

**17th International Conference on Qualitative and  
Quantitative Methods in Libraries  
QQML 2025**

**27-30 May**

**Conference venue  
TTC@ULisboa, Technology Transfer and Knowledge Enhancement Centre of the  
University of Lisbon  
Portugal**

***“Transformation and Innovation in Archives and  
Libraries in the Digital Age”***

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**Book of  
Abstracts**

**Organized by ISAST**



### *Imprint*

Book of abstracts and Program of the 17<sup>th</sup> Qualitative and Quantitative Methods in Libraries International Conference (University of Lisbon, Portugal: 27 May - 30 May 2025)

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### *Conference venue*

TTC@ULisboa, Technology Transfer and Knowledge Enhancement Centre of University of Lisbon, Portugal

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*Professor Dr Tatiana Sanches – University of Lisbon (FP/IE)*  
*Dr. Ana Alves Pereira – President of the Portuguese Association of Librarians, Archivists, Information and Documentation*

## ***Preface***

Dear Colleagues, Dear Friends,

Welcome 17<sup>th</sup> QQML International Conference

Welcome to Lisbon

For 17<sup>th</sup> year we are organizing the Qualitative and Quantitative Methods in Libraries conference hosting in European academic and cultural institutions:

16<sup>th</sup>: Cultural Center, Chania, Crete, Greece: 28 May-1 June 2024, Hybrid

15<sup>th</sup>: Hellenic Mediterranean University, Iraklion, Crete, Greece: 30 May- 3 June 2023, Hybrid

14<sup>th</sup>: National Hellenic Research Foundation, Athens, Greece: 24-27 May 2022, Hybrid

13<sup>th</sup>: 25-28 May 2021, Virtual

12<sup>th</sup>: 26-29 May 2020, Virtual

11<sup>th</sup>: European University Institute, Florence, Italy: 28-31 May 2019

10<sup>th</sup>: Cultural Center, Chania, Crete, Greece: 22-25 May 2018

9<sup>th</sup>: Limerick, Ireland: 23-26 May 2017

8<sup>th</sup>: Senae House, University of London, London, UK: 24-27 May 2016

7<sup>th</sup>: IUT Université Paris Descartes, Paris, France: 26-29 May 2015

6<sup>th</sup>: Kadir Has University, Istanbul, Turkey: 27-30 May 2014

5<sup>th</sup>: "La Sapienza" University, Rome, Italy: 4-7 June 2013

4<sup>th</sup>: Limerick, Ireland: 22-25 May 2012

3<sup>rd</sup>: Athens, Greece: 24-27 May 2011

2<sup>nd</sup>: Chania, Crete, Greece: 25-28 May 2010

1<sup>st</sup>: Chania, Crete, Greece: 26-29 of May 2009

A high-quality program is compiled again, this year, with research papers, workshops and posters from all over the world which support the professional development of library scientists and information specialists and enhance the research on the Library and Information Science. Important speakers present also their research in Plenary Speeches.

Selected papers will be published by SPRINGER NATURE.

Contributions from 31 countries contributed their work: Australia, France, Italy, Japan, Malaysia, Mexico, Moldova, Philippines, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Brazil, Canada, Cayman Islands, China, Croatia, Czech Republic, Finland, Greece, India, Iran, Lithuania, Nigeria, Pakistan, Sultanate of Oman, Uganda, USA.

Finally, 93 papers, 6 Plenary talks, 4 workshops and 1 poster are concluded to be presented.

The conference attracts professors and researchers, software developers, managers and library professionals to review achievements to announce creative challenges and opportunities.

The conference also brings together the members of the QQML network which illustrates the distribution of the participants in the five geographic regions of the world.

I'd like to thank the Committees of the Conference, the local and permanent organizing Committees.

The Conference is both social and scientific event, creates human networks and social affairs. It also offers an interesting social program.

Enjoy it!

Dr Anthi Katsirikou

University of Piraeus Library

Conference co- Chair

## Program

<b>QQML2025</b> <b>17<sup>th</sup> Qualitative and Quantitative Methods in</b> <b>Libraries International Conference</b> <b>27 May- 30 May 2025</b> <i>Hybrid, On site and Virtual</i>		
Tuesday, 27.5.2025		
TIME ZONE: West European Summer		
08:00- 09:00		
REGISTRATION		
Conference venue		
TTC@ULisboa, Technology Transfer and Knowledge Enhancement Centre of the Universidade de Lisboa		
09:00 –10:00		
Opening Ceremony		
Rector of the University of Lisbon Professor Luís Manuel dos Anjos Ferreira (10 minutes)		
Luiza Baptista (5 minutes)		
Anthi Katsirikou: 17 years QQML (10 minutes)		
Markku Laitinen: The importance of evidence and QQML (10 minutes)		
Ana Silva Rigueiro (5 minutes)		
	10:00-10:30 Room 1 Plenary Session (PS1) Chair: Luiza Baptista Speaker: Professor Arlindo de Oliveira (Universidade de Lisboa – IST) Title: Artificial Intelligence: Applications, Implications and Speculations (onsite)	
	10:30-11:00 Coffee break	
	11:00-12:30 SCS1 Special and Contributed Sessions	
	Room 1	Room 2

<b>The Artificial Intelligence Challenges for Libraries</b>  <b>Chair: Vicky Kalliampakou</b>	<b>Workshop 1</b>  <b>WS1</b>
Artificial Intelligence- Dangers and Possibilities  <b>Ari Haasio (virtual)</b>	Implementing the READ Scale (Reference Effort Assessment Data) Tool at Your Institution  <b>Coordinator:</b> <b>Bella Karr Gerlich (onsite)</b>
Advanced Access to Public Information and Policy Making in Romania with ION, first governmental AI Virtual Assistant  <b>Daniel Ionut Bledea (virtual)</b>	
Transforming Long-Term Digital Preservation through Artificial Intelligence: A Comprehensive Framework and Analysis  <b>Xinyu Wu and Zhenxin Wu (onsite)</b>	
Innovation Evolution and Development Trends of FPGA  <b>Zhao Ping, Wang Xuezhao (onsite)</b>	
Emerging Technologies in the Service of Universal Design: The Case of Libraries  <b>Eleni Angoura (virtual)</b>	
Innovating Citation Analysis Using Generative Artificial Intelligence  <b>Sarah G. Park and Lisa Romero (onsite)</b>	
<b>12:30-14:00</b>  <b>SCS2 Special and Contributed Sessions</b>	
<b>Room 1</b>	<b>Room 2</b>
<b>Heritage and Intangible resources: Organization and convergence</b>  <b>Chair: Petrusa Miholic</b>	<b>Information Literacies I</b>  <b>Chair:</b>
Preserving the Shared History of Tijuana and San Diego: A Binational, Multi-Institutional Partnership  <b>Jessica Barlow, Lisa Lamont and Matt Ferrill (onsite)</b>	Digital Literacy in Archives: An Analysis of Brazilian National Policies  <b>Carolina Soares Santos, Eliete Correia dos Santos, and Ana Lúcia Terra (onsite)</b>



Curriculum Infused Cultural Heritage <b>Jennifer Elaine Steele, Laura Clark Hunt, and Jeffery Hirschy (virtual)</b>	Co-creating AI Learning Solutions: A Qualitative Analysis of Student and Faculty Deliverables in an Algorithmic Literacy Learning Community <b>Samantha LeGrand, Zoeanna Mayhook, and Jing Lu (onsite)</b>
Digital Preservation Initiatives: A Model for Archiving and Disseminating Marginalized Heritage <b>Neda Zeraatkar and Azadeh Vatanpour (virtual)</b>	Contribution of Public Libraries in the Development of Health Literacy among the Local Community <b>Octavia-Luciana Madge (onsite)</b>
Digital Preservation - The eArchiving Reference Curriculum <b>João Oliveira, José Borbinha (onsite)</b>	Beyond knowledge and skills: the ethical imperative in information literacy <b>Ana Lúcia Terra (onsite)</b>
From Scrolls to Scrolling: Understanding Online Engagement through Historical Archives of the University of the Philippines Diliman College of Home Economics Library <b>Grace A. Garcia, Jet T. Tawaken, and Benelyn P. Ferrer (virtual)</b>	The Information Literacy Training Programs Performed for the Faculty Members by the Main Library at Sultan Qaboos University in the Sultanate of Oman from 07-0: The Reality and the Challenges <b>Naifa Bint Eid Bait Bin Saleem (onsite)</b>
Memories of Old Cebu: Facebook as a Platform for Community Archiving and Digital Heritage Preservation <b>John Louie Zabala, Ana Maria Fresnido (virtual)</b>	
<b>14:00-15:00</b>	
<b>Lunch</b>	
<b>15:00-15:30</b>	
<b>Room 1</b>	
<b>Plenary Session (PS2)</b>	
<b>Chair: Vicky Kalliampakou</b>	
<b>Speaker: Professor Dania Bilal</b>	
<b>Title: The AI Reality: Cultivating Opportunities, Embracing Learning, and Facing Challenges (onsite)</b>	
<b>15:30-16:45</b>	

SCS3 Special and Contributed Sessions	
Room 1	Room 2
<b>Collections</b> <b>Chair: Paulo Batista</b>	<b>Open Science Open Communities</b> <b>Chair: Ana Lúcia Terra</b>
Censorship and Reconsideration Policies in US Academic Libraries <b>Liz Cooper (onsite)</b>	Embracing OA in STEM Education: Experiences of Croatian Academics <b>Radova Vrana (virtual)</b>
Quality and Information Governance in Higher Education: A Systematic Literature Review (2020–2024) <b>Ana Silva Rigueiro, Maria Beatriz Marques, José Borbinha (onsite)</b>	From Network of Research Information Systems to AI-powered Accessible Repository – Open Science Infrastructure in Poland <b>Danuta Szewczyk-Kłos, Łukasz Skonieczny, Henryk Rybiński, and Jakub Koperwas (onsite)</b>
Preservation and dissemination of collections from the Documentation Department of the Municipality of Évora in the Library Network of Évora <b>Orlanda Maria Barradas da Silva and Glória Bastos (onsite)</b>	Informed Choices, Embracing Open Access Publishing: A Systematic Literature Review on Transformative Agreements Publishing Models in Philippine Context <b>Grace A. Garcia, Gladys A. Florendo, Rizalyn V. Janio, and Elvira B. Lapuz (virtual)</b>
Censorship on the Rise: Review of Book Challenges in America in 2023 <b>Jennifer Elaine Steele (virtual)</b>	Integrating Critical Information Literacy into Map and Geospatial Data Instruction: A Survey of Librarian Practices <b>Melissa Chomintra (virtual)</b>
Enabling Global Accessibility through Partial Digitization Projects: Building a Virtual Browsing Shelf of the University of Illinois' Africana Reference Collection <b>Alice Tierney-Fife (virtual)</b>	Examining the Impact of Primary Source Materiality with the Facial Action Coding System <b>Annette Bochenek (onsite)</b>
End of the 1st Day	

<b>QQML2025</b> <b>17<sup>th</sup> Qualitative and Quantitative Methods in</b> <b>Libraries International Conference</b> <b>27 May- 30 May 2025</b> <i>Hybrid, On site and Virtual</i>	
<b>Wednesday, 28.5.2025</b>	
<b>TIME ZONE: West European Summer</b>	
<b>08:30- 09:00</b> <b>REGISTRATION</b>	
<b>Conference venue</b> <b>TTC@ULisboa — Technology Transfer and Knowledge Enhancement</b> <b>Centre of the Universidade de Lisboa</b>	
<b>9:00-10:15</b> <b>SCS5 Special and Contributed Sessions</b>	
<b>Room 1</b>	<b>Room 2</b>
<b>Linking research and practice: the synergies and their relevance to practice, policy and academia</b> <b>Chair: Octavia-Luciana Madge</b>	<b>Information Literacies II</b> <b>Chair: Tatiana Sanches</b>
Master's and Doctoral Programmes in Information Science in Romania <b>Octavia-Luciana Madge (onsite)</b>	Inquiry in Action: A Mixed-methods Approach to assessing First-year Students' Information Literacy Skills <b>Martha Attridge Bufton and Marta Samokishyn (onsite)</b>
Conducting a Landscape Analysis of Indigenous Studies Librarianship in the United States and Canada <b>Kathryn Randall, Adrienne Vandenbosch, and Alexander Watkins (onsite)</b>	Developing news literacy and critical thinking skills through board games <b>Jasmina Ninkov, Isidora Injac, Bojan Kundacina (onsite)</b>
Policy Insider: An Agent for Science and Technology Policy Analysis <b>Wang Yanpeng, Zhao Ping, and Wang Xuezhao (onsite)</b>	OAR Revolution: Philippine Academic Libraries at the Forefront of Information Literacy <b>Miriam Charmigrace Q. Salcedo (virtual)</b>
Predicting Student Success Using Academic and Institutional Indicators to Support University Resource Planning and Library Services: A Big Data Analysis	Digital literacy and game-based learning method <b>Jasmina Ninkov and Bojan Kundacina (onsite)</b>

<b>Leonidas Theodorakopoulos, Vassiliki Kalliampakou, Christos Klavdianos, Alexandra Theodoropoulou, Ioanna Kalliampakou (onsite)</b>	
<b>Qualitative Analysis using MAXQDA Nastasha E Johnson (virtual)</b>	<b>Archives, Memory and Education: Dialogical and Decolonial Practices for Critical thinking in Local Communities Eliete Correia dos Santos, Ana Lúcia Terra, Wiliana de Araújo Borges, Saulo de Tarso de Oliveira Gomes, and Ana Beatriz Ramos de Oliveira (onsite)</b>
<p style="text-align: center;"> <b>10:15-10:45</b>  <b>Room 1</b>  <b>Plenary Session (PS3)</b>  <b>Chair: Jorge Revez</b>  <b>Speaker: Professor Luis Borges Gouveia</b>  <b>Title: Augmenting insight, preserving Purpose: AI, research methods, and the Human dimension in GLAM futures</b>  <b>Alternative title: Marry me! AI and GLAMs: augmenting prospects)</b>  <b>(on site)</b> </p>	
<p style="text-align: center;"> <b>10:45- 11:15</b>  <b>Coffee Break</b> </p>	
<p style="text-align: center;"> <b>11:15-11:45</b>  <b>Room 1</b>  <b>Plenary Session (PS4)</b>  <b>Chair: Ana Silva Rigueiro</b>  <b>Speaker: Professor Maria Beatriz Marques</b>  <b>Title: The Human Core: Why Information Services Need More Than Digital Functions for Sustainability</b>  <b>(on site)</b> </p>	
<p style="text-align: center;"> <b>11:45-13:15</b>  <b>SCS5 Special and Contributed Sessions</b> </p>	
<p style="text-align: center;"><b>Room 1</b></p>	<p style="text-align: center;"><b>Room 2</b></p>
<p style="text-align: center;"> <b>AI applications</b>  <b>Chair: Liz Cooper</b> </p>	<p style="text-align: center;"> <b>Special Users Special Services</b>  <b>Chair: Ana Novo</b> </p>
<p style="text-align: center;"> <b>GLAMs at the Crossroads: Reconciling Tradition and Transformation with Artificial Intelligence</b>  <b>Maria Beatriz Marques, Luis Borges Gouveia (onsite)</b> </p>	<p style="text-align: center;"> <b>Developing Digital Libraries for People with Disabilities: Compliance with Accessibility Guidelines and Challenges</b>  <b>Iris Xie, Shengang Wang, and Hyung Seung Lee (onsite)</b> </p>

<p>Chatgpt is a Threat for Academic Library in Future: Students' Perspective at Slovenian Public University</p> <p><b>Petruša Miholič (onsite)</b></p>	<p>Parental Engagement in School Libraries: A Longitudinal Study in Portuguese Elementary Schools</p> <p><b>Glória Bastos and Ana Novo (onsite)</b></p>
<p>Can ChatGPT accelerate research in libraries?: Results of a study comparing generative AI to human researchers for qualitative coding</p> <p><b>Mark Emmons, David Gustavsen, and Holly Surbaugh (onsite)</b></p>	<p>Engagement Strategies for the Advancement of Student Voices in Canadian Academic Libraries</p> <p><b>Sarah Guay (onsite)</b></p>
<p>Translating the Lived Experiences of Graduate Students into Practice: Qualitative Research Informing Library Services</p> <p><b>Liz Cooper, Mark Emmons, Teresa Neely, and Holly Surbaugh (onsite)</b></p>	<p>The Art of Collaboration: Bringing Archival Objects and Student Response Art Together to Honor MSU Alumni Veterans</p> <p><b>Carrie P. Mastley, Kate Gregory, and Jessica Perkins Smith (virtual)</b></p>
<p>A Comparative Analysis of "Eva" and "RAREs" AI-chatbots in the Context of Public Services and Access to Information</p> <p><b>Daniel Ionut Bledea and Octavia-Luciana Madge (onsite)</b></p>	<p>Rethinking the Evaluation of the Portuguese National Reading Plan: From Quantitative Indicators to a User-Centred Approach</p> <p><b>Paula Sousa Pinto, Maria Beatriz Marques (onsite)</b></p>
<p><b>13:15-14:30</b></p> <p><b>Lunch</b></p>	
<p><b>14:30 Half Day Excursion</b></p>	
<p><b>End of the 2<sup>nd</sup> Day</b></p>	

<p style="text-align: center;"><b>QQML2025</b>  <b>17<sup>th</sup> Qualitative and Quantitative Methods in</b>  <b>Libraries International Conference</b>  <b>27 May- 30 May 2025</b>  <i>Hybrid, On site and Virtual</i></p>	
<p style="text-align: center;"><b>Thursday, 29.5.2025</b></p>	
<p style="text-align: center;"><b>TIME ZONE: West European Summer</b></p>	
<p style="text-align: center;"><b>08:30- 09:00</b>  <b>Registration</b></p>	
<p style="text-align: center;"><b>Conference venue</b>  <b>TTC@ULisboa — Technology Transfer and Knowledge Enhancement</b>  <b>Centre of the Universidade de Lisboa</b></p>	
<p style="text-align: center;"><b>09:00-10:00</b>  <b>SCS6 Special and Contributed Sessions</b></p>	
<b>Room 1</b>	<b>Room 2</b>
<b>Digital Transformation</b> <b>Chair: Ivona Olariu</b>	<b>Services to Research and Education</b> <b>Chair: Ioanna Kalliampakou</b>
<p>Discourse analysis of scientific letters in Portuguese language: nominalization and their index function in knowledge organization and of politeness strategy in scientific communication</p> <p><b>Maria José Veloso da Costa Santos, Vânia Lisbôa da Silveira Guedes, Maria de Fatima Sousa de Oliveira Barbosa and Felipe Silva Izidoro da Fonseca (virtual)</b></p>	<p>Time Series Analysis of Surveys Conducted Among Local Library Users: Identifying Usage Trends to Support Library Management Decisions</p> <p><b>Markku Antero Laitinen, Svetlana Kirichenko, Jouni Henrik Juntumaa (onsite)</b></p>
<p>Exploring Digital Transformation and Leadership in Libraries and Archives: A Bibliometric Analysis and Systematic Literature Review</p> <p><b>Gianina Alexea Surio, Luis Ezra Cruz Karen Cecille Natividad, and Marian Ramos-Eclevia (virtual)</b></p>	<p>Performance Evaluation and Standardization in School Libraries: A Portuguese Perspective</p> <p><b>Leonor Gaspar Pinto, Paula Ochôa, and Ana Novo (onsite)</b></p>
<p>Exploring Archival Practices and Innovations in Academic Libraries in Cebu, Philippines: A Qualitative Study on Management, Preservation, and Technological Adaptation in the Digital Age</p>	<p>Gathering, Analyzing and Integrating Feedback on SHIFT Assistive Solutions – Driver for Inclusion of Visually and Hearing-Impaired Users in the Current Library Audience</p> <p><b>Ioana Cornelia Cristina Crihană (virtual)</b></p>

<b>Christler Aaron R. Miranda, Jonathan M. Ricardo, Irvin Dan M. Regidor, Frances Alyanna J. Del Castillo, Clifford G. Cabigas, Kester Anne D. Cajocson, and Mary Whieslyn N. Cole (on site)</b>	
Mapping the Digital Transformation of Romanian University Environment: Insights from a National Survey <b>Ivona Olariu, Silvia Popovici (onsite)</b>	Public Opinion Crawl <b>Lucy Campbell, Connor Franklin Rey, Kate Holvoet, Keven Jeffery and Rebecca Nowicki (on site)</b>
<b>10:00-10:30 Room 1 Plenary Session (PS5) Chair: Ioanna Kaliampakou Speaker: Professor Zélia Charraz Parreira Title: AI: the ultimate frontier or just another step? (on site)</b>	
<b>10:30-11:00 Coffee Break</b>	
<b>11:00-13:00 SCS7 Special and Contributed Sessions</b>	
<b>Room 1</b>	<b>Room 2</b>
<b>The Impact of Library support to Education and Research Chair: Jorge Revez</b>	<b>Change Patterns: Academic Libraries Chair: Triveni Kuchi</b>
An Innovative Practical Activity Contributing to Education and Academic Research: A Case of National Science Library, Chinese Academy of Sciences <b>Xiaomu Xu and Yanqin Weng (onsite)</b>	Empowering Academic Communities: Distributing AI Information in Academic Libraries <b>Thomas D. Walker (onsite)</b>
ASEAN National Libraries and the Sustainable Development Goals: A Thematic Content Analysis of Current Practices <b>Lady Catherine R. de Leon, Lejempf V. Flores , Diana Galang, Aisa dela Torre-Moraña (virtual)</b>	Evolution of Academic Production in Information Science: Theses and Dissertations in Portugal (2014-2024) <b>Tatiana Sanches, Luiza Baptista (onsite)</b>
The RSCVD international cooperation network for digital resource sharing <b>Silvana Mangiaracina, Z Cheikh Ibrahim, G. Colombo, C. Lomba, S. Marzocchi and D. Mazza (onsite)</b>	Transformation, Contraction, or Intensification? Impact of AI on Academic Public Service Librarianship – A Closer Look at the Research/Subject Liaison Librarian Roles <b>Triveni Kuchi (onsite)</b>
Infopragmatics and the Frontier Informational Structure (FIS): A Framework for Academic Research Excellence <b>Rafael Ibarra Contreras (virtual)</b>	Sensory Overload? Mapping Library “Soundscapes” and “Smellscapes” <b>Andrew Asher and Nikolina Zenovic (onsite)</b>

Information at your Fingertips: Maximizing the Use of Different Online Legal Database at Truman Bodden Law School Library <b>Ross Torrefiel Bachiller</b>	Sustainable Development Goals in Action: Through Innovative Library Reading Initiatives <b>Elsa Margarita Ramírez Leyva (virtual)</b>
Twitter (X) Use by Public and Academic Libraries in Japan <b>Yuhiro Mizunuma (virtual)</b>	Developing Sustainable and Collaborative Research Service at the University Library of Paris Nanterre (France) <b>Cecile Swiatek Cassafieres (onsite)</b>
<b>13:00- 14:00</b> <b>Lunch</b>	
<b>14:00 - 14:30</b> <b>Room 1</b> <b>Plenary Session (PS6)</b> <b>Chair: Ana Silva Rigueiro</b> <b>Invited Speaker: Professor José Borbinha</b> <b>Title: Information Governance and Archival Practices at the Crossroads of Trust and Technology (onsite)</b>	
<b>14:30- 15:00</b> <b>Poster Session</b>	
<b>Motivational Styles and Curriculum Interests in Courses for Certified Librarian in Japan: A Graduate-Based Analysis/ <i>Ui Ikeuchi, Yoshikazu Hinata, Kiichiro Kanai, Shuntaro Kawamura, Xinru Zhu, and Takuma Asaishi</i></b>	
<b>The Comparison between WTP for Book Lending and WTP for E-book lending in Japanese Public Libraries/ <i>Atsushi Ikeuchi</i></b>	
<b>15:00-16:15</b> <b>SCS8 Special and Contributed Sessions</b>	
<b>Room 1</b>	<b>Room 2</b>
<b>Change Patterns: Human Resources</b> <b>Chair: Anthi Katsirikou</b>	<b>Workshop 2</b> <b>WS2</b>
21st Century Liaisons? Findings from a Survey of Academic Librarians in the United States <b>Rachel Fleming-May, Wade Bishop and Caroline Villarreal (onsite)</b>	Library Association Capacities - An interactive Workshop <b>Coordinator:</b> <b>Martha Kyrillidou (virtual)</b>
The Human Factor in Secure Archives: an Information Security Framework for Accuracy and Memory Reliability <b>Miguel Santos, Maria Beatriz Marques, Luis Borges Gouveia (onsite)</b>	
Library Associations as Vital Components in Empowering of Continuing Professional Development of librarians and information scientists: The Case of Association of Greek Librarians and Information Scientists (AGLIS)	



<b>Angeliki Oikonomou and Anthi Katsirikou (virtual)</b>	
Shaping Data-Ready Librarians: Assessing Competencies in Selected Academic Institutions in the Philippines <b>Rizalyn V. Janio, Grace A. Garcia and Gladys A. Florendo (virtual)</b>	
Virtual Assistants in Philippine Academic Libraries: A Comparative Analysis of Features, Accessibility, and User Engagement <b>Marie Chezka G. Tamayo, Marvin A. Factor, and Julieta F. Olivar (virtual)</b>	
<b>20:00 Dinner</b>	
<b>End of the 3<sup>rd</sup> Day</b>	

**QQML2025**  
**17<sup>th</sup> Qualitative and Quantitative Methods in**  
**Libraries International Conference**  
**27 May- 30 May 2025**  
*Hybrid, On site and Virtual*

**Friday, 30.5.2025**

**TIME ZONE: West European Summer**

**08:30- 09:00 Registration**

**Conference venue**  
**TTC@ULisboa Technology Transfer and Knowledge Enhancement Centre**  
**of the Universidade de Lisboa**

**09:00-10:30**

**SCS9 Special and Contributed Sessions**

Room 1	Room 2
<b>Effect of Library Services on Research and Development</b> <b>Chair: Qiang Jin</b>	<b>Health Information Services</b> <b>Chair: Lisa Romero</b>
Entity Management with Linked Open Data for Illinois Experts <b>Qiang Jin (onsite)</b>	A Citation Analysis of Health Communication Journals to Determine Core Journals for Different Library Collections <b>Lisa Romero (onsite)</b>
An Embarrassment of Riches? Sources, Challenges, and the Role of Libraries in Text-as-Data Approaches <b>Hilary Bussell (onsite)</b>	Infiltration of Predatory Journals in Health Sciences into Reputable Academic Literature <b>Erin Watson and Li Zhang (virtual)</b>
Evaluation of Digitized Library Services through National Projects <b>Kazuyuki Sunaga (onsite)</b>	The Relevance of Search Strategies of Overview: The Case of Nature and Health  <b>Maria Imaculada Cardoso Sampaio, Luiza Baptista, Juliana Gatti Pereira Rodrigues, Marilene Proença Rebello de Souza, Fernanda Ferreira Chaves, Mariana Cabral Schweitzer, Caio Fábio Schlehta Portella and Ricardo Ghelman (on site)</b>
Uncovering New Technological Directions: The Role of TRIZ Theory and Technology Function Matrix in Patent-Driven Innovation <b>Zhao Ping, Wang Xuezhao (onsite)</b>	The Role of National Medical Library Prague in Promoting Health Literacy among Laypersons <b>Helena Bouzková, Eva Lesenková, Jitka Feberová, Filip Kříž and Ondřej Horsák (virtual)</b>

Practical Approaches on International Exchange of Publications into a university library—case of Lucian Blaga Central University of Cluj-Napoca, Romania <b>Alina Ioana Bogătean</b>	Challenges and Countermeasures in Medical Library Resource Construction in the digital and intelligent era <b>Qing Wang, Huiling Ren, JingjingXu (on site)</b>
Evolving Metadata Practices in a Distributed Creation Model <b>Myung-Ja K. Han and William Kries (onsite)</b>	The Half-life of the Collective Health Science Area: Citation Analysis of Cadernos de Saúde Pública to determine their Obsolescence <b>Felipe Silva Izidoro da Fonseca, Maria José Veloso da Costa Santo, and Vânia Lisbôa da Silveira Guedes (virtual)</b>
10:30- 11:00 Coffee Break	
11:00-12:15 SCS10 Special and Contributed Sessions	
Room 1	Room 2
The Added Value of Library Services Chair: Luiza Baptista	Workshop 3 WS3
Bridging Infocommunication and Archives: A Luso-Brazilian Literature Analysis <b>Paulo Dias, Maria Beatriz Marques, Luis Borges Gouveia (onsite)</b>	Administrators' Perceptions of Racial Equity Accountability Practices in Academic Libraries <b>Coordinator: Kristyn Caragher (virtual)</b>
Information Governance and Data Protection in Higher Education: A Systematic Literature Review (2020–2024) <b>Ana Silva Rigueiro, José Borbinha, Maria Beatriz Marques (onsite)</b>	
Data-Driven Library: A Project Overview and a Case of Electronic Resource Usage Analysis <b>Carlotta Alpigiano and Eulalia Mestre Lampreia (virtual)</b>	
The Evolution of the Scientific Publishing System in the Republic of Moldova: Bibliometric Analysis and Implications for Science Policies <b>Nelly Țurcan, Rodica Cujba and Vitalie Minciuna (virtual)</b>	
The Challenges of Electronic Waste as a Global Phenomenon <b>Wilhelm Peekhaus (virtual)</b>	
12:15-13.15 SCS11 Special and Contributed Sessions	
Room 1	Room 2
The Added Value of Library services II Chair: Jae Jennifer Rossman	Workshop 4 WS4

Development of Conceptual Models of Access to Special Collections and Archives <b>Jae Jennifer Rossman (onsite)</b>	<b>The Future of LibQUAL Coordinator: Martha Kyrillidou (virtual)</b>
Innovation and Collaboration in the GLAM Ecosystem: Towards Accessible and Inclusive Digital Heritage <b>Elena Loreto Olmedo-Pagés and Rosario Arquero-Avilés (virtual)</b>	
On the Personalization of Information Retrieval: “The AI-personification in Reformulating UX in Libraries” <b>Debojyoti Roy, Ajay Jaiswal, and Projes Roy (virtual)</b>	
Semantic analysis on Cultural Heritage: the use of NER for the enhancement of historical archives <b>Donatella Sforzini, Luca Mattei, Antonella Guidazzoli, Maria Chiara Liguori</b>	
<b>13:15-14.00</b> <b>Closing ceremony</b> <b>17<sup>th</sup> QQML International Conference</b>	
<b>14:00-15:00</b> <b>Lunch</b>	
<b>Saturday</b> <b>31.5.2025</b> <b>Full Day Excursion</b>	
<b>End of the Conference</b>	

## ***Book of Abstracts***

## *Plenary Speeches*

### *I*

#### *Artificial Intelligence: Applications, Implications and Speculations*

*Arlindo Oliveira*

Distinguished Professor, IST, President, INESC, Member of the Board, CGD, Distinguished Guest Professor, MUST, Senior Researcher, INESC-ID <http://arlindo.oliveira.cc>

#### **Abstract**

Recent advances in the fields of artificial intelligence (AI) and machine learning are revolutionizing our economy and our society. AI-based systems are finding numerous applications in marketing, sales, healthcare, finances, education, transportation, logistics, design, and even in scientific research. In the near future, AI-based systems may replace a significant fraction of human workers in many jobs and functions. Machine learning, a technology that is at the core of recent AI developments, enables computers to learn from experience and opens the way to even more radical changes in the way we interact with machines. Deep learning, in particular, is enabling us to address new problems in computer vision and human interaction, with many applications in analytics and automation. Recent results obtained with transformer-based vision-language models, convolutional neural networks, deep reinforcement learning, and reverse diffusion have brought this topic to the center of public attention and will have, no doubt, many practical, social, and philosophical impacts in the near future. Next generation AI systems will combine state-of-the-art models with reasoning abilities and agency, achieving or even exceeding human-level performance in many tasks. Many AI companies are now explicitly aiming at developing artificial general intelligence (AGI), creating the prospect of systems as intelligent, powerful, and possibly even as conscious as humans. If they come into existence, what will be the social, legal, and ethical implications?

#### **Brief CV**

Arlindo Oliveira was born in Angola and has lived in Mozambique, Portugal, Switzerland, the United States (California, Massachusetts and Maryland), Japan and China (Macau). He has a degree in Electrical and Computer Engineering from Instituto Superior Técnico (IST) and a PhD in the same field from the University of California at Berkeley, with a Fulbright scholarship. He was a visiting professor at MIT and a researcher at INESC, CERN, the Electronics Research Laboratory at UC Berkeley, Berkeley Cadence Laboratories and the University of Tokyo.

He was a member of the National Council for Science, Technology and Innovation and of the Advisory Board of the European Parliament's Science and Technology Panel (STOA). He is a Distinguished Professor at IST, president of INESC, visiting professor at the Macau University of Science and Technology, non-executive director of Caixa Geral de Depósitos and a researcher at INESC-ID.

He has published five books, translated into several languages, and hundreds of scientific articles in international journals and conferences in the areas of algorithms, artificial intelligence, machine learning, bioinformatics and computer architecture.

He has been a director of several companies and institutions, as well as president of the Instituto Superior Técnico, INESC-ID and the Portuguese Association for Artificial Intelligence. He is a member of the Lisbon Academy of Sciences, the Academy of Engineering, the IEEE and the ACM. He has received several awards and distinctions, including the Universidade Técnica de Lisboa/Santander award for excellence in research, the GALP/Academia da Engenharia career award and the ACEPI Career Award.

## **II**

### ***The AI Reality: Cultivating Opportunities, Embracing Learning, and Facing Challenges***

***Dr Dania Bilal***

#### **Abstract**

Dr. Bilal will focus on the impact of artificial intelligence (AI) on the information landscape, our lives, and our societies. AI is a reality, will continue to evolve, and is here to stay. Adopting AI in the workplace affords new opportunities for innovating services and operations. However, AI will dramatically affect our work and lives. A recent report shows that over fifty percent of those surveyed feel more concerned than excited about AI (<https://aiindex.stanford.edu/report/>). Studies have also suggested that integrating AI in education for teaching and learning causes anxiety, frustration, fear, and student concerns about data privacy, safety, bias, and societal implications (Bilal, He, and Liu, 2025).

These concerns permeate libraries, information organizations, and other sectors of society. Besides worry about rendering information professionals “irrelevant,” potential exists for adverse consequences, such as loss of equity in sharing and using information, and the risk of compromising information integrity, which can threaten the library and information science profession's core tenets in providing equitable and inclusive access to information (Bilal, Chu, Rieh, and Choi, 2025; Singh, Bilal, Cox, Chidziwisano, and Dinneen., 2023). Informational professionals and leaders can shape the future of AI adoption and practice in their workplace. Historically, libraries and information organizations have adapted to and embraced new technologies that once seemed to challenge their relevancy, such as automation, cloud computing, remote services, and big data. They have accomplished this partly by retooling and innovating existing operations and services to adapt to emerging technologies, providing new services that meet user expectations and serve their communities. The rapid advances in AI have raised questions about how to maintain the relevance of libraries and equip information professionals with the necessary skills and competencies to navigate this technology (Cox, 2023).

In the age of AI, staying ahead and leading the way is crucial for harnessing AI potential to enhance operations, services, and users’ experiences. Dr. Bilal will discuss key areas for

adopting AI in the workplace, including but not limited to, redefining what we do, keeping humans in the loop, providing effective AI education and training, supporting continuous learning and retooling; balancing data privacy, safety, risks, ethics, and human values, ensuring inclusivity and accessibility, building awareness of human and algorithmic bias in AI solutions, offering robust human-centered AI literacy programs, including GenAI, and developing AI policies.

AI will bring disruption but can also be transformative. Preparing for change and adaptability is crucial for adopting and evaluating AI in the workplace and navigating this innovative and powerful technology.

### **References**

Bilal, D., He, J., & Liu, J. (2025). AI in Education: Transforming Teaching and Learning. *Information and Learning Science journal*. Editorial. Forthcoming.

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Singh, V., Bilal, D., Cox, A., Chidziwisano, G. H., & Dinneen, J. D. (2023). Global AI initiatives: from theory to practice. *Proceedings of the Association for Information Science and Technology*, Vol. 60, No. 1, pp. 836-840. <https://doi.org/10.1002/pr2.873>

### ***Brief CV***

**Dr. Dania Bilal** is the Patricia D. Williams Professor at the School of Information Sciences, University of Tennessee-Knoxville. She is an information scientist, educator, and researcher who has worked and practiced in various libraries and information organizations. Her research focuses on human information behavior, human-AI interactions, and human-centered design of technologies, including Artificial Intelligence (AI) and Generative AI (GenAI). Her recent research has addressed educating and training information professionals in AI, AI in education, and AI4 Youth. She led the Innovation, Disruption, Enquiry, Access (IDEA) Institute on AI project (2020-2023), funded by the Institute for Museum and Library Services in the United States. Currently, she is leading the University Tennessee System's (UTS) Challenge project, Beyond Boundaries: Introducing 4-H Students to Gen-AI Through Immersive Learning Experiences (ILEs) (August 2024-December 2025), which is funded by UTS. She is the guest editor of the *Information and Learning Sciences Journal* special issue, *AI in Education: Transforming Teaching and Learning* (2025). Dr. Bilal has numerous publications and has been in the top 2% of most-cited researchers worldwide since 2022.



### III

#### *Augmenting insight, preserving Purpose: AI, research methods, and the Human dimension in GLAM futures*

*Alternative title: Marry me! AI and GLAMs: augmenting prospects*

*Luis Borges Gouveia*

#### **Abstract**

Artificial Intelligence (AI) is rapidly reshaping the landscape of information generation, access, analysis, and preservation, presenting both unprecedented opportunities and profound challenges for Information Science (IS) and the institutions it supports, particularly within the GLAM context (Galleries, Libraries, Archives, Museums). This keynote addresses the critical need to navigate this transformation thoughtfully, harnessing the power of AI while resolutely preserving the essential human dimension at the core of our field.

We will explore the transformative value of AI for Information Science, examining how machine learning, natural language processing, and computer vision can enhance information retrieval, automate complex metadata generation, enable new forms of knowledge discovery from vast datasets, and potentially revolutionize digital preservation strategies. Concurrently, we will critically assess the inherent risks, including algorithmic bias, lack of transparency (as the case of the black box problem), data privacy concerns, and the potential devaluing of traditional information skills.

A central focus will be the utility of AI specifically for Qualitative and Quantitative Methods in Libraries (QQML). We will discuss how AI can augment QQML by enabling large-scale quantitative analysis of user behavior, usage patterns, and collection data, uncovering insights previously unattainable. Simultaneously, AI tools can assist qualitative research through automated transcription, thematic analysis of large textual corpora (e.g., user feedback, archival descriptions), and sentiment analysis. However, we will emphasize that AI should be viewed as a tool to enhance, not replace, methodological rigor and critical interpretation. QQML, in turn, provides essential frameworks for evaluating the impact, effectiveness, and ethical implications of AI implementations within libraries and GLAM institutions.

The keynote confronts the challenge of preserving the human dimension. As AI automates tasks, how do we safeguard and elevate the roles requiring critical thinking, ethical judgment, contextual understanding, nuanced curation, community engagement, and empathetic user interaction? We argue for a future based on human-AI collaboration, where technology handles scale and computation, while information professionals focus on strategic oversight, ethical governance, complex interpretation, and fostering meaningful human connections with information and heritage.

Finally, we will outline strategies for the GLAM sector to strategically leverage and cope with AI. This involves developing digital literacy and AI competencies within the workforce, fostering interdisciplinary partnerships, advocating for ethical AI development tailored to cultural heritage needs, implementing robust information governance frameworks, and proactively engaging users and communities in shaping how AI is integrated into their

services. The ultimate goal is to chart a course where AI serves to amplify the core mission of GLAM institutions – preserving memory, enabling access, fostering knowledge, and enriching human understanding – without compromising the human values that underpin their existence.

**Keywords:**

Artificial Intelligence (AI), Information Science, GLAM (Galleries, Libraries, Archives, Museums), Human-AI Collaboration, Digital Ethics.

***Brief CV***

Full Professor at Fernando Pessoa University. PhD in Computer Science from the University of Lancaster, United Kingdom, and MSc in Electronic and Computer Engineering from the Faculty of Engineering, University of Porto. Diploma in Computer Science and Applied Mathematics from the University Portucalense. He also has a habitation in Industrial Engineering and Management from the University of Aveiro, and a Postdoctorate in Information Science from UP. Researcher at the Information, Communication and Digital Culture Group, CITCEM, UP, and collaborator within the Artificial Intelligence and Computer Science Laboratory, LIACC, UP. His interests are digital and how to explore its potential to improve human activity. Currently working on the use and exploration of artificial intelligence's impact on ongoing digital transformation both in individuals and organizations. He belongs to the advisory board and north direction of APDSI — Association for the Promotion and Development of the Information Society, a Portuguese NGO with a tradition in the discussion and dissemination of digital issues in society, with more than 20 years. He has been teaching for 30 years in higher education, having collaborated with universities in Portugal and abroad in his areas of expertise, with the successful guidance of 11 post-doctoral fellowships, 60 PhDs, and 34 master's degrees. He has published 41 books and more than two hundred scientific journal publications and has more than a thousand texts and communications of a scientific nature throughout his career in higher education.

***IV***

***The Human Core: Why Information Services Need More Than Digital Functions for Sustainability***

***Maria Beatriz Marques<sup>1,2</sup>***

<sup>1</sup> Universidade de Coimbra, Faculdade de Letras, Portugal

<sup>2</sup> CITCEM, Portugal

**Abstract**

In a controversial period in human history, we are witnessing an *epistemological discussion* about the power of the media over the messages they are intended to convey. This raises serious questions about the sustainability of Information Services (IS). Their long-term relevance seems threatened by an overemphasis on technology and a concerning disregard for the crucial human factor in how information is produced, shared, and used to create knowledge.

This trend appears linked to a lack of scientific depth in how Information Science itself is developing, evident even in prestigious university training programs, and persistent confusion

distinguishing the role of the Information Scientist from purely technical roles like Computer Scientists or Systems Analysts.

This study argues that these trends – stemming from perceived gaps in Information Science education and role confusion – undermine the field's long-term value. Therefore, the aim is to question the *informational capitalism*— the focus on information as a commodity — often seen in IS training and practice. We argue forcefully that the human capacity for critical judgment, ethical consideration, and contextual understanding within IS is the crucial differentiator from Artificial Intelligence and the key factor validating Applied Social and Human Information Science.

We propose that achieving true sustainability requires repositioning IS. They must evolve from *passive digital repositories* into active, privileged actors within the Information Society, fundamentally focused on empowering individuals to make informed decisions that lead to greater happiness and well-being.

Our methodology involves analyzing Information Science training at leading global universities (using data from Shanghai Ranking/ARWU and QS World University Ranking). We contextualize this within the broader framework of Applied Social and Human Information Science, emphasizing its inter- and transdisciplinary nature.

The results of this analysis are intended to outline a holistic view of IS as strategic partners of the analog and digital worlds in the development of functions and processes for the control, security and dissemination of information produced, stored, consumed and processed by the various agents involved, to evaluate the impact of IS in meeting the information needs of the various user segments, and to guarantee the sustainability of IS in the Digital Ecosystem based on their human capital.

**Keywords:** Information Science Training, Information Services, Sustainable Development, Social and Human Impact, Total Quality Management.

### ***Brief CV***

Maria Beatriz Pinto de Sá Moscoso Marques – University of Coimbra (EN) Maria Beatriz Pinto de Sá Moscoso Marques has a degree in History, a Postgraduate Degree in Documentary Sciences (Archive and Library) by FLUP, a Ph.D in Documentary Sciences (Specialized in Information Management and Information Services Management), and a Tenure in Information Science by FLUC. She works as an Assistant Professor in the Philosophy, Communication and Information Department, where she is a member of the Scientific Commission. She is also a member of the Pedagogical Council of FLUC. She is an investigator of CITCEM-Digital Culture (full member) and CEGOT (member). She develops research and teaching activities in the subjects of Quality Management and Marketing of Information Services - Customer Satisfaction of Information Services, Information Management in Organizations, Study of Information Policies and Systems, Epistemology and Phenomenology of Information Science, Theory and Criticism of the Information Society, Strategic Planning and Evaluation of Information Services, Social Responsibility of Organizations and Information and Interactivity - Organizational Communication. She is an A3ES expert in the field of Information Science.



## *AI: the ultimate frontier or just another step?*

**Zélia Charraz Parreira**

Librarian, Member of CIDEHUS-UE, Executive Committee of EBLIDA, Évora, Portugal

### **Abstract**

This presentation explores the question of whether artificial intelligence represents the final frontier, or merely another step along the way.

Throughout history, the threat of the extinction of the profession of librarianship has been a constant presence. In the contemporary context, AI appears to be the ultimate frontier, the technology that will ultimately supplant human expertise and render professional competencies obsolete.

In the face of this imminent and unavoidable technological advancement, two divergent responses have emerged: one being to disregard it, and the other being to become an integral part of it.

Assuming, for the sake of argument, that the 'ignore' route remains a viable option, the focus should be on how libraries, particularly public and school libraries, can or should address AI, given that technology is not always a first-hand resource, and users range from those who are completely analogue to those who are digitally obsessed. The discourse will address the barriers, benefits and threats associated with this transition. Of particular pertinence is the role of libraries and librarians in a world where knowledge is no longer confined to the human mind or even the tip of the human finger, but is instead found in the fast-paced, rapidly learning, high-speed processing, machine-centric domain of the Internet.

### ***IA: a última fronteira ou apenas mais uma etapa?***

Esta apresentação explora a questão da inteligência artificial, procurando equacionar se esta representa a última fronteira ou apenas mais um passo no caminho.

Ao longo da história, a ameaça de extinção da profissão de bibliotecário tem sido uma presença constante. No contexto atual, a IA parece ser a última fronteira, a tecnologia que acabará por suplantando os conhecimentos humanos e tornar obsoletas as competências profissionais.

Perante este avanço tecnológico iminente e inevitável, duas reações divergentes são possíveis: ignorar a realidade, ou tornar-se parte integrante dela.

Assumindo, por uma questão de argumentação, que a via “ignorar” continua a ser uma opção viável, o foco deve ser a forma como as bibliotecas, particularmente as bibliotecas públicas e escolares, podem ou devem abordar a IA, dado que a tecnologia nem sempre é um recurso de primeira mão e os utilizadores vão desde os que são completamente analógicos até aos que são obcecados pelo digital.

O discurso abordará as barreiras, os benefícios e as ameaças associadas a esta transição. Particularmente pertinente é o papel das bibliotecas e dos bibliotecários num mundo em que o conhecimento já não está apenas confinado à mente humana ou mesmo à ponta dos dedos, mas se encontra no domínio da Internet, centrado nas máquinas de ritmo acelerado, aprendizagem rápida e processamento de alta velocidade.

### ***Brief CV***

Degree in History (1994), Post-graduation in Information Sciences – Library (1996). PhD in Information and Documentation Sciences (2018), with the thesis "The legal regulation of Public Libraries in Portugal".

Director of the Public Library of Évora since 2014; director of the Municipal Library of Moura, between 1994 and 2013.

Vice president of EBLIDA - Executive Committee of the European Bureau of Library, Information and Documentation Associations (elected as member of the Executive Committee for the 2021-2024 and 2024-2027 terms).

PhD Full Member of CIDEHUS-UE ( Interdisciplinary Centre for History, Culture and Societies, University of Evora).

Trainer in the theme of Libraries since 2001, with a focus on issues of service organization, regulation of institutions and profession, and integration of the library in the community.

Member of the Portuguese Association of Librarians, Archivists, Information and Documentation Professionals (BAD).

Frequently invited to conferences, colloquia, and professional meetings, either to report her professional experience in creating strategies for affirming the public library in the community, or to disseminate the results of her research in the area of policy / strategy for the development of a national public libraries service and the corresponding legal regulations.

Jury Member of the Portuguese Public Libraries Best Practices Award.

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Licenciatura em História (1994), Pós-graduação em Ciências da Informação e Documentação - Biblioteca (1996). Doutoramento em Ciências da Informação e da Documentação (2018), com a tese “A regulamentação legal das Bibliotecas Públicas em Portugal”.

Diretora da Biblioteca Pública de Évora desde 2014; diretora da Biblioteca Municipal de Moura, entre 1994 e 2013.

Vice-Presidente da EBLIDA - European Bureau of Library, Information and Documentation Associations (eleita para a comissão Executiva nos mandatos 2021-2024 e 2024-2027).

Membro integrado do Centro Interdisciplinar de História, Cultura e Sociedades da Universidade de Évora (CIDEHUS – UE).

Formadora na temática de Bibliotecas desde 2001, com foco nas questões de organização dos serviços, regulamentação das instituições e profissões, e integração da biblioteca na comunidade.

Membro da Associação Portuguesa de Bibliotecários, Arquivistas, Profissionais de Informação e Documentação (BAD).

Frequentemente convidada para conferências, colóquios e encontros profissionais, seja para relatar sua experiência profissional na criação de estratégias de afirmação da biblioteca pública na comunidade, seja para divulgar os resultados de suas pesquisas na área de política / estratégia para o desenvolvimento de um serviço de bibliotecas públicas e respetiva regulamentação legal.

Membro do Júri do Prémio de Boas Práticas para Bibliotecas Públicas Portuguesas.

<https://orcid.org/0000-0003-1398-6385>, CIÊNCIA ID 141D-351B-6F6F

## VI

### *Information Governance and Archival Practices at the Crossroads of Trust and Technology*

*José Borbinha<sup>1,2</sup>*

<sup>1</sup> INESC-ID, Portugal

<sup>2</sup> Universidade de Lisboa, Instituto Superior Técnico, Portugal, University of Lisbon – IST - Special Session

#### ***Abstract***

Information governance (IG) is the strategic framework through which an organization ensures its information is managed responsibly, securely, and consistently aligned with legal, ethical, and operational objectives.

As digitization and artificial intelligence increasingly rely on documented information to reason, decide, and act, IG is undergoing a profound transformation. Previously viewed mainly as a back-office compliance function, IG has evolved into a critical driver of organizational resilience, transparency, accountability, and ethical integrity. Organizations must now strategically leverage IG to navigate regulatory complexity, manage escalating digital risks, and respond to growing societal expectations of openness, inclusion, and trustworthiness. Implementing structured management systems provides systematic support for efficient and effective IG.

Management systems based on widely recognized international standards offer an integrated approach to governance. Standards such as ISO 15489 (records management), ISO 30300 (management systems for records), ISO/IEC 27001 and 27701 (information security and privacy), and ISO 31000 (risk management) deliver proven frameworks for structuring governance processes and embedding them into organizational routines. Initiatives like eArchiving, dedicated to digital preservation, demonstrate how traditional archival disciplines can leverage these systems effectively, facilitating adaptation across diverse organizational contexts (whether public, private, or not-for-profit).

Beyond tools, standards, and policies, effective IG encompasses significant cultural and ethical dimensions. Leadership roles, institutional maturity, and well-defined organizational structures fundamentally shape an organization's governance posture. Important practical dilemmas remain, including how to ensure long-term accessibility and authenticity of archival information, balance transparency with confidentiality, and manage third-party risks within complex platform-based service ecosystems.

In this rapidly evolving landscape (where carefully managed data underpins sophisticated AI systems) the value of authentic, contextually rich documented information reaches unprecedented importance. Traditional archival activities, known for their rigor, precision, and reliance on human expertise, such as curation, preservation, metadata management, and long-term stewardship, now face dramatic new opportunities and challenges. Organizations must rethink these activities to combine traditional meticulousness with modern automation capabilities. By doing so, archival processes can efficiently deliver high-quality, trustworthy

data on a scale, laying essential foundations for credible, effective, and ethically grounded AI innovation. As AI transforms industries and societies, a thoughtful balance between human-driven archival rigor and AI-driven automation emerges as indispensable in shaping a future defined by trust, accountability, and responsible information use.

**Keywords:** Information Governance; Digital Transformation; Management Systems; Archives; Digital Preservation; Artificial Intelligence.

### ***Brief CV***

José Borbinha is full professor and the coordinator of the scientific area of Information Systems at the Department of Informatics of Instituto Superior Técnico (IST), University of Lisbon. He is an Integrated Researcher at INESC-ID in the scientific area of Information Systems and Decision Support, as well as the coordinator of the transversal Thematic Line of Digital Transformation and Citizenship. He completed his Bachelor's and M.Sc. degrees in Electrical and Computer Engineering at IST, and earned a Ph.D. degree in Computer Engineering and Information Systems also at IST. He has been actively involved in teaching at IST since 1990. His main academic and scientific interests encompass all aspects of information management and related techniques and technologies. Consequently, he has been engaged in academic activities, including participation and coordination of various national and international projects focusing on requirements management, analysis, modelling, and design of information systems. His emphasis lies in enterprise architecture techniques and challenges related to governance, innovation, risk, security, standardization, and compliance. In these domains, he has supervised twelve PhD students and over a hundred M.Sc. students. He took a break from teaching between 1998 and 2005 to serve as the Director of Innovation and Development at the National Library of Portugal, where he started the National Digital Library Initiative. In 2019, he worked as a consultant in the information management area for the United Nations Secretariat in New York, where he designed a long-term strategic plan for information management and preservation. During 2020 and 2021 he served as a specialist in technology topics in the office of the Secretary of State for Innovation and Administrative Modernization (part of the Ministry of State Modernization and Public Services of the XXII Constitutional Government of Portugal). He has regularly served as a consultant or evaluator for the European Commission, NSF (National Science Foundation, United States), FCT (Foundation for National Scientific Computing), UEFISCDI (Romania), and is a regular member of program committees in national and international conferences in his research areas. José Borbinha is a member of the Order of Engineers (in the colleges of Electrical Engineering and Computer Engineering), BAD - Portuguese Association of Librarians, Archivists, and Documentalists, APSI/PTAIS - Portuguese Association of Information Systems, and the Lisbon chapter of ISACA - Information Systems Audit and Control Association. He is a Senior Member of IEEE - Institute of Electrical and Electronic Engineers (was the elected president of the IEEE Technical Committee on Digital Libraries from 2008 to 2011), of ACM - Association for Computer Machinery (serves on the advisory committee for the ACM Digital Publications Library). Is corresponding member of the Academy of Sciences of Lisbon. He led the project team of ISO/TC 46/SC 11 Working Group 14, which produced "ISO TR 21965:2019 - Information and documentation — Records management in enterprise architecture." He was the elected president of the Steering Committee for the international

conference series TPDL - Theory and Practices of Digital Libraries from 2015 to 2018. Was representative of IST on the Board of RDA-pt - Research Data Alliance Portugal (of which he was a founding member). He was a founder of the European eArchiving initiative, defining the eArchiving Building Block terms as an architecture and reference service for European public administrations. Was one of the founders of the national scientific infrastructure BioData, the coordinator of the EuDML project, which created the main European digital library in the field of Mathematics, and one of the creators of the proof of concept for the Europeana portal.



## ***Workshop 1***

### ***Implementing the READ Scale (Reference Effort Assessment Data) Tool at Your Institution***

#### **Coordinator**

***Bella Karr Gerlich***

#### **Brief Description**

The READ Scale, developed by Dr. Gerlich, was first presented at QQML in 2018; since then, hundreds of libraries have adopted the tool at their institutions, with more asking for information every day. Libraries of all types - public, health sciences, special, government and academic of all sizes use the Scale. The READ Scale has also been incorporated in the online statistical data gathering packages Springshare, SiteScripster, and DeskTracker. This workshop will be an introduction to the tool for new users, and a refresher / discussion session for libraries already using the Scale. Dr. Gerlich will take participants through the process of implementation and continued use of the tool at their libraries. How to engage stakeholders, assess training and presenting outcomes from statistics will be included as part of the workshop experience.

#### **1. Introduction**

The Benefits using the tool and Engaging Stakeholders

What is the READ Scale? The READ Scale is a qualitative statistical tool for use in measuring the effort, knowledge, skill and teachable moments that occur during a reference transaction. Dr. Gerlich will share the inspiration for developing the READ Scale – interviews with both reference librarians and administrators that agreed 100% the traditional counting method was not a measure of the effort nor knowledge taking place – an undervalued service. Changing how we record reference statistics takes work – it means changing how we do something the same way we always have – what are the benefits? Gerlich will address the advantages and how to engage stakeholders in why it can be beneficial for them to adopt the Scale. A survey of the audience (size of institution, number of students / users, type of institution, etc.) will be taken to assist the workshop leader with creating groups for discussion / problem solving as needed.

#### **2. Implementing the Scale**

In this section, Dr. Gerlich will discuss ways to implement the READ Scale in the various library types. Participants may work together to create sample implementation materials and exercises that enable a confident approach to introduction at their home institution.

#### **3. Assessing Training and Planning Outcomes**

Dr. Gerlich will review training users overall and hone in on desired outcomes for using the READ Scale based on discussions. For this exercise, like institutions may be paired to enable a shared understanding of size, budget and so on that might impact the training options and outcomes desired.

#### **4. Using the READ Scale statistics for reporting purposes**

Dr. Gerlich will discuss how using the data gathered from implementing the Scale can be used to create reports that illustrate the activities of reference services to stakeholders that will build support for reference and research support services. Various papers / presentations and references will be included for discussion and review, citing examples of how to use Scale data for reports based on library needs as well as build support among colleagues.

## References

Gerlich, Bella Karr and Berard, G. Lynn, "Testing the Viability of the READ Scale: Qualitative Statistics for Academic Reference Services" *The 2007 National Study* College & Research Libraries, v.71, no2, March 2010, p. 116-137.

Gerlich, Bella Karr; Berard, G. Lynn; McLaughlin, Jean; Revie, Gretchen; Liebold, Sue "Using the READ Scale (Reference Effort Assessment Data): Qualitative Statistics for Meaningful Reference Assessment" (2008) Conference Proceedings, Association of Research Libraries Assessment Conference.

Gerlich, Bella Karr, "Work in Motion / Assessment at Rest: An Attitudinal Study of Academic Reference Librarians: A Case Study at Mid-Size University (MSU A)" Book chapter in *Advances in Library Administration and Organization* v. 28, p 323-372. 2009.

Gerlich, Bella Karr and Whatley, Edward, "Using the READ Scale for Staffing Strategies: The Georgia College & State University Experience" *Library Leadership and Management*, v.23, no1, Winter 2009, p. 26-30.

34 Gerlich, Bella and Heller, Margaret. "Electronic Resources & Libraries Conference (ER&L), February 28 – March 2, 2011, Austin, Texas. "Using the READ Scale to Track the Effort of Resolving Electronic Resource Access Issues". Presentation.

Lederer, Naomi and Feldmann, Louise. *Interactions: A Study of Office Reference Statistics*, June 2012 *Evidence Based Library and Information Practice* 7(2):5-19 DOI 10.18438/B88K6C

Vanscoy, Amy. *Fully engaged practice and emotional connection: Aspects of the practitioner perspective of reference and information service*. October 2013

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Vassady, L., Archer, A., Eric Ackermann, E. *READ-ing Our Way to Success: Using the READ Scale to Successfully Train Reference Student Assistants in the Referral*, October 2015, *Journal of Library Administration* 55(7):535-548 DOI, 10.1080/01930826.2015.1076309

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Hanson, D., Keller, K., Harmon, L., Steffensen, B., *Development of a Tool to Measure the Cognitive Labor of Research in a Health Sciences and Consumer Health Library: Adaptation of the 'Medical Decision-Making' Calculator*, April 2016, *Journal of Hospital Librarianship* 16(2):107-115, DOI 10.1080/15323269.2016.1150736

Stoddart, R., Hendrix, B. Learning at the Reference Desk: A Pilot Project to Align Reference Transactions with University Learning Outcomes, December 2016, The Journal of Academic Librarianship 43(1) DOI 10.1016/j.acalib.2016.11.004

Bowron, C., Weber, J. Implementing the READ Scale at the Austin Peay State University Library, September 2017, The Journal of Academic Librarianship 43(6) DOI 10.1016/j.acalib.2017.08.010

Stubbs, B., R. Muir, R. (2022). Reading the data. Incite, 43(6), 16. <https://search.informit.org/doi/10.3316/informit.764002052470631>

### ***Bella Karr Gerlich, Brief CV***

#### **Education**

PhD, Library and Information Sciences, University of Pittsburgh, Pittsburgh PA

Master of Public Management, Carnegie Mellon University, Pittsburgh PA

Bachelor of Fine Arts, Virginia Commonwealth University, Richmond VA

Postgraduate: Negotiation and Leadership Academy for Women, Carnegie Mellon University, Pittsburgh PA

#### **Employment**

Missouri University of Science & Technology, University Libraries, Vice Provost and Dean of Libraries, August 2023 – Present

Texas Tech University, University Libraries, Grants and Special Projects Librarian, February 2022 – August 2023

Goucher College, Library, Consultant / Interim Associate Vice President for the Library and Learning Commons, August 2020 – February 2022

Texas Tech University, University Libraries, Dean of Libraries, March 2015 – January 2020

University of Alaska Fairbanks (UAF), Elmer E. Rasmuson Library, Professor and Dean of Libraries, August 2011 – February 2015,

Dominican University, Rebecca Crown Library, University Librarian, July 2008 – July 2011

Georgia State College & University, Library and Instructional Technology Center (LITC), Associate University Librarian and Museum Operations Manager, February 2006 – June 2008

Carnegie Mellon University, University Libraries, Head, Arts and Special Collections, July 2001 – January 2006, Interim Music Librarian, May 2002 – January 2003, Co-Head, Arts and Special Collections, June 2000 – July 2001, Arts Services Specialist, Arts and Special Collections, March 1995 – June 2000

Pittsburgh Symphony Orchestra, Administrative Assistant, Corporate Giving, 1994 – 1995

Bethany College, T.W. Phillips Memorial Library, Administrative/ Acquisitions Assistant, July 1992 – July 1994

Virginia Commonwealth University, University Libraries, Special Events Coordinator, Library Development Office, September 1987 - Oct 1991, Mail Room Assistant, June 1987 - September 1987

#### **Scholarship and Creative Activity**

##### **Publications - Peer Reviewed**

Gerlich, Bella Karr and Berard, G. Lynn, "Testing the Viability of the READ Scale: Qualitative Statistics for Academic Reference Services" The 2007 National Study" College & Research Libraries, v.71, no2, March 2010, p. 116-137. Selected for inclusion in the Reference

Research Review for 2010. This annual bibliography focuses on research published within the last complete calendar year, annotating items of importance to the practice of reference.

Gerlich, Bella Karr, "Work in Motion / Assessment at Rest: An Attitudinal Study of Academic Reference Librarians: A Case Study at Mid-Size University (MSU A)" Book chapter in *Advances in Library Administration and Organization* v. 28, p 323-372. 2009.

Gerlich, Bella Karr and Whatley, Edward, "Using the READ Scale for Staffing Strategies: The Georgia College & State University Experience" *Library Leadership and Management*, v.23, no1, Winter 2009, p. 26-30.

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Gerlich, Bella Karr, (2006) "Core Competencies and Their Application in Management" In *Core Competencies and Core Curricula for the Art Library and Visual Resources Professions*, edited by H. Ball, Occasional Papers Series 15, Kanata, Ontario, Canada: Art Libraries Society of North America.

Gerlich, Bella Karr and Amy Perrier, "Arts Instruction in the Age of Technology: Providing Library Services to Support Studio and Survey Faculty Who Use Technology for Instruction" *Information Technology and Libraries*, v. 22 no2 June 2003, p. 79-83.

Gerlich, Bella Karr, "Rethinking the contributions of student employees to library services" *Library Administration and Management* v. 16 no3 Summer 2002 p. 146-50.

## 36 **Select Recent Presentations – Peer Reviewed and Invited**

FEDLINK Spring Exposition 2022, May 11, 2022 "The READ Scale" Invited Panelist.

International Federation of Libraries and Institutions (IFLA) World Library Information Conference 2021, August 18, 2021 "Can we create surveys that capture hidden value?" Panelist.

Special Libraries Association, "Do Your Future Self a Favor with the Read Scale: Small Actions Now Have Big Impacts Later" and "Reference Rodeo and The Data Collection Connection" Invited Speaker / Panelist, October 14 - 17, 2020.

Satellite Meeting, International Federation of Libraries and Institutions (IFLA) World Library Information Conference 2019, August 22, 2019 "Using the READ Scale at Your Library", Workshop. Greece. Invited Presenter.

International Federation of Libraries and Institutions (IFLA) World Library Information Conference 2019, August 24-30, 2019 "Every Picture Tells A Story: Using eMetrics at Your Library" Greece. Invited Speaker.

International Federation of Libraries and Institutions (IFLA) World Library Information Conference 2018, August 24-30, 2018 "Measuring Up: eMetrics & Libraries: Academic and Practical Applications" Kuala Lumpur. Invited Speaker.

American Library Association Conference, June 21-26, 2018 "Effort, Education, Knowledge, Skill and Teaching Recognized: The READ (Reference Effort Assessment Data) Scale at work in Academic, Public & Special Libraries." Panel Presentation with G. Lynn Berard, Jaqueline Cantwell, Morgan Miller and Lynne Rudasill.

## **Current Professional Activities**

- American Library Association (ALA) 1999 Present
- International Research Roundtable (IRRT) - 2020-Present

- Library Research Roundtable (LRRT) – 2020-PRESENT
- Association of College and Research Libraries (ACRL) – 1999 – Present
- International Federation of Library Associations and Institutions, 2017 – Present.
- Member, Statistics and Evaluation Section 2017 – Present
- Chair elect, 2019 – Present
- Library Leadership, Administration and Management Association – (LLAMA) 2001 – Present.
- Missouri Library Association – 2023 – Present.
- MOBIUS Consortium – 2023 – Present. Board Member.

#### **Current University Service**

- Missouri University of Science & Technology
- Provost Council, 2023 - Present.
- Provost Leadership Team, 2023 – Present.
- Chancellors Leadership Team, 2023 - Present.
- Library and Learning Services Faculty Senate Advisory Committee, 2023 – Present.
- Search Committee, Vice Chancellor for Student Success, 2024.
- Library Leadership, Missouri University Library System, 2023 – Present.
- University of Missouri Libraries Council, 2023 – Present
- UM System Sites Library Coordinators, 2024 - Present

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#### **Service to the Profession**

- Outside Peer Review Consultant, Maryland Institute and College of Art, April 2022
- Advisory Editorial Board Member, CALA IJOL journal. calaijol.org/ 2016 – Present.
- Peer-Review Board Member, Performance Measurement & Metrics (PMM). 2015 –Present.
- Dominican University, Guest Panelist, LISSA Association Night, October 25, 2010.
- ALA, Volunteer LRRT Representative, Professional Options Fair, OCLC Inclusion Initiative for ALA Spectrum Scholars, 2010.
- Volunteer Consultant – Oak Park Village Clerk's Office, Digitization / Project Process, County / Village Records, October 1, 2009.
- Volunteer Resume Reviewer – University of Pittsburgh, School of Library and Information Sciences, 2008 – Present.
- Volunteer Mentor – Library Research Round Table, 2008 - Present.
- Volunteer Judge – Georgia Student Media Festival, March 17, 2007.
- Volunteer - ARLIS/NA Conference, Pittsburgh, Pennsylvania. 2000.

#### **Awards**

- Nominee, ALA RUSA Rebecca Mudge Award, 2020.
- Recipient, Golden Heart Meeting Ambassador Award, Fairbanks AK, 2014.
- Outstanding Alumni Award, Professional Achievement, University of Pittsburgh, SLIS, October 2013.
- Carnegie Mellon University – Nominee, Andy Award for Innovation, August 2000.

- Carnegie Mellon University Libraries - Staff Award in recognition of innovation and leadership for the creation / implementation of the Student Employee Orientation Program, September 1996.
- Carnegie Mellon University Libraries - Staff Award in recognition of innovation and leadership for upgraded student compensation package for student employees, September 1996.

## ***II***

### ***Library Association Capacities - An interactive Workshop***

#### ***Coordinator***

**Martha Kyrillidou, Workshop Leader**

#### ***Abstract/ Scope and Rationale***

This workshop will present and discuss the findings of a recent IFLA report on library association capacities that QualityMetrics completed earlier this year. Participants will reflect on how they are engaged in library association work, which capacities they are focused on, and how their library associations can be stronger in future years.

The full report is accessible on the IFLA website and here as well. Please review this report before coming to the workshop.

***Duration*** 60 minutes

***Attendance:*** 15-20 people

***Format*** virtual

#### ***Brief cv***

Martha Kyrillidou is the principal of the library consulting firm QualityMetrics, LLC, which specializes in strategy, management, evaluation, space planning, and R&D activities. Martha believes in the transformative value of libraries to our communities. QualityMetrics works with academic, public, school libraries and state library agencies and collaborates with architects and other consulting firms; what do we do: generate ideas, test, explain, measure, understand in depth and in breadth, partner, collaborate, co-create, share. Prior to starting QualityMetrics, LLC, Martha served as the Director of the Statistics and Service Quality Programs at the Association of Research Libraries (ARL), which provides services to the 125+ research libraries in North America. In this role, Martha established the ARL Research and Assessment program (now known as Research and Analytics) developing evaluation protocols that measure library service quality including space assessment, diversity, equity, and organizational culture, and the impact of networked electronic services among others; mostly known as LibQUAL+, ClimateQUAL, DigiQUAL, and as MINES for Libraries, these tools have been used by hundreds of libraries across the globe.

Martha is a national expert on indirect costs (F&A) and library cost studies for academic libraries. She has library credentials from the iSchools of Ohio and Illinois, including a Master's in Library Science from Kent State University and a Ph.D. in Library and Information Science from the University of Illinois at Urbana-Champaign as well as a second Master's degree in educational psychology. Martha is an active participant in the Institute of Museum and Library Services Library Statistics Working Group, she chairs the NISO Z39.7 standards committee, and is a member of the ISO/TC 46/SC 8/WG 2 "International Library Statistics." She led the ALA/CORE Library Consulting group from 2019-2022 and co-facilitates the ALA workshop on "Assembling Your Consultant Toolkit: What You Need to Know to Become a Successful Consultant." She is active on the boards of the biennial Library Assessment Conference (LAC), and the International Conference on Performance Measures for Libraries (LibPMC). You can learn more about Martha from the Against the Grain interview and a recent Librarian Linkover podcast.

### **III**

#### ***Administrators' Perceptions of Racial Equity Accountability Practices in Academic Libraries***

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**Coordinator:**

***Kristyn Caragher***

Assistant Professor and Reference and Liaison Librarian (STEM), University of Illinois Chicago, Illinois, United States

**Abstract/Keywords:**

This presentation examines racism and accountability practices within academic libraries from the perspective of academic library administrators, with attention to differences between Black, Indigenous, and People of Color (BIPOC) and White academic library administrators. The quantitative data collected via an online survey show White academic library administrators are more likely to believe leadership is accountable and proactive in addressing racism within the workplace than BIPOC academic library administrators. The data reveal a need for accountability to be better defined within libraries and for academic library administrators to work together to better align on commitments toward addressing racism within the library workplace.

**Workshop Proposal Description:** I will present on the findings from the recently published article "Administrators' Perceptions of Racial Equity Accountability Practices in Academic Libraries" in portal: Libraries and the Academy. Additionally, I will outline accountability literature and engage with the audience during the question-and-answer session by inviting participants to reflect on how racial equity accountability shows up or does not show up in their own academic library contexts. This session is of interest to all library employees but especially library managers and administrators.

## IV

### The Future of LibQUAL

#### *Coordinator*

#### **Martha Kyrillidou, Workshop Leader**

#### *Abstract/ Scope and Rationale*

This workshop will discuss pathways for ensuring the LibQUAL service continues to serve the international library community. With more than 1,300 library implementations since 2000 through the ARL portal, LibQUAL is the de facto standard for measuring library service quality across the globe. Many more modified implementations have also taken place as local implementations as can be inferred from the published literature.

This workshop will discuss what are some sustainable ways we can pursue to ensure that the collective effort is a shared environment that can help libraries learn more about each other as they are constantly transforming and improving their services, introducing innovative approaches, and ensuring they continue to serve library users' expectations.

Martha Kyrillidou was one of the original developers and founders of the LibQUAL service, an effort.

LibQUAL was originally developed with the support of a grant from the Department of Education, Fund for the Improvement of Post-Secondary Education, awarded to ARL and Texas A&M University. There were four co-Principal Investigators on the grant, Colleen Cook and Fred Heath from Texas A&M, and Martha Kyrillidou and Duane Webster (ARL Emeritus Executive Director) from ARL. In the coming year, there will be three community wide forums to discuss pathways for transitioning LibQUAL support and a sustainable future for LibQUAL. The virtual community forums will be offered in May, September, and December respectively by QualityMetrics.

You can register for one or more of these forums by following the links on these dates:

Monday, September 15 2025 @ 7 AM to 9 AM Eastern time

Tuesday, December 16 2025 @ 7 AM to 9 AM Eastern time

A registration email will be received once you register with a zoom link for you to save and join the conversation. Please note that the reason the latter two times are scheduled so early is because LibQUAL is reaching international audiences and the proposed time zone is the most convenient for reaching all time zones across the globe. I am utilizing the eastern time zone findication because this email is coming to you from Silver Spring, Maryland, USA.

Other opportunities of meeting with consortia, state or regional, are also available. Please email me if you want to schedule a time that works for your consortium or group of libraries. To find out if your library has implemented LibQUAL, you can find a listing of [institutions that participated here](#). If your institution participated but your contact details are outdated, please email [libqual@arl.org](mailto:libqual@arl.org) and ARL colleagues will help you update your directory details and access your survey data. If your institution participated and you do not



know your LibQUAL directory information, please contact [libqual@arl.org](mailto:libqual@arl.org) as well and they will be able to help you.

**Duration** 60 minutes

**Attendance:** 50+ people

**Format** virtual

### **Brief cv**

Martha Kyrrillidou is the principal of the library consulting firm QualityMetrics, LLC, which specializes in strategy, management, evaluation, space planning, and R&D activities. Martha believes in the transformative value of libraries to our communities. QualityMetrics works with academic, public, school libraries and state library agencies and collaborates with architects and other consulting firms; what do we do: *generate ideas, test, explain, measure, understand in depth and in breadth, partner, collaborate, co-create, share*. Prior to starting QualityMetrics, LLC, Martha served as the Director of the Statistics and Service Quality Programs at the Association of Research Libraries (ARL), which provides services to the 125+ research libraries in North America. In this role, Martha established the ARL Research and Assessment program (now known as Research and Analytics) developing evaluation protocols that measure library service quality including space assessment, diversity, equity, and organizational culture, and the impact of networked electronic services among others; mostly known as LibQUAL+, ClimateQUAL, DigiQUAL, and as MINES for Libraries, these tools have been used by hundreds of libraries across the globe.

Martha is a national expert on indirect costs (F&A) and library cost studies for academic libraries. She has library credentials from the iSchools of Ohio and Illinois, including a master's in library science from Kent State University and a Ph.D. in Library and Information Science from the University of Illinois at Urbana-Champaign as well as a second master's degree in educational psychology. Martha is an active participant in the Institute of Museum and Library Services Library Statistics Working Group, she chairs the NISO Z39.7 standards committee and is a member of the ISO/TC 46/SC 8/WG 2 "International Library Statistics." She led the ALA/CORE Library Consulting group from 2019-2022 and co-facilitates the ALA workshop on "Assembling Your Consultant Toolkit: What You Need to Know to Become a Successful Consultant." She is active on the boards of the biennial Library Assessment Conference (LAC), and the International Conference on Performance Measures for Libraries (LibPMC). You can learn more about Martha from the [Against the Grain interview](#) and a [recent Librarian Linkover podcast](#).

## ***Special Session***

### ***Linking Research and Practice: The Synergies and their Relevance to Practice, Policy and Academia***

#### ***Coordinator***

***Maria G. N. Musoke***

Professor of Information Science and Deputy Vice Chancellor, Kyambogo University,  
Kampala, Uganda, East Africa

#### **Scope and rationale**

The 2025 QQML conference main theme is “Transformation and Innovation in Archives and Libraries in the Digital Age”. The impact and future of libraries is pegged on innovations leading to transformation in the digital era. The rapid advances in information technology, the paradigm shifts in research, learning and teaching, the growing research output that is increasingly becoming open access and the demands from library users/patrons, etc make it necessary to innovatively build on the synergies to transform archives and libraries’ service delivery to be impactful. Practicing librarians who conduct research or LIS academics and researchers who do research related to the practice of academic librarianship are invited to contribute papers to this session. The papers should share research findings about innovative practices and experiences that have been transformative and impactful– what works and what does not - to enable the participants to learn from the best practices or avoid what does not work. The application of research findings to library service delivery, policy and in theories relevant to academics and the growth of knowledge management in general will enrich the session as well as highlighting the future of libraries and archives in a rapidly changing digital environment.

## *Invited Talks*

### *21<sup>st</sup> Century Liaisons? Findings from a Survey of Academic Librarians in the United States*

*Rachel Fleming-May<sup>1</sup>, Wade Bishop<sup>2</sup> and Caroline Villarreal<sup>3</sup>*

<sup>1</sup>Associate Professor, School of Information Sciences, the University of Tennessee, Knoxville

<sup>2</sup>Proessor, School of Information Sciences at the University of Tennessee, Knoxville

<sup>3</sup>Adult Services Librarian, Berkshire Athenaeum, Pittsfield, Massachusetts

#### **Abstract**

**Objective:** in this study we investigated the extent to which academic librarians with social sciences and humanities liaison responsibilities in United States institutions of higher education engage with assessment-related tasks as part of their work. We also explored where librarians had acquired the skills and knowledge necessary for these tasks, and if they believed their American Library Association-accredited graduate programs had contributed to their development in these areas.

**Method:** In 2024 we distributed a survey directly to 1085 librarians employed by institutions with one or more of two characteristics: 1) membership in the Association of Research Libraries; 2) identification by the National Endowment for the Humanities (NEH) as home institutions of recipients of one or more NEH Office of Digital Humanities awards made between 2011 and 2024. We received 330 completed surveys, for a response rate of 30.4%. The survey instrument included a variety of question types.

**Results:** While respondents indicated robust engagement with the tasks traditionally associate with liaison work, such as providing instruction, managing collections, and offering specialized research support, a much smaller number report ever engaging with faculty and students on assessment- and scholarly communication-related issues, such as identifying traditional and Open Access venues for publication and evaluating their suitability and impact. Those who do engage with constituents on these topics report that they did not learn how to accomplish this work during ALA-accredited graduate study.

**Conclusions:** Libraries are reconsidering the nature of liaison librarianship. Our survey results indicate librarians beginning careers as liaisons to social sciences and humanities departments need more substantial support from graduate education to truly support the full extent of humanities and social sciences faculty and students' needs.

# *Advanced Access to Public Information and Policy Making in Romania with ION, first governmental AI Virtual Assistant*

***Daniel Ionut Bledea***

PhD candidate, University of Bucharest, Doctoral School in Communication Sciences, Romania

## **Abstract**

**Introduction:** "ION", the first governmental AI virtual assistant launched by the Romanian Government in 2023 is looking to make an impact in the context of Romanian public administration, with a particular emphasis on its potential to enhance citizen participation, access to public information and policy development for the country. The Romanian national strategy on Artificial Intelligence looks further for deployment of AI technologies in various sectors, including public administration where the new technology is seen as a necessity tool for access to public information, in the wake of retirements of public workers.

**Objectives:** The study aims to assess ION's ability to gather and communicate public opinion, leverage access to public information, and examine its impact on policy formulation. Additionally, it will explore the ethical and operational challenges associated with its use.

**Methods:** For a comprehensive mixed-methods research setup, this study will observe social media reactions to ION, and it will include in-depth interviews with stakeholders including public administration, citizens and software developers. Ethical challenges in AI deployment represent a point that can be addressed through literature review of the existing research papers.

**Results:** Demonstration of the effectiveness of ION in collecting and disseminating citizen opinions, intermediate access to public information will lead to improved civic engagement. The research is expected to provide empirical evidence of ION in public interaction, validate the system's impact on policy development processes, and present a framework for addressing ethical implications.

**Conclusion:** The study will conclude with a series of recommendations for the continued development and ethical implementation of ION and other AI-powered assistants, within the public administration, for a better delivery platform of access to public information. The findings of this study will serve to inform policymakers and software developers on more effective and user-friendly AI solutions, with the aim of enhancing citizen engagement and policy responsiveness.

**Keywords:** ION, governmental AI assistant, AI, artificial intelligence, public administration, access to information, Romania.

***Archives, Memory and Education:  
Dialogical and Decolonial Practices for Ccritical thinking in Local  
Communities***

***Eliete Correia dos Santos<sup>1</sup>, Ana Lúcia Terra<sup>2</sup>, Wiliana de Araújo Borges<sup>3</sup>,  
Saulo de Tarso de Oliveira Gomes<sup>1</sup>, and Ana Beatriz Ramos de Oliveira<sup>1</sup>***

<sup>1</sup>Paraíba State University, Brazil

<sup>2</sup>University of Coimbra, CEIS20 - Centre for Interdisciplinary Studies, Portugal

<sup>3</sup>Federal University of Campina Grande, Brazil

**Abstract**

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The focus of the research - educational activities in archives - combines linguistic, archival and pedagogical activities, requiring an interdisciplinary approach. This ongoing research is part of the studies of the Archival Studies and Society Research Group. The research question is: how can the integration of educational, dialogical and decolonial practices in the archival context promote a greater appreciation of local history memory, while at the same time stimulating the development of critical and cultural thinking in communities, considering Bakhtin's theoretical contributions and decolonial approaches? The general objective is to investigate how the integration of educational, dialogical and decolonial practices in the archival context can promote the appreciation of local history memory and stimulate the development of critical and cultural thinking in communities, aligning Bakhtin's theoretical contributions and decolonial methodologies. The public and private archives of the capital of Paraíba (João Pessoa city, Brazil) were chosen as the empirical field. We adopted qualitative and interpretivist approach to the research, of an exploratory and descriptive nature, associated with documentary research to identify ways of integrating decolonial methodologies into educational programmes in archives. These methodologies emphasise the valorisation of marginalised voices and the critique of traditional historical narratives, promoting more inclusive and reflective educational practices. The theoretical analysis is based on Bakhtinian theory, which defends dialogicity and heteroglossia; thinking that values local cultural development; and decolonial approaches, which question the hegemony of Western knowledge. The convergence between these approaches is based on valuing collective knowledge, marginalised voices, local history and cultural contexts. They stress the importance of a dialogical, dynamic and plural construction of knowledge, rejecting one-dimensional and colonialist models. They advocate development that respects cultural diversity, in line with proposals for decolonisation and resistance to imposing power structures. These principles promote the inclusion of multiple perspectives in the understanding of reality and social progress. The systematisation of the work uses the quadripolar method, covering epistemological, theoretical, technical and morphological poles, with procedures that include a literature review, qualitative and quantitative analysis and data collected through documents, semi-structured interviews and research diaries. The participants are students, teachers, community members and archivists. The analysis follows the Bakhtinian perspective, highlighting: dialogicity, observing the interaction between diverse

voices; heteroglossia, recognising multiple discourses and their tensions; contextualisation, considering the social, historical and political context; social and ethical action, focusing on identity and power; and discursive events, analysing transformations resulting from the activities. The expected results include: 1. Increased access to archives and local historical heritage; 2. The integration of decolonial methodologies into archival teaching and practice; 3. The engagement of students and local communities, strengthening the valorisation of memory and cultural identity; 4. The development of new educational practices in archives, aligned with an interdisciplinary perspective; 5. The promotion of critical thinking and historical awareness; 6. The documentation and dissemination of the educational practices developed, contributing to science and research in the areas of Archival Studies, Education, Linguistics and History. These results aim not only to enrich archival and educational practices, but also to strengthen the relationship between past, present and future, with significant impacts on the valorisation of memory, local culture and the empowerment of communities through a critical and inclusive approach.

**Keywords:** Dissemination and educational-cultural actions; Decolonial methodologies in archives; Heritage education; Marginalised voices.

***The Art of Collaboration:  
Bringing Archival Objects and Student Response Art Together to Honor  
MSU Alumni Veterans***

***Carrie P. Mastley<sup>1</sup>, Kate Gregory<sup>2</sup>, and Jessica Perkins Smith<sup>3</sup>***

<sup>1</sup>Assistant Professor/Curator of Material Culture, Mississippi State University

<sup>2</sup>Assistant Professor/Director of Mississippi Political Collections, Mississippi State University

<sup>3</sup>Assistant Professor/University Archivist, Mississippi State University

**Abstract**

It is no surprise that collaboration is an essential component to the exhibit creation process. From conception to installation, exhibits have many moving parts that often require the expertise of multiple professionals. However, what if individuals outside of GLAMs are involved in the process? In summer 2024, archivists working in the Division of Archives and Special Collections at Mississippi State University (MSU) Libraries were contacted by MSU's Center for Student Activities to collaborate on a Veteran's Day exhibit and reception. Other project partners included the Center for America's Veterans and multiple student artists. The exhibit, titled "Student Salutes: A Visual Tribute to MSU Veterans," honored servicepersons who once attended or worked at MSU through the displaying of various archival objects. Student artists, who were given stipends, created art pieces in response to the stories of the veterans represented in the exhibit. In this presentation, the speakers will detail the planning

and implementation of this project as well as offer insights on the successes and lessons learned from working with non-GLAM entities. The presenters will also emphasize the importance of communication and community engagement when carrying out a successful exhibition and event.

## *Artificial Intelligence- Dangers and Possibilities*

***Ari Haasio***

Seinäjoki University of Applied Sciences, Finland

### **Abstract**

The breakthrough in artificial intelligence occurred in 2022 with the widespread use of ChatGPT. Although artificial intelligence was being discussed more widely in public at that time, its history is much longer. Artificial intelligence has also been utilized in libraries for a much longer time. Traditional AI-based solutions that have been utilized in libraries include, for example, chats used in customer service, various robots, and systems intended for recommending materials. Artificial intelligence has also been increasingly used in information retrieval, and students in particular have made extensive use of it. In Finland, universities also offer guidance on the use of artificial intelligence when writing a thesis.

According to research (Haasio & Rauhala, 2024), Finnish public libraries have a positive attitude towards artificial intelligence. Half (50.0%) of library professionals who responded to a survey on training needs were willing or very willing to receive training on the topic.

Threat or possibility?

There is great interest in the use of artificial intelligence, and it is constantly being exceeded. Is the phenomenon only positive or can we see negative aspects in it? One of the problems in information retrieval are the hallucinated sources, which look reliable, but actually they don't exist (Kempas, 2024). Those sources are inventions of artificial intelligence. Reference is often made to an existing scientific journal and real, existing researchers in the field are mentioned as authors

Information seeking is not the only field, which is problematic from libraries point of view. Artificial intelligence can help librarians in their routines. It allows staff to focus on more demanding tasks. Therefore, there is no need to fear unemployment. Job descriptions are changing, but there is plenty of work.

The biggest problems are related to ethics and copyright. One can also ask whether artificial intelligence will make people even more passive if they are content to read schematic books produced by artificial intelligence, rely on artificial intelligence to search for information, and, for example, let artificial intelligence write the answers in their studies. The end result is a danger that the large majority will strive to do everything in the easiest way possible, and a small minority will invest in self-development and creativity in ways other than utilizing artificial intelligence.

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### *ASEAN National Libraries and the Sustainable Development Goals: A Thematic Content Analysis of Current Practices*

*Lady Catherine R. de Leon<sup>2</sup>, Lejemp V. Flores<sup>2</sup>, Diana Galang<sup>3</sup>, Aisa dela Torre- Moraña<sup>4</sup>*

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## Abstract

This study explores the role of ASEAN National Libraries in advancing the Sustainable Development Goals (SDGs) through their strategic planning initiatives. Employing a thematic content analysis, the research investigates the alignment of national library strategies with the SDGs, focusing on how these libraries contribute to the achievement of specific goals such as Quality Education (SDG 4), Reduced Inequalities (SDG 10), Sustainable Cities and Communities (SDG 11), and Partnerships for the Goals (SDG 17). By examining strategic documents and annual reports from ASEAN National Libraries, the study identifies common themes, practices, and challenges in integrating sustainability and social inclusion into library operations. The findings reveal varying degrees of commitment across the region, with some countries demonstrating robust frameworks for supporting SDGs through digital transformation, cultural preservation, and community engagement. The research underscores the significant role of national libraries as agents of change in promoting sustainable knowledge societies and offers insights for policymakers and information professionals seeking to align library services with global sustainability efforts. Ultimately, this study contributes to the growing body of literature on the intersection of libraries and sustainable development, particularly in the context of Southeast Asia.

**Keywords:** *ASEAN National Libraries, sustainable Development Goals (SDGs), strategic planning, digital transformation, social inclusion*



## ***Beyond knowledge and skills: the ethical imperative in information literacy***

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### **Abstract**

Due to the rapid proliferation of digital information and the increasing complexity of knowledge production, the ethical dimension of information literacy emerges as a crucial competence for informed and responsible engagement in the information society. This paper explores the intersection of ethics and information literacy, emphasizing the necessity of ethical awareness in information-seeking behaviors, evaluation processes, and the creation and dissemination of knowledge.

The main goal of this study is to examine the role of ethics as a fundamental component of information literacy, emphasizing its integration into the definition and implementation of information literacy practices to foster critical, responsible, and socially engaged information users. The following specific goals will be considered: a) analyze information literacy frameworks and their ethical guidelines; b) investigate the ethical challenges inherent to the digital era, including issues such as misinformation, algorithmic bias, data privacy, and digital exclusion, which must be considered in information literacy; and c) systematize the ethical dimensions that should be included in information literacy education, emphasizing the role of libraries in promoting ethical information practices.

The methodological approach adopted to support this research will be qualitative, based on a literature review and complemented by document analysis focusing on a critical study of information literacy frameworks. The literature review will focus on previous studies addressing the intersection between ethics and information literacy. The studied information literacy frameworks include four documents ranging from 2004 to 2016, trying to catch some changes over time (Association of College and Research Libraries, 2016; Association of College and Research Libraries, 2016; SCONUL Working Group on Information Literacy, 2011; Secker, J., & Coonan, E., 2011).

The study delves into how the ethical dimensions of information literacy manifest in different domains. Information-literate individuals must navigate complex dilemmas such as misinformation, biased algorithms, and data surveillance. The ability to critically assess sources, maintain intellectual integrity, and respect diverse perspectives are core competencies that strengthen the ethical foundations of information literacy. Information ethics education should address the principles of academic honesty and copyright compliance and equip individuals with the skills to engage in ethical reasoning and decision-making in the digital sphere. The paper will underscore the broader social implications of ethical information literacy. In a time of socio-political challenges, ethical literacy empowers individuals to counteract manipulation, advocate for inclusive information access, and contribute to a more just and informed society. By promoting an ethical perspective in information literacy education, we move toward a more equitable information ecosystem where users act as consumers and responsible contributors to the collective knowledge landscape.

**Keywords:** Information literacy, ethics, information literacy frameworks

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## ***Bridging Infocommunication and Archives: A Luso-Brazilian Literature Analysis***

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## **Abstract**

The digital transformation of archives in Portugal and Brazil has increasingly relied on *infocommunication* — the integration of information technologies and communication networks — to ensure the preservation, accessibility, and democratization of cultural heritage. Our present digital ecosystem framework presents a challenging environment for archives, as it is expected the change from static repositories to dynamic, sustainable and collaborative platforms for collective memory.

This presentation synthesizes findings from the literature review and case studies presented by the selected articles. Our aim is to present an integrative review in order to explore the *infocommunicational aspects in archives*, and its relevance and its application in archives for future sustainability.

The review methodology involved a structured search on databases using several terms combined in different queries, related to information, communication, *infocommunication* and archives. From the total retrieved articles, critical reviews on articles or books, collateral topics

on archives' dissemination tools, such as the Web 2.0 tools for archives in Portugal and Brazil were excluded.

The synthesis offers an overview of the state of the art on the focused research topics and aims to point some hypothesis for future research focused on the sustainability and relevance of archives for citizens, communities and their cultural identity.

Preliminary findings suggest a trend on *infocommunication strategies for archives* as they are living institutions with the potential to actively shape democratic culture, collective identity, and community empowerment. The *infocommunicational perspective*, as explored in this presentation, emphasizes how archives can evolve into *relational spaces* that foster dialogue between institutions and society.

The research outcomes aim to support future research and raise awareness among political decision-makers, archivists and the community of the importance of archives for the development of democratic and plural societies.

**Keywords:** Infocommunication, archives, cultural identity, democracy, citizenship.

## 51 ***Can ChatGPT accelerate research in libraries?: Results of a study comparing generative AI to human researchers for qualitative coding***

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### **Abstract**

Librarians at the University of New Mexico tested the trustworthiness and credibility of generative AI for the coding process in qualitative research. Researchers used ChatGPT 4 to replicate the coding and analysis process of a previously conducted research study using transcripts from interviews with graduate students. By using real-world, textual data to compare the work of a human research team to the qualitative coding and thematic framework produced by ChatGPT 4, the researchers developed recommendations for how scholars in the library and information science discipline can effectively and ethically incorporate generative AI into their qualitative coding process. This could help compress the timeline of research and speed up the adoption of data-informed library service enhancements without compromising credibility. The presentation will include an overview of the advantages and limitations associated with using these novel tools, expanding upon the team's forthcoming 2025 *Library Trends* article.

**Keywords:** qualitative research, trustworthiness, open coding, thematic coding, ChatGPT, large language models, generative artificial intelligence, academic libraries.

## ***Censorship and Reconsideration Policies in US Academic Libraries***

***Liz Cooper***

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[Note: only Cooper, L. attending conference & presenting, but research co-authors include:  
Solon, B., Montanez, M., Cooper, L., Koelling, G., Jankowski, A., & Soito, L.]

### **Abstract**

The number of book challenges in libraries in the United States has increased in recent years. Although the majority of challenges have occurred at school or public libraries, many library-related professional organizations recommend that academic libraries also have procedures in place in case challenges arise. Our research team sought to assess if and how academic libraries are prepared to face such challenges. To answer this question, we analyzed the reconsideration policies of US members of the Association of Research Libraries (ARL). Though ARL libraries may not be the primary targets for collection challenges, these highly resourced institutions lead the way in policy development and serve as allies to smaller institutions. We found that a majority of these libraries did not have a reconsideration policy. We analyzed how policies varied in the way they framed a potential challenge and how they varied in their procedures to handle removal requests. This presentation will focus on the issue of book challenges in academic libraries and the methods we used to investigate this issue, as detailed in our forthcoming publication in *Library Resources & Technical Services*, as well as how our findings led to recommendations on policy development for other academic libraries, the creation and implementation of a policy at our own institution, and how our policy is being integrated into our university response to a recent state legislative initiative to ban book bans in our state.

**Keywords:** reconsideration policies, intellectual freedom, book challenges, censorship, academic libraries.

## ***Censorship on the Rise: A Review of Book Challenges in America in 2023***

***Jennifer Elaine Steele***

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### **Abstract**

In 2023, the United States witnessed a significant rise in censorship and book challenges across the country, particularly in schools and public libraries. This presentation reviews the cultural, political, and educational dynamics that fueled these trends. The year saw increased legislative efforts, particularly in conservative-leaning states, aimed at restricting access to materials deemed inappropriate for young readers, with a focus on books addressing LGBTQIA+ themes, racial inequality, and other sensitive topics. Supporters of these measures argue for parental rights and protecting children from content they believe is unsuitable, while opponents see these actions as a direct threat to intellectual freedom and educational diversity. Public and school libraries became battlegrounds where librarians, educators, parents, and advocacy groups clashed over the scope and limits of free expression. This review highlights key instances of book bannings and challenges and analyzes the legal and societal implications of restricting access to literature. The presentation also examines how these debates reflect broader cultural divides in the U.S., with issues of race, gender identity, and political ideology at the center of the controversy. In conclusion, the presentation discusses the potential long-term impact of censorship on educational systems, intellectual freedom, and the role of libraries as spaces for free inquiry and diverse perspectives.

**Keywords:** Book Challenges, Censorship, Information Accessibility, Intellectual Freedom, Public Libraries, School Libraries.

## ***Challenges and Countermeasures in Medical Library Resource Construction in the digital and intelligent era***

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Chinese Academy of Medical Sciences/Peking Union Medical College Library  
Beijing

### **Abstract**

In the era of digital intelligence, the academic communication environment faced by medical libraries is undergoing profound changes. The interdisciplinary integration and collaborative development of medicine with other disciplines have become prominent trends. Open access resources and digital resources have emerged as the mainstream carriers for academic exchange, with a continuous influx of scientific data and open software tools, and the rise of

intelligent scientific research paradigms. Against this backdrop, medical libraries are gradually transitioning from a traditional model dominated by print resources and supplemented by electronic resources to one led by digital resources. The procurement model for traditional literature and information resources is evolving towards diversification and openness. Meanwhile, the usage patterns of digital resources and their rights management issues have exhibited unprecedented complexity. On this basis, this study proposes strategies for the construction of medical literature and information resources, including promoting intelligent statistics and evaluation of medical literature and information resources; establishing a three-dimensional literature and information resource service system oriented towards intelligent scientific research paradigms, encompassing "basic literature support, intelligent data services, and innovative tool provision"; and developing a rights management plan for digital resources aimed at in-depth utilization and strategic security, to enhance the ability to address various rights-related risks and challenges.

### *The Challenges of Electronic Waste as a Global Phenomenon*

**Wilhelm Peekhaus**

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#### **Abstract**

**Introduction:** The proposed paper will elaborate on the processes and problems associated with electronic waste (e-waste). In addition to interrogating the hazardous nature of e-waste, the paper examines its offshoring to the informal sector in developing countries, using India as an example. The article first defines e-waste and explains its scope. It then briefly outlines the Basel Convention and Ban Amendment, which seek to regulate international movements of e-waste. This is followed by an interrogation of the environmental and human health impacts of e-waste. Attention then turns to elaborating the informal e-waste sector in India.

**Data Collection Methods:** The findings presented in the paper are based on an analysis of the extant literature, as well interview data collected from study participants from various non-governmental organizations who work with and on behalf of workers in the informal e-waste sector.

**Preliminary Findings:** The Global E-Waste Monitor Reports, which are United Nations collaborative reports, adopt a broad definition of electrical and electronic equipment (EEE) as all products with circuitry or electrical components and a power or battery supply. EEE becomes e-waste (or WEEE) once it has been discarded as waste without the intention of reuse (Baldé et al., 2022; Baldé et al., 2017).

According to the authors of the 2017 report, 44.7 million metric tonnes of e-waste were generated globally in 2016, which equates to 6.1 kg for every person on the earth (Baldé et al., 2017). Within a mere five years, that number rose by nearly 39% to a record 62 million metric

tonnes, or 7.8 kg per world capita. By 2030 the amount of e-waste is projected to grow to 82 million metric tonnes (Baldé et al., 2024).

The 62 million metric tonnes of global e-waste generated in 2022 were comprised of metals (31 million metric tonnes), plastics (17 million metric tonnes), and other materials (14 million metric tonnes). The metals contained in all the e-waste generated in 2022 are estimated to be worth \$91 billion. Of this total amount, only \$28 billion worth of recovered metals filter back into the economy as secondary raw materials.

A little over 5 million metric tonnes of e-waste were shipped across international borders in 2022. Sixty-five percent (3.3 million metric tonnes) of this amount was shipped from high-income to middle- and low-income countries through uncontrolled and undocumented transboundary movements.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted on 22 March 1989 by the Conference of Plenipotentiaries in Basel, Switzerland. The Basel Convention does not ban the international trade in hazardous waste but instead regulates it. Parties to the Convention must seek “prior informed consent” from an importing country before exporting hazardous waste to it and are prohibited from shipping such waste to nations that have banned such imports. In 1995, the Third Meeting of the Conference of the Parties to the Basel Convention adopted an amendment to the Basel Convention (Decision III/1 known as the Ban Amendment) that banned toxic waste exports from the industrialized member countries of the Organisation for Economic Cooperation and Development (OECD), European Union, and Liechtenstein to developing countries.

Indian domestic production of e-waste ballooned to 4.1 million metric tonnes in 2022 (Baldé et al., 2024). Joon et al. (2017) maintain that importation is a significant source of e-waste in India, amounting to approximately 50,000 metric tonnes annually. It is estimated that 95% of e-waste is handled by the informal sector (Abalansa et al., 2021; Annamalai, 2015; Joon et al., 2017). Informal workers in India are involved in most aspects of the collection, refurbishing, dismantling, and recycling of e-waste. Many of the informal e-waste workers come from the lowest socioeconomic tiers that include the poor, ethnic or religious minorities, rural migrants, and immigrants.

This informal work, which is most often conducted without the use of personal protective equipment, tends to rely on crude disassembly techniques, including physical disassembly using hammers, chisels, screwdrivers, and bare hands to separate different materials; removing components from printed circuit boards by heating them over coal-fired grills; stripping metal components in acid baths to extract gold and other precious metals; chipping and melting plastics without proper ventilation; burning cables to recover copper; burning unusable leftover material in the open; and disposing of unsalvageable materials in fields or along riverbanks and in rivers (interview informants).

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**Keywords:** Electronic waste, e-waste, recycling, human health impacts, environmental impacts, India, informal work.

## ***Chatgpt is a Threat for Academic Library in Future: Students' Perspective at Slovenian Public University***

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**Purpose:** Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. Examples of AI applications include expert systems, natural language processing (NLP), speech recognition and machine vision. ChatGPT is based on machine learning, which is currently the most popular technique in AI technology. ChatGPT, an AI tool that has taken the world by storm, reaching 100 million users just two months after being launched in 2022. ChatGPT has become a noteworthy subject in the educational field due to the popularity it gained among students all over the world.

**Methodology:** With a questionnaire about ChatGPT and the use of artificial intelligence tools we achieved a better understanding of the use of artificial intelligence tools and the introduction of additional services in the library. A survey was used for the purpose and data were collected through a web tool 1KA ([www.1ka.si](http://www.1ka.si)). The questionnaire was sent to the students of Biotechnical faculty, department of biology. We compared the collected answers to determine whether there is a difference between students of undergraduate, master's and doctoral studies. The data collection took place from 4th July to 15th August 2024. The questionnaire was sent to 207 students (undergraduate students 62, master's students 97, doctoral students 48). The response rate was 27.5%.

**Results:** The results of the research showed that there are no statistically significant differences between students of undergraduate, master's and doctoral studies about the use of artificial intelligence tools, such as ChatGPT.

**Conclusion:** In the future academic librarians should pay more attention and present to students the ethical use of ChatGPT. Some training on this topic should be organized as part of the library services. Students will still use library services in the future such as support in



carrying out academic work, making citations and references, consultation, access and request to theses or dissertations and to printed/electronic books or periodicals which ChatGPT can't replace them.

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**Keywords:** Artificial intelligence, ChatGPT, academic libraries, students' perceptions.

## ***A Citation Analysis of Health Communication Journals to Determine Core Journals for Different Library Collections***

***Lisa Romero***

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### **Abstract**

In 2014, the Centers for Disease Control and Prevention reported that up to 40% of annual deaths from each of the five leading US causes are preventable. One might wonder if something could be done to decrease the number of deaths and how health communication might play a role. Since 1995, research in health communication has increased tremendously with researchers within and outside the discipline contributing to the field. Because of its importance to society (especially with the recent COVID 19 pandemic), the discipline's increase in research output, and the subject area's relevance to other academic disciplines, it is important that library collections meet the information needs of health communication researchers. Librarians may contribute to the effort by ensuring researchers have access to the

resources they need. To accomplish this goal, librarians need information that documents what resources are required for health communication research. Using citation data and addressing the interdisciplinary nature of the subject, the author applied 2 methods of quantitative data analysis to determine a list of journals necessary for research in health communication. The study is a user-centered analysis to provide a ranking of health communication journals.

The author first analyzed citations to and within the journals, *Health Communication* and *Journal of Health Communication* from 1997/1999 through 2022 and identified scholarly journals most relevant for health communication research. Then, by applying Bradford's Law of Scattering, the author determined which journals are core, major, supporting, and peripheral to health communication research. The study also identified subject areas most relevant to health communication and citation trends of core journals.

This ranking recognizes the research needs of researchers within and outside the field of health communication. It then considers the budgetary challenges librarians face and applies Bradford's Law of Scattering to sort the journals into zones. The study illustrates how applying the two methodologies can assist with creating a core list of journals that may be consulted to make collection decisions that consider information needs and degrees of access. It can assist librarians who manage health communication collections from varying library sizes and academic foci, make a variety of collection development decisions. The results provide evidence-based recommendations for collection management to librarians who manage communication, health, and medical journal collections and enables them to make informed collection development decisions and positively impact the information needs of researchers.

**Keywords:** Citation Analysis, Collection Development, Health Communication Research, Health Communication Resources.

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### ***Co-creating AI Learning Solutions:***

#### ***A Qualitative Analysis of Student and Faculty Deliverables in an Algorithmic Literacy Learning Community***

***Samantha LeGrand, Zoeanna Mayhook, and Jing Lu***

Clinical Assistant Professor of Information Studies & Instruction and Design Librarian  
Purdue University, Hicks Undergraduate Library, West Lafayette, United States

#### **Abstract**

The disruptive wake of ChatGPT and other large language models left many library instructors in speculation, confusion, and panic. Resulting assumptions were made about how students would inevitably use AI negatively to plagiarize, cheat, and otherwise undermine their learning. And though librarians pride themselves on inclusive excellence, students are rarely meaningfully included in the conversations, training, and scholarship exploding across the academic library world about how to move forward positively. But we can shift away from deficit-based narratives by sharing perspectives rather than making assumptions – namely,

through pedagogical partnership (Bovill, Cook-Sather & Felten, 2011), students share in meaningful decision-making about AI in learning and teaching. Academic librarians routinely collaborate with students and instructors alike, both instructors and lifelong students in a profession that demands we continually learn, adapt, and teach many ways of knowing. Thus, librarians are well positioned to lead a partnership-oriented approach to developing algorithmic literacy.

This research describes the conceptual development and insights from implementation of Partners for Algorithmic Literacy (PAL) - a groundbreaking student-faculty learning community model, facilitated by academic librarians, where undergraduates and instructors partner to co-design curricular plans integrating or interrogating AI in the classroom. In the fall of 2023 and 2024, two cohorts in this learning community were partnered. In weekly sessions, partners experimented with AI tools and engaged PAL's novel Algorithmic Literacy Pedagogy Framework to guide their conversations and co-design process.

Employing qualitative content analysis, an in-depth exploration is underway to glean valuable insights from the student-faculty partners' personal reflections, collaborative conversations, and co-developed curricular plans. This qualitative analysis seeks to identify common themes that will help inform future implementations of student-faculty learning communities and partnership-oriented algorithmic literacy pedagogy.

This presentation will include an overview of the PAL program, an explanation of the methodology behind the qualitative content analysis, and initial findings from this study and their implications for library instructors and students. These findings will shed light on how pedagogical partnership can support mindful engagement with AI in education, as well as introduce two novel pedagogical tools for library instructors: the student-faculty learning community program model and the Algorithmic Literacy Pedagogy Framework behind it. Attendees will be challenged to consider the ways in which they might shift from thinking about students as passive recipients of expert knowledge to see students instead as partners with unique strengths to contribute to a community of co-learners and co-teachers. Specifically, attendees will come away with actionable suggestions for implementing an algorithmic literacy student-faculty learning community to create a culture of partnership and democratizing decision-making around AI at their own institutions.

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<https://doi.org/10.1080/1360144X.2011.568690>

**Keywords:** Students as Partners Pedagogy, Algorithmic Literacy, Student-Faculty Learning Community.

# *A Comparative Analysis of "Eva" and "RAREș" AI-chatbots in the Context of Public Services and Access to Information*

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## **Abstract**

**Introduction:** The rapid advancements in Artificial Intelligence (AI) have led to the emergence of AI-powered assistants, which have the potential to enhance public services by improving access to information and thus improving citizen satisfaction. This paper aims to assess the effectiveness of "Eva" and "RAREș", two prominent AI-powered virtual assistants in Romania, in enhancing public services. EVA is developed by ANRE (The National Authority for Energy Regulation) and RAREș is a product of RAR (Romanian Car Register). Objectives: The study aims to assess the efficiency of "Eva" and "RAREș" AI Virtual Assistants in improving access to information, including service accuracy and response times, to compare the impact of these chatbots on citizen satisfaction, focusing on factors such as usability, delivery of information, and overall satisfaction and to identify best practices for AI implementation in public administration, in relation with the comparative analysis of Eva and RAREș.

**Methods:** This study employs a combination of research methods. Online surveys will be conducted among Romanian citizens to assess their satisfaction with Eva and RAREș and gather quantitative data on their effectiveness. In-depth interviews with users of Eva and RAREș will also be conducted as well as with public administration officials, to gather insights into the chatbots' impact and identify areas for improvement.

**Results:** Benefits of AI-powered assistants in enhancing access to public information, as a service, efficiency and citizen satisfaction that might suffer the change the status-quo, yet identifying the key factors influencing public satisfaction, such as usability of the received information, perceived benefits, and service accuracy. Recommendations for policymakers and developers on designing effective and user-friendly AI solutions can follow.

**Conclusion:** The study offers a comprehensive evaluation of the impact of AI-powered assistants on access to public information and provides actionable recommendations for their further development and deployment. The findings will inform stakeholders on best practices for AI implementation in public administration, ensuring the responsible and effective use of AI technologies in enhancing access to public information and public services.

**Keywords:** artificial intelligence, public administration, AI virtual assistants, chatbots, access to information, Romania.

## ***Conducting a Landscape Analysis of Indigenous Studies Librarianship in the United States and Canada***

***Dr. Kathryn Randall, Adrienne Vandenbosch, and Alexander Watkins***

University of Colorado Boulder

### **Abstract**

The goal of this study was to conduct a landscape analysis and create a visualization of the overlapping presence of Critical Indigenous Studies (CIS) programs and CIS liaison librarians at large, research-oriented colleges and universities in the United States and Canada. Indigenous studies librarians serve a crucial role in supporting Indigenous students, building inclusive and representative and integrating Indigenous Knowledge into academic discourse. Their presence can transform support for indigenous students and research.

We identified key pieces of data as necessary to inform the analysis: the presence of liaison librarianship programs, specific CIS liaison librarians, and academic CIS programs or departments. We built a database of this information for schools and colleges with membership in major North American collegial and library organizations cross referenced with key demographic details for each institution. A key challenge for creating this database was diverse terminology and precarious institutional homes for CIS. We then used Python to structure and normalize the data for visualization. This allowed us to create a map enriched with multilayered datapoint in order to visualize this multifaceted dataset in an easily digestible format. From this we were able to identify correlations and patterns. This required sorting institutions into five categories for the level of support offered, each category was assigned a color which then was matched with institutions that fit the designated requirements. Once these categories were established we determined an appropriate scale to represent student enrollment numbers. These categories were mapped for each institution in the dataset using the folium library for python.

Using the visualization we were able to identify a number of trends in Indigenous Studies Librarianship. The landscape analysis suggests that while an increasing number of North American colleges and universities are establishing CIS Programs, library support in the form of liaison librarianship lags behind. We hope that this dataset facilitates and catalyses incorporation of Indigenous resources and services in libraries around the world.

## ***Contribution of Public Libraries in the Development of Health Literacy among the Local Community***

***Octavia-Luciana Madge***

Associate Professor, PhD, University of Bucharest, Faculty of Letters, Department of Communication Sciences, Bucharest, Romania

## Abstract

**Introduction:** Health literacy has become a key aspect of modern life, empowering us with the skills to access and use health information, and thus enabling us to navigate our entire life through health-related challenges and the healthcare system more effectively. Nowadays, public libraries serve as information and learning hubs, actively supporting the development of the information literacy skills among their users. Positioned at the heart of their communities, they are well-placed to raise public awareness of health issues and promote health literacy.

**Objectives:** The aim of this study is to investigate the involvement of public libraries in Romania in promoting health literacy and exploring their availability to contribute to the development of health literacy levels within the communities they serve.

**Methods:** Eleven librarians from public libraries in Romania participated in this interview-based qualitative study. Data were collected in January 2024 through e-mail using a structured, open-ended questionnaire.

**Findings:** The participants in this study acknowledged the fact that their libraries receive requests for assistance with healthcare-related information, and they all agreed with the fact that their libraries should and could play a greater role in improving health literacy levels within the population. However, the range of examples provided by only a small number of participants for the current training and assistance activities in the field of health literacy was limited and largely marginal.

**Conclusion:** Although current initiatives and activities related to health literacy in Romanian public libraries remain modest, these institutions have the potential and the availability to make a more significant contribution in improving the health literacy levels among the population. A coordinated national initiative could help design a more focused strategy to address this issue effectively.

**Keywords:** health literacy, public libraries, information assistance, training activities, Romania.

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## *Curriculum Infused Cultural Heritage*

***Jennifer Elaine Steele<sup>1</sup>, Laura Clark Hunt<sup>2</sup>, and Jeffery Hirschy<sup>3</sup>***

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<sup>2</sup>The University of Southern Mississippi, USA

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## Abstract

Cultural heritage research helps to create knowledge of the past. Many foundational components are easily presented to children and can support standards required in the school curriculum. The current project seeks to inform cultural heritage research through surveys and

interviews with school librarians who have experienced a workshop on incorporating cultural heritage into the curriculum. Short lectures will be offered with hands-on activities to be delivered at conference workshops focused on school media specialists' professional development. The in-person workshops will allow school media specialists to apply common pedagogy for the field within the context of cultural heritage activities that teach simple, easy to use concepts that can be applied throughout the curriculum. The workshops will demonstrate how library instruction and program activities can support cultural and environmental heritage in the classroom for teachers. Participants will be able to implement cultural heritage education in their school's curriculum that focuses on critical thinking, discovery, and creating context.

Paper/online surveys that address school librarians' experiences and perceptions relative to the workshop activity will be distributed to workshop attendees at the end of the session. Survey participants can indicate if they wish to be contacted for an interview. The information collected from this project will inform the field of library and information science. The project aims to show that school media specialists can help teachers utilize real world archaeological research and practice in fun ways that support the curriculum. School media specialists can also include library resources that speak to the importance of cultural and environmental heritage.

**Keywords:** Archaeology, Archives, Cultural Heritage, Library Services, School Media Specialists.

***Data-Driven Library:  
A Project Overview and a Case of Electronic Resource Usage Analysis***

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<sup>1</sup>European University Institute, San Domenico di Fiesole, Florence, Italy

**Abstract**

The EUI Library developed a project to improve its efficiency and impact through data-driven decision making. This project, running from February 2024 to March 2025, involved a working group of library staff, which included also the Director, a trainee and the Outreach librarian. The project focused on three interconnected lines of action: (1) a comprehensive revision of library data collection and indicators, encompassing collections, services, and Open Science initiatives, establishing shared data storage and internal access; (2) fostering shared knowledge and awareness amongst staff through training, workshops and direct data access channels, enabling them to effectively retrieve, interpret and utilize data; and (3) implementing data-driven decision making, including monitoring user behaviour (comprising as well the usage of electronic resources, library collections and spaces; EUI geographical widening and

subjects of interest; open access publishing), benchmarking with other institutions, and assessing user perception via a survey. A key component of the project focused on enhancing the external visibility of data and indicators, making information available to stakeholders and the public through published data. The project utilised Microsoft Tasks for project management.

Within this broader project, we presented a specific case that analysed access to electronic resources from off-campus. Since 1 January 2025, the EUI adopted Open Athens as the sole authentication method for off-campus access. The data gathered during the first quarter of the year provided a valuable opportunity to analyse usage statistics and user behaviour. By using the attributes release feature that is available in Open Athens reporting section, the EUI can: (1) retrieve detailed data on active accounts, (2) recognise access patterns to specific resources, (3) understand user behaviour linked with specific academic departments or services and how the resources are used, (4) identify the geo-location from where authorised access originates. These data, combined with COUNTER statistics provided by publishers and harvested via SUSHI in our ExLibris Alma instance, can support data-driven decision-making in the process of acquisition/renewal of resources, and advocate for adjustments in the research support the library offers. Furthermore, the data collected for this case offer the opportunity to demonstrate a widening in the activities and population of the EUI. This is achieved by comparing Open Athens' data with previously retrieved data and cross-referencing them with access to the library catalogue by signed-in EUI members. This analysis contributes directly to the project's goal of implementing data-driven decision making and ultimately creating a more impactful and responsive library.

Expected outcomes of the overall project included a final report documenting lessons learned, a Statistical Yearbook, a set of EUI Library performance indicators, a suggested communication plan, a map of staff responsibilities for the collection and dissemination of information, and a refined and restructured dataset designed to better assist library strategy and operations.

**Keywords:** Data-driven library, performance indicators, access patterns, off-campus access, authentication, electronic resources, search behaviour, user behaviour, widening

### ***Developing Digital Libraries for People with Disabilities: Compliance with Accessibility Guidelines and Challenges***

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School of Information Studies, University of Wisconsin-Milwaukee, United States

#### **Abstract**

The purpose of this study is to explore how digital library (DL) developers address accessibility issues when creating digital collections to support individuals with disabilities.



Specifically, the study intends to answer two research questions: 1) Do DL developers comply with accessibility guidelines in the creation of digital collections for people with disabilities, and if so, how and why? 2) What challenges do DL developers face in creating DL collections, and what solutions have they implemented?

To recruit participants, a combination of strategies was used to engage 31 DL developers from universities across the country. Flyers were emailed to organizations such as the Digital Library Federation and the American Library Association, and listservs for DL developers were utilized to reach potential participants. Additionally, flyers were sent to DL developers at approximately 200 universities, based on the Carnegie Classification of Institutions of Higher Education. A snowball sampling strategy was also employed, where participants were encouraged to recommend other DL developers who might be interested in the study.

Data collection was conducted through a questionnaire and asynchronous focus groups. The questionnaire gathered demographic information from participants, while the focus groups were held online via Canvas, a web-based learning management system, over a two-week period. Four focus groups were conducted, with three groups consisting of eight participants and one group with seven participants. Before the focus groups, a course was set up on Canvas, where discussion questions were posted in the “Discussion” section, and participants were provided with step-by-step instructions on how to create a Canvas account and register for the course. To protect privacy, participants used unique IDs as usernames during the focus group discussions, ensuring individual anonymity and safeguarding institutional identities.

65 Both quantitative and qualitative analysis methods were used to evaluate the data. The findings indicate that the majority of DL developers follow legal requirements and followed a variety of accessibility guidelines, including national, regional, and institutional standards. However, a few participants reported not complying with any design guidelines. Key challenges identified by the developers included resource limitations, lack of awareness about accessibility, migration issues, administrative constraints, institutional requirements, vendor restrictions, and difficulties with accessibility tools and guidelines. The study further offers recommendations for enhancing the adoption of accessibility guidelines among DL developers and involving people with disabilities in the DL creation process.

### ***Developing news literacy and critical thinking skills through board games***

***Jasmina Ninkov, Isidora Injac, Bojan Kundacina***

Belgrade City Library, Belgrade, Serbia

#### **Abstract**

In today's information-overloaded world, marked by the rise of social media and AI, news literacy is crucial. This is why we implemented the Erasmus+ project NEED – News Literacy on Board, and we aimed to innovatively teach news literacy skills through game-based learning, equipping individuals with the skills they need to become engaged and informed civic participants. By developing the ability

to judge the reliability and credibility of news and information, we empower individuals to critically evaluate information and become active and responsible citizens. The spread of disinformation, often fueled by limited attention spans and complex issues, poses a significant threat to societies. Understanding the creation and spread of disinformation is crucial in combating it.

Game-based learning method play is an active learning technique that utilizes games to enhance the knowledge acquisition process. It is a valuable tool that, through the motivational aspects of games, creates dynamic and effective learning experiences aimed at addressing the lack of engagement and motivation among participants to actively participate in the learning process. Its goal is for the learner to acquire knowledge while playing. This can be achieved through both digital and non-digital games, including board games.

In accordance with this, as two results of the project have emerged game-based assessment tool (board game) for assessing the actual knowledge and skills level of learners and an educational board game and related online platform for game-based tailor-made education in news literacy and critical thinking. Within the framework of news literacy, we identified three core competence areas: Understanding the News Landscape, Finding Reliable Information and Verifying News. The primary challenge in developing educational games lies in finding the optimal balance between play and learning. We addressed this by ensuring that the rules of both games were simple and quickly learned, while the learning material was tailored to the participants. These two elements were complementary, making the game mechanics work and making the game fun and keeping people engaged.

66 The games consist of a board, a set of rules, and a series of questions divided into two levels for the first game (*easier questions* presented as true-or-false options and *harder questions* presented as multiple-choice options) and only one level with *harder questions* for the second game. Games were designed to allow players to advance and win by correctly answering a series of questions. While the primary purpose of the first game is knowledge assessment, it's crucial to remember the delicate balance between assessment and learning. Every knowledge assessment inherently involves learning, and conversely, every learning experience can be assessed. The second game blends analog and digital elements. It includes learning materials accessible through an online platform. By scanning a QR code, players can find answers or explore any topic that piques their curiosity in greater depth. Furthermore, both game models have demonstrated applicability to other knowledge areas. Notably, both games are equally engaging for all generations.

The NEED - News Literacy on Board project has effectively demonstrated that board games can serve as a powerful tool for learning and fostering social inclusion. They provide citizens with an alternative and engaging approach to acquiring news literacy knowledge.

Keywords: *news literacy, critical thinking, board games, library, Erasmus+ project*

### ***Developing Sustainable and Collaborative Research Service at the University Library of Paris Nanterre (France)***

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## Abstract

The University Library of Paris Nanterre in France has established a comprehensive suite of research support services, particularly within the humanities, characterised by a collaborative and voluntary methodology. This presentation aims at sharing experience, reflection and practices with the audience. It outlines the strategic vision, collaborative framework, planning techniques, training initiatives, capacity-building efforts, and organisational change management that have contributed to the development of innovative and future-oriented research services within the university library.

Following an examination of the regulatory framework and the objectives of an academic library in a French university context, we illustrate how the library has fortified its research services by embedding them within a coherent service development strategy. This strategy is aligned with local, national, and European research initiatives, as well as the institution's overarching projects. A holistic perspective on research support has facilitated the transformation of the existing service portfolio, enhancing its strengths and establishing a diverse array of services that provide significant value and complement the efforts of other university stakeholders. The implementation of a systemic management approach, suitable for a small, dynamic team that is responsive and adaptable, has allowed for the customisation of services to meet the needs of research communities. This gradual, human-centered, and experimental methodology has fostered a strong sense of unity and teamwork within the library and across other university departments. Consequently, more colleagues are motivated to explore research services, engage in training, and actively participate in initiatives that strengthen the connections between research support services, information skills training, and the cultivation of critical thinking, as well as the utilisation and dissemination of academic resources.

The presentation focuses on the dual challenge of enhancing both staff and organisational capacity while ensuring the sustainability of skills through two primary strategies: fostering team commitment and engagement by turning the organisation from a 'castle' model to a 'network' model, and promoting a collaborative approach to the design, management, and operation of research support services. Additionally, it emphasises the cultivation and preservation of genuine expertise by embracing challenges and maintaining regular and dynamic interactions within several professional networks.

The library is actively working to ensure its resilience in the face of various challenges, thereby guaranteeing its capacity to provide continuous, high-quality services while expanding its ability to undertake new or larger-scale projects.

The presentation outlines the library's choices in terms of specific methodologies and ongoing skills development ; it provides two concrete examples of knowledge management, one through the implementation of a Research Data Management Cluster and the other through the establishment of a network of stakeholders and relays for opening up institutional research papers and publications on the Paris Nanterre part of the French national repository HAL (<https://hal.parisnanterre.fr/>). Both cases are supported by a comprehensive training program. The library is engaged in a process of building, transferring, and sharing expertise, integrating it into an institutional project in collaboration with other university teams and partners. Over

the past few years, it has successfully transitioned from project management to change management.

**Keywords:** libraries, open science, research support, research data management skills.

## *Digital literacy and game-based learning method*

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### **Abstract**

The Erasmus+ project, "Improving Adult Digital Literacy Through Innovative Gamified Blended Learning", with the acronym DIGIBLEND, which started in March 2022 and ended in August 2024, involved nine partners from seven European countries in addition to the Belgrade City Library. Two board games, *Infinity.Net* and *DigiUP*, were created, blending analog and digital elements to evaluate and enhance participants' digital abilities. A comprehensive Educators' Guide was also developed as part of the project, offering detailed instructions for implementing game-based learning techniques.

The rapid technological advancements since the second decade of the 21st century have affected a large number of citizens who did not encounter this type of knowledge during their formal education. On the other hand, younger generations who are largely growing up with new technologies, in addition to basic knowledge about their use and awareness of changes, are often unaware of the dangers (digital security and violence) and challenges (information dissemination through social networks) that new technologies bring.

Digital literacy encompasses an individual's awareness, attitude, and ability to effectively utilize digital tools and resources. This includes identifying, accessing, managing, evaluating, analyzing, and synthesizing digital information to construct new knowledge, create media expressions, and communicate with others. Believing in the importance of digital skills for contemporary citizens, our project focused on improving the competencies defined within the DigComp 2.2 framework. We selected three areas that we considered particularly valuable as we believe that they directly impact the quality of life for citizens in the digital age: information literacy, security, and problem-solving.

Game-based learning has emerged as a powerful tool that leverages the motivational aspects of games to create dynamic and effective learning experiences. The primary challenges in modern education are the lack of engagement and motivation among students to actively participate in the learning process. Digital literacy programs for older adults often use game-based learning method or gamification to demystify new technologies, making them more accessible and easier to learn. Games fundamentally present a certain problem that the player strives to solve. Motivated by achieving a goal, they invest effort and time to solve complex tasks, while also developing logic, memory, and strategic thinking. In multiplayer games, social skills are also developed.

Despite all the mentioned advantages of learning through play, there are also challenges you may encounter when creating games. First and foremost is the challenge of how to implement

learning material or how to measure knowledge in a certain area through a game, without disrupting the game's mechanics and thus making the game uninteresting for participants. Secondly, there are resources, especially when it comes to creating digital games, which require the necessary knowledge and application of programs in order for the game to be realized at all. A third challenge to implementing learning through play is the resistance often encountered from teachers and educational institutions.

Project outcomes help us to better understand how game-based learning can encourage active learning and teamwork among participants. The DIGIBLEND project's innovative approach was evident in its multidisciplinary nature. Partners from diverse fields, such as education, culture, and business, contributed their unique expertise, creating a synergy that led to the development of a flexible blended learning model.

**Keywords:** digital literacy, game-based learning, library, Erasmus+ project

### ***Digital Literacy in Archives: An Analysis of Brazilian National Policies***

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***Ana Carolina Soares Santos<sup>1</sup>, Eliete Correia dos Santos<sup>1</sup>,  
and Ana Lúcia Terra<sup>2</sup>***

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<sup>2</sup>University of Coimbra, CEIS20 – Centre for Interdisciplinary Studies, Portugal

#### **Abstract**

The enhancement of digital literacy is key today. Above all, it is important to be aware that digital literacy encompasses a set of skills that can be developed progressively through cognitive operations, and courses, training, workshops, and so on are essentials in supporting that approach. Organizational environments need to create and promote policies to support digital literacy skills due to the constant changes in digital technology, which consequently implies that employees must learn and adapt in order to carry out their duties. When it comes to archives, as an information unit, they need to support their actions with these policies so that they know how to use these technological means to carry out archival services, both in document processing and to facilitate user access. Attending this framework, the following research question was formulated to guide this research: Considering that Brazilian archival policies guide actions in the archival context, how do they address the development of digital literacy? To this end, the general aim of this research is to analyse the development of digital literacy in archives based on Brazilian national policies. To fulfil this general objective, the specific goals are: i) identify digital literacy policies aimed at archives, especially those linked to the implementation of information systems; ii) explore the structuring of these policies and their contributions to the Brazilian archival scenario and; iii) promote the scientific and technological advancement of archival studies and archives. This research is a work in

progress currently linked to the Postgraduate Programme in Document Management and Archival Governance and is qualitative and descriptive-exploratory in nature. Thus, at this stage, bibliographical and documentary research has been used to search, identify and analyse Brazilian national policies. The Quadripolar Method is applied as an analysis procedure to allow dynamic and interpolary research. As final outputs, this study will contribute to better the archival practice and promote the discussion about the role of digital literacy related to the archival science field.

**Keywords:** Digital Literacy. Archives. Brazilian National Policies. Archival Studies.

### ***Digital Preservation - The eArchiving Reference Curriculum***

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#### **Abstract**

The eArchiving Initiative, funded by the European Commission's Digital Europe Programme, has developed a reference curriculum designed to support academic training in digital preservation. Aimed primarily at the master's level, the eArchiving Reference Curriculum supports the formation of professionals equipped to address the long-term preservation of digital information in both public and private sectors. Its intended audience includes educators, students, and institutions seeking to strengthen their engagement with eArchiving as a specialised and multidisciplinary field.

This curriculum is the result of a comprehensive process that combined the analysis of over 200 European postgraduate courses with contributions from individual academics and structured discussions within the eArchiving Academic Curriculum Working Group. Anonymous feedback was gathered through online surveys, panel discussions at public events, and informal interviews across the European archival community. This collective effort shaped the curriculum's scope, priorities, and pedagogical model.

The resulting curriculum adopts a modular structure to ensure adaptability across diverse institutional and national contexts. It includes six recommended modules: Introduction to eArchiving; eArchiving Standards and Specifications; Software Tools for eArchiving; eArchiving Data and Documents; Legal and Regulatory Compliance; and an Independent Project or Placement. These are designed to be implemented in full or selectively, depending on institutional needs. Optional modules, such as Sustainable Digital Archiving, may also be integrated as required.

In addition to its technical and legal content, the curriculum emphasises critical reflection, ethical awareness, and practical engagement with contemporary tools and standards. It also

aligns with European regulatory frameworks, including the GDPR (work in progress is now also covering eIDAS2), while addressing international developments in digital preservation. By presenting this work at QQML2025, we aim to share these, promote discussion among educators and information professionals, and support the wider adoption of shared educational frameworks in digital preservation. This effort contributes to a long-term vision of strengthening archival education and professional readiness across Europe.

**Keywords:** eArchiving, Digital preservation, Academic curriculum, Modular education, Information management, Standards and compliance, Long-term digital access, Curriculum development.

### ***Digital Preservation Initiatives: A Model for Archiving and Disseminating Marginalized Heritage***

***Neda Zeraatkar<sup>1</sup> and Azadeh Vatanpour<sup>2</sup>***

<sup>1</sup>Middle East and Islamic Studies Librarian, Emory University

<sup>2</sup>Director of Iranian Studies, University of Austin, PhD Candidate, Emory University

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#### **Abstract**

This study proposes a methodological framework for the archival, preservation, and dissemination of large-scale data related to ethno-religious minority communities, using the Yārsān, an ethno-religious minority residing in western Iran, as an example and model. The Yārsān community has historically safeguarded a vast collection of manuscripts and rare books, restricting external access to protect their beliefs and traditions from state scrutiny and forced assimilation. However, in recent years, internal efforts to assert their distinct religious identity and secure minority rights have led to a growing willingness to share these texts with scholars and researchers. Despite this shift, national and public libraries in Iran have not taken significant steps to incorporate these valuable resources into their collections. As a result, the limited available literature is often written by external scholars who, due to restricted access to primary sources, fail to accurately represent the Yārsān's history, beliefs, and traditions.

This research is structured in three key stages. The first stage involves a systematic quantitative assessment of Yārsān manuscript availability in national and public libraries through an analysis of catalog records and book lists from the National Library of Iran in Tehran and public libraries in Kermanshah and Kurdistan, where the majority of the Yārsān reside. The second stage focuses on community-centered data collection, identifying existing manuscripts and evaluating their historical and cultural significance while addressing challenges in preservation and willingness to share materials digitally. The final stage develops a digital preservation framework utilizing metadata classification, digital curation techniques, and open-access strategies. Cloud-based storage and decentralized repositories will be explored to enhance accessibility while ensuring community control over sensitive materials.

By employing a data-driven approach, this study quantifies the representation of Yārsān manuscripts in institutional collections and identifies archival gaps, providing empirical evidence to support proactive archival interventions. The findings aim to contribute to a sustainable, measurable model for documenting and preserving at-risk minority archives, ensuring their accessibility while protecting their cultural integrity. Ultimately, this proposed methodology illustrates the critical role of digital preservation in safeguarding marginalized histories and promoting online archival practices on a global scale.

### *An Embarrassment of Riches?*

#### *Sources, Challenges, and the Role of Libraries in Text-as-Data Approaches*

***Hilary Bussell***

The Ohio State University, Columbus, Ohio, USA

#### **Abstract**

This presentation will consider the roles of libraries and librarians in supporting text mining research in political science and related fields. The use of text mining, also referred to as automated content analysis or text-as-data approaches, has proliferated in many social science disciplines over the last few decades. Political science researchers have been at the forefront of methodological innovations in this area and the rapid growth in the amount of text available in digital formats has opened up new horizons in the types of questions that can be explored using computational methods.

As a political science librarian and the head of a library department that includes liaisons to a range of social sciences, the author of this presentation has encountered a steady rise in questions from researchers looking to use a variety of text sources as data. These inquiries include whether library books can be digitized for computational analysis, which databases support automated searching and bulk downloading, and requests for new licensed resources for text mining. Recent changes in the social media data environment, such as the emergence of new microblogging tools and changes to the availability of APIs, have already begun impacting researchers looking for this type of data, and libraries have an opportunity to play a role here as well.

This presentation will consider the role of libraries in supporting social science researchers who perform text mining. The results will be presented of a study analyzing doctoral dissertations from top political science doctoral programs over the last five years. Out of nearly 570 dissertations produced by these programs, seventy-three dissertations were identified as using some form of text mining and comprised the sample of this study. The research used NVivo to analyze the dissertations, resulting in the identification of categories of text data sources used, means of accessing the textual data, challenges faced by the doctoral candidates in performing text mining, and the ways that libraries were involved in supporting these



projects. This presentation will highlight findings from this study and discuss implications for libraries in the areas of research support, instruction, and collections. Finally, it will discuss areas of future exploration in light of the rise of generative AI, the discontinuation of several prominent text mining tools, and continuing changes in the social media landscape.

## *Embracing OA in STEM Education: Experiences of Croatian Academics*

**Radovan Vrana**

Faculty of Humanities and Social Sciences, University of Zagreb, Croatia

### **Abstract**

**Introduction:** This research study explores the experiences of scientists at Croatian academic institutions offering STEM degree programs, examining their perspectives on Open Access (OA) and the challenges they face in navigating the complex landscape of scientific publishing. OA is crucial for the scientific community as it facilitates access to research results that would otherwise be inaccessible. Since its inception, OA has evolved into several types, with Gold OA and Hybrid OA currently being the most prominent. By understanding the factors influencing scientists' publication choices, this study aims to shed light on the barriers to wider OA adoption and identify potential strategies for promoting its growth and sustainability.

**Research:** The aims of this research study were to determine the current state of OA acceptance and the factors influencing scientists at Croatian academic institutions offering STEM degree programs to publish in OA. The main hypothesis was that despite a broad understanding of OA and its benefits, scientists still face challenges when deciding to publish in OA or have doubts in OA publishing related to their specific situation or position within the academic community. The primary research method was an online questionnaire consisting of 12 closed-ended questions. It was designed for the management of 18 faculties at the University of Zagreb, Croatia, that offer STEM study programs and was distributed to their employed scientists. Consequently, a convenience sample of scientists was used, focusing solely on their publishing experiences. The primary research method was an online questionnaire consisting of 12 closed-ended questions. It was designed for the management of 18 faculties at the University of Zagreb, Croatia, that offer STEM study programs and was distributed to their employed scientists from June to July 2024. Consequently, a convenience sample of scientists was used, focusing solely on their publishing experiences.

The results indicate that the respondents (102 in total) have experience publishing in OA journals. However, they feel burdened by the cost of article processing charges (APCs), which they cover using various financial resources intended to support OA publishing. Many are not fully aware of how scientific journals are funded or the total expenses involved in article publication. The majority of respondents paid publishing fees from different available resources, confirming that paying for publications has become mainstream. The criteria for

selecting a journal for publication have not changed since the pre-OA era: journals must be indexed in relevant citation databases, the peer review process must be efficient, and the journal should facilitate a high citation count, among other factors. The respondents highly valued preprint article publishing. They also viewed OA journals more favorably than non-OA journals, believing that OA journals contribute to the quality of published articles and the advancement of science. Additionally, the respondents clearly recognized the significant positive impact of OA on scientific communication.

**Conclusion:** OA has been part of the scientific community for several decades. However, scientists participating in this study do not always fully recognize its advantages and disadvantages, even though one might expect this to be a non-issue in 2024 (when the study was conducted). The findings indicate that while respondents acknowledge the key benefits of OA publishing, they continue to struggle with its financial aspects and the perceived value or prestige of OA journals.

**Keywords:** Open access, STEM education, scientific publishing.

## *Emerging Technologies in the Service of Universal Design: The Case of Libraries*

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GREECE

### **Abstract**

The integration of emerging technologies (ETs) such as conversational AI chatbots and intelligent robots represents a significant advancement in enhancing Universal Design within library environments. Libraries are transitioning from static information repositories into dynamic centers of knowledge and user engagement, largely driven by these innovative technologies. This paper provides a comprehensive review of current research and practical applications concerning the use of emerging technologies, especially the collaboration of intelligent agents and robots to improve library accessibility and user experience, emphasizing their role in the Universal Design framework.

The paper begins by exploring the concept of Universal Design, outlining its fundamental principles and emphasizing its importance in fostering an integrated cultural community characterized by equitable interaction. Emerging technologies constitute invaluable tools for achieving successful Universal Design within library settings, offering innovative solutions where traditional methods fall short. The paper specifically focuses on the utilization of collaborative chatbots and intelligent robots within an Internet of Things (IoT) environment.

Chatbots, particularly multi-Chatbot systems, comprise intelligent agents capable of collaborative interactions with each other, offering personalized guidance and support, and significantly enhancing user experience through context-aware and individualized assistance. Their implementation extends across reference services, user recommendations, data retrieval, and analysis, effectively reducing repetitive tasks traditionally handled by library personnel.

In parallel, intelligent robots have found essential applications in library environments, notably in tasks such as shelf-reading, inventory management, and reference service provision. These robotic

technologies enhance operational efficiency and contribute significantly to the inclusivity of services, notably aiding patrons with visual impairments.

Despite these benefits, the paper acknowledges challenges associated with deploying these technologies, including data privacy concerns, security risks, and inherent biases in automated information retrieval processes. Addressing these issues requires meticulous strategic planning and continuous evaluation.

The findings advocate for strategic implementation approaches within libraries adopting these technologies, highlighting the potential to significantly improve user experiences, operational efficiency, and inclusivity. The research concludes by identifying future opportunities and recommending strategic integration of conversational AI and robotic systems to develop accessible, engaging, and universally designed library environments.

### ***Empowering Academic Communities: Distributing AI Information in Academic Libraries***

***Thomas D. Walker***

Professor, School of Information Sciences, Wayne State University, US

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#### **Abstract**

This presentation will explore the findings of a qualitative research project aimed at identifying and analyzing best practices in academic libraries of various sizes for distributing information about artificial intelligence (AI), its applications, ethics, and education. The study examines a range of dissemination methods, including libguides, videos, social media, websites, workshops, self-study modules, online learning platforms, public information sessions, and specialized positions to coordinate an AI presence. A primary outcome will be guidelines that can be adopted by academic libraries to effectively educate their communities about AI.

The rapid advancement of AI technologies necessitates that academic libraries play a pivotal role in educating their communities about AI, its applications, ethical considerations, and educational opportunities. This research project aims to identify best practices for distributing AI-related information in academic libraries, ensuring that students, faculty, and staff are well-informed and prepared to engage with AI in their respective fields.

#### **Research Objectives:**

1. To identify effective methods for distributing AI information in academic libraries.
2. To explore the role subject specialists in providing discipline-specific AI information.
3. To develop a set of best practices that can be implemented by academic libraries of all sizes.

Methodology: This qualitative research project employs:

- Surveys: Conducting surveys with librarians, bibliographers, and subject specialists from academic libraries of different sizes.
- Case Studies: Analyzing case studies of academic libraries that have successfully implemented AI information distribution strategies.

- Content Analysis: Reviewing existing AI-related resources, such as libguides, videos, social media, websites, workshops, self-study modules, online learning platforms, and position descriptions.

**Keywords:** AI, AI education, AI ethics, academic libraries, information distribution.

## ***Enabling Global Accessibility through Partial Digitization Projects: Building a Virtual Browsing Shelf of the University of Illinois' Africana Reference Collection***

***Alice Tierney-Fife***

MSLIS '25, University of Illinois Urbana-Champaign, Graduate Assistant, International & Area Studies Library, Urbana, IL United States

### **Abstract**

Beginning in summer of 2024, I have been working to increase access and visibility of our primary and secondary sources through a virtual browsing shelf of all the reference materials in the University of Illinois Urbana-Champaign's International & Area Studies Library's Africana reference collection. Physical sources are not accessible or convenient for our global audience, and are severely underutilized. This metadata-rich digital collection will provide a base of information for scholars and students to explore from anywhere in the world.

The digital age requires transformation of our collection spaces and innovation in the digital sphere to enable greater access to our physical holdings. This project involves updating our collection management system, creating metadata to facilitate information retrieval, and lays one specific groundwork for how we as information managers can develop new strategies to ensure continuous access to physical collections through digital networks. In my proposed presentation, I will discuss how the Africana Reference Digitization Project has taken advantage of open access digital resources such as Scalar and the Internet Archive, as well as the use of library-provided OCR software and scanning machines in the IASL, in order to construct a virtual representation of the collection with the essential informational pages from hundreds of books. This will be available online through the IASL website, providing a way for scholars who cannot access the physical collection to discover our materials and request them from the Library for scholarly or personal use.

I will share the logistical and technological challenges that we encountered in this project, and the strategies and workflows that we developed in order to navigate them. Ultimately, this innovative project will bring our renowned and historically valuable Africana reference collection into the digital age, and foster greater accessibility and distribution of our underutilized resources.

## ***Engagement Strategies for the Advancement of Student Voices in Canadian Academic Libraries***

***Sarah Guay***

University of Toronto Scarborough Library, Ontario, Canada

### **Abstract**

Student engagement is an integral part of the mission and function of academic libraries, with powerful potential to impact decision-making across various facets of governance, operations, services, and space design. Despite its importance, however, “student engagement” is a broad and highly contested term within the domain of libraries. While there are numerous case studies that highlight individual libraries’ efforts, successes, and hindrances relating to engagement work, there is a notable lack of existing literature involving a cohesive exploration across Canadian academic libraries. In response to this gap, this research details a national-level investigation of how academic libraries in Canada are approaching student engagement, with specific attention towards use of student voices as a feedback mechanism for decision-making. Using findings from a combination of a virtual survey and semi-structured interviews / focus groups, this session presents on engagement strategies used by Canadian academic libraries to understand and amplify student voices. Attendees will learn about the perceived challenges and benefits of this work, and overall implications of key findings will be shared.

**Keywords:** Student engagement, student feedback, student voices, voice-seeking, academic libraries, Canada.

## ***Entity Management with Linked Open Data for Illinois Experts***

***Qiang Jin***

Senior Coordinating Cataloger, Associate Professor, University of Illinois at Urbana-Champaign, Urbana, Illinois, USA

### **Abstract**

**Purpose:** Institutional repositories are digital archives designed to collect and disseminate the intellectual output of research institutions. Linked Open Data (LOD) aims to make data, information, and knowledge accessible and interconnected on the Semantic Web using URIs and RDF. This paper investigates the use of URIs associated with faculty members in STEM and Humanities fields, integrating traditional authority files with modern author databases for entity management. The goal is to enhance the visibility and discoverability of institutional repositories on the Web.

**Approach:** The author selected faculty members from the History Department and the Materials Science & Engineering Department in Illinois Experts at the University of Illinois at Urbana-Champaign. The faculty names were linked to Uniform Resource Identifiers (URIs) from traditional authority files and several modern author databases, including the Library of Congress Authority File (LC/NAF), Virtual International Authority File (VIAF), Open Researcher and Contributor Identifier (ORCID), International Standard Name Identifier (ISNI), and Wikidata. The author then analyzed the results to examine the differences in how faculty members from the History Department and the Materials Science & Engineering Department are represented in both traditional authority files and modern name databases.

**Results:** The results of this project indicate that traditional authority files, such as LC/NAF and VIAF, represent most faculty members in the History Department, but a small number in the Materials Science & Engineering Department. ORCID identifiers are linked to most faculty members in the Department of Materials Science & Engineering, but only a few in the History Department. Wikidata represents more than 60% of faculty members in both departments. Additionally, ISNI is associated with most faculty members in the History Department, but only a few in the Materials Science & Engineering Department.

**Conclusion:** This study presents a case study investigating the representation of faculty members in STEM and the Humanities fields across both traditional authority files and modern author databases. It argues that integrating traditional authority files with modern author database can improve entity management for faculty members in a linked data environment. As modern author databases continue to grow, the study recommends that future research should focus on evaluating their quality and the extent of their adoption.

**Keywords:** entity management, Uniform Resource Identifiers, linked open data, Illinois Experts.

## *Evaluation of Digitized Library Services through National Projects*

***Kazuyuki Sunaga***

Kokugakuin University

### **Abstract**

This study investigates the actual state of library services in the Digital Rural City State Initiative launched by the Japanese Government in 2022. This initiative is an attempt by the Japanese Government to subsidize digital transformation projects to solve local problems. The initiative includes the digitization of various projects, such as the attraction of semiconductor factories to improve the living conditions of residents and the introduction of new transport systems. It also includes the digitization of library activities. Some municipalities are promoting the use of the number card (ID card) by offering user registration and e-books in public libraries. This study assesses and reports on changes in services to residents in municipalities that have digitized their library services through government funding. Specific

case studies are taken from Showa village, Fukushima Prefecture; Goka Town, Ibaraki Prefecture; and Hida City, Gifu Prefecture.

**Keywords:** Digital Garden City Initiative, Digital transformation, public library, Evaluation.

## ***Evolution of Academic Production in Information Science: Theses and Dissertations in Portugal (2014-2024)***

***Tatiana Sanches, Luiza Baptista***

UIDEF, Instituto de Educação, Universidade de Lisboa, Alameda da Universidade, Portugal

Academic training in information science is guided by international guidelines that establish essential structuring axes for preparing future information professionals. These axes include: Information in Society; Foundations of the LIS Profession; Information and Communication Technologies; Research and Innovation; Information Resources Management; Management for Information Professionals; Information Needs and User Services; Literacies and Learning. However, technological advances and changes in information practices have led to the emergence of new research topics, such as Communicating Value, Data Curation, Digital Preservation, Ubiquity of Information Technologies and Associated Ethical Problems, Mobile Devices and Environments, Acquisition and Use of E-books, Communication and Publication of Information, User Behaviours and Expectations, and Information Professionals.

Against this backdrop, this study aims to investigate whether the theses and dissertations developed by higher education students in Information Science in Portugal align with the traditional axes of training in the area or reflect a growing tendency to explore emerging themes. To this end, an exploratory analysis was carried out of the academic works available in the Portuguese Open Access Scientific Repository (RCAAP), considering master's dissertations and doctoral theses in Library and Information Science.

The study followed a quantitative and qualitative methodology, starting with the creation of a corpus of analysis based on criteria such as keywords, abstracts, and thematic classification. The academic papers were categorized according to their adherence to traditional or emerging themes, allowing a comparison between the two approaches. By analyzing the results, this study contributes to a reflection on the adequacy of academic curricula to the emerging demands of the market and society. The research points to the need for a balance between traditional training and the incorporation of new themes, ensuring that information professionals are prepared for contemporary challenges. The discussion also highlights the importance of internationalizing research and exchanging experiences between institutions in different contexts, promoting a broad and up-to-date vision of Information Science.

**Keywords:** Information Science; Research Trends; Theses and Dissertations; Academic Training; Portugal

***The Evolution of the Scientific Publishing System in the Republic  
of Moldova:  
Bibliometric Analysis and Implications for Science Policies***

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<sup>2</sup>Moldova State University

<sup>3</sup>Technical University of Moldova

<sup>4</sup>National Agency for Quality Assurance in Education and Research

**Abstract**

The evolution of the scholarly publication system in the Republic of Moldova reflects the dynamic interplay between national regulatory reforms and global trends in scholarly communication. This study examines the impact of national regulations implemented between 2008 and 2024 on the dissemination and visibility of Moldovan research. Employing a mixed-methods approach, the research integrates a comprehensive review of national regulations concerning the assessment, classification, and monitoring of scientific journals and events with a bibliometric analysis based on data from the National Bibliometric Instrument (IBN). The IBN serves as a centralized database for indexing, organizing, and analysing scientific publications authored by Moldovan researchers.

The findings indicate substantial progress in aligning publication practices in the Republic of Moldova with international standards. Key achievements include a rise in the number of open access publications, the implementation of digital object identifiers (DOIs) in national journals and scientific conference proceedings, and a growing number of publications indexed in international databases such as Scopus and Web of Science. These advancements have enhanced the visibility and accessibility of Moldovan research while fostering greater international collaboration.

A significant advancement in the scientific publishing system of the Republic of Moldova is the increase in the number of journals classified as categories A and B+. In 2015, there were only five journals in category A and one in category B+. However, the 2024 assessment reveals that there are 12 journals in category A or 31% of the total, and three in category B+. This progress is attributed to changes in the regulations governing the evaluation and classification of scientific journals, which have been aligned with international standards. These reforms have enhanced the quality of the journals and facilitated their indexing in global databases. Concurrently, the number of category C journals has decreased dramatically, from 48 in 2012 to just one in 2024. Nevertheless, further efforts are needed to improve the visibility of Moldovan publications.

Conference proceedings have emerged as a crucial dissemination platform for researchers in Moldova. Regulatory changes have significantly influenced this landscape, leading to an increase in the number of articles published in conference volumes, a decrease in the number



of published theses, a rise in DOI-registered articles, and an expansion of open access publications.

However, continuous improvement in the quality of journals and publications from scientific events is essential to attract broader international participation. Although international collaboration has expanded, the involvement of foreign authors in Moldovan journals and conference publications remains limited, highlighting the necessity for enhanced global integration.

Using bibliometric tools such as IBN, this research offers valuable insights into how regulatory frameworks influence the dissemination of research and contribute to the development of a sustainable scientific ecosystem.

This study is conducted within the framework of project „Trends in the development of the scientific publishing system in the Republic of Moldova through the lens of science policies (2008-2024)”, funded by the National Agency for Research and Development.

**Keywords:** scientific publishing, bibliometric analysis, Republic of Moldova, National Bibliometric Instrument, Open Access, science policies, research evaluation.

## *Evolving Metadata Practices in a Distributed Creation Model*

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*Myung-Ja K. Han and William Kries*

### **Abstract**

Information and knowledge should be accessible to everyone in the best possible way, and metadata plays a vital role in facilitating discovery and access. However, the rapidly evolving information landscape has introduced significant changes to the field of metadata and information organization. These changes include a growing variety of resource formats, evolving systems, new metadata standards, and more.

One significant outcome of these changes is the shift toward a diverse and distributed metadata creation model. Traditionally, libraries and cataloging professionals served as the primary creators and stewards of metadata. Today, metadata is increasingly created by a wide range of contributors, including authors, publishers, researchers, students, and even machines. While this shift addresses challenges such as resource limitations and staffing shortages, it also raises concerns about metadata quality and consistency.

Libraries have a longstanding tradition of ensuring high-quality metadata through community-driven collaborative efforts. Standards such as the Anglo-American Cataloguing Rules (AACR) and Resource Description and Access (RDA) have provided a foundation for metadata creation and best practices. Additionally, authority records and controlled vocabularies remain essential tools for maintaining consistency and supporting effective resource discovery.

As libraries embrace technologies like linked data, the semantic web, and artificial intelligence, the metadata creation model will continue to grow more diverse and distributed.

These technologies have the potential to revolutionize workflows, but their success hinges on the quality of training data and adherence to shared best practices. Poor-quality metadata generated by untrained systems or individuals risks compromising the discoverability and accessibility of resources.

While the roles of libraries and metadata professionals continue to evolve, their core mission remains unchanged: to ensure that information and knowledge are accessible to all. By fostering collaboration, embracing innovation, and adhering to long-standing principles of quality, libraries will continue to lead the way in organizing and connecting the world's knowledge. A critical part of this work is recognizing that metadata must continue to support both access and inventory.

This presentation will explore how metadata creation practices have transitioned to a distributed metadata creation model over the past five years, particularly in the academic library environment. It will highlight the shift from metadata creation to metadata management and how this transformation drives the development of new workflows and best practices for improved metadata integration and oversight. Finally, the presentation will propose strategies for leveraging metadata competencies to enhance quality within this distributed creation landscape, emphasizing the importance of shared best practices and collaboration.

### ***Examining the Impact of Primary Source Materiality with the Facial Action Coding System***

***Annette Bochenek***

Purdue University, West Lafayette,, United States

#### **Abstract**

Primary sources can be used across a wide range of disciplines. In particular, they can be accessed through many different formats, whether physical, digitized, or born-digital. In this study, individuals interact with primary sources in physical and digitized formats, reacting to what is gained or lost when transitions in format occur. The affective experience is also examined in this context, with the implementation of the Facial Action Coding System (FACS) also being used to examine user reactions and affective responses to these primary sources across varying material formats. This work is significant to librarianship, examining the role that affect may play in the research process across different formats as well as how to bolster interactions with digitized surrogate materials to allow for a more robust user experience.

***Exploring Archival Practices and Innovations in Academic Libraries in  
Cebu, Philippines:  
A Qualitative Study on Management, Preservation, and Technological  
Adaptation in the Digital Age***

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**Abstract**

**Introduction:** Technological advancements and changing user needs increasingly influence the evolution of archival practices within academic libraries. In Cebu, Philippines, academic libraries face unique challenges and opportunities as they strive to preserve cultural heritage while adapting to digital innovations. This study aims to explore these dynamics, focusing on how libraries in Cebu manage and preserve their archival materials in the context of the digital age.

**Objectives:** This research aims to investigate the current archival practices in academic libraries in Cebu, exploring how these institutions manage and preserve their collections amidst the challenges posed by digital transformation. The study will identify innovative strategies employed for managing and preserving archival materials, highlighting the role of technology in shaping these practices. Additionally, the research seeks to assess the challenges librarians face in adapting to digital tools, such as limited funding, training, and organizational resistance, and how these barriers impact the overall effectiveness of archival management in Cebu's academic libraries.

**Methodology:** This qualitative study will employ semi-structured interviews with librarians and archival staff from various academic institutions across Cebu. A purposive sampling technique will be utilized to select participants with relevant expertise in archival management. Data collection will focus on understanding their experiences, challenges, and innovative practices related to archival preservation and technological integration. Thematic analysis will be applied to interpret the data, allowing for the identification of key themes and patterns.

**Results:** The study will reveal that academic libraries in Cebu are likely to adopt various digital tools for archival management, including digitization initiatives and online access platforms. It is anticipated that the findings will highlight successful case examples where libraries have effectively integrated technology into their archival processes, resulting in improved accessibility and preservation outcomes. However, challenges such as limited funding, lack of training, and resistance to change are expected to emerge as significant barriers to full implementation.

**Conclusion:** The findings will underscore the necessity for continuous professional development and investment in technology to enhance archival practices in Cebu's academic libraries. As these institutions navigate the complexities of digital adaptation, a collaborative approach involving stakeholders from various sectors will be essential for overcoming challenges and fostering innovation. This research will contribute valuable insights into the evolving landscape of archival practices in a digital age, offering a framework for future studies and practical applications.

**Keywords:** Archival Practices, Academic Libraries, Digital Transformation, Cebu, Philippines, Qualitative Study.

### ***Exploring Digital Transformation and Leadership in Libraries and Archives: A Bibliometric Analysis and Systematic Literature Review***

***Gianina Alexea Surio<sup>1</sup>, Luis Ezra Cruz Karen Cecille Natividad,  
and Marian Ramos-Eclevia***

<sup>1</sup>De La Salle University, Manila, Philippines

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#### **Abstract**

The ongoing digital transformation in higher education has driven libraries and archives to increasingly integrate digital technologies into their operations, services, and physical spaces. While numerous studies have explored digital transformation and digital leadership within libraries and archives, there is a notable lack of systematic reviews that comprehensively assess the existing body of research. This gap presents an opportunity to better understand the current state of digital transformation and leadership in these institutions. A systematic mapping of the scientific literature is needed to delineate the research landscape, identify emerging themes, and highlight new directions for future inquiry. Such an analysis would not only provide valuable insights into the areas that are actively being explored, but also uncover underexplored themes, helping researchers and information professionals identify opportunities for further investigation and development in the field. This study attempts to address the following research questions: What is the status quo of research on digital transformation and leadership in the context of libraries and archives? What major themes and emerging trends shape the discourse on digital transformation and leadership in libraries and archives, and how do they reflect the evolving roles of these institutions in a digital age?; What theoretical frameworks and methodological approaches dominate the literature on digital transformation and leadership in libraries and archives, and what are their inherent limitations, biases, and implications for future research?; What are the key gaps in the research on digital transformation and leadership in libraries and archives, and how might addressing these gaps contribute to advancing theoretical knowledge and practical strategies in the field? This study employed scoping and systematic literature review of scholarly articles, conference

proceedings, and theses/dissertations, published from 2001 to 2024. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) steps and metadata was used to select the core literature for this study. Bibliographic data were extracted from Scopus, Web of Science, Google Scholar, and ProQuest Digital Dissertations. Biblioshiny will be used to visualize research trends as well as intellectual and social structures of papers. This study ascertains critical gaps in digital transformation and leadership in LIS research by addressing key trends, themes, theoretical frameworks, and methodological approaches. The findings will inform future studies, guiding scholars, graduate students, and practitioners in developing more effective frameworks and strategies for digital transformation and leadership in the context of libraries and archives.

**Keywords:** digital transformation, digital leadership, libraries, archives.

## ***From Network of Research Information Systems to AI-powered Accessible Repository - Open Science Infrastructure in Poland***

***Danuta Szewczyk-Kłos<sup>1</sup>, Łukasz Skonieczny<sup>2</sup>, Henryk Rybiński<sup>2</sup>,  
and Jakub Koperwas<sup>3</sup>***

<sup>1</sup>Opole University / Conference of Directors of Polish Academic Libraries

<sup>2</sup>Warsaw University of Technology,

<sup>3</sup>Warsaw University of Technology, and Sages

**Jakub Koperwas (presenting author)**

### **Abstract**

During the presentation, we will describe the process of building open research infrastructure by universities in Poland in the technical, meritorical and organizational aspects.

The process of building the ecosystem started with OMEGA-PSIR Research Information System developed at the Warsaw University of Technology in the Research Project. The key goals was to design a system that combines functionalities of the Current Research Information System (CRIS), Research Profiling System, and the Institutional Repository. The main idea was to promote real transparency in research which involves publishing real and up-to-date information about all research-related activities (not only). This resulted in the developing a knowledge base that provides the functionalities of

- institutional repository of research data, publications, patents, etc.,
- supporting the university authorities in strategic decision support processes,
- internal reporting including researchers' assessment,
- reporting to the National Authorities and European bodies such as OpenAIRE.

Currently there is a network of institutional CRIS systems (currently 50+), as the bottom-up initiative of the Polish university libraries. The steering group established under the umbrella

of the Conference of Directors of Polish Academic Libraries takes care of the system development and data standardization by curating common databases.

The direct follow up was a Polish Platform for Medical Research, where the medical Universities decided to promote their medical-related achievements in a single platform including fully accessible full-text files. This unveiled the problem of accessibility of PDF files for individuals with visual or other disabilities.

PDFs can contain a wide range of content, from simple text to complex multimedia elements. For instance, providing alternative text for images, ensuring a proper document structure, and implementing meaningful link text requires careful attention to detail. The complexity increases further with the inclusion of tables, forms, and multimedia elements.

Another challenge is the dynamic nature of content updates, which requires ongoing effort to keep PDFs accessible and when dealing with legacy documents.

Therefore another research project conducted and co-financed by the EU was raised to solve the problem with the help of AI. The solution that was built, offers a way to address the challenges associated with manual annotation by providing efficiency, accuracy, and adaptability. It can process large volumes of content swiftly, completing tasks that would take hours or even days manually in just minutes, while ensuring a higher level of precision and consistency in annotations. This tool can consistently apply WCAG principles across different elements, minimizing the risk of human error.

The last but not least element of the infrastructure is the MeSHPOL project that enriched ecosystem with collaborative platform for Polish version of Medical Subject Heading Thesaurus.

**Keywords:** research information management, institutional repository, library cooperation.

### *From Scrolls to Scrolling:*

#### *Understanding Online Engagement through Historical Archives of the University of the Philippines Diliman College of Home Economics Library*

***Grace A. Garcia<sup>1</sup>, Jet T. Tawaken<sup>1</sup>, and Benelyn P. Ferrer<sup>2</sup>***

<sup>1</sup> College of Home Economics Library, University of the Philippines Diliman

<sup>2</sup> College of Social Science and Philosophy, University of the Philippines Diliman

#### **Abstract**

**Introduction:** The College of Home Economics (CHE) boasts a rich history that embodies the legacy and identity of the institution. To honor and recognize the College's historical value, the UP Diliman College of Home Economics Library therefore finds an innovative way to showcase the college's historical value through SALAMISIM. Salamisim is a Filipino word derived from a Spanish word that means reminiscing events from the past. It is a digital exhibition initiative of the UP CHE Library that aims to commemorate the rich history of the

College of Home Economics by highlighting invaluable archival collections, which are also considered institutional assets. It features weekly posts of historical archives every Friday on the College of Home Economics Library's Facebook page. The “Story of the First Dean, Dr. Presentacion T. Perez,” was its first content released in June 2024. These archival collections encompass various historical materials, including photographs, artifacts, and significant documents highlighting the College's journey. This is a continuous effort to showcase and promote invaluable archival collections as part of the important institutional assets. Hence, the library takes the initiative to curate thematic digital exhibitions that delve into various aspects of the College's history—exploring its early development to the early curricula that laid the foundation of the current programs of home economics, underlining the remarkable achievements of faculty members who have contributed to the field of home economics, and underscoring the role of home economics in the broader context of nation-building. Each content featured in the online exhibitions offers an engaging and informative experience, showcasing the enduring legacy and impact of the College on educational activities within and beyond the institutional community.

**Methods:** This study involves the college community engagement in the digital exhibition of the CHE library. Accordingly, this study used a qualitative approach, using thematic analysis to explore the nature and patterns of user interaction on the Salamisim digital exhibition. It focuses in particular on the dimension of user engagements, specifically the reactions, shares, and reach, to determine how users engage with and respond to the content. The researchers used textual and sentiment analysis to uncover the underlying themes, sentiments, and user feedback. This analysis facilitates a broader understanding of users' perceptions regarding digital exhibitions. It evaluates its effectiveness in enhancing user connections with archival resources and fostering engagement within and beyond the community. Focus group discussions and interviews are also conducted to gain insights and perspectives of the users.

**Results:** The UP CHE library is dedicated to showcasing the college's historical collections through the SALAMISIM digital exhibition on the College of Home Economics Library's Facebook page. Using the qualitative approach, this study identified three dominant themes: nostalgia, pride, and gratitude, unveiling the positive impact of the digital exhibition initiative. Moreover, the study discovers that the visually rich and meaningful content of the SALAMISIM digital exhibition on cultural and historical awareness and preservation enhances user interaction on social media platforms. Notable patterns and heightened interaction in user engagement on photographs and timelines have been observed, particularly in collective memories. The collective memories posts gained high levels of engagement including the “College's Milestones,” which highlights key achievements of the College, and the “Notable Story of the Deans,” focusing on the significant contributions of academic leaders. Also, several suggestions have emerged, like utilizing videos and audio clips as part of thematic coverage and multimedia integration to enrich content representation, cater to diverse user preferences, and social media platforms as archival repository posts. However, these components are also considered challenges including obscuring older content prompting discoverability issues and algorithmic constraints. Nonetheless, users still valued the narrative depth and accessibility of the SALAMISIM digital exhibits. Also, this digital exhibition allowed users to connect with institutional history. Such initiatives guarantee the ongoing

relevance and influence of archival materials for a varied and changing user base by connecting generations and offering inclusive access to historical narratives.

**Recommendations:** The UP College of Home Economics Library SALAMISIM digital exhibition gained positive results despite some challenges. Thus, it offers insights that could assist academic libraries with archival collections the CHE library has to offer. However, recommendations have been proposed based on the results of the study. It is recommended to develop a specialized web platform for long-term accessibility and enhancing user navigation. Furthermore, it will be used to revitalize cultural and historical awareness and preservation initiatives. Expanding the multimedia offerings is also recommended like videos and oral histories to reach higher user engagement and to cater to diverse user preferences.

**Keywords:** Digital Archives, Institutional Assets, History, Online/User Engagement, Cultural and Historical Awareness, Digital Exhibitions

### ***Gathering, Analysing and Integrating Feedback on SHIFT Assistive Solutions – Driver for Inclusion of Visually and Hearing-Impaired Users in the Current Library Audience***

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***Ioana Cornelia Cristina Crihană***

<sup>1</sup>The National Association of Public Librarians and Libraries in Romania, Romania

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#### **Abstract**

In the context of the current supremacy of digital in the cultural and creative industries, the imperative need to ensure equitable access to cultural heritage resources within library ecosystems has become increasingly acute. This article explores the opportunity for integration in libraries and the degree of adequacy of assistive technologies for visually and hearing-impaired users, with a particular focus on the innovative solutions of the SHIFT - Metamorphosis of Cultural Heritage into Augmented Hypermedia Assets for Enhanced Accessibility and Inclusion project.

Using artificial intelligence-based tools, such as generating motion sequences for foreground objects using GANs, Picture-to-Speech, Text-to-Speech, Landscapes-to-Soundscapes conversions, etc., the SHIFT initiative, carried out under the Horizon 2021-2027 program, aims to increase inclusion and redefine the interaction and engagement of users belonging to vulnerable groups with library collections.

Based on the findings and exchange of impressions from the SHIFT TO INCLUSION workshop, organized by The National Association of Public Librarians and Libraries in Romania (ANBPR) at the National Library of Romania, this article examines the experience of users from vulnerable groups in testing SHIFT solutions. Through interactive demonstrations and structured feedback mechanisms - including surveys, thematic interviews and in-depth consultations - participants contributed critical insights on the use, accessibility



and potential improvements of these assistive technologies. These findings and discoveries based on feedback and direct observation provide a substantial documentary basis for refining assistive tools and optimizing library services for specific categories of users with special needs.

By synthesizing, processing, and evaluating the qualitative knowledge and experiences of vulnerable users in interacting with assistive technology solutions, this article demonstrates the transformative potential of AI in promoting accessibility and lifelong learning. Adopting SHIFT solutions within library ecosystems aims to maximize access to cultural heritage in libraries and also contributes to transforming libraries into vibrant, technology-enhanced spaces that appeal to all users, regardless of ability.

**Keywords:** Library Accessibility, Assistive Technologies, AI-Based Inclusion, Cultural Heritage Augmentation, User Experience Optimization, SHIFT Value Proposition, Horizon Programme.

## ***GLAMs at the Crossroads: Reconciling Tradition and Transformation with Artificial Intelligence***

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<sup>3</sup> CITCEM, Portugal

### **Abstract**

Galleries, Libraries, Archives, and Museums (GLAMs) are custodians of vast cultural and informational heritage, facing increasing pressure to enhance access, ensure preservation, and remain relevant in a rapidly evolving digital ecosystem. Current practices, often rooted in established methodologies, now confront the transformative potential and inherent complexities of Artificial Intelligence (AI). From an Information Science (IS) perspective, this presents a critical tension: how can GLAMs leverage the power of AI to augment their core functions without compromising their foundational principles of curation, authenticity, context, and ethical stewardship?

This presentation addresses this tension by exploring pragmatic and strategic applications of AI within the GLAM context, focusing on its potential to augment, rather than simply replace, existing practices. We will examine five key areas where AI offers significant opportunities:

- **Content Organization:** Discussing AI's role in automated metadata generation, subject indexing, entity recognition, and semantic enrichment of diverse collections (text, image, audio-visual), tackling the scale and complexity of digital and digitized materials that challenge manual methods.
- **Research Support:** Exploring how AI can accelerate scholarly discovery through intelligent search across heterogeneous collections, automated literature synthesis,

topic modeling, and identifying hidden connections within large datasets, empowering both researchers and GLAMs professionals.

- **Material Production:** Analyzing the use of AI in creating derivative works, generating summaries or translations, enhancing low-resolution images or audio, and even creating novel virtual experiences or exhibits based on collection data.
- **Task Automation:** Identifying opportunities for AI to automate repetitive tasks like transcription, digital preservation checks, user query routing, and basic report generation, freeing up professional staff for more complex, interpretative, and engagement-focused work.
- **Innovating GLAMs Work:** Moving beyond mere efficiency, we explore how AI can fundamentally enable innovation, facilitating new forms of user interaction (e.g., personalized tours, conversational interfaces), digital storytelling, accessibility enhancements, and predictive insights for collection management and user engagement strategies, harnessing “technologies of the future.”

However, the adoption of AI is not without challenges. We will critically address issues of algorithmic bias potentially embedded in classification or description, the need for transparency and explainability in AI-driven processes, data privacy concerns related to user interaction or collection data, and the crucial requirement for developing new AI literacy skills among GLAMs professionals. The presentation concludes by advocating for a balanced, ethically informed approach, where IS principles guide the responsible integration of AI, ensuring that these powerful tools are used to truly augment the invaluable work of GLAMs institutions in preserving and providing access to our shared heritage.

**Keywords:** Artificial Intelligence (AI), GLAM (Galleries, Libraries, Archives, Museums), Information Science (IS), Innovation, Digital Transformation.

### ***The Half-life of the Collective Health Science Area: Citation Analysis of Cadernos de Saúde Pública to determine their Obsolescence***

***Felipe Silva Izidoro da Fonseca<sup>1</sup>, Maria José Veloso da Costa Santos<sup>2</sup>,  
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#### **Abstract**

Scientific journals metrics and indicators provide an inexhaustible source for quantitative and qualitative analysis to evaluate the behavior of literature and overall scientific output in various fields. Scientometrics and bibliometrics, subareas of library and information science, focus on the quantitative measurement of scientific activities. This study aims to develop a quantitative

and descriptive analysis of Collective Health using citation analysis as a diasynchronous study of obsolescence and half-life comparing the citation data collected from the reference section of the selected articles in *Cadernos de Saúde Pública*, a journal published by Fundação Oswaldo Cruz, on two distinct periods 2021/2022 and 2011/2012.

While there is extensive literature on obsolescence studies based on citation analysis, as discussed by Kurtz and Bollen (2010), Coimbra (2011) notes the lack of Brazilian studies focused on half-life and obsolescence indicators. Collective Health was chosen for this study due to its unique characteristics and significant contributions to Brazilian healthcare policies. The journal plays a key role in the process of legitimizing knowledge in the field's institutional context (Nunes, 2006).

Gingras (2016) affirms that since the 1990s, bibliometrics methods have been used for the evaluation of research and researchers. These methods, such as citation analysis, help produce indicators of great relevance to the treatment and management of information and knowledge, especially in information retrieval, communication and scientific evaluation systems. The bibliometric indicator of half-life appeared in the field of Information Science through the analogous application of the concept of half-life in the area of Physics to measure the rate of obsolescence of scientific literature (Burton; Kleber, 1960).

Obsolescence, as Stinson and Lancaster (1987) explain, refers to the replacement of outdated publications with more current ones. The decline in the use of older literature over time, observable through citation analysis, is a key indicator of obsolescence. Obsolescence studies can be synchronous, diachronous, or diasynchronous (Line; Sandison, 1974), considering the relation of obsolescence with use and time. Research indicates that obsolescence patterns vary across fields, with possible explanations including rapid scientific growth, knowledge diffusion, online tools improving access to older materials, and the availability of bibliographical databases (Larivière et al., 2008; Faber et al., 2023; Dorta-González; Gómez-Déniz, 2022).

The SciELO database was used to compile data from the journal *Cadernos de Saúde Pública*, which provides open access to all its digital volumes. The data of 860 articles was organized in Microsoft Excel. The research followed these stages: Citation Collection, Citation Analysis, Data Organization, Half-life Calculation, and Comparison. The results indicate a small variation in the number of articles published in the analyzed periods of time. On average, 41,24 references are listed on papers published in 2021/2022, while those from 2011/2012 list 34.67 average. More than half of the 32.558 citations analyzed were for journal articles (71.63%). The results indicate that in the Collective Health field the half-life for the 2021/2022 and 2011/2012 periods are 7 years, indicating the ephemerality of information, with a significant portion of the citations covering documents published in the last five years of the biennial investigated.

### **Acknowledgements**

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**Keywords:** Bibliometrics. Citation Analysis. Literature Obsolescence. Half-life Literature.

## ***The Human Factor in Secure Archives: an Information Security Framework for Accuracy and Memory Reliability***

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### **Abstract**

Archival information serve as the cornerstone of organizational and societal memory, underpinning accountability, research, and cultural heritage. However, the reliability of this

memory hinges directly on the accuracy and integrity of the information held within. In today's increasingly complex digital ecosystems, ensuring this accuracy faces significant challenges, moving beyond traditional preservation concerns to intersect critically with Information Security (InfoSec) principles. While InfoSec is often applied in business settings to protect operational data, its core tenets offer a vital, yet often underused, lens for safeguarding the authenticity and accuracy of archival information.

This presentation argues that achieving trustworthy archival information, capable of supporting memory reliability, requires a *proactive and holistic InfoSec approach* integrated throughout the entire archival lifecycle – from creation and appraisal to description, preservation, and access. In particular, the proposed approach explicitly address the human factor, recognizing that human actions (intentional or unintentional negligence, lack of awareness, malicious intent, biases in description or appraisal) represent significant vulnerabilities impacting information accuracy.

We propose an *InfoSec Framework for Archival Accuracy* that extends beyond basic access controls. This framework incorporates four dimensions: (i) risk management adapted for archival processes: identifying and assessing risks to information accuracy stemming from human interaction at each stage (e.g., errors during digitization, biased classification, insecure handling of records, unauthorized modification); (ii) data integrity and authenticity controls: implementing procedures and potentially technical checks (e.g., checksums, audit trails for modifications) to ensure records remain unaltered and authentic, addressing accuracy at the bit-level where applicable, and (iii) clear policies and role-based access: defining clear information security policies specifically for archival functions and ensuring access privileges align strictly with clear and existing roles and responsibilities, minimizing opportunities for error or misuse, and finally, (iv) security awareness and training for archival staff: developing targeted training programs focused on secure handling practices, data privacy obligations specific to archives, ethical considerations in description, and recognizing threats to information integrity.

This presentation will explore the specific challenges of *applying these InfoSec principles within the archival information context*, contrasting traditional archival ethics with modern security demands. We will discuss how a focus on the human component – through policy, training, and clearly defined responsibilities – directly impacts the *accuracy of the archival information*. By integrating InfoSec thinking, particularly concerning human vulnerabilities, we can build more resilient and trustworthy archival information. The discussion aims *to offer practical insights and stimulate debate on modernizing archival practices to meet the security and accuracy demands of the digital ecosystem*, fostering a perspective where *InfoSec becomes an integral dimension of archival integrity and memory reliability*.

**Keywords:** information security (InfoSec), archival information, memory reliability, information accuracy, human factors in security.

## ***Infiltration of Predatory Journals in Health Sciences into Reputable Academic Literature***

***Erin Watson and Li Zhang***

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**Abstract:** Citing articles from predatory journals can spread unreliable information and compromise scientific integrity. Using citation analysis techniques, this study explores the extent to which predatory health sciences journals have infiltrated reputable academic literature.

We selected 26 journals from the "Medical Sciences" category of a known predatory publisher. The number of articles published by these journals was recorded using the information posted on their websites. Citation data for these journals was retrieved from Web of Science.

Out of 3,671 articles published in these predatory journals, 1,151 (31.4%) were cited at least once by 3,613 articles indexed in Web of Science. The number of articles that cited predatory journals increased significantly from 64 in 2014 to 665 in 2022, a ten-fold increase over nine years. The citing articles were published by researchers worldwide, including those from high-, middle-, and lower-income countries, and appeared in both traditional and open access journals. Notably, 43% (1,560/3,613) of the citing articles were supported by research funds. The results indicate that articles from predatory journals have significantly infiltrated reputable health sciences journals. It is essential to develop strategies to prevent the citation of such articles to maintain the integrity of scientific research.

**Keywords:** predatory journals, citation analysis, health sciences, Web of Science

## ***Infopragmatics and the Frontier Informational Structure (FIS): A Framework for Academic Research Excellence***

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### **Abstract**

This paper introduces the Frontier Informational Structure (FIS) - originally in Spanish: Estructura Informacional de Frontera (EIF)-, a transformative framework developed to enhance academic research and writing practices through the Infopragmatics method. Grounded in the integration of digital library resources and linguistic tools, the FIS provides a structured approach to navigating complex bibliographic and informational challenges in academic environments. By leveraging advanced methodologies such as Controlled Vocabulary Matrices, Linguistic Storming, and AI-powered tools like ChatGPT, the

framework bridges gaps in research education, particularly within the UNAM community. The paper presents the evolution of FIS, its implementation in Assertive Bibliographic Research (ABR) workshops since 2020, and its alignment with UNAM's strategic goals of improving research output quality. Findings from the 2024 workshops, including quantitative and qualitative data, validate the model's effectiveness in fostering information literacy and reducing academic malpractices. This contribution highlights the pivotal role of EIF in advancing library science and education, positioning it as a replicable model for global adoption.

**Keywords:** Artificial Intelligence, Frontier Informational Structure, Infopragmatics, Controlled Vocabulary Matrices, ChatGPT, Linguistic Storm, UNAM, Estructura Informacional de Frontera.

***Information at your Fingertips:  
Maximizing the Use of Different Online Legal Database at Truman Bodden  
Law School Library***

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***Ross Torrefiel Bachiller***

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**Abstract**

Awareness of the roles that library and knowledge specialists can play in enhancing the quality of online education and training resources in various aspects of information literacy for students and learners is growing along with the trend toward increased use of library online resources and databases. This will give them the tools they need to study online and combat the increasing amount of misinformation.

The overall goal of this research is to examine the impact of the different online legal databases in information literacy skills of the law students of the Truman Bodden Law School (TBLS) Library. Specifically, it seeks to answer the following questions: 1) What is the profile of the respondents in terms of: age, gender, year level, and course/programme?; 2) What are the level of usage of the respondents in the TBLS Library online legal resources?; 3) What are the level of information literacy (IL) skills of the respondents in the TBLS Library; 4) What are the impacts of the different online legal databases in information literacy of the law students of the Truman Bodden Law School (TBLS) Library?; and 5) What are the challenges encountered by the librarians and law students in online legal databases in TBLS Library?

The descriptive survey method using a survey questionnaire was used in the study to obtain information concerning the impact of the different online legal databases in information literacy. The data gathered from the survey questionnaires were tabulated and analyzed to ascertain the adequacies of each problem. Descriptive statistics (frequencies, percentages, mean scores, standard deviations and ranking) were the statistical tools utilized.

On the basis of the findings, the conclusions will be drawn. The researcher recommends further study on the impact of the different online legal databases and critical need for the development of information literacy instruction programs for law students to improve their information literacy.

**Keywords:** Information Literacy, Information Literacy Skills, Legal Databases, Legal Resources, Online Databases

## ***Information Governance and Data Protection in Higher Education: A Systematic Literature Review (2020–2024)***

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### **Abstract**

In the current landscape of digital transformation and data-driven decision-making, the protection of information and personal data has become a pressing concern for public institutions, particularly in higher education (HE). Universities are not only responsible for managing large volumes of sensitive data but are also expected to comply with evolving regulatory frameworks such as the General Data Protection Regulation (GDPR). Within this context, information governance (IG) and information management (IM) play pivotal roles in ensuring compliance, security, and accountability.

This study presents a systematic literature review (SLR) focused on the intersection of data protection and information governance in higher education institutions (HEIs), aiming to identify research trends, theoretical frameworks, and best practices adopted between 2020 and 2024. The review supports the development of a doctoral research project centred on the maturity assessment of IG in HEIs, with a specific focus on the Portuguese context within the broader European regulatory landscape.

The methodology included a comprehensive search in the Scopus and Web of Science databases, using a structured query combining terms related to information governance, data protection, data privacy, and GDPR. The initial result set was refined using explicit inclusion and exclusion criteria tailored to the scope of this study. The inclusion criteria prioritized peer-reviewed scientific articles dealing with governance, security, and privacy in the context of higher education or public administration. Exclusion criteria eliminated studies unrelated to



the education sector, as well as publications focused on technological domains (e.g., blockchain, IoT) without a clear link to information governance.

From an initial set of 442 articles, a total of 132 were selected for in-depth analysis. These articles were published between 2020 and 2024 and cover topics such as compliance with data protection laws, implementation of information governance strategies, maturity assessment of data management practices, and the evolving role of university libraries and IT departments. The findings reveal an increasing academic interest in integrating data protection into broader governance frameworks in HEIs, with particular attention given to accountability, transparency, and risk management. Furthermore, the review highlights a research gap concerning practical implementation models and the measurement of organizational maturity in information governance.

This first iteration of the study provides a structured synthesis of the international research landscape and sets the foundation for a more targeted analysis of the Portuguese HE system. In the next phase of this research, the work will be fine-tuned to assess how the IG in Portuguese HEIs is aligned with the National and European-level regulatory and governance expectations, and what would be the determinants of a maturity model tailored for guidance and the assessment in that domain.

**Keywords:** Information governance; Data protection; GDPR; Higher education; Maturity models.

***The Information Literacy Training Programs Performed for the Faculty Members by the Main Library at Sultan Qaboos University in the Sultanate of Oman from 2017-2023:  
The Reality and the Challenges***

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**Abstract**

This study explores the role of the Main Library at Sultan Qaboos University (SQU) in promoting information literacy (IL) skills among faculty members (FMs) in relation to their information needs from 2017 to 2023. The study investigates the library's training programs, examining factors such as user categories, gender differences, and participation rates. The research methodology employed is a case study approach, which allows for an in-depth examination of the Main Library's efforts in fostering IL among the SQU community. Qualitative methods, including unstructured interviews with the Deputy Director of Information Services (DDoIS) and content analysis of the training programs, were used to gather data. The findings reveal that postgraduate students (PG) were the largest group attending IL training programs, while faculty members showed lower participation, possibly due to time constraints

or perceived sufficiency of their existing skills. The study highlights the need for more targeted IL programs that address the specific needs of faculty members and other underrepresented groups, such as researchers. It also emphasizes the importance of ongoing evaluation and adaptation of the library's training initiatives to ensure they meet the evolving needs of the SQU community.

**Keywords:** faculty members, information literacy, information needs, Main Library, Sultan Qaboos University, training programs.

***Informed Choices, Embracing Open Access Publishing:  
A Systematic Literature Review on Transformative Agreements Publishing  
Models in Philippine Context***

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University of the Philippines Diliman

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**Abstract**

**Introduction:** The transformative agreements (TAs) are contracts between institutions (e.g., universities, consortia) and publishers aimed at transitioning from subscription-based models to open-access publishing. Just like the information professionals worldwide, Filipino academic librarians are as well committed to promoting equitable access to information, especially in an era where transformative agreements (TAs) are rapidly changing the academic landscape. There is a growing need for Philippine academic institutions and libraries to better understand how these models are reshaping scholarly communication, reducing barriers to access, and fostering greater global collaboration.

**Methods:** To better understand the TAs landscape, this study employs a qualitative research design, using Systematic Literature Review (SLR) method to synthesize the bibliometric literatures on transformative agreements, open access, publishing models, big deals and subscription models. The subject literatures which are 70 scholarly works published in 2019-2024 with full-text articles were generated from the Web of Science (WoS) and Scopus databases. The question formulation, protocol review, extensive search, and literature screening are some of the processes of the SLR method. In this method, the three (3) research questions such as (1) What are the motivations behind the adoption of the transformative agreements of the academic institutions and publishers?; (2) What are the struggles or obstacles encountered by the libraries in negotiating and implementing the TAs?; (3) How do

the librarians, library administrators, decision makers and funders perceive the advantages and disadvantages of the TAs? are thoroughly examined.

**Results:** This study will guide the Philippine academic libraries to embrace or not to adopt these models. This study utilizes a thematic analysis to categorize the findings into key themes and patterns. To ensure well crafted systematic reviews, the researchers will employ the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The findings show that increased research visibility, reduced publication barriers and compliance with open-access mandates are major motivations behind the shift to transformative agreements. While the budget constraints, lack of expertise, and difficulties in evaluating the long-term value of these agreements are some of the challenges faced by academic libraries in negotiating and implementing TAs.

**Conclusion/Recommendations:** The study highlighted the perspective of librarians and library administrators on the perceived benefits like enhanced information accessibility, reduced expenses on subscription plans, and increased opportunities for collaboration. Whereas, the financial limitations, insufficient experience, and issues in assessing the agreements' long-term worth are the obstacles that the academic libraries encountered. This paper will enable decision-makers in our academic institutions to make well-informed decisions about publishing models and library subscriptions. Furthermore, the results of this study will provide structured understanding of the frameworks and principles of TAs.

**Keywords:** Transformative agreements; Open access publishing; Subscriptions models.

## *Innovating Citation Analysis Using Generative Artificial Intelligence*

***Sarah G. Park and Lisa Romero***

University Library, University of Illinois Urbana-Champaign

### **Abstract**

Citation analysis is a quantitative method that evaluates bibliographic data to understand how research is produced, used, and interconnected. It measures the scholarly impact of research outputs and serves as a vital tool for collection management, uncovering the research trends of the respective users. Such insights enable librarians to identify usage trends and make critical decisions, such as subscribing and canceling resources for institutions, determining online or print format, or providing on-site or remote access. Unlike current standardized metrics such as download and circulation data—which offer limited insight into how resources are actually used in research output—citation analysis can more accurately reveal actual usage. However, the current methods for citation analysis have multiple obstacles. Abstract and indexing databases, which librarians rely on to gather citation data, selectively include resources, often excluding non-traditional resources, such as grey literature and institutional resources, thus limiting the scope of analysis and insight for librarians. Additionally,

traditional methods often depend on manual labor and are time-consuming, making it difficult to scale up the scope of analysis.

The presenters utilize a Generative Artificial Intelligence (GenAI) Application Programming Interface (API) to enhance citation analysis in the field of actuarial science, which assesses risk using mathematical and statistical methods. Using 10 years of citation data from leading journals in actuarial science, they will outline a new and enhanced approach that demonstrates how Gen AI can innovate citation analysis and enable librarians to make evidence-based collection development decisions so that collections better meet the needs of researchers.

### ***Innovation and Collaboration in the GLAM Ecosystem: Towards Accessible and Inclusive Digital Heritage***

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#### **Abstract**

GLAM institutions (Galleries, Libraries, Archives and Museums) play a key role in the preservation and dissemination of cultural heritage, creating resources and activities that bring culture closer to their audiences. However, access to these resources remains limited for people at risk of social exclusion. These groups are often excluded from cultural circuits due to economic, educational, accessibility or social integration barriers, which increases their sense of isolation and marginalisation. New technologies offer the opportunity to change this relationship from a passive access model to one based on immersion. Artificial Intelligence (AI), Virtual Reality (VR) and other digital tools allow these people not only to consume culture, but also to participate in its interpretation, representation and dissemination, creating a sense of belonging and enhancing their role in society.

This paper explores how GLAM institutions can work together through digital platforms and immersive experiences to create inclusive meeting spaces. As part of the R+D+i project 'Cultural and Bibliographic Heritage in the context of GLAM (Libraries, Archives and Museums)' (ref: PID2020-113405RB-I00), funded by the Spanish Ministry of Science and Innovation, State Research Agency, and in collaboration with the IDEALab Research Group, we participated in the fourth edition of Built with Bits, an original project of the Europeana Foundation (an initiative of the European Commission that aims to disseminate European cultural heritage in the fields of research and education), in collaboration with the Macedonian team and with the support of the AIDI community network.

In this project, institutions and professionals from different disciplines establish collaborative networks to design and create virtual spaces with a strong social impact, using open source and low/no code platforms, promoting the use of resources with Creative Commons licences and the reuse of 3D models made available to the public by initiatives such as Europeana, for the creation of educational and entertaining experiences that make cultural heritage accessible and inclusive for everyone.

The establishment of collaborative networks between GLAM institutions and other professionals for the preservation and dissemination of physical and digital heritage is latent in initiatives such as this, where the relationship between professionals from all over the world leads to the creation of shared spaces where any user can live an immersive experience and actively participate in the knowledge and interpretation of cultural heritage.

#### Acknowledgements

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**Keywords:** Accessibility, inclusion, collaboration, GLAM institutions, cultural heritage.

## *Innovation Evolution and Development Trends of FPGA*

**Zhao Ping Wang Xuezhao**

National Science Library, Chinese Academy of Sciences

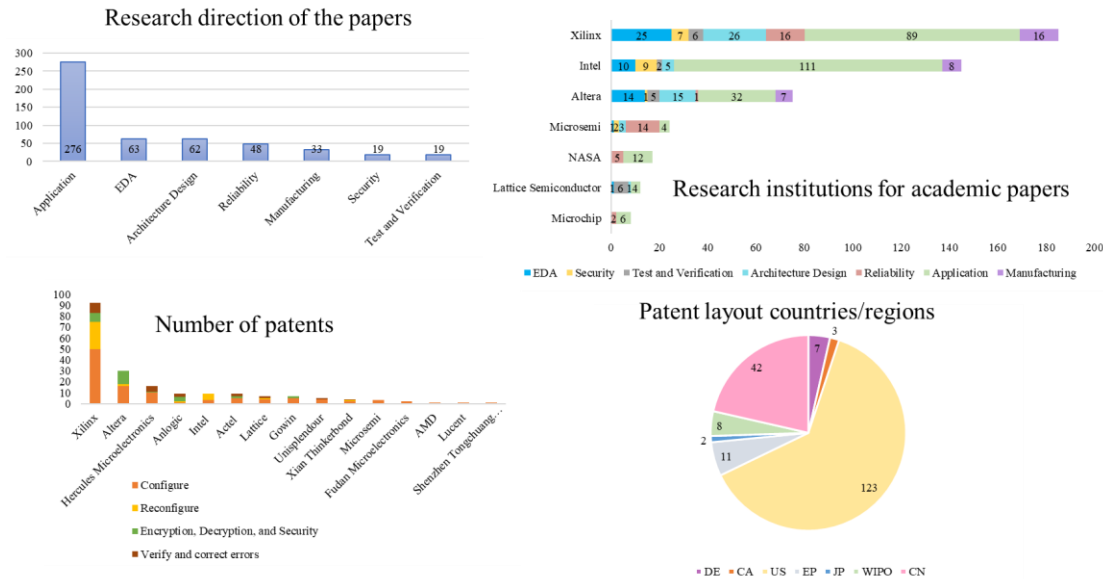
#### **Abstract**

**Background:** The burgeoning 5G, artificial intelligence, and big data technologies demand higher speed, precision, and flexibility in information processing. Field Programmable Gate Array (FPGA), with its programmability, high integration, speed, and reliability, has become pivotal in digital system design, meeting the needs of these emerging fields. Researching its innovation evolution and future trends is crucial for surmounting technological hurdles, driving independent innovation, and fueling industrial upgrading.

**Objectives:** This study aims to chart the FPGA technology's evolution, from its inception to key technological and architectural breakthroughs across different stages, unearthing the underlying drivers of progress. We also conduct a comprehensive analysis of the FPGA market, both globally and in China. This includes identifying major players, market share distributions, and competitive landscapes to understand the core competitive elements. Additionally, we explore FPGA's application expansion in diverse sectors like 5G, AI, and automotive electronics to clarify its prospects.

**Methods:** Based on the Web of Science and Incopat databases, this paper adopts methods such as literature research, expert wisdom, and statistical analysis. We screen 520 FPGA-basic-

research papers, 196 key-tech patents, and some projects by NASA, DARPA etc. for FPGA's development, market, types, and research-status analyses. A comprehensive data survey reveals its technological development directions and key research institutions. By integrating industry research and public opinion data, this study explores the application potential of the development trends of FPGA.



**Fig.1** Current Status of FPGA Research

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**Results: Innovation Evolution Process:** FPGA evolved from embryonic-stage PLA, PAL, GAL (programmable logic arrays) to its invention, then to the expansion-stage million-gate era, and finally entered the accumulation-stage system LSI trend, innovating significantly in architecture and integration.

**Market Pattern:** Globally, there is a situation of "two big and two small". Xilinx and Intel dominate the high-end market, while Lattice and Microchip show their respective strengths in niche markets. There are both strategic cooperation and fierce competition among enterprises. Although the Chinese market started later than its international counterparts, it has developed rapidly in recent years.

**Application Expansion:** FPGA demonstrates remarkable performance across diverse domains including data centers, industry, communication, and artificial intelligence. In data centers, it offers novel approaches to enhance computing power and optimize energy consumption. For industrial applications like automotive electronics, it caters to demands for flexibility, stability, and low power consumption. Its architecture aligns well with communication algorithms, serving as a pivotal element for signal processing. In AI, it balances front-end sensor handling and back-end algorithm acceleration, meeting the high-demand for hardware computing power and flexibility.

**Conclusions:** As a key digital system design platform, FPGA has seen fast tech growth, wider applications, and market expansion. In future, with tech and eco-upgrades, it'll evolve further. Industry-academia collaboration via multi-faceted efforts can break bottlenecks for its continuous development.

**Keywords:** FPGA, Technological Evolution, Market Pattern, Development trend.

***An Innovative Practical Activity Contributing to Education and Academic Research:  
A Case of National Science Library, Chinese Academy of Sciences***

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<sup>2</sup>University of Chinese Academy of Sciences

**Abstract**

**Background:** As the first designated depository for Chinese Academy of Sciences (CAS), the National Science Library, Chinese Academy of Sciences (NSLC) has collected more than 220,000 dissertations since the 1980s, with an annual growth of approximately 10,000 volumes. These collections not only embody students' academic achievements and research capabilities, but also play a crucial role in advancing disciplinary development and providing innovative ideas for academic research. Many authors of early dissertations have since become esteemed professors and mentors in their respective fields. Recognizing the value of this unique resource, the library aims to thoroughly explore and utilize these physical materials and related human books to fulfill its responsibility of supporting academic research and fostering graduate education development.

**Initiative:** Since 2022, the library has collaborated with the graduate education division and the student union to launch a series of interview activities called "Meeting with Mentors". This initiative aims to assist the younger generation in their studies and work through face-to-face interactions with mentors, while also promoting scientists' spirit and inspirational experiences to the public.

**Approach:** Taking the dissertations as a starting point, we invite highly influential mentors to present and interpret both their own dissertations and those of their supervised students. In these living libraries, participants gain valuable insights into dissertation writing methods as mentors analyze their research backgrounds and ideas. Additionally, these discussions showcase the mentors' rigorous scholarship and academic attributes from the perspective of their academic philosophy and research achievements. To extend the benefits to a wider audience, each offline interview is live-streamed and can be reviewed online through new media platforms.

**Results:** This approach not only presents the academic value contained in the archived theses and dissertations from a micro perspective in a more multifaceted manner but also brings the special collections closer to readers by effectively sharing the stories behind these archived works. To date, we have hosted eight interview activities, which have garnered thousands of views and numerous positive responses from both students and the public.

**Benefits and significance:** On one hand, combining physical dissertation collections with living books, "Meeting with Mentors" series closely focuses on key challenges in graduate students' work and study, as well as important issues in disciplinary development. It not only answers questions about thesis writing but also illuminates the path of scientific research and provides academic guidance. On the other hand, the interview activity uses the library space as a platform and adopts an open teaching format with teacher-student interaction. This

effectively stimulates students' curiosity and desire for exploration, helping to cultivate their independent thinking and academic research abilities. It not only demonstrates the library's unique function as a "second classroom for students' quality education" and a "third space for teachers' and students' learning and life," but also promotes the shaping of innovative capabilities for both teachers and students via "teaching through interviews" and "integration of science and education." This approach pushes forward the synergy between scientific research and talent cultivation.

**Keywords:** Library activity, interview, graduate education, thesis and dissertation, scientific spirit.

### ***Inquiry in Action:***

#### ***A Mixed-methods Approach to assessing First-year Students' Information Literacy Skills***

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#### **Abstract**

**Introduction:** Academic librarians play a crucial role in fostering undergraduate students' information literacy skills, yet measuring the impact of library-based instruction is still one of the major challenges for instructional librarians. Opportunities to assess and evaluate student performance are especially limited for librarians delivering one-shot sessions, where time constraints and limited chances for follow-up make it challenging to determine if students are effectively learning and applying their information literacy skills in a variety of contexts. Without meaningful assessment strategies, librarians struggle to understand their instructional effectiveness and reflexively inform their teaching practices.

**Objectives:** In this presentation, we address this problem of teaching and learning assessment and have the following two objectives: 1) to demonstrate the opportunities for assessment offered by credit-bearing information literacy courses; 2) to explore best practices in qualitative and quantitative assessment strategies; 3) demonstrate an application of such strategies in two instructional contexts.

**Methods:** This session draws on the outcomes of our research and teaching partnership. We are teaching librarians, each based at a Canadian university in Ottawa, Ontario. With another colleague, we have an open-access credit-bearing information literacy course designed for first-year undergraduate students at Canadian universities and beyond. The course is grounded in inquiry-based learning, a pedagogical approach that can be used to encourage students to be curious, motivated, and engaged while also fostering their information literacy skills. Inquiry-based learning grounds university or college program content, classroom activities, and formative and summative assessments in authentic research problems that reflect student interests, knowledge, and experiences. Using a "backward design" approach to curriculum



development based on the Association of College and Research Libraries (ACRL Framework for Information Literacy for Higher Education, our assessment strategies include a quantitative pre- and post-course survey to measure student perception of learning as well as the acquisition of core information literacy skills. In addition, we have created a scaffolded set of qualitative activities and assignments to provide feedback to students (and ourselves) on their ongoing learning as well as to evaluate their learning at the end of the course.

**Results:** In this “best practices” session, we share examples of the quantitative and qualitative assessments we use to measure student learning in credit-bearing courses. We argue that this combination of qualitative and quantitative assessment tools aligns with the goals of inquiry-based learning while meeting the need to grade students’ course performance. These assessment strategies can be used successfully in credit-bearing information literacy courses and also adapted to one-shot library instructions.

**Learning outcomes:** By the end of this session, participants will be able to:

- reflect on the benefits of inquiry-based learner-centred curriculum design in information literacy courses;
- define several types of formative and summative assessment suitable for inquiry-based learning;
- discuss the strengths and challenges of developing quantitative and qualitative assessments for inquiry-based learning.

**Keywords:** Academic libraries, curriculum design, information literacy, intellectual curiosity, inquiry-based learning, assessment of learning, best practices.

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## ***Integrating Critical Information Literacy into Map and Geospatial Data***

### ***Instruction:***

#### ***A Survey of Librarian Practices***

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Assistant Professor Libraries and School of Information Studies, Purdue University  
West Lafayette, IN

### **Abstract**

As the field of cartographic and geospatial information continues to evolve, the importance of equipping librarians with the skills to critically engage with cartographic and geospatial information becomes integral to facilitating informed research, promoting spatial literacy, and enhancing the accessibility of geospatial data for their user communities. To understand Map and/or Geospatial Data Librarians current involvement in critical information literacy (CIL), librarians were surveyed to examine (1) if they incorporate CIL into their instruction, (2) in what ways they are incorporating CIL into their instruction, as well as (3) the benefits and challenges in doing so. Forty-five responses were analyzed and 57.7% indicated that they incorporate CIL into their map and geospatial instruction. The sixteen-question survey gathered both quantitative and qualitative data. Deductive and inductive reasoning was used

to identify the major themes in the qualitative survey data. Respondents highlighted the use of critical thinking exercises, discussions of bias and representation in maps, and exploration of the social and political implications of geospatial data. While the benefits of incorporating CIL are significant, challenges include limited time and resources, resistance from users, and the need for ongoing professional development. The findings are useful to Map and Geospatial Data Librarians looking for practical strategies to integrate CIL into their instruction, addressing challenges and leveraging opportunities to enhance the critical information literacy skills of their users as well as critical information literacy scholarship and the broader discourse on map and geospatial education.

This presentation will share the findings of the survey, providing practical strategies for Map and Geospatial Data Librarians seeking to integrate CIL into their instruction. The findings contribute to critical information literacy scholarship and inform the broader discourse on map and geospatial education by addressing the practical challenges and opportunities of fostering critical engagement with geospatial information among users.

This presentation would be of interest to:

- Map and Geospatial Data Librarians
- Academic Librarians
- Information Literacy Instructors
- Geospatial Professionals
- Researchers in Library and Information Science
- Educators interested in spatial literacy and critical thinking

**Keywords:** Critical Information Literacy, Map Librarianship, Geospatial Data, Information Literacy Instruction, Spatial Literacy, Cartographic Literacy, Library Instruction, Survey Research.

***Library Associations as Vital Components in Empowering of Continuing Professional Development of librarians and information scientists:  
The Case of Association of Greek Librarians and Information Scientists  
(AGLIS)***

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President of the Board of Directors of the Association of the Greek Librarians and Information Scientists. QQML International Conference co-Chair

## Abstract

Librarians and information scientists' associations play a crucial role in shaping the profession and advancing the field. These associations provide a variety of resources, tacit knowledge, professional development opportunities, and platforms for networking. Their primary functions often include promoting best practices, supporting members career growth, establishing professional standards, and advocating open access and accessibility to information. In an information environment that is changing rapidly Continuing Professional Development (CPD) is crucial to maintain and enhance the skills set of librarians and information scientists. Library professional associations at international level are vital in supporting CPD through conferences, professional certification, providing access to current research, and via promoting best practices.

This study built on upon the international experience and literature of CPD for library and information scientists so as to provide a CPD framework based on Association of Greek Librarians and Information Scientists (AGLIS).

**Keywords:** Library associations, Librarians and information scientists, Continuing Professional development, Association of Greek Librarians and Information Scientists (AGLIS)

## *Mapping the Digital Transformation of Romanian University Environment: Insights from a National Survey*

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<sup>2</sup>"Mihai Eminescu" Central University Library Iași, Romania

## Abstract

The present research investigates the current state of digitalization in Romanian university libraries through a survey applied on 108 library professionals from 15 university libraries, most of them belonging to the member universities of the Anelis Plus consortium.

The survey explored key aspects of the digital transformation process. The paper summarizes results on the creation and provision of digital resources regarding their use for academic purposes.

The survey explored issues including:

- The level of digitalization: Adoption of digital resources, digital repositories, online services, interoperability of the online resources, integration of digital resources into teaching and learning.
- Challenges and barriers: Identified challenges including limited funding, lack of technical infrastructure, insufficient staff training and resistance to change, users' degree of information literacy.

- Professionals' competence gaps: Identified gaps in professionals' digital skills, including data management, digital curation, information literacy instruction, and the use of emerging technologies.
- Competence development: Assessed the availability and effectiveness of professional development opportunities for enhancing digital competencies.
- Impact on job roles: Examined how digitalization and AI are transforming staff roles and responsibilities, requiring new skills and expertise.

**Key findings:** Preliminary findings suggest a medium to high levels of digitalization across Romanian university libraries involving the majority of the institutional staff. While many universities have adopted digital resources, digital repositories, institutional platforms for the study programs support and online services, challenges related to funding, infrastructure, staff and users training remain significant. The study highlights the crucial role of targeted continuous professional development in supporting professionals' adaptation to the evolving digital landscape, including ICT updates, AI skills, data protection and cyber security. Data analyses also indicate the clear awareness on the redefinition of the LIS professional tasks, as well as fear of job cuts due to the introduction of artificial intelligence.

**Conclusion:** The main priorities identified in the study are collaborative efforts to advance digitization, improve the implementation of artificial intelligence elements, and bridge the gap between users with an advanced access or a limited access to technology and digital resources to ensure equitable access for the academic and scientific community. A small number of universities offer, through their libraries, most of the digital scientific content needed for research and development.

Despite the successful development of the Romanian digital libraries and extensive research on this topic practitioners still face a variety of challenges and problems.

Professional and scientific association, the mission of Anelis Plus is to undertake research and development activities, necessary for the implementation of the educational and research national and European policies, so as to answer to the growing information needs.

In this context, the Romanian consortium supports both the construction of the national library of scientific literature and the interoperability between the institutional repositories of its' members, also providing staff training in the management of digital resources.

**Keywords:** Anelis Plus Consortium, Romanian university libraries, Digitalization, Survey, Competences transformation, Professional development, Digital library.

## *Master's and Doctoral Programmes in Information Science in Romania*

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## Abstract

Higher education programmes must follow the trends and progress in their respective field, preparing specialists for the future labour market. This requires periodic changes and updates to ensure the relevancy of such programmes. In the field of information science, where progress has been remarkable in recent years —particularly in relation to access to information and knowledge, encompassing activities such as the collection, organisation, storage, retrieval, use, dissemination of information —the need to adapt to all developments in both the field and in society is even greater. Graduates of information science programmes typically work in a range of private companies or in public organisations, including libraries, information services, documentation and information centres. In doing so, they contribute to the transformation of these organisations and their information services to better meet the current needs of users and of society. In Romania, the University of Bucharest is currently the only university which provides all levels of higher education programmes in information science. This study focuses on the master's and doctoral programmes in information science provided by the University of Bucharest, exploring the beginnings and development of these programmes over the years, their curricula, while also analysing recent changes and challenges. The study concludes with a series of suggestions to help strengthen these programmes even further.

**Keywords:** information science, higher education, master's programme, doctoral programme, University of Bucharest, Romania.

## *Memories of Old Cebu: Facebook as a Platform for Community Archiving and Digital Heritage Preservation*

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## Abstract

This study examines the use of Facebook as a digital platform for community archiving, focusing on how communities leverage social media to document, preserve, and share local history and heritage. Using a case study approach, the research analyzes how a specific Facebook group (e.g., dedicated to local history, cultural heritage, or a library-led initiative) functions as an informal archive. The study explores: (1) the types of content shared (e.g., photographs, oral histories, documents); (2) community engagement and participation in archival efforts; and (3) the challenges and opportunities of using Facebook for long-term digital preservation. The findings highlight the role of social media in democratizing access to historical records, fostering public participation, and supplementing traditional archival practices. However, the study also addresses concerns such as data ownership, platform

dependency, and sustainability. Recommendations are provided for archivists, librarians, and information professionals seeking to integrate social media into archival and heritage initiatives.

**Keywords:** community archiving, digital preservation, social media archives, cultural heritage, user-generated content

***Nominalization in Scientific Letters in Brazilian Portuguese:  
Their Index Function in Knowledge Organization and Politeness Strategies  
in Scientific Communication***

***New title: Discourse analysis of scientific letters in Portuguese language:  
nominalization and their index function in knowledge organization and of  
politeness strategy in scientific communication***

***Maria José Veloso da Costa Santos<sup>1</sup>, Vânia Lisbôa da Silveira Guedes<sup>2</sup>,  
Maria de Fatima Sousa de Oliveira Barbosa<sup>3</sup>,  
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**Abstract**

O estudo investiga a frequência de uso de nominalizações deverbais em cartas científicas em língua portuguesa, do arquivo pessoal do cientista Adolpho Lutz (ano), com o propósito de estimar os graus de produtividade relativa de nominalizações e observar sua função de índice na organização do conhecimento e sua função discursiva de impessoalização como estratégia de polidez na linguagem de cartas científicas. No domínio da Febre Amarela na Medicina Tropical.

Nesta perspectiva, desenvolve a análise linguística do gênero discursivo cartas científicas visando contribuir com a área de Organização do Conhecimento (KO), a partir da análise de fenômenos informativos ligados ao gênero, do ponto de vista da Comunicação Científica na Ciência da Informação (CI) e da Análise de Discurso (AD) na Linguística. O objetivo principal é contribuir para o conhecimento epistemológico e empírico interdisciplinar sobre fenômenos que norteiam a linguagem científica com propósitos comunicativos e para criação de sistemas de organização do conhecimento de natureza semântica.

A hipótese é de que as nominalizações deverbais em -ção são predominantes em cartas científicas e, portanto, apresentam maior grau de produtividade e frequência de uso, com funções de índice relevante na KO e de impessoalização como estratégia de polidez na escrita científica.

Consideram-se como referencial teórico a KO e a comunicação científica na CI em diálogo com a AD, particularmente a análise de gêneros, a Teoria da Polidez e a Teoria Lexical, na Linguística.

The theoretical framework used was the Knowledge Organization, Zipf's Theory and Goffman Transition Point (Pao, 1978) in Bibliometrics, as well as the genre theory (Bazerman, 2006; Hyland, 2009; Swales, 1990), Lexical Theory (Basílio, 2007; Chomsky, 1970) and Discourse Analysis (Eggins, 2004; Van Dijk, 2012) within Linguistics.

Bibliometrics is the science that presents a set of empirical principles based on mathematical and statistical methods to investigate, assess and quantify the written communication processes. Bibliometrics analysis establishes relevant indicators in a knowledge field highlighting the quantitative aspects of production, dissemination and use of scientific information.

Among the more used bibliometrics laws there are the Zipf's principles used for KO related to words use frequencies in a given text, enriched by Goffman Transition (T) Region, as method for selecting terms directly suggested by Goffman (apud Pao, 1978). This method indicates a region from the list of words used in a scientific text with the highest semantics content.

In Linguistics, the deverbal nominalization (Basilio, 2007) refers to the set of processes that form nouns from verbs. The author explains that the nominalization contains aspects syntactic and semantic textual and play functions of designation of process, action, state etc. Basilio (2007), Swales

(1990), Hyland (2009), Eggins (2004), Halliday (2004) and other authors emphasize that the use of nominalizations characterize heavily the scientific discourse.

As cartas foram processadas pelo software AntConc e assim foi produzida uma lista de frequência de tipos e de uso de palavras para verificação da produtividade e da recorrência de nominalizações em -ção, -mento e -ência, a partir de suas frequências relativas e suas funções de índice.

Do ponto de vista pragmático, discute-se o processo de nominalização como estratégia de impessoalização no qual o pesquisador-autor é obscurecido e o evento é apresentado como fato, respeitando as convenções estabelecidas pelas comunidades científicas e revelando a polidez na comunicação entre autores.

Finalmente, observa-se a predominância da recorrência de nominalizações em -ção na escrita das cartas em análise, sua função de intensificação da carga semântica e de impessoalização como estratégia linguística de polidez. Ressalta-se, ainda, que os dados obtidos corroboram a hipótese estabelecida e apontam para a importância das abordagens teóricas e descritivas da nominalização para estudos da carga semântica de palavras na KO e polidez na comunicação científica.

**Keywords:** Nominalization. Knowledge organization. Scientific communication. Scientific letter. Politeness strategy.

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**Abstract**

In the Philippines, academic libraries at top-ranking universities are increasingly leveraging open access repositories (OARs) to enhance information skills among students and faculty. The COVID-19 pandemic has further accelerated the shift towards digital resources in academic libraries, prompting many institutions to enhance their online services and promote the use of Institutional Repositories (IRs) (Esposito-Betan & Fresnido, 2022). These initiatives are vital in addressing challenges of digital and information literacy in the evolving educational landscape. Libraries integrate digital literacy programs, emphasizing the importance of online information searching strategies and mindfulness (Atoy et al., 2020). They also advocate for open educational resources (OERs), despite limited adoption in the Philippines, to provide diverse and flexible learning materials (Jalandoon, 2023).

This study examined how academic librarians at leading Philippine universities are revolutionizing information literacy through Open Access Repositories (OAR). Through content analysis of library websites, social media platforms, and institutional reports from 2020-2024, the study investigated the innovative strategies implemented by top academic libraries in the Philippines.

Results revealed that Philippine academic libraries are pioneering new approaches to information literacy while facing unique challenges in resource optimization and user engagement. This study demonstrates that Philippine academic libraries are pioneering innovative approaches to information literacy through OAR.

**Keywords:** Open Access, Digital Literacy, Information Literacy, Academic Libraries, Content Analysis.

***OERs and SDG 4: A Philippine Perspective on Open Access and Quality Education***

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**Abstract**

This study explores the role of Open Educational Resources (OERs) and Open Access Initiatives (OAI) in supporting and advancing SDG 4: Quality Education within Philippine academic libraries. Through a qualitative research approach, this study investigates best practices and challenges encountered by these institutions in integrating OERs into their teaching and learning processes. Key findings include the potential of OERs to enhance access to quality education, reduce educational costs, and promote innovative teaching methodologies. However, challenges such as copyright issues, limited awareness and



understanding of OERs among faculty and students, and inadequate infrastructure and support systems are identified. The study concludes by emphasizing the need for collaborative efforts among stakeholders, including government agencies, academic institutions, and civil society organizations, to effectively leverage OERs and OAI to achieve SDG 4 in the Philippines.

**Keywords:** Sustainable Development Goals (SDGs), Open Educational Resources (OER), Open-Access Initiatives (OAI), Academic Libraries, and Philippines

### ***On the Personalization of Information Retrieval: “The AI-personification in Reformulating UX in Libraries”***

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#### **Abstract**

The rapid evolution of digital information has reformulated the role of libraries, creating a shift from traditional knowledge repositories to AI-enhanced ecosystems that cater to user preferences. Leveraging AI has significantly improved information retrieval, specifically search efficiency and resource recommendation, leading to more personalized and adaptive user experiences. AI-algorithms tend to analyse user behaviour, predict search intent, and refine content delivery, ensuring personalised recommendation systems [1]. On integration of AI, library systems have now come to terms with better techniques of knowledge-discovery [2]. This paper provides a comprehensive analysis of AI's role in redefining information retrieval in libraries, examining real-world case studies from academic, public, and corporate sectors namely Ex Libris Primo [3], The National Library of Singapore and EBSCOhost, respectively. Through these case studies, we explore how AI-driven systems impact knowledge accessibility, user engagement and research efficiency, while also addressing their limitations and ethical concerns. However, while AI optimizes search efficiency, it also raises ethical and technical concerns, including algorithmic bias, privacy risks, and the potential loss of human intuition in knowledge discovery as described by Bender et al. in [4]. Personalized AI recommendations, if not carefully regulated, may reinforce information silos, limiting exposure to diverse perspectives and research areas. The findings highlight the essentiality and the positive future scope of applying AIML to the modern and emerging library and information systems.

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**Keywords:** Artificial Intelligence and Machine Learning, Library and Information Science, Information Retrieval, Ethics, AI Implementation

### *Parental Engagement in School Libraries: A Longitudinal Study in Portuguese Elementary Schools*

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<sup>1</sup>Professor, Universidade Aberta, LEAD

<sup>2</sup>Professor, Universidade Aberta

#### **Abstract**

Parental engagement in school library activities has been extensively analyzed, with numerous studies emphasizing its critical role in fostering reading habits and supporting educational outcomes. In Portugal, the school library evaluation process utilizes a specialized model that includes a parent questionnaire designed to assess library processes, their impact, and prospects for future development (Bastos, Martins & Conde, 2011). This questionnaire consists of eight closed-ended questions addressing parents' awareness of the library, their involvement in library activities, and their perception of the library's role in promoting reading and learning.

As part of a research partnership between Universidade Aberta and the Portuguese School Libraries Network (SLN), this study examined parental responses to the evaluation questionnaire. The survey was administered to parents of students in levels 1 to 4 across four mainland districts in Portugal: Leiria and Setúbal (coastal regions) and Vila Real and Évora (inland regions).

Adopting a quantitative approach, the study analyzed data across diverse geographic and social contexts over three distinct time periods (2015, 2017 and 2019), identifying patterns and contrasts in parental engagement. The analysis focused on four key categories: (1) Awareness

of the School Library (SL); (2) Communication between the SL and parents; (3) Collaboration between the SL and parents; and (4) Recognition of the SL's role in learning.

Findings indicate a collaborative relationship between parents and school libraries in promoting reading, with slight improvements observed from 2015 to 2019. However, the level of parental involvement varies significantly due to factors such as school dynamics and sociodemographic characteristics. A critical barrier identified was the lack of parental awareness regarding library activities, limiting engagement. Certain schools require targeted interventions to address this gap, as it adversely impacts students' academic performance—particularly in reading—and hinders the achievement of SLN's 2021-2027 strategic goals.

This study holds particular significance as it leverages previously unpublished data from the SLN. It underscores the school library evaluation model's role in guiding best practices, monitoring and evaluating various intervention areas, validating processes and outcomes, and informing strategic decision-making.

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### ***Performance Evaluation and Standardization in School Libraries: A Portuguese Perspective***

***Leonor Gaspar Pinto<sup>1</sup>, Paula Ochôa<sup>2</sup>, and Ana Novo<sup>3</sup>***

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#### **Abstract**

This paper presents an ongoing meta evaluative study investigating how standardization can enhance performance evaluation models in school libraries, focusing on the Portuguese School Libraries Network (SLN) as a case study. The study is anchored in three strategic guidelines that promote innovation and accountability:

- The *IFLA/UNESCO School Libraries Manifesto* (2021) advocating for continuous monitoring, evaluation and accountability processes, data discussion and share with the school and local community members and stakeholders.
- The *Recommendation CM/Rec(2023)3 of the Committee of Ministers to Member States on library law and policy in Europe*, to conduct regular studies and assessments to explore how libraries fulfil their educational and cultural missions, as well as the Sustainable Development Goals.

- ISO/TC 46/SC 8 (the International Organization for Standardization Technical Subcommittee for Quality – Statistics and Performance Evaluation)’s Resolution 2024/02 to initiate a new standardization project on International Statistics for School Libraries.

The study involves characterizing the SLN’s self-assessment model and mapping its statistics and performance indicators against ISO 2789:2022 and ISO 11620:2023. The self-assessment model is based on ISO 16439:2014 (Information and Documentation – Methods and Procedures for Assessing the Impact of Libraries), CAF (Common Assessment Framework), and EFQM (European Foundation for Quality Management) models and intends to evaluate school libraries across four domains: curriculum, literacies and learning; reading and literacy; projects and partnerships; and school library management.

The findings and recommendations aim to enhance the SLN’s approach to performance evaluation, positioning school libraries at the forefront of educational priorities and recognizing them as a vital component of the national library system and futures information policies.

Launched in November 2024 and scheduled for completion in 2025, the study is a collaboration between CHAM/NOVA FCSH and CIDHEUS/Open University Portugal and benefits from a large experience in this field: Since 2007, the Open University in Portugal has provided training through its Master program in Information Management and School Libraries, working with teacher-librarians and analysing self-assessment reports to identify strengths and weaknesses.

116 Since 2012, the School of Social Sciences and Humanities at NOVA University Lisbon (NOVA FCSH) has implemented research, teaching, and training strategy in Information Science that emphasizes interdisciplinarity and integrates performance evaluation, sustainable development, and digital transformation. Several projects and learning experiences focusing on performance evaluation and sustainability literacy competencies have emerged from this strategy, extensively documented by researchers at CHAM – Centre of Humanities (NOVA FCSH). In 2021, through collaboration with ISO/TC 46/SC 8 (the International Organization for Standardization Technical Subcommittee for Quality – Statistics and Performance Evaluation), CHAM launched a research initiative to explore the contributions of standardization in aligning information services performance with the Sustainable Development Goals (SDGs).

With this initiative it is expected that the pivotal roles of value co-creation and collaborative learning in performance measurement innovation are highlighted.

**Keywords:** Performance evaluation, School libraries, Standardisation, Portugal

### ***Policy Insider:***

### ***An Agent for Science and Technology Policy Analysis***

***Wang Yanpeng, Zhao Ping, and Wang Xuezhao***

National Science Library, Chinese Academy of Sciences

## Abstract

**Background:** Science and technology (S&T) policy information is vast in quantity, diverse in sources, and broad in scope, presenting significant challenges for librarians and information service providers in terms of efficient information retrieval and analysis. Traditional S&T policy analysis often relies on manual searches and interpretations of literature, which are not only time-consuming and labor-intensive but also susceptible to inaccuracies and inconsistencies due to variations in individual understanding and subjective judgment. Moreover, as policymakers' demands become increasingly complex, the timeliness of S&T policy analysis has become a critical concern. Consequently, there is an urgent need for an intelligent tool that can assist in the retrieval and analysis of S&T policies, enhancing the quality and efficiency of decision-making support.

**Objectives:** This study aims to develop and evaluate an agent for S&T policy analysis, named Policy Insighter. The agent is designed to automatically retrieve relevant S&T policy documents based on user-provided keywords and generate structured policy analysis reports, thereby offering efficient and accurate support for both policymaking and research.

**Methods:** The Policy Insighter agent is constructed on the COZE platform and comprises four key modules:

1. **Keyword Expansion Module:** This module identifies up to five additional keywords closely related to the user's input keyword. The GLM-4-0520 large language model (LLM) is used for keyword expansion.
2. **Database Module:** This module stores S&T policy data from major countries worldwide, organized by year. The data is collected and organized by librarians at the National Science Library of the Chinese Academy of Sciences. Additionally, this module can automatically retrieve relevant S&T policy documents based on both the user-provided and expanded keywords.
3. **S&T Policy Analysis Module:** This module analyzes the retrieved policy documents and generates analytical insights in three key areas: the structure and characteristics of national policies, priority S&T areas, and emerging policy trends. The GLM-4-0520 LLM is used for analysis generation.
4. **Text Processing Tool Module:** This module formats the output, including answers and references, using Python.



**Keywords:** Policy Insider, Science and Technology Policy Analysis, Agent, Large Language Model.

***Practical Approaches on International Exchange of Publications into a university library – case of Lucian Blaga Central University of Cluj-Napoca, Romania***

***Alina Ioana Bogătean***

**Lucian Blaga Central University Library, Cluj-Napoca, Romania**

**Abstract**

In the context of the new challenges caused by the changes in social, economic, political and digital environments, the office of international exchange of our library continues to hold an important place in the collection development policies of university libraries. This library service represents an alternative source for the acquisitions of foreign books and periodicals, but also an efficient way for scientific dissemination of Romanian publications in all the intellectual circles.

In this paper I will treat the practical implications caused by open access movement, the digitization of the publications, higher shipping charges for sending the publications abroad etc. The research methodology is based on the study of scientific articles, specialized papers, legislative framework, statistic and implicitly our own theoretical and practical experience.

In the beginning, international exchange activities were traditionally carried out on worksheets where all the identification data of a journal, provenance, years and volumes received were entered. Since 1996, all international exchange activities have been centralized and carried out through FoxPro, a program created by the specialists of our library's IT department, which had four modules built into it. Since 2008, the publications (books, magazines, CD-ROMs, etc.) obtained through the library's exchange program have been processed in Aleph 500, an integrated library system whose configuration has been adapted to exchange procedures involving the sending and processing of received publications. Since 2020 Aleph has been used exclusively in the desire to integrate all exchange activities in this library system;

Open access (open access movement) and digitization of publications even lead to a decrease in the exchange of printed publications because more and more partners prefer, recently, the orientation towards electronic resources.

In present, we practice hybrid exchange - for a printed publication, the electronic version of a magazine can be obtained because I emphasize the desire of some institutions to carry out the online exchange, especially at the level of magazines, by sending the access coordinates to them, or they even give up these partnerships preferring to focus on electronic publications. In the light of this information presented above, it can be concluded that within our library there is a quantitative and qualitative increase in the publications entered through the international

exchange of publications, and the balance of the exchange tilts in favor of our institution despite the other available electronic resources

***Predicting Student Success Using Academic and Institutional Indicators to  
Support University Resource Planning and Library Services  
A Big Data Analysis***

***Leonidas Theodorakopoulos, Vassiliki Kalliampakou, Christos Klavdianos,  
Alexandra Theodoropoulou, Ioanna Kalliampakou***

***Abstract***

Student success in higher education is closely tied to the strategic allocation of institutional resources, including library services and academic support systems. This study develops a predictive framework that identifies students at risk of dropping out based on demographic, academic, financial, and contextual factors. Utilizing a high-volume dataset of university students, we apply Natural Language Processing for data normalization and Machine Learning techniques to forecast educational outcomes. Key predictors include curricular engagement metrics, socioeconomic indicators, and academic performance across semesters. Although direct metrics of library use are unavailable, we analyze academic activity and scholarship status as proxies for potential reliance on institutional resources. The resulting insights inform university decision-makers about student support needs, enabling proactive interventions and efficient planning of library materials, staffing, and accessibility services. The approach demonstrates how data-driven prediction can enhance retention and guide strategic investment in student-centered academic infrastructure.

**Keywords:** University Libraries, Decision-Making, NLP, Machine Learning, Education Management.

***Preservation and dissemination of collections from the Documentation  
Department of the Municipality of Évora in the Library Network of Évora***

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<sup>2</sup>Universidade Aberta

**Abstract**



In the Information and Knowledge Society, technology presents itself as a more attractive way of accessing information. Information services must therefore consider and value the inclusion of their collections in the technological society, with the aim of reaching a wider audience. In this context, we highlight digitisation as a strategy for preserving information and conserving original documents. So, the project we intend to present arose from a problematic situation in a professional context at the Documentation Services of the Municipality of Évora - the preservation of information. The main objectives were: 1) to reflect on the role of digitalization and open access in the context of expanding support to users; 2) to analyse the resources - in the area of archaeology - with regard to their state of conservation and effective use; 3) to identify which resources were most relevant for high school students; 4) to propose an action methodology for digitizing and disseminating the identified resources.

According to the different phases of the project, we start with the systematic analysis of the specific part of the collection. The analysis of the documents also focused on their connection with the school curriculum of the History subject in secondary education. Since the Documentation Services is part of the Évora library network, the aim of the digitalization project was to make the most relevant documents for this study cycle available to students and teachers. In the second phase of the project, we carried out a survey applied to history teachers and librarians at secondary schools, partners of the network. As a result of these phases of the project, we achieved a clear and in-depth knowledge of the part of the collection under study, in terms of its state of conservation (20% of the documents need an intervention), its actual use (97% of the documents were requested by users) and the content considered relevant to secondary school students, enabling the selection of documents for digitisation. The data obtained with the survey revealed that the archaeological reports can be used in some transversal pedagogical areas, namely for analysis and organization of information (information literacy), to develop their critical and analytical thinking and to encourage respect for culture and diversity of opinions. On the other hand, it confirmed which contents of the History subject are more closely related to the contents of the archaeological reports.

The third phase of the study consisted of constructing the methodological action proposal for the digitalization of documents and their subsequent availability online in open access. The different elements and data obtain before constitute important contributions to establishing an order of priorities for the digitalization process. The final digitization proposal took into account the state of conservation of the documents, their effective use and the pedagogical interest for secondary education, thus allowing an action plan based on objective and pertinent criteria.

**Keywords:** Preserving Information; Selection criteria; Digitalisation; Municipality of Évora; Évora Library Network.

*Preserving the Shared History of Tijuana and San Diego:  
A Binational, Multi-Institutional Partnership*

***Jessica Barlow<sup>1</sup>, Lisa Lamont<sup>1</sup>, and Matt Ferrill<sup>1</sup>***

<sup>1</sup>San Diego State University

**Abstract**

In this presentation, we will describe a cross-border digitization partnership between the San Diego State University (SDSU) Library, the SDSU Center for Regional Sustainability, and the Archivo Histórico de Tijuana. This binational project, funded through grants from the Modern Endangered Archives Program and the National Endowment for the Humanities aims to make valuable image resources from the Archivo available online to our local community and researchers worldwide. We will discuss and display the historical images of the US-Mexico border region, discuss the challenges of working across borders and cultures, securing funding for international projects, creating and displaying metadata in multiple languages, and navigating the urgency of this work in light of changing political landscapes on both sides of the border.

San Diego, California, USA, and Tijuana, Baja California, Mexico, form the largest metropolitan area along the US-Mexico border with over five million people and a rich and complicated shared history. The Archivo's holdings document this unique history. The Archivo is at risk from environmental, political and social threats, however. The storage conditions are not ideal. IMAC, which houses the Archivo, is located in a renovated historical building that has air conditioning; however, budget constraints prevent humidity control and archival storage solutions. Further, the political situation on both sides of the border can and often does abruptly change. The current and prior municipal governments in Tijuana have valued the Archivo, have provided at least some funding toward the preservation effort, and have supported the partnership with SDSU. In later elections the new administrations could choose to reduce or remove funding and support for cultural institutions. In the US, changes in leadership at the national level can directly impact the availability of federal funding to support initiatives such as this, without which this work would not be possible. Finally, the Archivo is threatened by general lack of knowledge of its existence -- and therefore its importance -- by the general public. Thus, immediate action to digitize as much of these materials as possible is critical while the infrastructure and funding to do so remain available. We have prioritized the Archivo's photographic holdings, as these are the most fragile of the collections. The Archivo holds prints, negatives and slides donated by local families and businesses dating back to the 1800s. Accession records are sparse and metadata is lacking for most images.

We hired bilingual graduate students in history from a local Tijuana university to digitize the images and assist with the creation of bilingual metadata, drawing on their knowledge of the Tijuana and northern Baja California region. Additional bilingual students from SDSU and other California universities have assisted with the creation of MODS metadata. The digital collection is housed at <http://digitalcollections.sdsu.edu>.

To conclude, this highly collaborative, binational project has leveraged the diverse knowledge, experiences, and cultural perspectives of both students and library professionals in Mexico and

the US to make invaluable archival holdings available and freely accessible for our binational community.

**Keywords:** Binational partnership, digitization, bilingual metadata, historical archives.

### *Public Opinion Crawl*

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and Rebecca Nowicki***

San Diego State University Library

#### **Abstract**

Have you struggled to recruit students for qualitative research? Many Librarians acknowledge that organizing usability testing and focus groups can be both time-consuming and daunting. Often requiring experience and expertise from multiple individuals, qualitative library assessment is complicated. How do you improve the effort-to-outcome ratio and facilitate data collection and assessment in academic libraries?

Librarians at a public academic institution have developed an innovative approach in the form of a library-wide research event. Billed as the “Pub(lic) Opinion Crawl”, this qualitative research event allowed for multiple investigators to create and conduct research studies with an engaged and motivated student audience. Running independent investigations simultaneously from the same potential participant pool allowed for the consolidation of time and financial investment. The Pub(lic Opinion) Crawl planning team coordinated marketing, recruitment, and event planning to create a festive atmosphere for study participants, and were able to reduce barriers for individual researchers.

Intended to mirror a pub crawl, the event encouraged students to move from station to station and complete studies to earn credits they could use towards food and treats. This case study will include reflections from individual investigators on their experience and the benefits of this model. It will demonstrate the value of collaboration to plan and execute research studies while reducing psychological obstacles. Investigators are then able to focus on their study and methodology as opposed to tricky logistics. Presenters will share results and lessons learned through three iterations of the Public Opinion Crawl, in order to provide recommendations for others attempting to conduct multiple qualitative research studies at a single place and time.

### *Qualitative Analysis using MAXQDA*

***Nastasha E Johnson***

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**Abstract**

MAXQDA qualitative data analysis software can be used to code and analyze multiple qualitative source types. A recent research project analyzed interviews, social media posts, images and documents to find themes. Those themes were then used to create visuals that could be used in publications. This session will demonstrate how MAXQDA is more user-friendly than some other software products, and can be used to collect data directly from the internet. The session will be a brief demonstration of the software and will provide an opportunity for participants to see how the software can be used in real-time to collect and analyze data. A data set will allow for participants to interrogate how we code and rationale with our qualitative decision making.

***Quality and Information Governance in Higher Education: A Systematic Literature Review (2020–2024)***

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**Abstract**

In an era of growing complexity in digital transformation and public sector accountability, quality assurance and information governance have emerged as critical pillars in the strategic management of information in higher education institutions (HEIs). Universities are increasingly required to demonstrate compliance with international standards such as ISO 9001, ISO/IEC 27001, and ISO/IEC 38500, while ensuring the transparency, security, and reliability of their information systems. Within this context, information governance (IG), information management (IM), and quality management systems (QMS) play essential roles in aligning institutional practices with regulatory frameworks and organizational goals.

This study presents a systematic literature review (SLR) examining the intersection of quality standards, information governance, and maturity models in HEIs, based on peer-reviewed research published between 2020 and 2024. The review contributes to the development of a doctoral research project focused on designing a maturity model for information governance and quality integration in academic institutions.

The review methodology involved a structured search in the Scopus and Web of Science databases using a query combining terms related to information governance, ISO standards, data quality, and organizational maturity. A set of inclusion and exclusion criteria was defined

to ensure thematic relevance, sectoral alignment, and methodological rigor. Articles were included if they addressed quality assurance, information management, or governance frameworks within the context of higher education, libraries, or public administration. Studies focusing exclusively on technical implementations (e.g., blockchain, AI) or unrelated domains were excluded.

From a total of 748 articles identified, 132 met the criteria and were selected for detailed analysis. These studies explore a range of topics including the implementation of ISO-based quality systems, institutional data governance strategies, assessment of information maturity, and the evolving roles of academic libraries and IT governance units.

Findings reveal a growing interest in aligning quality management with information governance, particularly through the use of maturity models and standards-based approaches. The review also highlights gaps in the operationalization of governance frameworks and the measurement of institutional maturity in information handling.

This initial iteration of the study provides a structured synthesis of the current state of international research and establishes the foundation for a more targeted analysis of the integration between information governance and quality management within the Portuguese higher education system. In the next phase of this research, the work will be refined to assess the extent to which information governance and quality management practices in Portuguese HEIs are aligned with national and European regulatory and normative frameworks, as well as to identify the determinants of a tailored maturity model to guide and support assessment in this domain.

**Keywords:** Information governance, Quality management, Higher education, ISO standards, Information systems.

### ***The Relevance of Search Strategies of Overview: The Case of Nature and Health***

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## Abstract

An overview is a review of systematic reviews that summarizes the evidence results to address a specific research question. This paper details the development and application of search strategies for the "Overview of the Evidence for the Clinical Effectiveness of Nature Interventions in Human Health". Search strategies play a critical role in ensuring the reliability and quality of evidence in overviews. To structure these strategies, the PICO (an acronym for Patient, Intervention, Comparison, and Outcomes) framework was utilized, focusing on identifying the patient population, the nature-based interventions under study, relevant comparisons, and the desired clinical or health-related outcomes. Keywords were carefully selected from established indexing tools such as Medical Subject Headings (MeSH) and the Thesaurus of Psychological Index Terms, supplemented by references from related articles to ensure broad and relevant coverage. These strategies were applied to several databases, including PubMed, Embase, PsycInfo, Web of Science, the Cochrane Library, the BVS Portal, and Google Scholar. Each database contributed unique perspectives and literature, ensuring a comprehensive search. PubMed and Embase provided biomedical and pharmacological insights, PsycInfo added behavioral science context, while Web of Science and the Cochrane Library offered multidisciplinary and systematic review resources. Including the BVS Portal and Google Scholar further expanded the search, incorporating regional literature to fill any potential gaps. A total of 4,241 references were retrieved from these searches. These references were managed using two platforms to support systematic selection and data extraction. Ryan, a web-based tool designed for systematic review screening, streamlined the process with features that facilitated tagging, collaboration, and conflict resolution. RedCap, a secure data management platform, enabled the organization and detailed analysis of the extracted data. Together, these tools ensured a rigorous and methodical approach, contributing to a robust overview of the clinical effectiveness of nature interventions in improving human health.

**Keywords.** Nature and health. Overview of reviews. Search strategies. Evidence map.

## *Rethinking the Evaluation of the Portuguese National Reading Plan: From Quantitative Indicators to a User-Centred Approach* *Paula Sousa Pinto<sup>1</sup>, Maria Beatriz Marques<sup>2,3</sup>*

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## Abstract

The *Portuguese National Reading Plan* (NRP) stands as a central policy in the promotion of reading and literacy. However, the methodologies currently used to evaluate its effectiveness are largely based on quantitative indicators—such as the number of books read, the volume of

activities implemented, and participation rates. While these metrics offer a comprehensive overview of the Plan's scope and application, they often fail to capture the richness and the complexity of the user experience, as well as the authentic impact on reading habits, motivation, and literacy development among students and educators.

This communication critically examines *the limitations of current assessment practices* applied to the NRP, highlighting the prevalence of formal reporting and statistical data over qualitative and contextualized understandings. Based on documentary analysis and original qualitative research, we explore how participants perceive the impact of the NRP in their everyday educational contexts and the extent to which official evaluations align (or not) with their lived experiences. The findings reveal a significant disconnection between the formal evaluation frameworks and the subjective, often invisible, dimensions of reading promotion, such as the pleasure of reading, the role of libraries as social and cultural hubs, and the diversity of users' reading pathways.

Drawing on these insights, the paper argues for *the integration of user-centred methodologies in the evaluation of national reading policies*, advocating for *the importance of mixed-method approaches* that combine quantitative data with qualitative evidence. Such an approach is more likely to support informed decision-making, enhance the responsiveness of school libraries to their communities, and foster a culture of reading that goes beyond mere numbers. The paper concludes presenting a set of practical recommendations for policymakers, educators, and information professionals, outlining how a more holistic, context-sensitive evaluation model can contribute to the ongoing transformation and innovation of reading promotion initiatives in the digital age.

**Keywords:** National Reading Plan (NRP), evaluation, school libraries, user experience, qualitative research, public policy.

## ***The Role of National Medical Library Prague in Promoting Health Literacy among Laypersons***

***Helena Bouzková<sup>1</sup>, Eva Lesenková<sup>1</sup>, Jitka Feberová<sup>2</sup>, Filip Kříž<sup>1</sup>, and Ondřej Horsák<sup>1</sup>***

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<sup>2</sup>First Faculty of Medicine, Charles University, Prague, Czech Republic

### **Abstract**

The paper presents a special information service of the National Medical Library in Prague. The MedLike portal, which is intended primarily for laymen, i.e. patients, their family members and anyone interested in their health. Attention is paid to the characteristics of the portal, the structure, content and methodology of the portal's development in comparison with other similarly focused portals. The aim of the service is to expand the availability of

information on medical topics for laypersons and thus promote health literacy of the population.

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**Keywords:** Medical libraries, Czech Republic, health literacy, web portal MedLike, laypersons.

### ***The RSCVD international cooperation network for digital resource sharing***

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#### **Abstract**

During the pandemic, the RSCVD initiative was designed by members of the IFLA Document Delivery Resource Sharing (DDRS) Committee to support libraries unable to access collections due to lockdown. It was a simple way for libraries worldwide to request materials from other libraries on behalf of their users. Initially, this action was entitled “Resource Sharing in the Time of COVID-19 (RSCVD),” and libraries worldwide were encouraged to use the service.

The success of the RSCVD initiative has been based at the outset on the voluntary contribution of librarians who, working together, have over time formed a very active and extensive professional community. Through various stages of development and thanks to the funding by European Erasmus plus program, by means of the project *HERMES Strengthening digital resource sharing during COVID and beyond*, the RSCVD community gradually became more and more structured and in 2023 updated its name to “Resource Sharing Collaborative and Voluntary Document Delivery” (<https://rscvd.ifla.org/>).



The RSCVD community currently consists of around 270 participating libraries from 31 countries. From April 2020 to date, RSCVD Initiative has received more than 26,000 requests, about 78% of which were fulfilled.

RSCVD service is based on the RSCVD App, powered by TALARIA, a free open-source resource sharing management software, released under the GPL 3.0 (GNU Public License). The RSCVD App supports the entire workflow of a document delivery request (borrowing and lending), supports user and library registration in the community, multiple user's roles, and library operators' management, and provides the automatic import of document's bibliographic metadata and the retrieval of the Open Access version, if available. The RSCVD App user interface is available, at present, in four languages: English, Spanish, Italian and Turkish, but translations in any other language may be added in the future.

There is no cost to join the RSCVD community and, in addition to the free RSCVD App, its immeasurable value is the human factor and the expansion of professional networking.

This contribution intends to present the experience of the RSCVD international collaborative network and the state-of-the-art of the free open-source resource sharing management software that underlies the service.

**Keywords:** International collaborative networks, libraries cooperation networks, digital resource sharing

### ***Semantic analysis on Cultural Heritage: the use of NER for the enhancement of historical archives***

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#### **Abstract**

Named Entity Recognition (NER) has emerged as a pivotal tool in the digital humanities, particularly for enhancing the metadata of historical documents. This paper explores the integration of NER techniques to enrich the cataloguing and analysis of texts regarding the Italian cultural heritage, particularly the descriptive cards of the Certosa of Bologna, a monumental cemetery situated in the homonymous city founded in 1801 on the existing structures of a Carthusian convent.

By automating the identification of key entities such as people, places, dates, and organizations, NER facilitates more precise and comprehensive metadata generation, enabling improved searchability and cross-referencing across digital archives. The study outlines a hybrid approach: on one side the usage of Named Entity Recognition engine based on the transformer architecture to retrieve the name of People, Locations, Organization and Miscellaneous entities (i.e all the entities recognized that don't fit in the previous categories) and a dictionary based method that exploit the "Soggettario di Firenze": a subject indexing tool for various types of information resources edited by the National Central Library of Florence (Biblioteca nazionale centrale di Firenze). Using this second tagging, we have been able to stratify the NER output in two levels, the first one with the classic labels used in the literature and the second one exploiting the macro categories of the

Soggettario di Firenze: Organisms, Organizations, People and Groups, Activities, Disciplines, Processes, Shapes, Matter, Objects, Space, Tools, Structures and Time. The peculiarity of this dictionary is that it only contains common nouns, so that, paired with the transformer-based method which only retrieves named entities, it does not provide redundant information, but it only enrich the meta-dation.

Additionally, the paper discusses the broader implications of enhanced metadata for interdisciplinary research, including improved accessibility for historians, linguists, and archivists. This research underscores the potential of NER as a transformative tool for bridging the gap between historical scholarship and computational technologies.

**Keywords:** NER, NLP, Cultural Heritage, Certosa di Bologna, Soggettario di Firenze, advanced metadata

### ***Sensory Overload? Mapping Library “Soundscapes” and “Smellscales”***

***Andrew Asher<sup>1</sup> and Nikolina Zenovic***

<sup>1</sup>Indiana University, Bloomington, IN, USA

#### **Abstract**

This study examines undergraduate students’ embodied experience of library spaces through their aural and olfactory senses. User comments and complaints about library sound and smell environments are common in our library system. Ambient noise levels in many locations often exceed students’ expectations for library spaces even in areas that were not intended or designed for quiet study, while the introduction of services such as cafes and cafeterias have added layers to the libraries’ potential smell profiles. The sensory environment can significantly affect users subjective experience of a place and has implications for students’ choices to utilize the library, their comfort in library spaces, the quality of their study and work, and their overall library satisfaction. However, prior to this project, these sensory effects had not been systematically studied at our libraries. Using a sensory mapping method modified from urban planning, students were asked to go to pre-chosen locations in the Business Library and Education Library branches of a large US university and consciously observe their sense impressions of the environment. These experiences were recorded using a guided online survey protocol that combined qualitative questions about expectations and experience of sounds and smells, Likert-scale questions about sound and smell effects on study, work, and emotional well-being, and semantic differential scales that asked participants to rank their sensory perceptions on bi-polar adjective scales with opposing endpoints. The results of this survey enabled the researchers to construct the “soundscapes” and “smellscales” that characterize the library spaces, to better understand students’ expectations and experiences of the sensory environments of the libraries, to identify potential problems, and to make service and design recommendations.

**Keywords:** Sensory Maps, Sensory Experience, Library Spaces, Sound, Smell.

***Shaping Data-Ready Librarians:  
Assessing Competencies in Selected Academic Institutions in the Philippines***

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**Abstract**

**Introduction:** Data literacy has emerged as a critical skill for librarians in this digital era. The ability to interpret, manage, and utilize data effectively has become essential. This is because academic institutions depend so much on the data for decision-making. Unfortunately, literature discussing the current state of data literacy competencies among librarians and information professionals in the Philippines are limited. This study will assess the data literacy competencies of librarians in selected academic institutions in the Philippines. It seeks to identify factors influencing these competencies and determine opportunities, challenges and training needs to enhance their skills.

**Methods:** This descriptive-correlational research examines and summarizes the competency levels of the respondents, while the relationships between variables will be analyzed using the inferential statistics. A statistical software will be used to interpret the data gathered. While, a thematic analysis will be used for the open-ended responses. The researchers selected the respondents through purposive sampling. An online survey will be administered to librarians from the 120 top-producing research universities in the Philippines. The list of top-producing research universities was generated from the two (2) bibliographic and citation platforms, the Scopus and Web of Science Incites.

**Results:** The study expects to reveal the current state of data literacy competencies among the respondents, including their strengths and weaknesses. It will identify significant factors, such as educational background and institutional type that influence these competencies. Additionally, it will uncover common opportunities, challenges faced by librarians and their training needs.

**Conclusion:** This study is limited to Philippine research-oriented higher education institutions since it is assumed that they are more likely to provide research data services and require the librarians to be data literate. Findings will provide evidence-based insights to guide academic institutions and professional organizations in designing targeted interventions and training programs to enhance data literacy among librarians. This study's findings may not apply to non-library institutions or academic libraries outside the Philippines. The study will contribute to the current body of research on the topic of data literacy in academic libraries in the Philippines. This study will offer a clear overview of the data literacy competencies of the Filipino Librarians in academic libraries' opportunities, challenges, and training needs.

**Keywords:** Data literacy, librarians, higher education institutions, academic institutions, research universities, Philippines.

***Sustainable Development Goals in Action:  
Through Innovative Library Reading Initiatives***

***Elsa Margarita Ramirez Leyva***

Library and Information Research Institute National Autonomous University of Mexico, Mexico City

**Keywords:** Sustainable Development Goals, reading promotion, storytelling, creative writing, oral communication, university library.

***Time Series Analysis of Surveys Conducted Among Local Library Users.  
Identifying Usage Trends to Support Library Management Decisions***

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**Abstract**

**Purpose** – The purpose of this paper is to form an accurate overall picture of the local users of the National Library in order to provide reliable services to the academic community.

**Design/methodology/approach** – This study is based on a user survey conducted among local users of the National Library of Finland. The dataset covers the period from 2019 to 2024, during which the paper survey in its current form was conducted among local customers. The representation of academic disciplines among respondents was analyzed as a percentage share each year, and a time-series analysis was conducted to identify major trends and anomalies.

**Findings** – The largest user group among respondents was historians, and the data reveals a strong representation of disciplines from the central campus faculties. Users' material usage patterns appeared to concentrate on specific subject areas, with notable shifts over the years. The results indicate significant variations in the representation of different academic disciplines among library users. The most substantial increases were observed in history (+94.9 percentage points), philosophy (+49.5 percentage points), and literary research (+59.3

percentage points). Conversely, major decreases occurred in literary research (-32.8 percentage points), classical studies (-20.6 percentage points), and theology and church history (-18.3 percentage points). These results suggest that the composition of library users has changed considerably over the study period.

**Research limitations** – The number of survey respondents varied significantly between years, partly due to the global pandemic. Moreover, the response rate did not return to pre-pandemic levels, limiting the reliability of long-term trend assessments.

**Originality/value** – This study provides a longitudinal analysis of how different academic disciplines are represented among library users over time. By identifying significant trends and anomalies, the study highlights the evolving role of national libraries in supporting various research communities. The findings offer valuable insights for library service development, particularly in aligning services with the changing needs of different academic fields. We also want to provoke discussion about the need and means of showing the results, impact, and value of library services to their clientele, their frame organizations, or society as a whole.

**Keywords** – Evidence-based librarianship, User experience, Libraries

## *Transformation, Contraction, or Intensification? Impact of AI on Academic Public Service Librarianship*

### *A Closer Look at the Research/Subject Liaison Librarian Roles*

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#### **Abstract**

In an artificial intelligence (AI) environment where users have easy access to information and quick answers to their queries, what does it mean to be an academic public services librarian providing information and research support services?

Historically, librarians began as readers' assistants (in public libraries initially), evolving into reference librarians who assist users at physical desks and now increasingly online via chat and email. With the growth of the Internet and the use of electronic resources, information access became more complex, prompting the expansion of librarian roles beyond reference to instruction, training, and education that helped faculty and students learn to search for, evaluate, and use information ethically. In addition, subject liaison roles have grown to promote and advocate for libraries, surpassing traditional roles of bibliographers and collection development. Furthermore, the rise of open access and digital resources has led librarians to specialize in data, research, and scholarly communications to support faculty and student research needs.

With the integration of AI systems in libraries and academic institutions, public service librarians can expect fundamental changes in how they will support users and provide services. They will need new skills and training to understand the workings, ethics, socio-cultural

dimensions, and use of (constantly changing) AI tools, while still retaining the underlying elements of traditional public services librarianship – engaging with and supporting users. This presentation will consider the impact of the adaptation of AI technologies on the work of the academic public service librarian, and especially that of the research/subject liaison librarian. Through the lenses of professionalism, interaction, communication, emotional labor, and personal influence, it will explore the nature of activities of the research/subject liaison librarian to uncover potential future directions for collaboration and user support in the era of AI.

***Transforming Long-Term Digital Preservation through Artificial  
Intelligence:  
A Comprehensive Framework and Analysis***

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**Abstract**

Artificial intelligence technology has undergone years of rapid development and iteration, gradually exhibiting characteristics such as deep learning, interdisciplinary integration, human-machine collaboration, and collective intelligence openness. It has been widely applied in various fields, leading to a series of research advancements. Digital resources serve as the foundation for economic and social development and play a critical role in building new national competitive advantages. However, the exponential growth in the volume of digital resources and the emergence of new data types have significantly increased the complexity of digital preservation. This has posed new challenges to the scientific rigor, rationality, reliability, and efficiency of preservation efforts. Artificial intelligence technology is gradually being integrated into digital preservation practices, bringing new opportunities for advancement in this field.

Existing research shows that artificial intelligence technology has been applied to various stages of digital preservation. However, there is currently a lack of systematic reviews of relevant studies, investigations into the compatibility of AI technologies with long-term preservation efforts, and comprehensive frameworks or standardized methods for integrating AI into the entire preservation workflow.

We conducted an in-depth review of relevant literature from the past decade and closely monitored the development of international long-term preservation organizations, such as the Digital Preservation Coalition. Based on this, we summarized and organized the key application outcomes. Referring to the functional modules of the OAIS Reference Model, we

developed an application framework for artificial intelligence in long-term preservation, encompassing five modules: ingestion, organization and management, long-term storage, access, and preservation planning. The ingestion module involves automated collection of digital resources and extraction of new forms of academic data. The organization and management module focuses on content maintenance, preservation assessment, sensitivity review, and information organization. The long-term storage module emphasizes automated preservation, error detection, disaster backup, and recovery. The access module deals with resource access and usage, automated indexing, and remote reading. Finally, the preservation planning module spans the entire workflow, providing detailed guidance and planning for preservation efforts for each module, we summarized the current applications of AI in long-term preservation, highlighting their characteristics, patterns, key research focuses, and the challenges that still exist in the field.

The study reveals that current artificial intelligence technologies cover the primary functions of the preservation workflow and are poised to bring a comprehensive transformation to long-term preservation. Specifically, AI progress will drive innovation in digital resource preservation, optimize practices, and facilitate the transformation and skill development of preservation professionals. These advancements will enhance the efficiency of resource ingestion, improve the organization and management of digital resources, and lead to an intelligent transformation of the preservation process. However, despite these promising prospects, challenges remain, including technological uncertainty, incomplete understanding, and the absence of comprehensive solutions. To ensure the sustainable development of digital resources, long-term preservation must embrace technological opportunities while preserving its unique characteristics and actively seek strategies to address these challenges.

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### ***Translating the Lived Experiences of Graduate Students into Practice: Qualitative Research Informing Library Services***

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#### **Abstract**

In 2022, librarians at the University of New Mexico interviewed 20 graduate students using a modified version of the critical incident technique and evaluated interview transcripts with two stages of qualitative coding to explore the graduate students' lived experiences in their roles

as students, researchers and teachers. Research findings include students' perspectives on their multiple roles, especially in relation to issues such as financial challenges, student-life balance, decision-making, and trusting and navigating the university system. Students also shared the benefits and challenges of their relationship with the library and its spaces, services, collections, and technology. Our presentation will focus on our research methods, key findings, and how we are using our findings to inform and restructure our support for graduate students holistically by creating spaces and enhancing services that will help them thrive in all their roles. This presentation elaborates on findings published in the team's Fall 2024 Journal of Graduate Librarianship article.

**Keywords:** qualitative research, graduate students, academic libraries.

### ***Twitter (X) Use by Public and Academic Libraries in Japan***

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#### **Abstract**

Many libraries use social media to promote their services. In this study, to evaluate post content, we collected X (formerly Twitter) data posted by public and academic libraries in Japan from January 2020 to January 2023. We analyzed 5,207 posts from 24 academic libraries and 81,820 posts from 193 public libraries to identify the types of content most likely to be retweeted or liked by Twitter users. Using a text mining approach, we found that both types of libraries frequently post about library resources and opening hours. Additionally, posts that provide behind-the-scenes insights or mention famous individuals tend to receive more likes and retweets.

**Keywords:** Social media, Public libraries, Academic libraries, Library marketing, Text mining, User engagement.

### ***Uncovering New Technological Directions: The Role of TRIZ Theory and Technology-Function Matrix in Patent-Driven Innovation***

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#### **Abstract**

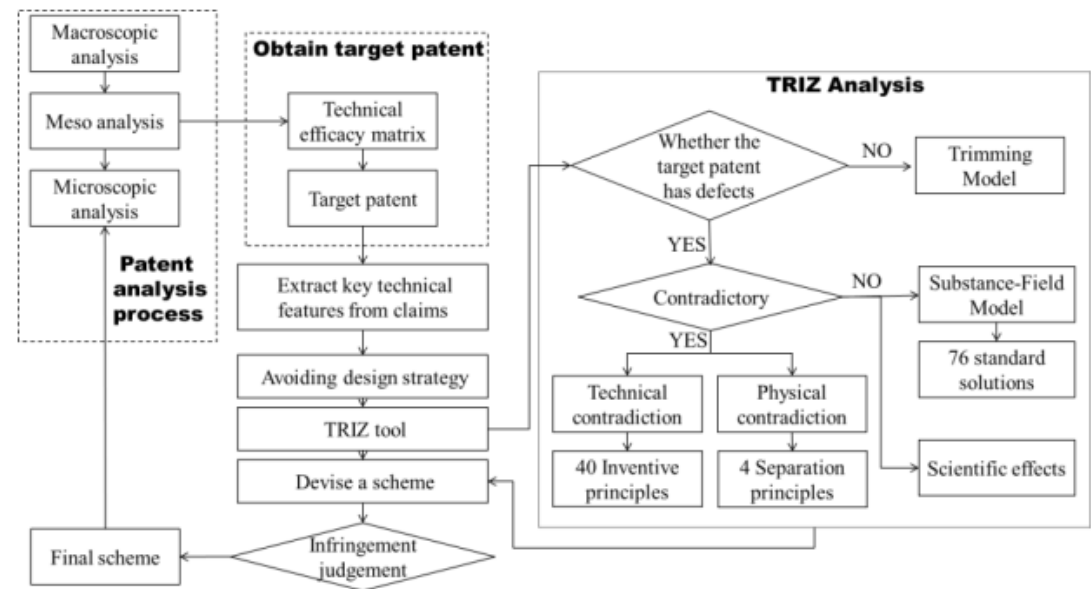


**Background:** Technological innovation is rooted in cutting-edge science, technology, and engineering. Patents hold tech info, and new patent layout hints at development trends. Integrating TRIZ and Technology-Function Matrix in patent-avoidance helps find solutions, avoiding the existing patent protection, and guide decision-making for tech development.

**Objectives:** By integrating TRIZ theory with the patent analysis methodologies, we aim to scientifically circumvent existing technologies, explore new technological directions, uncover novel opportunities for patent layout, and provide decision support for technology managers (government, agencies, or other organizations) by predicting technological evolution trends, forecasting directions for technological development, and evaluating the supportable technical directions.

**Methods:** The patent avoidance process, based on the combination of TRIZ theory and Technology-Function Matrix, as researched in this paper, is conducted through collaboration between analysts and technical personnel. In the initial phase of the research, analysts conduct searches based on the technological directions provided by the technical personnel. The search results are then reviewed by the technical personnel to determine the analysis dataset. Analysts are responsible for collecting data and performing initial classification through text clustering. Subsequently, the data is handed over to the technical personnel for interpretation and categorization into the Technology-Function Matrix. Technical personnel identify the focus technological directions from the matrix, while analysts extract relevant key data (full-text patents) and utilize TRIZ tools to propose patent avoidance recommendations systematically. Finally, feasibility discussions are held with technical personnel regarding the proposed solutions, aiming for better and faster identification of innovative directions.

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**Fig.1** Technical Roadmap of Exploring Method Process

**Results:** In this paper, we use spectrometer technology as a case for patent-avoidance study. Relying on the DII Patent Database, we screened 794 closely-related patents, which were then interpreted by experts for constructing the spectrometer Technology-Function Matrix.

Analysis shows that interference-typed and dispersive spectrometers are more active in patent application and authorization. The main R&D goal of international spectrometer technology is to enhance spectral resolution. After consulting front-line technicians, we focused on patent literature about improving spectral resolution via diffraction-lens technology for patent-avoidance.

Technical staff targeted patent CN104062007B. According to the TRIZ contradiction matrix, the most suitable approach was to separate non-essential functions, specifically by removing the double-convex lens from the module. This finalized the patent-avoidance design and pinpointed an innovative layout direction. This happens to confirm that spectrometers are poised to move towards miniaturization and portability. For instance, spectrometers employing optical fibers have significant development prospects.

**Conclusion and Outlook:** This research has combined TRIZ theory with patent analysis methodologies to develop a standardized innovation process and has provided auxiliary query tools to streamline the process. Through case evidence, the feasibility of the process and the effectiveness of the tools have been validated. In the future, we hope to enhance the method's standardization and intelligence, providing more verifiable evidence chains for technology decision-making.

**Keywords:** TRIZ, Technology-Function Matrix, Patent Avoidance, Innovation.

### ***Virtual Assistants in Philippine Academic Libraries: A Comparative Analysis of Features, Accessibility, and User Engagement***

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#### **Abstract**

This study explores the implementation and use of virtual assistants (VAs) in academic libraries in the Philippines, focusing on the comparative analysis of their features, accessibility, and user adoption. Virtual assistants have become an integral tool in enhancing library services, offering 24/7 support, guiding users in accessing resources, and addressing frequently asked questions. However, the design, functionality, and user experience of these tools vary significantly across institutions. Through a mixed-methods approach, this research evaluates key differences in VA implementations by analyzing their technical capabilities, such as natural language processing (NLP), multilingual support, and integration with library management systems. Additionally, the study examines accessibility features, including support for users with disabilities, and evaluates user adoption through surveys and interviews with library patrons and staff. The findings indicate that VAs with advanced NLP and seamless integration into existing library systems achieve higher user satisfaction and adoption rates. Accessibility features, while present in most implementations, often require further refinement to meet the needs of differently-abled users. Budget limitations and insufficient staff training

emerged as primary barriers to successful VA deployment. Best practices include investing in ongoing staff capacity building, involving users in the design process to enhance engagement, and adopting scalable, customizable VA platforms that can evolve with technological advancements. The study concludes that well-implemented virtual assistants can significantly enhance service delivery in academic libraries. These insights provide valuable guidance for library administrators and developers in optimizing VA systems to ensure inclusive, efficient, and user-friendly services for diverse communities.

**Keywords:** Virtual Assistant (VA), Library Services, Library Support, Academic Libraries, and Philippines.

## *Poster*

### *The Comparison between WTP for Book Lending and WTP for E-book lending in Japanese Public Libraries*

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#### **Abstract**

**Introduction:** The implementation of e-book services in public libraries in Japan has accelerated since the onset of the COVID-19 pandemic in 2020. As of January 2020, 91 municipalities offered e-book services, with the number projected to rise to 585 by January 2025, representing 32.7% of all municipalities in the country. Despite this growth, the average number of e-books available through public libraries is approximately 8,000, with half of these titles consisting of public domain works, such as those available through ‘Aozora Bunko’ and ‘Project Gutenberg’. Furthermore, a survey conducted among libraries revealed that 50% of respondents report using the service less than anticipated, suggesting underlying issues with its utilization. The implementation of e-book services represents a relatively recent development in public libraries, making it crucial for each institution to determine the optimal allocation of its limited resources. Effective decision-making in this regard requires a comprehensive understanding of public needs. In the case of e-book services, it is particularly important to consider the needs not only of existing library users but also of individuals who have not previously engaged with library services. E-book services have the potential to broaden the library user base by providing access to materials anytime and anywhere, without necessitating a physical visit to the library. However, while the needs of current library users can be relatively easily assessed, understanding the preferences and expectations of non-

library users remains a significant challenge. Furthermore, the financial implications of implementing e-book services cannot be overlooked. Compared to print books, e-books are generally more expensive and do not grant permanent ownership upon purchase. Given these considerations, public libraries must take into account user needs, cost constraints, budgetary limitations, and the frequency of library usage when determining future resource allocation strategies.

**Research Objectives:** This study aims to estimate citizens' willingness to pay for print and e-book lending services in public libraries using the contingent valuation method and to compare the valuation of these two services. Specifically, the study examines how willingness to pay varies based on respondents' annual income, age, and frequency of library use.

**Methods:** A web-based survey was conducted to collect data for this study. The questionnaire asked respondents to indicate their willingness to pay for borrowing a print book and an e-book from a public library. The survey employed a two-stage dichotomous choice design: if a respondent accepted the initial bid amount, they were subsequently asked whether they would be willing to pay a higher amount; conversely, if they rejected the initial bid, they were asked whether they would be willing to pay a lower amount.

**Results:** A total of 1,123 responses were collected through the survey. The contingent valuation method was employed to estimate and compare respondents' willingness to pay for print book and e-book lending services in public libraries.

**Keywords:** Public Libraries, E-book, Lending Service, Economic Value, Contingent Valuation Method.

### *Motivational Styles and Curriculum Interests in Courses for Certified Librarian in Japan: A Graduate-Based Analysis*

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#### Background

In Japan, one way to obtain librarian qualification is by enrolling in university-offered Courses for Certified Librarian (CCL) and earning the required credits. However, job opportunities in libraries are limited, and few individuals with librarian qualifications can secure employment there. The increasing proportion of non-regular positions has also made library work unstable and low-paying, becoming a social issue. As students recognise these employment-related

challenges in libraries, there is a need for a curriculum that is both engaging and applicable across diverse career paths. Without such improvements, the sustainability of these courses may be at risk.

Previous studies developed the Motivation Scale for Taking Librarian Course (MSLC) (Asaishi et al., 2024) and identified four motivational styles among students (Kawamura et al., 2024). While these studies provided insights into student motivation, curriculum effectiveness requires a long-term perspective. CCL includes both foundational subjects (e.g., cataloguing methods) and courses integrating the latest advancements (e.g., AI applications). Graduates with career experience can provide valuable insights into these subjects. Therefore, we conducted a graduate survey to assess the perceived usefulness and interest in curriculum topics, analysing variations by employment status (Ikeuchi et al., 2024).

#### Objective

This study analyses differences in curriculum interest by motivational style through a secondary analysis of graduate survey data.

RQ1: What are the motivational styles of graduates?

RQ2: How do curriculum interests vary by motivational style?

#### Methods

A web-based survey targeted graduates via email invitations and Yahoo! Crowdsourcing was conducted from August 5–18 (email) and July 29 & August 4, 2024 (Yahoo!).

The questionnaire covered:

39 curriculum topics (past interest, current interest, usefulness, learning preference)

MSLC (24 items, 5-point Likert scale)

Enrolment motivation (4-point Likert scale)

Demographics (occupation, gender, age, university, certification year)

Cluster analysis (k-means) classified respondents into motivational styles.

#### Results

Among 334 graduates from 102 universities, four motivational styles were identified, consistent with previous student-based studies:

Librarian Job Applicants Group (LJA, n=74): Strongest desire to work in libraries, strong attachment to books.

High Motivation Group (HM, n=116): High motivation across factors, including certification expectations and publishing interest.

Qualification Request Group (QR, n=122): Focused on obtaining a qualification but with lower motivation overall.

Low Motivation Group (LM, n=32): Lowest motivation except for qualification.

Curriculum interest showed both commonalities and differences. A shared area of high interest was library philosophy and history, whereas customer service and complaint handling had the lowest interest.

Differences by style were also observed. LJA (56.8%) showed a strong interest in reference search techniques, while LM (40.6%) preferred classification knowledge. Interest was lowest in library budgeting (LJA: 5.4%), library construction (HM: 20.7%), group work (QR: 13.4%), and research support (LM: 3.1%).

#### Conclusion

Graduates exhibited the same four motivational styles as students. Findings suggest that LJA's low interest in library budgeting may indicate areas for curriculum improvement. QR had high current interest, and LM had strong learning preferences, indicating they should not be dismissed as unmotivated. Strengthening topics such as library history and classification could enhance motivation in lower-motivation groups.

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## *Social events*

*28<sup>th</sup> of May Half-day excursion*

*National Museum of Natural History and Science and Lisbon Botanical Garden<sup>1</sup>*

Depart place: Conference venue

Depart time: 14:30

*The National Museum of Natural History and Science in Lisbon,<sup>2</sup> Portugal* (Portuguese: Museu Nacional de História Natural e da Ciência) is the country's main museum focusing on nature. The museum functions under the University of Lisbon.

Its rich collections, gathered over more than 250 years, span zoology, anthropology, geology and botany. The museum has activities for the promotion of natural history and science awareness, with space for artistic exhibitions, conferences, debates, workshops and courses.

*History.* Its recent public designation, "MNHNC - National Museum of Natural History and Science", was created in October 2011. This incorporated the former National Museum of Natural History and the University of Lisbon Science Museum, integrating their collections, the historical buildings of the Polytechnic School, the Lisbon Botanical Gardens and, since July 2012, the Lisbon Astronomical Observatory.

The history of natural history collections in Lisbon began in the Royal Natural Cabinet and *Botanical Garden*, created in the second half of the eighteenth century, in Ajuda (western Lisbon). It was then housed for a short period in the Royal Academy of Sciences and transferred to the Polytechnic School in 1858, with the denomination of National Museum of Lisbon (1861) and under the administration of the Polytechnic School.

The second Botanic Gardens of Lisbon, in the grounds of the Polytechnic School officially opened in 1878. In 1911, with the creation of the University of Lisbon, the Museum was annexed to the Faculty of Sciences.

In March 1978 a devastating fire destroyed part of the building of the former Polytechnic School, most of the zoology collection and part of the geology collection. The Faculty of Sciences would eventually move to its current premises in Campo Grande.

The Science Museum of the University of Lisbon was created in May 1985, sharing the building with the National Museum of Natural History.

Both museums adopted new by-laws in 2003, becoming autonomous from the Faculty of Sciences and under the direct administration of the Rector of the University of Lisbon.

*Address:* Rua da Escola Politécnica 56/58, Príncipe Real, 1250-102 Lisboa, Portugal

Tel. 213921808, email: [geral@museus.ulisboa.pt](mailto:geral@museus.ulisboa.pt),

[www.museus.ulisboa.pt](http://www.museus.ulisboa.pt)

*30<sup>th</sup> of May*

*Conference dinner*

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<sup>1</sup> <https://www.ulisboa.pt/en/unidade-organica/museus-e-instituto-de-investigacao-cientifica-tropical>

<sup>2</sup> [https://en.wikipedia.org/wiki/National\\_Museum\\_of\\_Natural\\_History\\_and\\_Science,\\_Lisbon](https://en.wikipedia.org/wiki/National_Museum_of_Natural_History_and_Science,_Lisbon)

*31<sup>st</sup> of May*

*Sintra, Cascais & Cabo da Roca: all-day tour*

Cabo da Roca is the westernmost point of the European continent, located at the far end of the Sintra Mountains, and is undoubtedly one of the most emblematic places in Portugal. With a 22 m tall lighthouse, dating from 1722, shrouded in fog, or bathed in splendid sun light, this inspiring setting has been a member of the "Sri Chinmoy Peace Blossoms" programme, dedicated to peace, since 1989.

## ***Practical Information<sup>3</sup>***

*Time (GMT)*

UTC 0 | UTC+1 summer time (from the last Sunday in March to the last Sunday in October)

*Power Currency & Banks*

Portugal has the euro (EUR) as its currency. Most hotels, restaurants and shops accept debit and credit cards (Visa, MasterCard, American Express).

ATM locally known as Multibancos (MB), can be found all over Portugal, including small towns. Banks are open from 8.30am to 3pm, Monday to Friday.

*Electricity*

Electrical supply: 230 V | Frequency: 50 Hz

*Plug System*

Type C

Type C Type C

Type F

Type F Type F

*Communications*

*Most mobile phone providers* offer customers international roaming services, but in doubt contact your mobile provider to turn on this feature. It's likely that you'll have 4G service, or at least 3G, everywhere provided by Meo, Vodafone or Nos (the three main local mobile providers).

Visitors from inside the EU, Iceland, Liechtenstein and Norway "*roam like at home*" in Portugal since 2017 when roaming charges were abolished. If you're coming from outside the EU and you know you'll be using your phone frequently, you might want to buy a SIM Card in Lisbon and in Portugal.

*WiFi* is available all over the country. The majority of hotels, many public spaces and large shops offer free WiFi.

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<sup>3</sup> <https://www.lisbonguru.com/visit-portugal-useful-practical-information/>

## *Water*

Tap water is safe to drink and of good quality throughout Portugal. Local bottled mineral water is available from shops, supermarkets, restaurants and bars.

## *Lisbon Weather in May<sup>4</sup>*

As far as the weather goes, May is usually a good month to visit Lisbon. It begins the drier part of the year, with less rain than April. Every once in a while, there may be a *partial rainy* day, but it won't be a couple of hours until the rain passes and the skies open up. Many days already *feel like summer*, with longer daylight hours for exploring the city.

Weather in May: What to Pack, What to Wear

Average High: 22°C / 72°F

Average Low: 14°C / 57°F

Average Rainfall: 54 millimetres / 2.13 inches

There might be a few days when the thermometer goes over 30°C / 86°F. Lisbon receives on average 54mm / 2.13in of rainfall during May. Occasional thunders are not unusual.

Lisbon Itineraries. Layers may come in handy during your May visit to Lisbon. Layers will allow you to be prepared if it becomes windy, or the weather suddenly changes. We recommend bringing along a lightweight jacket as well as a number of short sleeve shirts. Long pants or jeans are what the locals usually wear in May, but there are a few days when you could wear shorts.

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## *Useful phone numbers<sup>5</sup>*

- Tourism Bureau: +351 800 296 296
- Emergency call numbers are free. Emergency Call: 112 or 115  
If it is possible, give the phone to a Portuguese who will answer all emergency questions that you will asked, in case you do not speak Portuguese.
- Portuguese Intelligence Service: 118
- Fire or flood, call: +351 21 34 22 222 or +351 21 39 24 700.
- Hospital: Pulido Valente (Respiratory diseases, other): Alameda das Linhas de Torres - 1700 Lisboa, Tel.: +351 21 754 80 00
- Ambulance 808 24 24 24 (24 hours a day)

## *Staying Safe in Lisbon<sup>6</sup>*

Lisbon is considered to be one of the safest European capitals. Pickpocketing is the most common crime, especially in crowded tourist areas and public transport such as the popular tram 28. Violent street crime is rare.

However, it's important to use common sense and take a few precautions to ensure you avoid hassles on your trip to Lisbon.

Here are a few basic tips to explore the city safely. In case of an emergency, call 112.

### **1. Plan ahead**

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<sup>4</sup> <https://www.lisbonguru.com/lisbon-may-weather-events/>

<sup>5</sup> <https://myhomein-lisbon.com/travel-guide/useful-numbers.html>

<sup>6</sup> <https://www.lisbonguru.com/staying-safe-lisbon/>

Planning your trip is the first step for a safe stay. Chiado, Baixa and Avenida da Liberdade are some of the [best areas to stay in Lisbon](#), close to everything, and with plenty of hotels. The Saldanha neighbourhood, which is 15-minute away from major attractions, is also a quiet and safe area.

## **2. Don't carry too much cash**

A good idea is to use a money belt to keep your money and passport safe. Have in your purse or wallet only the money you need for the day. Pickpockets on public transport, especially on [tram 15 to Belém](#) and the scenic [tram 28](#), are known to be a problem. As such, you should pay attention to your personal affairs.

## **3. Use cashpoints in well-lit and busy areas**

Particularly after nightfall, avoid ATMs that are inside the Bank's premises. Check that the ATM hasn't been tampered with.

## **4. Stick to main streets at night**

We'd like to say it's 100% safe to walk at night in central Lisbon, but as in any big city caution is warranted in some areas at night, and when travelling alone. While Anjos, Intendente and Martim Moniz are perfectly safe neighbourhoods to walk during the day, and even to stay during your Lisbon trip – these areas have witnessed some gentrification in recent years – you should avoid dark streets and alleys late at night. The Intendente area, between Anjos and Martim Moniz, has at times been known to be the site of prostitution and drugs. In addition, stick to well-lit streets in the historic neighbourhoods of Alfama, Mouraria, Graça, and Bairro Alto.

## **5. Learn to say no**

This tip may be especially helpful when walking on Rua Augusta, the main commercial street in the Baixa area, where you may be annoyed by pushy hash offers at any time of day. [Bairro Alto at night](#) is another area where you might to be approached, especially at night. The right way to deal with these characters is to firmly decline any offer.

## *Transportation<sup>7</sup>*

### *Metro*

The metro is the quickest and most practical way to travel around the city. The metro network has a total of 4 lines, each identified by a different colour: green (Telheiras – Cais do Sodré), blue (Reboleira – Santa Apolónia), yellow (Odivelas – Rato) and red (Aeroporto – São Sebastião).

The metro service runs from 6.30am-1am every day. Some metro stations are contemporary art exhibits, decorated with sculptures, mosaics, tiles and paintings, namely Olaias, Marquês de Pombal, Parque and Aeroporto stations.

Here are some useful stations to visit Lisbon's main sights and around:

- Baixa-Chiado (blue line): Chiado and Bairro Alto neighbourhoods, and also Príncipe Real.
- Rossio (green line): Praça do Comércio, Rua Augusta, Praça da Figueira, Teatro Dona Maria and trains to Sintra.
- Terreiro do Paço (blue line): Praça do Comércio and the Alfama neighbourhood.
- Jardim Zoológico (blue line): Sete Rios, Lisbon's long-distance bus terminal with connections to several Portuguese cities.
- Cais do Sodré (green line): trains to Cascais and Estoril, trams and buses to Belém and ferries to Almada.
- Oriente (red line): Parque das Nações and national and international train station.

### *Bus*

Yellow buses are a good option to travel to areas that are not accessible by metro or tram. The bus network is also operated by Carris. The service runs generally from 5am to 11pm. Useful bus routes to travel around Lisbon and visit the main attractions:

#727 – Runs through Campo Pequeno, Marquês de Pombal Square, São Bento, Santos and Belém.

#728 – Runs between Belém and Parque das Nações via Santa Apolónia train station.

#737 – Mini bus going through Praça da Figueira, Sé, Castelo de São Jorge (castle) and the Alfama neighbourhood.

#744 – Connects Lisbon Airport and Saldanha, Picoas, Marquês de Pombal and Avenida da Liberdade.

#773 – Runs between Rato and Alcântara, via Príncipe Real, Estrela and Lapa.

#201 – Night bus that runs between Cais do Sodré and Santos (until 5am).

### *Train System*

Lisbon's commuter train system consists of five lines that travel to greater Lisbon:

- Sintra line operated by CP
- Cascais line operated by CP
- Azambuja line operated by CP

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<sup>7</sup> <https://www.lisbonguru.com/getting-around-lisbon-traveller-information/>

- Sado line operated by CP
- Setúbal line (North/South Railroad) operated by Fertagus
  - Sintra and Cascais lines are of interest to the tourist. The train to Setúbal may also be useful for those planning to visit the town of Setúbal, or to get the ferry to Tróia Peninsula, known for its beautiful beaches extending for about 25 kilometres (16 miles).
  - Train services to Sintra depart from Rossio station. Trains run every 15-20 minutes, and the trip takes about 45 minutes. Refer to [How to Get from Lisbon to Sintra](#).
  - The train that connects Lisbon and Cascais departs from Cais do Sodré station. The trip to Cascais offers beautiful views of the coastline. Trains run every 10-30 minutes, and the trip takes approximately 40 minutes. Refer to [How to Get from Lisbon to Cascais](#).

Hours of Operation: Operating hours vary according to the line but on average trains run between 6am and 1am.

Accessibility. As far as accessibility is concerned, visit CP's page on [Customers with Special Needs](#) and Fertagus' page on [Accessibility](#).

Safety. Riding the train during the day is usually safe.

### *Ferry System*

Ferries connecting Lisbon and the Tejo south bank are operated by Transtejo. Several connections per day are available from different riverfront terminals:

- Cais do Sodré to Cacilhas (15 minutes), Montijo (30 minutes) and Seixal (30 minutes)
- Terreiro do Paço to Barreiro (30 minutes)
- Belém to Trafaria and Porto Brandão (20 minutes) with bus connections to Costa da Caparica beaches
  - The ferry from Cais do Sodré to Cacilhas might be of interest to the traveller who wants to visit the statue of Christ. Refer to [How to Visit Cristo Rei, Lisbon's Statue of Christ](#).
  - Those seeking to go to Costa da Caparica's beaches can take the ferry from Belém to Trafaria and from there get the bus to Costa da Caparica.

### *Navegante Card: Tickets or Zapping*

For convenience, buy a non-refundable navegante occasional smart card for €0.50 to ride public transport during your stay in Lisbon. Do not confuse the navegante occasional for non-frequent travellers with the navegante pass used by locals.

You can buy and load your navegante card in any metro station from a ticket machine in cash (coins and notes) as well as debit and credit cards issued by major companies (e.g. Visa, MasterCard, Maestro). The navegante card is also available at selling points around the city and at commuter train stations from ticket machines.

Note that the navegante card can only hold one kind of ticket at any one time. So, depending on the length of your stay, how much you're planning to use public transport, and whether you're going to other places such as Sintra, Cascais, or the statue of Christ, you'll need to choose between:



- Single tickets: good for one metro or bus ride within Lisbon, for example from the airport to your hotel, provided you don't plan to use any other public transport on that same day.
- 24-hour tickets which come in three options (for use within the city only, or including commuter train / ferry): the best option if you're planning to travel extensively, for example riding several trams and funiculars, and don't want to worry about tracking tickets or Zapping money.
- Zapping: pay as you go money that you load into your card and can use to ride the metro, tram, funicular, bus, commuter train, and ferry.

You cannot mix different kinds of tickets. So, if, for instance, you load your navegante occasional card with two single tickets, you must first use them (you "empty" the card) before you can buy a one-day ticket.

With Zapping, because of the price of each individual ride, you'll always have a few cents left on the card after riding. It'll be difficult to empty your navegante card and load another kind of ticket after loading Zapping money. The best thing to do will be to get a new navegante occasional card for €0.50 and load that one with the ticket you want.

Zapping money left on the card is non-refundable, although it can be transferred to another navegante card at a ticket office.

For the current tickets, fares and details on how to buy tickets and top up the card, see [Navegante Card: Use it on Metro, Bus, Tram, Ferry & Train](#).

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### *Taking a Uber or Taxi in Lisbon*

Several ridesharing services are available in Lisbon. You need to download the smartphone app which allows you to book a car and pay for it without cash exchanged with the driver. Cars from ridesharing services are identified by a TVDE sticker placed on the front and rear windows of the driver's side.

You won't usually need to take a taxi in Lisbon, except perhaps to get from the airport to your hotel, if you have limited mobility, or if you're returning late to your hotel after a [night out](#).

Lisbon taxis are usually black and green. They are not expensive when compared to taxi fares in other European cities. However, depending on when and where you want to go, it may not be an option that will take you there faster (and it may not be that cheap).

The taximeter is displayed during the entire cab ride, and it includes the start fee (€3.25 from 6am to 9pm, €3.90 at night). A luggage fee of €1.60 may also apply. While many taxis accept cards, make sure to confirm before you get in.

### *Other Ways of Getting Around Lisbon*

**By electric scooter:** Like many cities, Lisbon has now [dockless electric scooters](#) readily available all over the city. They are fun, fast, and tourists also use them to explore the best the city has to offer.

**By bike:** With a network of bicycle lanes opening up around the city, Lisbon has become a much more bike-friendly place. And with e-bikes now widely available, what better way to explore the city than by two wheels? See [All About Bike Rentals in Lisbon](#) to learn about your options.

**By tuk tuk:** It turns out that the tuk tuk be a very convenient means of transport for getting around the steep and narrow streets of Lisbon. Refer to [Tuk Tuk Tour – The Fun Way to Explore Lisbon](#).

**Hop-on hop-off tour:** [Hop-on/hop-off buses](#) can be a good choice if you're trying to get a broad sense of the available tourist attractions in the city. There are also hop-on, hop-off cruises and other [boat tours in Lisbon](#).

### *Lisbon Airport transportation<sup>8</sup>*

One of the great things about arriving to Lisbon Airport is that you don't have to endure a long drive to the city centre. The city's only airport is just 10km (6mi) from most attractions, which makes it one of the world's most convenient airports.

There are a number of different ways to get from the airport to central Lisbon and beyond. Here are the options.

*By Metro.* There is a metro station at Lisbon Airport linking to the city centre. The service runs between 6.30am and 1am.

Frequency: Every 6 to 10 minutes (red line)

Journey time: 35 minutes approximately (Baixa/Chiado station), changing to green line at Alameda station (metro map)

Fare: single ticket or Zapping option deducted from your navegante occasional card

162 *By Uber.* You can take an Uber in Lisbon. You need to download the smartphone app which allows you to book a car and pay for it without cash exchanged with the driver. In Lisbon, Uber cars are identified by a TVDE sticker placed on the front and rear windows of the driver's side.

*By Taxi.* You can pick up a taxi at the rank located outside Terminal 1. Expect long lines at peak arrival times. A journey to downtown Lisbon (Baixa) typically takes about 15-20 minutes and costs around €15 in light traffic. If your destination is outside Lisbon, say Cascais, expect to pay around €40. If going from Lisbon Airport to Sintra, the ride will cost about €30-35.

### *By Private Transfer*

Instead of waiting in a long line for a taxi, you can use a reliable private transfer service, and avoid delays. Welcome Pickups is one such service available in Lisbon, and in many other cities, that you can easily book ahead online, often by paying as much as a regular taxi. An English-speaking driver picks you up (waiting for you at the airport or at your hotel) around the clock. Usually knowledgeable about Lisbon, if asked, the driver will offer you some useful tips about the city.

*By Car Rental.* The journey takes about 20 minutes in light traffic. A number of car hire companies operate at the airport.

<sup>8</sup> <https://www.lisbonguru.com/how-to-get-from-lisbon-airport-to-city-centre/>

## Lisbon<sup>9</sup>

**Lisbon**, city, port, capital of **Portugal**, and the centre of the Lisbon **metropolitan area**. Located in western Portugal on the **estuary** of the **Tagus (Tejo) River**, it is the westernmost capital city in continental **Europe** and serves as the country's chief port, largest city, and commercial, political, and tourist centre. The city's name is a modification of the ancient Olisipo (Ulyssipo), and its founding has been attributed to the **legacy** of Ulysses (**Odysseus**), the hero of **Homer's** *Odyssey*; to **Elisha**, purported to have been a grandson of the Hebrew patriarch **Abraham**; and, more credibly, to **Phoenician** colonists. Lisbon owes its historical prominence to its natural harbour, one of the most beautiful in the world. Area city, 33 square miles (85 square km)

### Character of the city

Once a remote outpost on what was thought to be the farthest edge of the known world, Lisbon had established itself as a centre of operations for Portuguese exploration by the 15th century. The city centre was destroyed by an **earthquake in 1755** but was rebuilt by the **marquês de Pombal**. This seagirt city of multicoloured houses and elegant parks and gardens is no longer the capital of a vast overseas empire. It has been reconstructed as a bustling modern metropolis. In fact, Lisbon was designated a European City of **Culture** in 1994, and in 1998 it hosted the World's Fair (Expo '98). That event sparked the city's biggest renewal project since the rebuilding that followed the 1755 earthquake, including the construction of the six-lane **Vasco da Gama Bridge**, then the longest bridge in Europe, and other extensive upgrades of the **city's transportation infrastructure**. The fair also was the primary **catalyst** for the construction along the Tagus River of an oceanarium, marinas, hotels, commercial complexes, and entertainment **venues**.

Despite modernization, Lisbon in many ways retains the air of a 19th-century city. The *varinas* (fish vendors) who roam the streets dressed in long black skirts still carry their wares in baskets on their heads. Vessels tie up at quays where the clang of trolley cars blends with ships' horns. At dawn, fishing boats deposit their catch for noisy auction with Lisbon shop owners while the fish vendors wait to fill the baskets they peddle through the streets. Farther inland the fish market gives way to the equally colourful and clamorous fruit and vegetable market. Lisbon's port maintains an intimacy with its city that was common in the days before steam. Amid the freighters, warships, cruise liners, and ferryboats, a picturesque note is struck by the *fragatas* of Phoenician origin; these crescent-shaped boats with their striking black hulls and pink sails still perform most of the harbour's lighterage.

The general outlines of the city remain as they have for hundreds of years. Lisbon is still a city of balconies and vistas. Some of the most striking of the latter can be seen from the *miradouros*, the terraces maintained by the municipality on seven of its hillsides. (Many Lisboetas, as the people of Lisbon are known, profess their city to have seven traditional hills, like Rome.) For centuries Lisboetas have discussed the symptoms of an **affliction** they believe to be **endemic** in their city: *saudade* ("melancholy"), a state of anxiety tempered by fatalism that is said to be reflected in *fado* ("fate"), the melodic but deeply emotional folk songs that

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<sup>9</sup> <https://www.britannica.com/place/Portugal/Government-and-society>

can still be heard in specific restaurants, mainly in the historic quarters of Alfama and Bairro Alto.

### **Landscape**

The city lies on the north bank of the Tagus River estuary, about 8 miles (13 km) from the river's entrance into the [Atlantic Ocean](#). From the ocean upstream to the city, the river is almost straight and about 2 miles (3 km) wide. It is spanned, on the west side of the city, by the [25th of April Bridge](#). Just east of the bridge, the Tagus suddenly broadens into a bay 7 miles (11 km) wide called the Mar de Palha ("Sea of Straw") because of the way that it shimmers in the sun. The widest part of the Tagus estuary is spanned by the Vasco da Gama Bridge, which was built to help [alleviate](#) traffic on the 25th of April Bridge. Scenically spectacular, this hill-cradled bay of burnished water lies on a strategic sea route and serves as a busy port, handling much of the trade between Portugal and [Spain](#).

Lisbon is built in a succession of terraces up the slopes of a range of low rolling hills that rise from the banks of the Tagus River and the Mar de Palha northwest toward the [Sintra Mountains](#), whose covering of lush Mediterranean and Atlantic European flora provides an attractive retreat for the city's population. Sections of the city vary considerably in elevation, especially in the older areas along the water's edge, which offer [splendid](#) views of the river and the low cliffs that line the river's southern shore. Several geologic faults cross Lisbon and the surrounding region, but, notwithstanding the devastating earthquake of 1755, seismic activity has been limited to slight tremors since the 20th century.

### **Climate**

Lisbon has a mild and equable climate, with a mean annual temperature in the low 60s F (about 17 °C). The proximity of the [Atlantic Ocean](#) and the influence of the [Gulf Stream](#) mediate the weather conditions throughout the year. January, the coldest month, has an average temperature of 50 °F (10 °C), and in August the temperature seldom exceeds 82 °F (28 °C). Average monthly rainfall ranges from 0.1 inch (3 mm) in summer up to about 4 inches (100 mm) in winter.

### **City layout**

It is traditional for poets to refer to the entwining [Tagus](#) as Lisbon's lover. The river is indeed an ever-present part of the city's decor, and the official entrance to Lisbon is a broad marble staircase [mounting](#) from the water to the vast arcaded [Commerce Square](#) (Praça do Comércio). The three landward sides of the square are surrounded by uniform buildings dating from the 18th century. That formal Baroque-inspired layout is pierced by a monumental archway, built a century later, marking the entry north into the central city. In the middle of the square stands a bronze statue of [King Joseph I](#) on horseback, an important work by the sculptor Joaquim Machado de Castro. Many government offices occupy the buildings that surround Commerce Square.

The square lies at the south end of Lisbon's central district, the Cidade Baixa ("Lower City"). The Baixa was completely rebuilt after the earthquake in 1755 under the supervision of [Joseph I's prime minister, Sebastião de Carvalho](#), later the marquês de Pombal. The streets are laid out in a grid pattern broken by spacious squares. A series of parallel streets, each named for its original intended occupants (e.g., Rua Áurea ["Golden Street"] for the goldsmiths), runs north from Commerce Square to Dom Pedro IV Square, locally known as [Rossio Square](#). Rossio Square is a traditional centre of activity and the starting point of the city's main

promenade, the wide, gently sloping [Avenida da Liberdade](#). This treelined boulevard leads north from the city centre to Marquês de Pombal Circle, which features a statue of Pombal. The Baixa remains rigorously protected from change, but the four-story buildings that long lined Avenida da Liberdade and its [ancillary](#) streets have been almost totally replaced by taller edifices in a bland modern style.

In the sequence of postearthquake reconstruction, the waterfront's renovation was followed by the rehabilitation of historical districts, such as Castelo, Alfama, Bairro Alto, Mouraria, and Madragoa, and fashionable residential areas, such as Chiado, Lapa, Estrela, and Príncipe Real. In 1988 a fire destroyed part of the city's historic Chiado district, which was rebuilt as a shopping area during the 1990s. Rua Garrett in Chiado is lined with boutiques, silver and porcelain shops, cafés, and bookstores. [Peripheral](#) neighbourhoods, such as Ajuda to the west, Rato-Amoreiras to the north, and Graça to the east, were also planned at this time.

Directly east of the Baixa lies [Alfama](#) (Arabic: Al-Hammah; "Hot Spring"); one of the oldest quarters of the city, it has a blend of Roman and Moorish architecture and narrow streets that crowd between a jumble of houses down to the river. In this area, on the hill where Lisbon was first founded, the Castle of [St. George](#) (Castelo de São Jorge) towers over the city. The castle is Moorish in origin and was named for England's [patron saint](#), in honour of an alliance made in 1386 between [Portugal](#) and England. Just below it, the [austere](#) white church and monastery of St. Vincent guards the remains of the saint, which (according to legend) were miraculously brought to the city in a ship guided by two ravens. To [commemorate](#) the event, the birds are depicted on the Lisbon [coat of arms](#).

Also to the east, Chelas and Olivais-Sul, two [public housing](#) districts implanted on heathland previously considered too difficult to build upon, provide residence for lower-income families. Despite these government-sponsored projects, adequate housing remains a problem as an influx of immigrants (mainly Africans, eastern Europeans, and Brazilians) has caused a housing deficit.

A number of neighbourhoods extend west of the Baixa toward suburban [Belém](#). Each possesses its own distinctive character, reflecting the epoch in which it was built. The [Bairro Alto](#) ("Upper District"), for example, dates primarily from the 16th century. It is [characterized](#) by its maze of straight and narrow streets. Some of these streets, especially those leading down to the Baixa, are so steep that they terminate abruptly, giving way to stairs, cable cars, and, in one case, an elevator (the Santa Justa Lift; an iron structure designed by French architect Raoul Mesnier du Ponsard). Just west and north of the heart of Bairro Alto is the Palace of the National Assembly, also known as the Palace of São Bento. Nearby is the official residence of Portugal's prime minister. Farther west, toward Belém, Necessidades Palace houses the Ministry of Foreign Affairs.

The Belém Palace, a former royal residence, is the official home of the president of the republic. The Belém area reflects Portugal's maritime past and is known for its [Manueline](#) (early 16th-century) architecture, notably the Jerónimos Monastery, founded by [Manuel I](#) in 1499, and the [Tower of Belém](#) (1515–21; designated a [UNESCO World Heritage site](#) in 1983), which was built to defend the city. The Monument to the Discoveries (1960), on the Tagus River, [commemorates](#) Portuguese explorers of the 15th and 16th centuries. The Belém-Restelo district, a sumptuous residential area in the western [periphery](#), developed from the 1940s.



To the north, the transition between the city and the suburb is not marked. Vast shopping complexes such as Amoreiras and Colombo, along with residential apartment buildings, stretch north and northwest from the Marquês de Pombal Circle. These modern, colourful, mid-rise structures were designed by Lisbon architects.

Suburban development began to affect the city's character in the second half of the 20th century, when Lisbon lost about half its population because of migration to the periphery. New housing developments replaced manufacturing plants in Greater Lisbon. In the north, near the [University of Lisbon](#) campus, two neighbourhoods, Alvalade (which sprouted in the 1940s and 1950s) and Telheiras (which developed from the 1970s to the 1990s), were among the most successful examples of [urban planning](#) in the 20th century. Many [affluent](#) families moved out of the city to newer gated [communities](#) or to villas in Greater Lisbon, mostly to the surrounding regions of Oeiras, Cascais, and [Sintra](#).

### **People of Lisbon**

Although the Lisbon [metropolitan area](#) occupies only about 3 percent of [Portugal's](#) total area, more than one-fourth of the country's inhabitants reside there. Lisbon experienced a population surge in the 1970s owing to [migration](#) from the country's rural areas as well as the return of Portuguese citizens who had been living in Portugal's African colonies, which attained independence in 1975. Migration rates stabilized in the 1980s. In the mid-1990s, however, Africans, mainly from [Cape Verde](#), were the most populous [immigrant](#) group; with a [birth rate](#) considerably higher than the national average, they contributed to a renewed growth of the population.

At the beginning of the 21st century, the foreign population accounted for about one-tenth of Lisbon residents. In addition to those from [Cape Verde](#), immigrants arrived from [Brazil](#), [Angola](#), [Guinea-Bissau](#), and various European countries. There are also smaller South Asian [communities](#) in the city proper and metropolitan area. Although this migratory current has put a strain on the city's resources, Lisbon's mixed population has transformed the city into a [cosmopolitan](#) and [dynamic](#) metropolis.

### **Transportation**

Lisbon is connected by rail and road to the interior of Portugal and to the rest of Europe. The 1.5-mile- (2.4-km-) long [25th of April Bridge](#), one of the longest [suspension bridges](#) in western Europe, has served as the main roadway into the city since it was built in the mid-1960s. Inaugurated in 1998, just in time for the World's Fair, the cable-stayed, combined-purpose [Vasco da Gama Bridge](#), connecting Lisbon and the eastern portion of the metropolitan area to the southern shore, relieved traffic congestion on the 25th of April Bridge and provided additional rail access. A number of other public- and private-funded improvements to the [city's transportation infrastructure](#) were undertaken in the 1990s in preparation for the fair. Notably, a new subway line was added to the system whose first route opened in 1959, and the trolley system in the historic district that primarily served tourists was refurbished and expanded. Also expanded and modernized was the airport at Portela de Sacavém, some 6 miles (10 km) northeast of the city centre, which offers flights to [Europe](#), the Americas, and [Africa](#). The construction of new highways and underground parking lots increased automobile usage, however, and the abundance of cars increased traffic and pollution in the city.

### **Education**

Officially, education in Portugal is free and compulsory for children ages 6 through 15. In addition to public schools, Lisbon has many private schools, including American, French, German, Spanish, and Swedish schools. The [medieval University of Lisbon](#) was founded in 1288 and remained Portugal's only university until the 16th century. It moved back and forth between Lisbon and [Coimbra](#) several times before settling in Lisbon from 1377 to 1537, when it permanently relocated to Coimbra and took the name of that city. Thus, the capital was left without a university until 1911, when the University of Lisbon was restored. The Technical University of Lisbon was founded in 1930, and the New University of Lisbon opened in the city during the 1970s. The Catholic University of Portugal was established under the tutelage of the [Roman Catholic Church](#) in 1968. Lisbon also has a large number of specialized colleges and polytechnic institutes. Prior to the 1974 [coup](#) in Portugal, university education was restricted to the elite. Not until the 1990s did the number of university applicants increase, and then, after a brief flourishing of private universities, student applications decreased again in the 2000s. Many Portuguese students have chosen to study abroad, especially in the [United Kingdom](#), while a number of new immigrants have opted to enter the workforce rather than pursue [higher education](#).

### **Cultural life**

Lisbon's rich cultural life was further [enhanced](#) in the 1990s by the city's preparations for hosting the World's Fair, including the construction of the [Belém Cultural Centre](#) (1992), which offers visual and performing arts and houses exhibits, an auditorium, and an arts complex. It is but one component of the city's network of cultural centres, public libraries, and research institutes. Another prominent cultural institution, the [Calouste Gulbenkian Foundation and Museum](#), presents music and ballet, exhibits other fine arts, and displays the broad-ranging personal collection of its [eponymous benefactor](#), an Armenian oil-lease negotiator who lived in Lisbon from 1942 until his death in 1955. Culturgest, a multifunctional auditorium and exhibition centre, opened in Lisbon in the early 2000s.

The city has many other museums, including those dedicated to modern, antique, sacred, decorative, and folk arts. Two specialized, rather unusual museums are the Azulejo Museum and the National Museum of Coaches. The former, located in the convent of Madre de Deus, boasts a large and varied collection of the painted tiles ([azulejos](#)) for which the [Iberian Peninsula](#) is famous. The National Museum of Coaches occupies a wing of the Portuguese president's official residence and contains an impressive display of carved and gilded coaches. Lisbon's municipal orchestra was founded in 1971. The city is also the site of the National Conservatory, which offers advanced instruction in both music and [drama](#). The St. Charles and the National Theatre of Dona Maria II are Lisbon's two principal theatres. The former, which was constructed in the late 18th century, has a beautiful [elliptical](#) interior, and the latter, which was built about 1845, displays a facade of six giant columns saved from the convent church of St. Francisco, which was destroyed by an earthquake. The interior, gutted by fire in 1966, has been restored.

Neither of these edifices is as theatrical as the interiors of some of the churches built or restored after the 1755 [earthquake](#). In gold, marble, carved wood, and rare tiles, these interiors are decorated in Baroque, Rococo, or rocaille style. One outstanding example is the 16th-century church of St. Roque, whose unpretentious exterior belies its opulent collection of painted tiles, paintings, and [mosaics](#) inlaid with semiprecious stones.

The city's old redbrick [bullring](#), Campo Pequeno, with its Moorish arches and cupolas, draws natives and tourists alike to witness the Portuguese manner of [bullfighting](#). Campo Pequeno reopened in 2006 after a major renovation, which included the addition of a [shopping mall](#), a cinema, restaurants, and a supermarket.

Lisbon is distinguished as one of the few places in the world whose chief Roman Catholic clergyman bears the title of patriarch. However, Lisboetas are typically less devout than the northern Portuguese and attend church mainly for rites such as christenings, weddings, and funerals. Religious processions are generally subdued affairs, without the colour and the drama found in [Spain](#). The June feasts of the popular saints (St. Anthony, [St. John](#), and St. Peter) are exceptions. Lisboetas celebrate them by [donning](#) imaginative costumes, jumping over bonfires, and dancing in the streets until dawn. Indeed, these lively events, held in the city's historical districts, retain all the pagan elements of a midsummer festival.

Lisbon has several sports and recreational areas. Many of the housing developments are planted with trees and grass, their small parks adding to Lisbon's collection of dozens of public gardens. The largest public park, Monsanto, covers about 3.5 square miles (9 square km) and has numerous recreational facilities. Rolling hills planted from the 1930s provide a windbreak for the city and are now thickly forested. There are also [botanical](#) gardens and a zoo within the city. Football (soccer) is very popular in Portugal, and two of the country's most prominent teams call Lisbon home: Benfica and Sporting Clube de Portugal.

## **History of Lisbon**

### **The early period**

#### **Prehistoric to Moorish times**

The valley in which the heart of Lisbon now lies was, in prehistoric times, the bed of a forked branch of the [Tagus River](#). (The subway now forks at the same spot.) No evidence has been uncovered to show who were the first residents on the hills surrounding the valley. Although it seems likely that the city was founded about 1200 BCE as a trading station by the far-ranging Phoenicians, there is no unassailable proof of the story. The city's ancient name, Olisipo (Ulyssipo), may be derived from the Phoenician *alis ubbo* ("delightful little port") or from the [legend](#) that the city's founder was [Odysseus](#).

Whatever the city's origins, it is known that the area was under Roman domination from 205 BCE to about 409 CE and that Julius Caesar raised the settlement to the dignity of a *municipium* and named it Felicitas Julia. A few inscribed stones remain as evidence of the Roman presence. The Romans lost the city to the migratory peoples known as the [Alani](#), who were driven out by the [Suebi](#), who in turn were conquered by the [Visigoths](#). The base plan of the original fortifications is thought to be Visigothic and, if so, is the sole [vestige](#) of their reign. The [Muslims](#) of [North Africa](#) ([Moors](#)) took Lisbon when they overran the [Iberian Peninsula](#) in the 8th century; they stayed for 433 years, despite incursions by the [Normans](#) and by [Alfonso VI](#) of [Castile and León](#) in 1093. Under the Moors the city was known by variations of the name "Lisbon": Luzbona, Lixbuna, Ulixbone, and Olissibona.

#### **The Portuguese conquest**

Behind their walls, the [Moors](#) were able to hold out for months when the city was assailed by Crusader forces—English, Flemish, Norman, and Portuguese under [Afonso I](#) ([Afonso Henriques](#)), the Portuguese king. The city finally fell in 1147 and then successfully resisted Moorish attempts to win it back. The Moorish alcazar was transformed into a Portuguese royal



palace, and, according to legend, the Lisbon Cathedral (Sé Patriarcal) was converted from a mosque (with subsequent restorations in the styles of many periods after fires and earthquakes). There is no evidence, however, of a building on the site of the cathedral before the time of Afonso I.

After winning Lisbon, King Afonso established his court 105 miles (170 km) to the north-northeast, atop a cliff at [Coimbra](#). Lisbon did not become the national capital until more than a century later, in 1256. Within its Moorish walls, of which large segments still remain, [medieval](#) Lisbon measured 1,443 feet (440 metres) at its widest point and 1,984 feet (605 metres) at its longest, descending the hill below the castle. Even before the Portuguese conquest, two districts had already been built outside the walls: [Alfama](#) to the east and [Ribeira](#) to the west.

[King Dinis I](#) (1279–1325) founded the [University of Lisbon](#) in 1288, and during his reign other hilltops around the central valley were crowned with convents and churches.

In 1372–73 Lisbon was besieged and burned by the Castilians, who forced [King Ferdinand I](#), an unsuccessful [contender](#) for the Castilian throne, to [repudiate](#) his alliance with England; thereafter the king swiftly erected new defenses. His wall—more than 3 miles (5 km) long, with 77 towers and 38 gates and enclosing more than 247 acres (100 hectares)—withstood the renewed Castilian attack of 1384, which followed Ferdinand's death.

### **The Age of Discovery**

The first Portuguese census (1527) counted 65,000 inhabitants in Lisbon occupying 23 parishes. A considerable number of these residents became rich, and the city was endowed with larger and more luxurious buildings. African slaves became a familiar Lisbon sight, the trade in slaves being one in which [Portugal](#) played a major role. After the great explorer [Vasco da Gama](#) led a Portuguese [fleet](#) to [India](#) in 1498, the Venetian monopoly on Oriental trade was broken, and colonies of German, Flemish, Dutch, English, and French traders established themselves in Lisbon. Greeks, Lombards, and Genoese who had lost their trading enclaves in [Constantinople](#) when that city fell to the Turks in 1453 also came to Lisbon.

[King Manuel I](#) (1495–1521) dominated this epoch, and under his rule Portugal developed its sole contribution to European architecture, an extreme style of late Gothic decoration that celebrated the voyages of discovery, Manuel, and God. The prime examples of [Manueline style](#) in Lisbon, the [Tower of Belém](#), designated a [World Heritage site](#) in 1983, and the [Jerónimos Monastery](#), about 4 miles (6 km) downstream from the city centre, are far less [exuberant](#) than those in the rival Portuguese cities of [Batalha](#) and [Tomar](#). The tower and the monastery are nevertheless the most important architectural monuments in the Lisbon area. The five-story Tower of Belém, located on the riverbank, was built in 1515 as a fort in the middle of the Tagus, which subsequently altered course. Girt by a cable carved in the stone, it has a stern Gothic interior but exhibits North African touches on its turrets and crenellations and presents rounded Renaissance arches for the windows. The monastery with its church and cloisters was begun in 1502 by Diogo de Boytac (Boitaca), an architect of French origin, and was not finished until the end of the century. Four other architects worked on the project, their styles passing from the Gothic through the Renaissance to the [Baroque](#). Smoothed by time, the ensemble is harmonious and proudly Portuguese.

Manuel I promoted the urbanization of Lisbon, creating new districts, and by the Tagus he constructed the Ribeira Palace, with a large square laid out along its eastern flank. The area

between the Rossio and the [Palace Terrace](#) was soon crisscrossed with streets, along which rose the new shops, churches, and hospitals of what had become a phenomenally prosperous city. Although Lisbon suffered a serious earthquake in 1531 and some sanitary problems, its development was not hampered, and it advanced with new prestigious construction, mainly along the Tagus River.

The [prosperity](#) was chimerical, however. [John III \(the Pious\)](#), who had succeeded Manuel, permanently transferred (1537) the university to the royal palace at Coimbra, far from the capital's excesses. He also invited the [Jesuits](#) and the [Inquisition](#) to come to Portugal. The [Inquisition](#) office, located in the Rossio, was particularly ferocious in its persecution of the Jews, who were the bankers, financiers, and moneylenders of the time. Many wealthy Jews had their property and goods confiscated; some emigrated to Holland or other countries, taking their money and financial expertise with them. As a result, Lisbon's connections with foreign markets were disrupted and the country's economy suffered severe financial [constraints](#).

In 1578 [King Sebastian](#) of Portugal was killed in a disastrous invasion of Morocco: two years later, the [Spanish](#) pushed into Portugal, and [Philip II](#) of [Spain](#) became king of both countries. In 1588 it was from Lisbon that the [Invincible Armada](#) sailed against England, Portugal's oldest ally. In the half century that followed, Lisbon lived relatively well as a port for the riches of the [Spanish Main](#). In 1640 a [conspiracy](#) of Lisbon nobles struck for freedom and drove out the Spaniards, restoring Portugal's independence. Restoration Square, just north of Rossio Square, is named for them.

170 With the Cromwellian treaty of 1654, following British military assistance to the Portuguese in the war with Spain, the British merchants trading and living in Lisbon set up a corporation, which became known as the British Factory. The Factory negotiated with the Portuguese government for trade [concessions](#) and other privileges, appealing to the British government to put pressure on the Portuguese authorities when necessary. [Britain's](#) economic and political influence on Portugal was strong, and the Factory remained in existence until 1810.

### **Evolution of the modern city**

#### **Disaster and reconstruction**

In the first half of the 18th century, the profits from the plantations and the gold and diamond deposits of [Brazil](#) brought a new flurry of optimism and excitement to Lisbon. Meanwhile, an aqueduct was being built and manufacturing was flourishing. During this time of financial prosperity, churches also were constructed, namely the massive convent of [Mafra](#), about 25 miles (40 km) north of Lisbon. This period of optimism ended on the morning of Nov. 1, 1755. The churches were crowded to honour the dead on [All Saints' Day](#) when the city was devastated by one of the greatest [earthquakes](#) ever recorded. Three initial jolts lasted for 10 minutes. Lisbon's [quay](#) sank into the [Tagus River](#). Those who sought safety on boats on the Tagus were drowned by a [tsunami](#). Following the tsunami, massive fires broke out and lasted for days, burning large sections of the city. About 60,000 lives were lost, and more than 12,000 buildings were destroyed. (See [Lisbon earthquake of 1755](#).)

Physically, Lisbon recovered with a celerity astonishing for the time, but the shock left its mark upon the thinking of generations to come. The reconstruction—a good deal of [foreign aid](#) was forthcoming—was achieved by [Joseph I's](#) [prime minister](#), [Sebastião José de Carvalho](#), the virtual ruler of the country. He put Manuel da Maia, engineer in chief of the realm, in charge of five architects and soon had a plan for remaking the totally devastated centre of the

Cidade Baixa (“Lower City”). The riverside palace had been destroyed, and its [terrace](#) was expanded to create the new Commerce Square. Northward from there, a grid of 48 streets led inland to the Rossio and a neighbouring new square, Figueira. The two-story, uniform buildings were topped by two tiers of dormers projecting from tiled roofs. The corners of the eaves, in the Lisbon tradition, turned up, in faint echo of a pagoda. The building style, evolved for fast, cheap construction, was Baroque but virtually stripped of decoration. After the minister was rewarded with the title of *marquês de Pombal*, the style became known as *pombalino*.

The Sé and most of the churches were repaired or rebuilt, but the 14th-century Carmel (Carmo) Church was left as it was. Looming from its hilltops over the Baixa, the roofless Gothic shell was [converted](#) into an archaeological museum, while its cloister served as the barracks for the National Republican Guard, a paramilitary security force. The Palace of the Inquisition, utterly flattened, was not rebuilt when Pombal enlarged and realigned the Rossio, and on its site, 90 years later, the National Theatre of Dona [Maria II](#) was erected. Pombal banished the Jesuit order and transformed their establishment into St. Joseph’s Hospital to replace the destroyed All Saints Hospital. The medical school scrambled for room at St. [Joseph’s](#) until it acquired a new building of its own late in the 19th century. The Jesuit novice house was converted to serve as the Nobles’ School. Later governments expelled more religious orders, whose buildings became barracks, hospitals, royal academies, and government offices.

### **19th-century expansion**

171 During the [Peninsular War](#) of the early 1800s, Lisbon [alternated](#) between French and British control. When [Napoleon](#) invaded [Portugal](#) in 1807, the Portuguese royal family fled to [Rio de Janeiro](#) in Brazil. Rio replaced Lisbon as the capital of the Portuguese empire from 1808 to 1821, which enabled Portugal to maintain its independence. The war was followed by 10 years of revolutionary outbursts in Lisbon as liberal constitutionalists and absolutists fought over succession to the throne. Nevertheless, 19th-century Lisbon continued to expand and, by 1885, embraced some 20,378 acres (8,250 hectares), while the population had doubled in 100 years to reach 300,000. Public buildings, such as the new city hall and the Ajuda Royal Palace, had been built, and the harbour had been modernized and [quays](#) constructed on land reclaimed from the river. The railway had appeared, and a system of horsecars served the Baixa.

The greatest change in the city, and the one most important for modern expansion, was the opening in 1880 of a new main street—[Avenida da Liberdade](#). The municipality bordered the central six-lane carriageway with wide blue mosaic sidewalks graced with palms and shade trees, fountains, and ornamental waters stocked with goldfish and swans. The street remained the same through the 20th and into the 21st century, with the addition of outdoor cafés beneath the trees.

In conjunction with the new thoroughfare, a series of *avenidas novas* (“new streets”) expanded the city northward, and new neighbourhoods developed like those that bordered Avenida da Liberdade. In 1901 the electric [streetcar](#) made its appearance, enabling more people to live farther away from their employment in the Baixa. Three cable cars shuttled up and down the [adjacent](#) hills, and the giant elevator designed by French architect Raoul Mesnier du Ponsard hissed grandly between the city’s upper and lower levels.

New water supplies, augmenting those of the 18th-century aqueduct of Águas Livres, were introduced from Alviela. Consequently, water was piped directly into houses, eliminating the hassle of having to call a water porter.

### **The 20th century**

In 1906 Portugal's King Charles appointed João Franco as prime minister and allowed him to assume dictatorial powers, a decision that was met by strong opposition. On the morning of Feb. 1, 1908, a newspaper reported that a new law had gone into effect calling for the deportation to Africa of anyone who opposed the policies of the monarch. That afternoon Charles and the crown prince were assassinated by anarchists on the northwest corner of Commerce Square. That same day, Manuel, the king's younger son, ascended to the Portuguese throne as Manuel II. The new king vowed to uphold the constitution and destroy his father's oppressive regime. Two years later Manuel II abdicated. A republic was declared, and a period of national instability ensued. When António de Oliveira Salazar took control of the near-bankrupt country in 1932, he established a corporate state for which he alone determined the policies until his retirement in 1968. There was considerable growth in Lisbon throughout this time. New industries emerged, and oil and petrochemical refineries were constructed. Electrical and metal manufactures were mass-produced. Ports, roads, and railways were modernized, and housing projects, colleges, hospitals, and sports arenas were built.

During the world wars the city was able to offer refuge to some 200,000 foreigners. Until the end of World War I, urban expansion followed the pattern of broad avenues established in Paris in the mid-19th century by Georges-Eugène Haussmann. After the war, city extensions became more functional, though the new street patterns were relatively uncharacteristic, dominated by big highways and the absence of a coherent urban design.

In the 1960s national policy began to change, allowing economic expansion. The 30-year-old austerity program of stability and self-sufficiency (at an admittedly low level of investment and consumption) was somewhat softened, and tourists and foreign corporations began to be accommodated. In 1966, well ahead of schedule, the Salazar (now the 25th of April) Bridge was completed.

On April 25, 1974, the government of Marcello Caetano, Salazar's successor, was overthrown by a military coup. By the early 1980s, however, political instability and economic difficulties remained serious problems and hindered the country's—and the city's—efforts to bring about social and economic reforms. The restriction of government funds for the municipality of Lisbon led to a bitter struggle within the city council, where resistance mounted to speculative building projects that would affect the environment in historical parts of the city.

In 1986 Portugal's integration into the European Economic Community (later succeeded by the European Union) stimulated modernization in Lisbon, and private investment contributed to the construction of new buildings. The World's Fair in 1998 spurred the modernization of the city's infrastructure, increased tourism, and stimulated economic growth. In the early 2000s, however, Portugal experienced economic stagnation, and its economic development fell behind that of other European countries. Lisbon fared better than other cities in the country, however, and, along with tourists, it has continued to attract foreign and real estate investment.

*Blake Ehrlich*  
*Luis de Sousa Rebelo*  
*Jorge B. Gaspar*

### **Tagus River**

**Tagus River**, longest waterway of the [Iberian Peninsula](#). It rises in the Sierra de Albarracín of eastern [Spain](#), at a point about 90 miles (150 km) from the Mediterranean coast, and flows westward across Spain and [Portugal](#) for 626 miles (1,007 km) to empty into the [Atlantic Ocean](#) near [Lisbon](#). Its [drainage basin](#) of 31,505 square miles (81,600 square km) is only [exceeded](#) on the peninsula by that of the [Ebro River](#), to the northeast. The Tagus covers the heart of Portugal and Spain and has been of vital importance to the modern economic development of the two nations. The [Vasco da Gama Bridge](#) that crosses over the Tagus River estuary in Lisbon, spanning 17.2 km (10.7 miles), was the longest bridge in [Europe](#) at the time of its inauguration in 1998.

The upper Tagus cuts into limestone rocks and flows generally southwestward through narrow, sinuous valleys with deep canyons and abundant ravines. Near Trillo ([Guadalajara province](#)) it runs more peacefully, and just before the town of Bolarque it is held back by the [dams](#) of Entrepeñas and Buendía, forming an artificial lake known as the Sea of Castile, which covers an area of 51 square miles (132 square km).

### **Tagus River**

Again flowing southwestward, the [river](#) irrigates the fertile lands of [Aranjuez](#) and the areas around [Toledo](#) and [Talavera de la Reina](#) until it reaches the province of Cáceres. Here it again flows through narrow, steep-edged trenches formed by quartzites and shales. At Puente de [Alcántara](#) another dam on the river has formed one of the greatest artificial lakes in Europe, with a length of 57 miles (92 km). Less than 10 miles (16 km) downstream the river becomes the frontier between Spain and Portugal for 27 miles (43 km). It enters Portugal at Beira and the Sierra de Carbajo, then crosses the fertile region of Abrantes. After flowing across Portugal for 111 miles (179 km), it forms at Vila Franca de Xira the Tagus (or Lisbon) estuary, emptying into the Atlantic Ocean. Toledo is the only large Spanish city that lies along the river, which flows past the cities of [Santarém](#) and Lisbon in Portugal and supplies the latter with a fine natural harbor. Only the lower portion of the river is used for navigation of any importance.

The Tagus flows mostly through semiarid lands, and government efforts have been dedicated to increasing [land irrigation](#) and creating [hydroelectric power](#) in its basin. Major efforts to harness the Tagus and its tributaries for these purposes were undertaken from the 1960s, and by 1980 more than 60 dams had been built with a total installed power capacity of more than 1,200,000 kilowatts. In the highlands of the Tagus basin, coniferous trees are numerous, supporting a well-developed timber industry. About one-third of the basin's [cultivated](#) land is devoted to [cereal farming](#), and everywhere are olive trees and vineyards. In Extremadura, in western Spain, only oaks and cork trees break the monotony of a rolling and rocky landscape. Animal life near the river is abundant and [diverse](#), with both European and North African species. Fishing for royal carp, lucas, and [black bass](#) is possible in the artificial lakes of Entrepeñas and Buendía, and trout, barbels, and many other kinds of fish are caught in the Tagus and its tributaries. There is big-game hunting in Gredos, noted for its Pyrenean, or Spanish, ibex; in the ridges of Cuenca and Guadalajara [fallow deer](#) and chamois are found.

*The Editors of Encyclopaedia Britannica* This article was most recently revised and updated by *Amy Tikkanen*.

### **Religion**

Some ninth-tenths of Portugal's citizens are [Roman Catholic](#), and one of the most globally famous of all [pilgrimage](#) sites tied to the [Blessed Virgin Mary](#) is found in the village of [Fatima](#).



Regular attendance at the Catholic Mass, however, has declined in the cities and larger towns, particularly in the south. Less than 2 percent of the population is Protestant, with Anglicans and Methodists the oldest and largest **denominations**. In the late 20th century, fundamentalist and Evangelical churches grew in popularity, though the number of their adherents remained quite small. The **Jewish** population of Portugal is also tiny, as Jews were forced to convert or emigrate during the Inquisition in the late 15th century.

## **Museums<sup>10</sup>**

### **1. National Museum of Ancient Art (Museu Nacional de Arte Antiga)**

Housed in a 17th-century palace, the National Museum of Ancient Art boasts an impressive collection of European, Oriental, and Portuguese art from the Middle Ages to the early 19th

*Address:* R. das Janelas Verdes, 1249-017 Lisboa, Portugal.

*Opening hours:* Tuesday to Sunday, 10:00 AM – 6:00 PM.

### **2. Luz stadium**

Luz Stadium was initially built in the Fifties and quickly became prized terrain for the Portuguese club, S.S. Benfica. Visit the club itself and its on-site museum. You'll even gain access to the press and locker rooms.

*Address* Av. Eusébio da Silva Ferreira, 1500-313 Lisboa, Portugal.

*Opening hours:* Jun-Sep: 09:30 AM - 19:00 PM and Oct-May: 10:00 AM - 6:00 PM.

*However, the stadium is closed on match days, so please check the Sport Lisbon and Benfica Stadium website for further information.*

### **3. Fado Museum (Museu do Fado)**

*Address:* Alfama, Largo do Chafariz de Dentro 1, 1100-139 Lisboa, Portugal.

*Opening hours:* Tuesday to Sunday, 10:00 AM – 6:00 PM. Closed Mondays.

### **4. Museum of Art, Architecture and Technology (MAAT)**

*Address:* Wednesday to Monday, 11:00 AM - 7:00 PM (last entry at 6:30 PM). Closed on Tuesdays.

*Opening hours:* Av. Brasília, 1300-598 Lisboa.

### **5. National Tile Museum (Museu Nacional do Azulejo)**

*Address:* R. Me. Deus 4, 1900-312 Lisboa, Portugal.

*Opening hours:* Open Tuesday to Sunday, 10:00 AM-6:00 PM. Closed Mondays.

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<sup>10</sup> <https://www.getyourguide.com/explorer/lisbon-ttd42/best-museums-in-lisbon/>

## **6. Immersivus Gallery Lisboa**

*Address:* Praça das Amoreiras 10-1250-020.

*Opening hours:* Tuesday-Sunday, afternoon to evening (hours vary). Closed Mondays.

## **7. Calouste Gulbenkian Museum Lisbon (Museu Calouste Gulbenkian)**

*Address:* Av. de Berna 45A, 1067-001 Lisboa, Portugal.

*Opening hours:* Tuesday to Sunday, 10:00 AM – 6:00 PM. Closed Mondays.

## **8. Belém Tower: Lisbon's Iconic Maritime Sentinel**

*Address:* Av. Brasília, 1400-038 Lisbon.

*Opening hours:* Tuesday-Sunday, 10:00 AM - 5:30 PM (Oct-May) / 6:30 PM (May-Sept).

## **9. Maritime Museum (Museu de Marinha) Lisbon**

*Address:* Praça do Império, 1400-206 Lisboa.

*Opening hours:* Tuesday-Sunday, 10:00 AM - 5:00 PM (October-March) / 6:00 PM (April-September)

## **10. Calouste Gulbenkian Planetarium**

*Address:* Tuesday-Sunday, 10:00 AM - 12:00 PM and 1:30 PM - 4:00 PM on Tuesdays and Wednesdays and 10:00 AM - 12:00 PM and 1:30 PM - 5:00 PM Thursday - Sunday. Closed Mondays.

*Opening hours:* Empire Square, Praça do Império, 1400-206 Lisboa, Portugal.

## **11. Money Museum (Museu do Dinheiro)**

*Address:* Largo de São Julião, 1100-150 Lisboa, Portugal.

*Opening hours:* Wednesday to Saturday, 10:00 AM - 6:00 PM.

Free entry.

## **12. 3D Fun Art Museum Lisbon**

*Address:* Av. Miguel Bombarda, 1050-162 Lisboa, Portugal.

*Opening hours:* daily, 10:00 AM - 6:00 PM.

## **13. National Coach Museum (Museu Nacional dos Coches)**

*Address:* Av. da Índia 136, 1300-300 Lisboa, Portugal.

*Opening hours:* Tuesday to Sunday, 10:00 AM - 6:00 PM (last admission at 5:30 PM).

Closed on Mondays and select holidays

## **14. Royal Treasure Museum**

*Address:* Largo da Ajuda, 1349-021 Lisboa, Portugal.

*Opening hours: Open daily (hours vary by season). Check the official website for current times.*

### **15. Banksy Museum Lisbon: Street Art Masterpieces in Portugal's Capital**

*Address:* Museu Banksy, R. Viriato, 1050-234 Lisboa.

*Opening hours:* Mon-Fri 1:00-8:00 PM, Weekends 11:00 AM-8:00 PM

#### **FAQs**

#### **What are the most famous museums in Lisbon?**

The most famous museums in Lisbon include the National Museum of Ancient Art, Calouste Gulbenkian Museum, Belém Tower, MAAT (Museum of Art, Architecture and Technology), National Tile Museum, and the National Coach Museum.

#### **What are the best times to visit Lisbon's museums to avoid crowds?**

Generally, early mornings on weekdays are less crowded. Many museums are closed on Mondays, so Tuesdays can be busier. Consider visiting popular museums like the National Tile Museum or Belém Tower later in the afternoon to avoid peak tourist hours.

#### **Are there any combo tickets, discounts, or museum passes for visiting multiple museums in Lisbon?**

Yes, the Lisboa Card offers free entry to over 35 museums and monuments, including many on this list. A Lisbon city card is available in 24, 48, or 72-hour options and includes free public transportation. Some museums also offer combined tickets with nearby attractions.

Which Lisbon museums are most suitable for families with children?

The 3D Fun Art Museum, with its interactive exhibits, is a hit with kids. The Maritime Museum (Museu de Marinha) is family-friendly, with impressive ship models. For a unique experience, try the Calouste Gulbenkian Planetarium, which offers engaging shows for all ages.

#### **Are there any free museums in Lisbon?**

Ironically, the Money Museum (Museu do Dinheiro) is free. The Calouste Gulbenkian Museum is free on Sundays from 2:00 PM. The MAAT offers free entry on the first Sunday of each month. Many museums offer free entry on May 18th, International Museums Day.

#### **How accessible are Lisbon's museums for visitors with mobility challenges?**

Most modern museums like MAAT and the National Coach Museum are fully accessible. Historic buildings like the National Tile Museum have made efforts to improve accessibility, but some areas may still be challenging. It's best to check each museum's website for specific accessibility information.



## Can I take photographs inside Lisbon's museums?

Photography policies vary. Many museums allow non-flash photography for personal use, but some, like the Calouste Gulbenkian Museum, have restrictions in certain areas. Always check the policy at the entrance or with staff before taking photos.

## ***Libraries in Lisbon<sup>11</sup>***

***The National Library of Portugal (BNP) is the guardian of Portuguese bibliographic heritage.<sup>12</sup>***

Two hundred skilled professionals, including those from the Public Library of Évora, work with us. Every day, they seek to honour the memory of two institutions that, although created in the 18th century, look forward to the future by firmly committing themselves to a strategy of modernisation.

Our two main objectives are, on one hand, to rely on the involvement of everyone who works here in order to link the library to the most innovative information systems. On the other, it is to put ourselves on par with similar international institutions. In achieving these two objectives, we will fight for democratic procedures and do everything we can to further internationalise our institution. Our mission and sense of public service follow the BNP's ambition, which is not insignificant, to remain an institution of reference in the broader context of Portuguese culture.

Located in the heart of Campo Grande, in an imposing building by the architect Porfírio Pardal Monteiro, it has the largest bibliographic collection in Portugal and is the largest library in the country.

The National Library of Portugal is the largest library in the country and a prestigious institution on the cultural scene. We collect, process and preserve the nation's bibliographic heritage and make it available to the intellectual and scientific community. Using the latest technologies, we make it possible to conduct [online bibliographic research](#) from anywhere in the world.

The National Library of Portugal has a wide variety of collections that encompass documentation from every era, of every type and on every subject. A combination of the legal deposit system, acquisitions and donations mean that our holdings are constantly evolving. Naturally, we place a special emphasis on Portuguese works. Subject to the terms and conditions of the [General Access Regulations](#), the BNP's holdings are accessible on-site to any Portuguese or foreign researcher who is over the age of 18 and holds a Reader's Card. In many cases, access is also possible from other libraries, using the inter-library lending service, or, in the case of works that have already been digitised, directly online via the [National Digital Library](#).

Address: Campo Grande, 83 – Lisboa

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<sup>11</sup> <https://www.artsoulgroup.com/en/blog/the-7-most-beautiful-libraries-in-lisbon/>

<sup>12</sup> <https://www.bnportugal.gov.pt/index.php?lang=en>

### *The Municipal Library of St. Lazarus*<sup>13</sup>

#### ***Biblioteca São Lázaro***

Nestled within Lisbon's vibrant cultural landscape, the Municipal Library of St. Lazarus (Biblioteca Municipal de São Lázaro) stands as a testament to the city's rich literary heritage. Established in 1883, this esteemed institution is housed in a magnificent neoclassical building, epitomizing the elegance of erudite architecture.

Under the stewardship of the Arroios Parish Council and conveniently situated adjacent to Lisbon's Elementary School No. 1, near Martim Moniz, the library's origins can be traced back to its humble beginnings as a school library. Today, it remains committed to fostering a love for reading among the younger generation, making it a focal point for engaging literary activities and events. Moreover, it attracts a diverse audience, including many foreigners who are captivated by the library's ambiance and the multicultural spirit of its surroundings.

Distinguished by its extensive operating hours, the Biblioteca Municipal de São Lázaro proudly boasts a growing collection that caters to a wide range of interests. Visitors will discover an abundance of children's literature, captivating historical accounts, literary masterpieces, an extensive array of comic books, and a vast selection of DVDs. The library serves as a cultural haven, catering not only to those who venture into the heart of Lisbon but also extending its warm embrace to the local community.

Despite its illustrious history spanning over 135 years, the Municipal Library of St. Lazarus remains a hidden gem that often escapes the well-trodden paths of the city's cultural and tourist circuits. Tucked away between the enchanting realms of Martim Moniz and Campo Santana, it continues to be an undiscovered treasure waiting to be explored.

At first glance, the neoclassical exterior may not demand immediate attention. However, as you step inside, a world of literary marvels unfolds before your eyes. The Noble Hall, the crown jewel of the library, beckons with its majestic presence. Delight in the hexagonal layout adorned with opulent woodwork, evoking an ambiance that exudes both grace and reverence. A focal point within the hall, an impressive chandelier illuminates the space, casting a warm glow upon the shelves teeming with literary treasures. As you ascend the intriguing spiral staircase leading to the mezzanine, the room envelops you in a sense of tranquility and inspiration.

Within the library's various chambers, more than 20,000 documents await discovery. Its extensive collection encompasses an impressive range of literary works, including captivating children's books, diverse works of literature, technical manuals, enlightening magazines, informative newspapers, and an assortment of CDs and DVDs. In addition to its extensive catalog, the library hosts a myriad of engaging activities catered to different age groups. Children can immerse themselves in captivating storytelling sessions, partake in interactive workshops, or even explore their creative side through yoga and dance classes. Meanwhile, adults can join the Book Club, fostering lively discussions, or attend enlightening book presentations that fuel intellectual curiosity.

For over a century, the Municipal Library of St. Lazarus, now under the dedicated management of the Arroios Parish Council, has faithfully served generations of Lisbon residents. Its

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<sup>13</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/the-municipal-library-of-st-lazarus-biblioteca-municipal-de-sao-lazaro>

enduring legacy stands as a testament to its unwavering commitment to nurturing a passion for literature and knowledge. Venture through its doors and unveil the secrets hidden among its countless shelves. Who knows? Within the depths of this remarkable establishment, you may just stumble upon the book that forever alters the course of your life's narrative. Founded in 1883, it boasts the title of the oldest library in the city, with over 20,000 documents. Its Noble Hall is beautiful with its fine wood shelves, the spiral bamboo staircase, and a central chandelier.

Address: R. do Saco, 1 – Lisboa

### ***Galveias Palace Library***

#### ***Biblioteca Municipal Palácio Galveias<sup>14</sup>***

Galveias Palace, home to the Municipal Library Palácio Galveias, is a remarkable public library situated in Lisbon. Nestled within the Avenidas Novas district, it resides in the stunning 17th-century Galveias Palace, considered one of Lisbon's most beautiful noble palaces and an exemplary Portuguese manor house of the 17th century.

Originally constructed as a country residence for the Marquises of Távora in the mid-17th century, Galveias Palace later became a significant part of the renowned Távora family's history until it was confiscated by the State in 1759. In 1801, it was acquired by D. João de Almeida de Melo e Castro, the 5th Count of Galveias, who initiated restoration works. Subsequently, it changed ownership and eventually came under the possession of the Lisbon Municipal Council in 1928, which transformed it into a municipal library.

In 2015, the library temporarily closed its doors to undergo extensive renovation and expansion, aiming to transform it into a 21st-century library with enhanced facilities and engaging spaces for the community. The renovation project increased the usable area from approximately 1,336.05 m<sup>2</sup> to 2,040.10 m<sup>2</sup>. After an estimated closure period of 18 months, Galveias Palace Library reopened its doors on June 10, 2017, offering an enriched experience for visitors.

The revamped library now boasts 220 additional seats, expanding its capacity to accommodate more patrons. With an extra 700 m<sup>2</sup> of space, it incorporates extended study rooms, a dedicated children's area, versatile workspaces, and free internet access. The library also features a lounge area, providing a comfortable and inviting environment for visitors. This ambitious renovation project required an investment of 2.5 million euros, resulting in a revitalized community resource.

Architecturally, Galveias Palace exhibits a perfectly symmetrical layout with a U-shaped floor plan influenced by French design. The imposing structure is distinguished by its precise architectural lines. Notably, the U-shaped layout is enclosed by a surrounding wall that houses the main gate—a solution frequently employed during the 17th century, prevalent throughout Portugal. The courtyard of Galveias Palace showcases intriguing semi-circular Renaissance-style pediments above its balcony windows, a feature also found in religious architecture from the early 17th century.

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<sup>14</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/galveias-palace-library-biblioteca-municipal-palacio-galveias>

Upon observing the palace's exterior, one cannot miss the heraldic gate, exquisitely adorned in the mannerist style and prominently displaying the arms of the city of Lisbon. The grand entrance hall, known as the noble courtyard, forms an impressive square, serving as a majestic gateway to this historic property.

Throughout the years, Galveias Palace has undergone significant interior transformations and improvements while preserving its original exterior architecture, with the exception of the noble courtyard. The renovation works conducted between 1929 and 1931 left a lasting impact on the interior design, ensuring the preservation of its outer aesthetics.

Today, Galveias Palace stands as a captivating testament to Lisbon's architectural heritage, seamlessly blending its historic significance with modern library facilities. As the Municipal Library Palácio Galveias, it continues to serve as a vibrant hub for knowledge, culture, and community engagement, attracting visitors from near and far.

Address: Campo Pequeno – Lisboa

### ***Library of the Academy of Sciences of Lisbon<sup>15</sup>***

#### ***Biblioteca da Academia das Ciências***

Welcome to Biblioteca da Academia das Ciências de Lisboa (Library of the Academy of Sciences of Lisbon), a captivating haven of knowledge nestled in the heart of Lisbon. This esteemed institution stands as one of Portugal's most significant libraries, merging the collections of the Lisbon Academy of Sciences and the Convent of Jesus Library.

180 The Biblioteca da Academia das Ciências de Lisboa (Library of the Academy of Sciences of Lisbon) stands as one of Portugal's most esteemed libraries. It emerged from the merging of the collections of the Academy of Sciences of Lisbon and the Library of the Convent of Jesus. Following the dissolution of religious orders in 1834, the convent and its library were entrusted to the Academy by the state. Particularly noteworthy was the contribution of Frei Manuel do Cenáculo, who significantly enriched the library's collection with numerous rare works during his tenure.

The library houses an extensive collection encompassing scientific works by renowned authors such as Johannes Kepler, Isaac Newton, Carl Linnaeus, and Georges-Louis Leclerc, among others. It also includes works on philosophy, theology, literature, and art, featuring incunabula, manuscripts (around 3,000 exemplars), periodicals, and an invaluable collection of rare books dating from the 14th to the 16th centuries. The library comprises approximately one million species of knowledge, not only from Portuguese sources but also from diverse origins, including notable Islamic and Chinese contributions, as well as works from Spain and other European countries.

Among its remarkable holdings are ancient treasures, including a 12th-century parchment with a donation from Queen D. Teresa and her son D. Afonso Henriques, as well as works from the 14th, 15th, and 16th centuries. The Baroque and Neoclassical periods are equally well-represented, particularly through the volumes that were part of the Library of the Convent of Jesus. The library also boasts a valuable editorial collection from the 19th and 20th centuries, primarily focusing on history and literature.

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<sup>15</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/library-of-the-academy-of-sciences-of-lisbon-biblioteca-da-academia-das-ciencias-de-lisboa>

Preserving the library's invaluable heritage is of utmost importance. Notable items include a magnificent copy of the *Crónica Geral de Espanha* from 1344, commissioned by D. Duarte during the reign of D. João I; the Book of Hours of the Countess of Bertiandos, dating back to the first half of the 16th century; the Missal of Estêvão Gonçalves Neto (1610 – c. 1620), a masterpiece of Portuguese illumination; the *Livro das Armadas*, an eloquent testament to Portuguese navigation, its triumphs, and dramas; and the renowned Atlas of Lázaro Luís, perhaps the first to feature Japan, among others. The collection has been adequately cataloged and extensively digitized.

The library's facilities include an imposing hall known as the "Salão de Pedro Alexandrino" (named after the artist responsible for its ceiling frescoes), now serving as the Salão Nobre (Main Hall) of the Academy. This hall, constructed after the devastating 1755 earthquake and subsequently added to the repaired Convent, was inaugurated in 1795 by D. João VI. Noteworthy features include the ornate bookshelves, Pedro Alexandrino's paintings, the President's table, and a frieze of busts depicting notable personalities that dominate the space. The open Reading Room, accessible to scholars, researchers, and the general public as per regulations, provides exceptional support for research across various domains.

In conclusion, the Academy of Sciences Library, with its rich and diverse collection, represents a treasure trove of knowledge. It preserves and promotes Portugal's cultural and scientific heritage, making it an invaluable resource for academics, researchers, and the curious public alike. Step into this captivating realm of intellectual exploration and embark on a journey through time, as you immerse yourself in the wealth of wisdom preserved within the library's hallowed halls.

Address: R. Academia das Ciências, 19 – Lisboa

### ***Passos Manuel Library<sup>16</sup>***

#### ***Biblioteca Passos Manuel (Assembleia da República)***

Nestled within the historic walls of the Palácio de São Bento, the Passos Manuel Library stands as a beacon of intellectual exploration and legislative scholarship. Serving as the official library of the Portuguese Parliament, it houses a specialized collection of over 180,000 volumes, predominantly focusing on parliamentary affairs, law, political science, history, economics, and statistics.

The Library of the Assembly of the Republic has more than 180,000 volumes, most of which are related to parliamentary activity, but also has books on History, Law, Economics, Statistics and texts from international organizations.

Established by decree of Minister Passos Manuel in 1836, the library found its permanent home in 1921, within the former dormitories of the ancient São Bento Monastery. In a touching tribute to its founder, the library was renamed Passos Manuel Library during a small ceremony on October 25, 2017, marking the bicentenary of the Liberal Revolution of 1820.

Located on the noble floor of the Palácio de São Bento, the Passos Manuel Library occupies four rooms that were once inhabited by the monks of the São Bento da Saúde Monastery. Its origins can be traced back to the former Library of the Cortes, established in 1836 by Minister Manuel da Silva Passos to serve the legislative body. Initially situated in the former choir of

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<sup>16</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/passos-manuel-library-biblioteca-passos-manuel>

the Benedictine church (now the Salão Nobre), it housed around 7,300 volumes from the General Repository of Libraries of Extinct Convents, created in 1834.

In 1921, following the approval of a bibliographic organizational plan, the library was permanently relocated to its present location. However, it was not until 1936, during the Estado Novo period, that the library, then known as the Library of the National Assembly, was redesigned by Adolfo Marques da Silva. It was furnished with two-story bookshelves, gallery access, reading tables, and oak wooden chairs, aiming to recreate the ambiance of a Renaissance convent library. The main room proudly displays busts of António de Oliveira Salazar, sculpted by Francisco Franco, and Passos Manuel, sculpted by Anatole Calmels.

Following the [The Carnation Revolution in 1974](#), the library was renamed the Library of the Assembly of the Republic, and its furniture underwent remodeling, though some pieces from that era are still preserved in the main room. The bust of Passos Manuel remains at the center of the room, serving as a testament to the library's enduring connection to its founder.

Today, known as the Passos Manuel Library, it houses an impressive collection of over 180,000 volumes. The majority of these resources are directly related to parliamentary activities, while others cover a wide range of subjects including law, political science, history, economics, statistics, and texts from international organizations. Additionally, the library houses a reserved collection of ancient documents, including works dating from the 16th to the 18th centuries. As the heart of parliamentary knowledge, the Passos Manuel Library not only supports the legislative endeavors of the assembly but also welcomes citizens in need of information in these areas.

Within its hallowed halls, the Passos Manuel Library stands as a testament to the intertwining of knowledge, history, and democracy. It embodies the enduring spirit of Passos Manuel and his vision for a library that would serve as a bastion of learning and enlightenment for generations to come. As visitors explore the library's shelves, delve into its historic texts, and bask in its serene atmosphere, they bear witness to the power of literature and the importance of preserving the rich heritage of parliamentary discourse. The Passos Manuel Library stands as a true treasure, a sanctuary of ideas and a bridge between the past, present, and future of Portugal's democratic legacy.

Address: Av. D. Carlos I, 128-132 – Lisboa

### ***Portuguese Red Cross Library<sup>17</sup>***

#### ***Biblioteca da Cruz Vermelha Portuguesa***

Nestled within the historic Palácio dos Condes d'Óbidos, the headquarters of the Portuguese Red Cross, lies a hidden gem that has captivated visitors for decades, the magnificent Library of the Portuguese Red Cross. Since its establishment in 1935, this awe-inspiring library has served as a beacon of knowledge and compassion, embodying the mission and values of the esteemed humanitarian organization.

With its exquisite architecture, impressive collection of books, and emphasis on the International Red Cross Movement and International Humanitarian Law, this library stands as

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<sup>17</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/the-portuguese-red-cross-library-biblioteca-da-cruz-vermelha-portuguesa>

a testament to the enduring commitment of the Portuguese Red Cross to promote understanding, empathy, and social progress.

Upon entering Biblioteca da Cruz Vermelha Portuguesa, visitors are immediately transported into a world of architectural splendor. The library is designed as a faithful replica of the renowned Salão Nobre (Noble Hall) of the [Academy of Sciences](#) in Lisbon, showcasing the meticulous attention to detail and reverence for tradition. The ceilings, adorned with ornate paintings, depict allegorical representations of the Liberal Arts, offering a visual feast for the eyes. These intricate artworks, accompanied by a central panel by the renowned artist Gabriel Constante, create a serene and inspirational ambiance within the library's walls.

One of the most striking features of the Library of the Portuguese Red Cross is the presence of an imposing crystal chandelier suspended from the ceiling. This magnificent fixture, produced by the renowned Fábrica da Marinha Grande, casts a mesmerizing glow, illuminating the library and adding a touch of grandeur to the surroundings. As visitors peruse the shelves, the sparkling light from the chandelier reflects off the polished covers of the books, creating a captivating interplay between light and knowledge.

Beyond its architectural grandeur, the location of the library itself is a sight to behold. Situated within the [Condes de Óbidos Palace \(Palácio dos Condes de Óbidos\)](#), the building offers a breathtaking panoramic view of the majestic [Tagus River \(Rio Tejo\)](#). Designated as a property of public interest in 1993, the Palácio dos Condes d'Óbidos stands as a testament to Lisbon's rich history and cultural heritage. As visitors explore the library's treasures, they can also marvel at the picturesque scenery that surrounds this iconic building.

The Library of the Portuguese Red Cross houses an impressive collection of approximately 20,000 books, embodying a diverse range of subjects and disciplines. While the library encompasses various fields of study, its primary focus lies in the International Red Cross Movement and International Humanitarian Law. The curated selection of literature reflects the organization's commitment to advancing the understanding of humanitarian principles, promoting human rights, and facilitating the dissemination of knowledge that can positively impact communities in need.

Biblioteca da Cruz Vermelha Portuguesa not only preserves historical records but also serves as a source of inspiration and learning for future generations. Its collection includes monographs, national and international periodicals, and an extensive range of publications related to humanitarian issues. Additionally, the library houses military legislation dating back to 1865 and national legislation from 1849, providing a comprehensive resource for researchers, scholars, and individuals seeking a deeper understanding of humanitarian practices, past and present.

While the Library of the Portuguese Red Cross primarily serves the organization's members and staff, it is also open to the public, offering a unique opportunity for intellectual exploration. Visitors interested in delving into the humanitarian field, gaining insights into the principles of the International Red Cross Movement, or immersing themselves in the vast knowledge of International Humanitarian Law are welcomed to make a prior appointment and discover the treasures that lie within this sanctuary of wisdom.

In the heart of Lisbon, within the Palácio dos Condes d'Óbidos, the Library of the Portuguese Red Cross stands as a testament to the enduring pursuit of knowledge, compassion, and humanitarian ideals. From its remarkable architectural features to its extensive collection of

books, this library invites visitors to embark on a journey of enlightenment, fostering a deeper understanding of the International Red Cross Movement and the principles that guide it. As a custodian of history, a haven for scholars, and a symbol of compassion, the Library of the Portuguese Red Cross represents the invaluable role that knowledge and empathy play in shaping a better world.

Address: Jardim 9 de Abril, 1 a 5 – Lisboa

### ***Public Libraries in Lisbon*<sup>18</sup>**

The public libraries in Lisbon are full of history and charm. The shelves are lined with books and the spaces are magic-filled.

As famous as Lisbon is for its beauty, buildings, and history, the libraries are no exception. Many of the Lisbon libraries are tucked into [corners of museums](#) or used to be former palaces. Today, I highlight some of these public libraries in Lisbon that you can visit. You can sit and read a magazine, newspaper, or book or work quietly.

So, whether you are a book lover or seeker of knowledge, explore this vast collection of Lisbon libraries to enjoy the pleasures of architecture and reading.

The public libraries in Lisbon are not just places to find and read books; they are architectural treasures filled with history and charm.

### ***Belém Library***

On the west side of Lisbon, you find the [Municipal Library of Belem](#). The Library in Lisbon has been here since 1965. It is on the western side of the Marquises of Angeja palace, in a wing dating back to the 18th century. Here, you will find an exciting collection of curiosities to explore whether you want leisure, culture, or heritage.

Once you step inside **Belém Library**, you will see a **tranquil garden** with a beautiful cafe where you can relax. The beverages and meals you enjoy here support the Hearts with Crown Association.

The foundation focuses on women's empowerment to help improve their quality of life. The Library is a vibrant hub for community engagement and has a diverse program of activities. It is one of many public libraries spread over two floors with multiple rooms for cultural events, reading, and studying.

**Tip:** Head to the second floor for breathtaking views of the Tagus River, a serene atmosphere for visitors. Address: R. da Junqueira 295 297 Opening Time, 10:00 AM.

### ***Ajuda Library***

The Ajuda Palace, one of Lisbon's noble palaces, is an [architectural marvel](#) with an extensive collection of books dating back to the 15th century. It is a **treasure trove of rare books, manuscripts, and historical artifacts**. Biblioteca da Ajuda used to be the Royal Library, but most of its valuable holdings were lost in the 1755 earthquake.

Yet, it remains a beautiful library with invaluable collections spanning over 3 km of shelves. One extraordinary piece with historical value is the Cancioneiro da Ajuda.

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<sup>18</sup> <https://lisboavibes.com/libraries-in-lisbon/>



The medieval songbook offers scholars and music enthusiasts a captivating glimpse into past music traditions.

**Tip:** Lisbon has some great libraries, and you can also check out these [great theatres](#).

Address: Largo da Ajuda 31 Opening 9:30 AM

### ***Biblioteca de Marvila***

Public Library

The library marvel designed by Architect Hestnes Ferreira is in the historic Quinta das Fontes building. It also has an auditorium that can accommodate 172 people. It blends old and new, creating a vibrant present.

The **Library is a cultural lifeline for the community**. It focuses mainly on children and teens who create and play video games and provides programs to engage and inspire visitors.

A local event is the Dias de Maravilla, a haven for gaming enthusiasts. The Human Library stands out for its social impact and has added community-oriented endeavors like the Meio no Meio, Visionários, and Sê Bairrista.

These play a huge role in community development and add cultural engagement.

Address: R. António Gedeão, opening Time 10:00 AM

### ***Coruchéus Library***

Municipal Library

The Palace of Coruchéus has a mysterious history. It used to be a manor house-like building with origins dating back to the 17th century. The building suffered greatly during the earthquake and then underwent a vast transformation.

It is an **L-shaped building with panels** decorated with blue and white tiles dating to the 18th century. The panels feature bucolic scenes and huge flower jars. The property has been passed between several owners since the 19th century.

It ended up with the City Council in 1945, and 1966 it was a warehouse. Afterward, the Center of Plastic Arts made another attempt at construction.

Since 2013, it has been the [Corucheus public library](#) for locals to visit and tourists to explore.

Address: Palácios dos Coruchéus Opening Time 10:00 AM

### ***Camões Public Library***

[Biblioteca Camoes](#) is also found in an old palace building in Lisbon's historical center, Calhariz Square, on the corner of Duarte Belo and Rua da Bica. The **building dates back to the 15th century** and belonged to the family Marquises of Távora.

Still, the current building underwent many reconstructions after the earthquake. From the 19th century until 1922, it belonged to the Azambuja family. You first notice the imposing facade, which has a round window surrounded by low-relief and plant-inspired motifs.

In the 20th century, the building underwent several changes to match the commercial shops. Another main attraction compared to the other libraries in Lisbon is the big panels of tiles seen from the outside.

To get access to the Library, you see a stucco relief that embellishes the staircase.

**Tip:** Also, check out some of these [bookstores in Lisbon](#) to find interesting books to read.

Address: Largo Calhariz 17 1º andar Opening Time 10:00 AM ***Libraries in Lisbon***<sup>19</sup>  
***The National Library of Portugal (BNP) is the guardian of Portuguese bibliographic heritage.***<sup>20</sup>

Two hundred skilled professionals, including those from the Public Library of Évora, work with us. Every day, they seek to honour the memory of two institutions that, although created in the 18th century, look forward to the future by firmly committing themselves to a strategy of modernisation.

Our two main objectives are, on one hand, to rely on the involvement of everyone who works here in order to link the library to the most innovative information systems. On the other, it is to put ourselves on par with similar international institutions. In achieving these two objectives, we will fight for democratic procedures and do everything we can to further internationalise our institution. Our mission and sense of public service follow the BNP's ambition, which is not insignificant, to remain an institution of reference in the broader context of Portuguese culture.

Located in the heart of Campo Grande, in an imposing building by the architect Porfírio Pardal Monteiro, it has the largest bibliographic collection in Portugal and is the largest library in the country.

The National Library of Portugal is the largest library in the country and a prestigious institution on the cultural scene. We collect, process and preserve the nation's bibliographic heritage and make it available to the intellectual and scientific community. Using the latest technologies, we make it possible to conduct [online bibliographic research](#) from anywhere in the world.

The National Library of Portugal has a wide variety of collections that encompass documentation from every era, of every type and on every subject. A combination of the legal deposit system, acquisitions and donations mean that our holdings are constantly evolving. Naturally, we place a special emphasis on Portuguese works. Subject to the terms and conditions of the [General Access Regulations](#), the BNP's holdings are accessible on-site to any Portuguese or foreign researcher who is over the age of 18 and holds a Reader's Card. In many cases, access is also possible from other libraries, using the inter-library lending service, or, in the case of works that have already been digitised, directly online via the [National Digital Library](#).

Address: Campo Grande, 83 – Lisboa

### ***The Municipal Library of St. Lazarus***<sup>21</sup> ***Biblioteca São Lázaro***

Nestled within Lisbon's vibrant cultural landscape, the Municipal Library of St. Lazarus (Biblioteca Municipal de São Lázaro) stands as a testament to the city's rich literary heritage. Established in 1883, this esteemed institution is housed in a magnificent neoclassical building, epitomizing the elegance of erudite architecture.

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<sup>19</sup> <https://www.artsoulgroup.com/en/blog/the-7-most-beautiful-libraries-in-lisbon/>

<sup>20</sup> <https://www.bnportugal.gov.pt/index.php?lang=en>

<sup>21</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/the-municipal-library-of-st-lazarus-biblioteca-municipal-de-sao-lazaro>

Under the stewardship of the Arroios Parish Council and conveniently situated adjacent to Lisbon's Elementary School No. 1, near Martim Moniz, the library's origins can be traced back to its humble beginnings as a school library. Today, it remains committed to fostering a love for reading among the younger generation, making it a focal point for engaging literary activities and events. Moreover, it attracts a diverse audience, including many foreigners who are captivated by the library's ambiance and the multicultural spirit of its surroundings.

Distinguished by its extensive operating hours, the Biblioteca Municipal de São Lázaro proudly boasts a growing collection that caters to a wide range of interests. Visitors will discover an abundance of children's literature, captivating historical accounts, literary masterpieces, an extensive array of comic books, and a vast selection of DVDs. The library serves as a cultural haven, catering not only to those who venture into the heart of Lisbon but also extending its warm embrace to the local community.

Despite its illustrious history spanning over 135 years, the Municipal Library of St. Lazarus remains a hidden gem that often escapes the well-trodden paths of the city's cultural and tourist circuits. Tucked away between the enchanting realms of Martim Moniz and Campo Santana, it continues to be an undiscovered treasure waiting to be explored.

At first glance, the neoclassical exterior may not demand immediate attention. However, as you step inside, a world of literary marvels unfolds before your eyes. The Noble Hall, the crown jewel of the library, beckons with its majestic presence. Delight in the hexagonal layout adorned with opulent woodwork, evoking an ambiance that exudes both grace and reverence.

A focal point within the hall, an impressive chandelier illuminates the space, casting a warm glow upon the shelves teeming with literary treasures. As you ascend the intriguing spiral staircase leading to the mezzanine, the room envelops you in a sense of tranquility and inspiration.

Within the library's various chambers, more than 20,000 documents await discovery. Its extensive collection encompasses an impressive range of literary works, including captivating children's books, diverse works of literature, technical manuals, enlightening magazines, informative newspapers, and an assortment of CDs and DVDs. In addition to its extensive catalog, the library hosts a myriad of engaging activities catered to different age groups. Children can immerse themselves in captivating storytelling sessions, partake in interactive workshops, or even explore their creative side through yoga and dance classes. Meanwhile, adults can join the Book Club, fostering lively discussions, or attend enlightening book presentations that fuel intellectual curiosity.

For over a century, the Municipal Library of St. Lazarus, now under the dedicated management of the Arroios Parish Council, has faithfully served generations of Lisbon residents. Its enduring legacy stands as a testament to its unwavering commitment to nurturing a passion for literature and knowledge. Venture through its doors and unveil the secrets hidden among its countless shelves. Who knows? Within the depths of this remarkable establishment, you may just stumble upon the book that forever alters the course of your life's narrative. Founded in 1883, it boasts the title of the oldest library in the city, with over 20,000 documents. Its Noble Hall is beautiful with its fine wood shelves, the spiral bamboo staircase, and a central chandelier.

Address: R. do Saco, 1 – Lisboa

### *Galveias Palace Library*

#### *Biblioteca Municipal Palácio Galveias*<sup>22</sup>

Galveias Palace, home to the Municipal Library Palácio Galveias, is a remarkable public library situated in Lisbon. Nestled within the Avenidas Novas district, it resides in the stunning 17th-century Galveias Palace, considered one of Lisbon's most beautiful noble palaces and an exemplary Portuguese manor house of the 17th century.

Originally constructed as a country residence for the Marquises of Távora in the mid-17th century, Galveias Palace later became a significant part of the renowned Távora family's history until it was confiscated by the State in 1759. In 1801, it was acquired by D. João de Almeida de Melo e Castro, the 5th Count of Galveias, who initiated restoration works. Subsequently, it changed ownership and eventually came under the possession of the Lisbon Municipal Council in 1928, which transformed it into a municipal library.

In 2015, the library temporarily closed its doors to undergo extensive renovation and expansion, aiming to transform it into a 21st-century library with enhanced facilities and engaging spaces for the community. The renovation project increased the usable area from approximately 1,336.05 m<sup>2</sup> to 2,040.10 m<sup>2</sup>. After an estimated closure period of 18 months, Galveias Palace Library reopened its doors on June 10, 2017, offering an enriched experience for visitors.

The revamped library now boasts 220 additional seats, expanding its capacity to accommodate more patrons. With an extra 700 m<sup>2</sup> of space, it incorporates extended study rooms, a dedicated children's area, versatile workspaces, and free internet access. The library also features a lounge area, providing a comfortable and inviting environment for visitors. This ambitious renovation project required an investment of 2.5 million euros, resulting in a revitalized community resource.

Architecturally, Galveias Palace exhibits a perfectly symmetrical layout with a U-shaped floor plan influenced by French design. The imposing structure is distinguished by its precise architectural lines. Notably, the U-shaped layout is enclosed by a surrounding wall that houses the main gate—a solution frequently employed during the 17th century, prevalent throughout Portugal. The courtyard of Galveias Palace showcases intriguing semi-circular Renaissance-style pediments above its balcony windows, a feature also found in religious architecture from the early 17th century.

Upon observing the palace's exterior, one cannot miss the heraldic gate, exquisitely adorned in the mannerist style and prominently displaying the arms of the city of Lisbon. The grand entrance hall, known as the noble courtyard, forms an impressive square, serving as a majestic gateway to this historic property.

Throughout the years, Galveias Palace has undergone significant interior transformations and improvements while preserving its original exterior architecture, with the exception of the noble courtyard. The renovation works conducted between 1929 and 1931 left a lasting impact on the interior design, ensuring the preservation of its outer aesthetics.

Today, Galveias Palace stands as a captivating testament to Lisbon's architectural heritage, seamlessly blending its historic significance with modern library facilities. As the Municipal

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<sup>22</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/galveias-palace-library-biblioteca-municipal-palacio-galveias>

Library Palácio Galveias, it continues to serve as a vibrant hub for knowledge, culture, and community engagement, attracting visitors from near and far.

Address: Campo Pequeno – Lisboa

### ***Library of the Academy of Sciences of Lisbon<sup>23</sup>***

#### ***Biblioteca da Academia das Ciências***

Welcome to Biblioteca da Academia das Ciências de Lisboa (Library of the Academy of Sciences of Lisbon), a captivating haven of knowledge nestled in the heart of Lisbon. This esteemed institution stands as one of Portugal's most significant libraries, merging the collections of the Lisbon Academy of Sciences and the Convent of Jesus Library.

The Biblioteca da Academia das Ciências de Lisboa (Library of the Academy of Sciences of Lisbon) stands as one of Portugal's most esteemed libraries. It emerged from the merging of the collections of the Academy of Sciences of Lisbon and the Library of the Convent of Jesus. Following the dissolution of religious orders in 1834, the convent and its library were entrusted to the Academy by the state. Particularly noteworthy was the contribution of Frei Manuel do Cenáculo, who significantly enriched the library's collection with numerous rare works during his tenure.

The library houses an extensive collection encompassing scientific works by renowned authors such as Johannes Kepler, Isaac Newton, Carl Linnaeus, and Georges-Louis Leclerc, among others. It also includes works on philosophy, theology, literature, and art, featuring incunabula, manuscripts (around 3,000 exemplars), periodicals, and an invaluable collection of rare books dating from the 14th to the 16th centuries. The library comprises approximately one million species of knowledge, not only from Portuguese sources but also from diverse origins, including notable Islamic and Chinese contributions, as well as works from Spain and other European countries.

Among its remarkable holdings are ancient treasures, including a 12th-century parchment with a donation from Queen D. Teresa and her son D. Afonso Henriques, as well as works from the 14th, 15th, and 16th centuries. The Baroque and Neoclassical periods are equally well-represented, particularly through the volumes that were part of the Library of the Convent of Jesus. The library also boasts a valuable editorial collection from the 19th and 20th centuries, primarily focusing on history and literature.

Preserving the library's invaluable heritage is of utmost importance. Notable items include a magnificent copy of the *Crónica Geral de Espanha* from 1344, commissioned by D. Duarte during the reign of D. João I; the *Book of Hours* of the Countess of Bertiandos, dating back to the first half of the 16th century; the *Missal* of Estêvão Gonçalves Neto (1610 – c. 1620), a masterpiece of Portuguese illumination; the *Livro das Armadas*, an eloquent testament to Portuguese navigation, its triumphs, and dramas; and the renowned *Atlas* of Lázaro Luís, perhaps the first to feature Japan, among others. The collection has been adequately cataloged and extensively digitized.

The library's facilities include an imposing hall known as the "Salão de Pedro Alexandrino" (named after the artist responsible for its ceiling frescoes), now serving as the Salão Nobre

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<sup>23</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/library-of-the-academy-of-sciences-of-lisbon-biblioteca-da-academia-das-ciencias-de-lisboa>

(Main Hall) of the Academy. This hall, constructed after the devastating 1755 earthquake and subsequently added to the repaired Convent, was inaugurated in 1795 by D. João VI. Noteworthy features include the ornate bookshelves, Pedro Alexandrino's paintings, the President's table, and a frieze of busts depicting notable personalities that dominate the space. The open Reading Room, accessible to scholars, researchers, and the general public as per regulations, provides exceptional support for research across various domains.

In conclusion, the Academy of Sciences Library, with its rich and diverse collection, represents a treasure trove of knowledge. It preserves and promotes Portugal's cultural and scientific heritage, making it an invaluable resource for academics, researchers, and the curious public alike. Step into this captivating realm of intellectual exploration and embark on a journey through time, as you immerse yourself in the wealth of wisdom preserved within the library's hallowed halls.

Address: R. Academia das Ciências, 19 – Lisboa

### ***Passos Manuel Library<sup>24</sup>***

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The Library of the Assembly of the Republic has more than 180,000 volumes, most of which are related to parliamentary activity, but also has books on History, Law, Economics, Statistics and texts from international organizations.

Established by decree of Minister Passos Manuel in 1836, the library found its permanent home in 1921, within the former dormitories of the ancient São Bento Monastery. In a touching tribute to its founder, the library was renamed Passos Manuel Library during a small ceremony on October 25, 2017, marking the bicentenary of the Liberal Revolution of 1820.

Located on the noble floor of the Palácio de São Bento, the Passos Manuel Library occupies four rooms that were once inhabited by the monks of the São Bento da Saúde Monastery. Its origins can be traced back to the former Library of the Cortes, established in 1836 by Minister Manuel da Silva Passos to serve the legislative body. Initially situated in the former choir of the Benedictine church (now the Salão Nobre), it housed around 7,300 volumes from the General Repository of Libraries of Extinct Convents, created in 1834.

In 1921, following the approval of a bibliographic organizational plan, the library was permanently relocated to its present location. However, it was not until 1936, during the Estado Novo period, that the library, then known as the Library of the National Assembly, was redesigned by Adolfo Marques da Silva. It was furnished with two-story bookshelves, gallery access, reading tables, and oak wooden chairs, aiming to recreate the ambiance of a Renaissance convent library. The main room proudly displays busts of António de Oliveira Salazar, sculpted by Francisco Franco, and Passos Manuel, sculpted by Anatole Calmels.

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<sup>24</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/passos-manuel-library-biblioteca-passos-manuel>

Following the [The Carnation Revolution in 1974](#), the library was renamed the Library of the Assembly of the Republic, and its furniture underwent remodeling, though some pieces from that era are still preserved in the main room. The bust of Passos Manuel remains at the center of the room, serving as a testament to the library's enduring connection to its founder.

Today, known as the Passos Manuel Library, it houses an impressive collection of over 180,000 volumes. The majority of these resources are directly related to parliamentary activities, while others cover a wide range of subjects including law, political science, history, economics, statistics, and texts from international organizations. Additionally, the library houses a reserved collection of ancient documents, including works dating from the 16th to the 18th centuries. As the heart of parliamentary knowledge, the Passos Manuel Library not only supports the legislative endeavors of the assembly but also welcomes citizens in need of information in these areas.

Within its hallowed halls, the Passos Manuel Library stands as a testament to the intertwining of knowledge, history, and democracy. It embodies the enduring spirit of Passos Manuel and his vision for a library that would serve as a bastion of learning and enlightenment for generations to come. As visitors explore the library's shelves, delve into its historic texts, and bask in its serene atmosphere, they bear witness to the power of literature and the importance of preserving the rich heritage of parliamentary discourse. The Passos Manuel Library stands as a true treasure, a sanctuary of ideas and a bridge between the past, present, and future of Portugal's democratic legacy.

Address: Av. D. Carlos I, 128-132 – Lisboa

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### ***Portuguese Red Cross Library<sup>25</sup>***

#### ***Biblioteca da Cruz Vermelha Portuguesa***

Nestled within the historic Palácio dos Condes d'Óbidos, the headquarters of the Portuguese Red Cross, lies a hidden gem that has captivated visitors for decades, the magnificent Library of the Portuguese Red Cross. Since its establishment in 1935, this awe-inspiring library has served as a beacon of knowledge and compassion, embodying the mission and values of the esteemed humanitarian organization.

With its exquisite architecture, impressive collection of books, and emphasis on the International Red Cross Movement and International Humanitarian Law, this library stands as a testament to the enduring commitment of the Portuguese Red Cross to promote understanding, empathy, and social progress.

Upon entering Biblioteca da Cruz Vermelha Portuguesa, visitors are immediately transported into a world of architectural splendor. The library is designed as a faithful replica of the renowned Salão Nobre (Noble Hall) of the [Academy of Sciences](#) in Lisbon, showcasing the meticulous attention to detail and reverence for tradition. The ceilings, adorned with ornate paintings, depict allegorical representations of the Liberal Arts, offering a visual feast for the eyes. These intricate artworks, accompanied by a central panel by the renowned artist Gabriel Constante, create a serene and inspirational ambiance within the library's walls.

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<sup>25</sup> <https://www.lisbon.vip/discover-lisbon/public-libraries/the-portuguese-red-cross-library-biblioteca-da-cruz-vermelha-portuguesa>

One of the most striking features of the Library of the Portuguese Red Cross is the presence of an imposing crystal chandelier suspended from the ceiling. This magnificent fixture, produced by the renowned Fábrica da Marinha Grande, casts a mesmerizing glow, illuminating the library and adding a touch of grandeur to the surroundings. As visitors peruse the shelves, the sparkling light from the chandelier reflects off the polished covers of the books, creating a captivating interplay between light and knowledge.

Beyond its architectural grandeur, the location of the library itself is a sight to behold. Situated within the [Condes de Óbidos Palace \(Palácio dos Condes de Óbidos\)](#), the building offers a breathtaking panoramic view of the majestic [Tagus River \(Rio Tejo\)](#). Designated as a property of public interest in 1993, the Palácio dos Condes d'Óbidos stands as a testament to Lisbon's rich history and cultural heritage. As visitors explore the library's treasures, they can also marvel at the picturesque scenery that surrounds this iconic building.

The Library of the Portuguese Red Cross houses an impressive collection of approximately 20,000 books, embodying a diverse range of subjects and disciplines. While the library encompasses various fields of study, its primary focus lies in the International Red Cross Movement and International Humanitarian Law. The curated selection of literature reflects the organization's commitment to advancing the understanding of humanitarian principles, promoting human rights, and facilitating the dissemination of knowledge that can positively impact communities in need.

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Biblioteca da Cruz Vermelha Portuguesa not only preserves historical records but also serves as a source of inspiration and learning for future generations. Its collection includes monographs, national and international periodicals, and an extensive range of publications related to humanitarian issues. Additionally, the library houses military legislation dating back to 1865 and national legislation from 1849, providing a comprehensive resource for researchers, scholars, and individuals seeking a deeper understanding of humanitarian practices, past and present.

While the Library of the Portuguese Red Cross primarily serves the organization's members and staff, it is also open to the public, offering a unique opportunity for intellectual exploration. Visitors interested in delving into the humanitarian field, gaining insights into the principles of the International Red Cross Movement, or immersing themselves in the vast knowledge of International Humanitarian Law are welcomed to make a prior appointment and discover the treasures that lie within this sanctuary of wisdom.

In the heart of Lisbon, within the Palácio dos Condes d'Óbidos, the Library of the Portuguese Red Cross stands as a testament to the enduring pursuit of knowledge, compassion, and humanitarian ideals. From its remarkable architectural features to its extensive collection of books, this library invites visitors to embark on a journey of enlightenment, fostering a deeper understanding of the International Red Cross Movement and the principles that guide it. As a custodian of history, a haven for scholars, and a symbol of compassion, the Library of the Portuguese Red Cross represents the invaluable role that knowledge and empathy play in shaping a better world.

Address: Jardim 9 de Abril, 1 a 5 – Lisboa



### *Public Libraries in Lisbon<sup>26</sup>*

The public libraries in Lisbon are full of history and charm. The shelves are lined with books and the spaces are magic-filled.

As famous as Lisbon is for its beauty, buildings, and history, the libraries are no exception. Many of the Lisbon libraries are tucked into [corners of museums](#) or used to be former palaces. Today, I highlight some of these public libraries in Lisbon that you can visit. You can sit and read a magazine, newspaper, or book or work quietly.

So, whether you are a book lover or seeker of knowledge, explore this vast collection of Lisbon libraries to enjoy the pleasures of architecture and reading.

The public libraries in Lisbon are not just places to find and read books; they are architectural treasures filled with history and charm.

#### *Belém Library*

On the west side of Lisbon, you find the [Municipal Library of Belem](#). The Library in Lisbon has been here since 1965. It is on the western side of the Marquises of Angeja palace, in a wing dating back to the 18th century. Here, you will find an exciting collection of curiosities to explore whether you want leisure, culture, or heritage.

Once you step inside **Belém Library, you will see a tranquil garden** with a beautiful cafe where you can relax. The beverages and meals you enjoy here support the Hearts with Crown Association.

The foundation focuses on women's empowerment to help improve their quality of life. The Library is a vibrant hub for community engagement and has a diverse program of activities. It is one of many public libraries spread over two floors with multiple rooms for cultural events, reading, and studying.

**Tip:** Head to the second floor for breathtaking views of the Tagus River, a serene atmosphere for visitors. Address: R. da Junqueira 295 297 Opening Time, 10:00 AM.

#### *Ajuda Library*

The Ajuda Palace, one of Lisbon's noble palaces, is an [architectural marvel](#) with an extensive collection of books dating back to the 15th century. It is a **treasure trove of rare books, manuscripts, and historical artifacts**. Biblioteca da Ajuda used to be the Royal Library, but most of its valuable holdings were lost in the 1755 earthquake.

Yet, it remains a beautiful library with invaluable collections spanning over 3 km of shelves. One extraordinary piece with historical value is the Cancioneiro da Ajuda.

The medieval songbook offers scholars and music enthusiasts a captivating glimpse into past music traditions.

**Tip:** Lisbon has some great libraries, and you can also check out these [great theatres](#).

Address: Largo da Ajuda 31 Opening 9:30 AM

#### *Biblioteca de Marvila*

Public Library

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<sup>26</sup> <https://lisboavibes.com/libraries-in-lisbon/>

The library marvel designed by Architect Hestnes Ferreira is in the historic Quinta das Fontes building. It also has an auditorium that can accommodate 172 people. It blends old and new, creating a vibrant present.

The **Library is a cultural lifeline for the community**. It focuses mainly on children and teens who create and play video games and provides programs to engage and inspire visitors.

A local event is the Dias de Maravilla, a haven for gaming enthusiasts. The Human Library stands out for its social impact and has added community-oriented endeavors like the Meio no Meio, Visionários, and Sê Bairrista.

These play a huge role in community development and add cultural engagement.

Address: R. António Gedeão, opening Time 10:00 AM

### ***Coruchéus Library***

Municipal Library

The Palace of Coruchéus has a mysterious history. It used to be a manor house-like building with origins dating back to the 17th century. The building suffered greatly during the earthquake and then underwent a vast transformation.

It is an **L-shaped building with panels** decorated with blue and white tiles dating to the 18th century. The panels feature bucolic scenes and huge flower jars. The property has been passed between several owners since the 19th century.

It ended up with the City Council in 1945, and 1966 it was a warehouse. Afterward, the Center of Plastic Arts made another attempt at construction.

Since 2013, it has been the [Corucheus public library](#) for locals to visit and tourists to explore.

Address: Palácios dos Coruchéus Opening Time 10:00 AM

### ***Camões Library***

Public Library

[Biblioteca Camoes](#) is also found in an old palace building in Lisbon's historical center, Calhariz Square, on the corner of Duarte Belo and Rua da Bica. The **building dates back to the 15th century** and belonged to the family Marquises of Távora.

Still, the current building underwent many reconstructions after the earthquake. From the 19th century until 1922, it belonged to the Azambuja family. You first notice the imposing facade, which has a round window surrounded by low-relief and plant-inspired motifs.

In the 20th century, the building underwent several changes to match the commercial shops. Another main attraction compared to the other libraries in Lisbon is the big panels of tiles seen from the outside.

To get access to the Library, you see a stucco relief that embellishes the staircase.

**Tip:** Also, check out some of these [bookstores in Lisbon](#) to find interesting books to read.

Address: Largo Calhariz 17 1º andar Opening Time 10:00 AM