	44, 197, 208, 209, 212, 217, 253, 259, 260, 265, 270
community-led services	105, 212, 226
computer-supported collaborative work	101, 133
continuing education	164, 200, 203, 210, 216, 235, 236, 229, 256
copyright	194
critical librarianship	105, 111, 196, 203, 211, 220, 224, 237, 245, 246, 248, 257
critical thinking	74
curriculum	1, 5, 23, 36, 48, 52, 58, 62, 68, 78, 101, 116, 145, 153, 164, 168, 183, 194, 195, 199, 200, 201, 203, 205, 215, 221, 224, 229, 240, 249, 250, 251, 252, 254, 264
data curation	157, 177, 202, 207, 272

Keyword	Page(s)
data management	157, 202, 261
data mining	214, 225, 228
data science	174, 202, 250, 252, 261, 268, 273
data visualization	157, 177, 234, 249
database systems	58
digital humanities	19
discovery systems	177
education	19, 23, 62, 96, 125, 145, 164, 168, 196, 198, 200, 203, 205, 208, 211, 213, 215, 226, 229, 230, 238, 241, 245, 247, 249, 254, 255, 259
education of information professionals	28, 116, 231
education programs/schools	5, 23, 36, 48, 129, 133, 138, 142, 145, 164, 183, 197, 199, 200, 201, 203, 204, 215, 224, 229, 236, 237, 252, 253, 264
human-computer interaction & design	271
indexing	58
information ethics	252, 257, 262
information governance	174
information literacy	1, 40, 44, 57, 74, 196, 216, 217, 229, 243, 253
information needs	105, 168, 188, 218, 219, 225, 229, 233, 239, 241, 248, 258, 263, 269
information policy	220, 252
information practices	116, 231, 260, 269
information privacy	145, 252
information security	145
information seeking	78, 93, 105, 188, 218, 227, 233, 239, 241, 243, 248, 258, 263, 266, 268, 269, 274
information services	116, 231
information system design	188

Keyword	Page(s)
information technologies	247
information use	16, 78, 93, 105, 164, 188, 209, 218, 222, 234, 244, 248, 258, 263, 266, 269
instruction	74
intellectual property	194
interactive information retrieval	227, 239, 274
knowledge management	230, 268
libraries in the developing world	235
library technology systems	207, 262
linked data	262, 266
machine learning	177, 234, 273
metadata	40, 57, 257, 262, 272
mobile systems	78, 119
museums	213, 226, 259, 260
natural language processing	225, 228
new student orientation	240
online learning	1, 33, 68, 119, 133, 215, 221, 223, 230, 235, 237, 240, 247
ontologies	272
open source software	96
pedagogy	5, 19, 33, 36, 48, 52, 57, 62, 68, 101, 116, 153, 197, 198, 201, 205, 215, 224, 229, 240, 247, 249, 250, 251, 255
political economy of the information society	142, 199, 242, 246, 255
public libraries	68, 129, 174, 195, 208, 216, 217, 220, 226, 232, 235, 253, 270
reading and reading practices	111, 253
reference transactions	219
research methods	16, 68, 148, 209, 214, 219, 227, 232, 248, 256, 264, 265, 271, 274
risk management	204

Keyword	Page(s)
scholarly communications	96, 198, 207, 214, 222, 256, 271
school libraries	129, 195, 236, 237, 249, 253, 264
short-term study abroad	116
social computing	16, 270, 273
social justice	52, 105, 111, 148, 183, 197, 203, 206, 209, 210, 211, 212, 220, 224, 259, 262, 265
social media	228, 234, 263, 266, 269
social software	260
sociocultural perspectives	116, 232
sociology of information	40, 142, 206, 233, 242, 245, 246, 260, 263, 265
special libraries	68, 195
specific populations	16, 44, 57, 93, 105, 197, 209, 214, 218, 222, 241, 248, 258, 265, 269
standards	1, 125, 200, 223, 238
students	19, 33, 57, 125, 138, 153, 183, 194, 195, 196, 198, 215, 221, 224, 237, 254, 264
teaching faculty	138, 198, 206, 215
ubiquitous computing	119
user interfaces	148, 188, 243, 272
young adult services	228, 253