

Exploring the Intersection of Electronic Theses and Dissertations (ETDs) and Open Science in the 21st Century Library Science Landscape through Analysis of OATD.org

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Introduction

- ◆ **Transformation in Scholarly Communication:** Advances in ICTs and open access have revolutionized scholarly communication, enhancing accessibility and fostering collaboration among researchers
- ◆ **Role of Electronic Theses and Dissertations (ETDs):** ETDs are pivotal in this landscape, providing valuable insights and contributing significantly to academic growth. The adoption of electronic formats has notably increased access to this knowledge
- ◆ **ETD Programs:** National and international ETD programs offer guidelines, standards, and software, streamlining processes and ensuring accessibility and long-term preservation of these scholarly works
- ◆ **Significance of ETDs in Library Science:** Within the realm of library science, ETDs serve as invaluable assets, encapsulating extensive research and diverse perspectives. Their alignment with Open Science principles is particularly noteworthy, enabling researchers to navigate existing knowledge and explore the latest advancements.

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Introduction

- ◆ **Focus of the Study:** This paper explores the intricate relationship between ETDs and Open Science in the library science domain. It meticulously examines the evolving landscape of these resources and their implications for effective information management
- ◆ **Research Objectives:** The study rigorously delves into the strategies and challenges associated with amplifying the outreach and influence of ETDs. It contributes significantly to the discourse on the transformative potential of Open Science in library science
- ◆ **Methodology:** The research analyzes the contemporary library science landscape of the 21st century by examining ETDs available on platforms like OATD.org. It scrutinizes diverse parameters, offering valuable insights into prevailing trends, challenges, and prospects related to ETDs and Open Science in library science.

Objectives

- i) To provide an overview of Electronic Theses and Dissertations (ETDs) by examining their importance in the field of library science.
- ii) To explore the concept of Open Science in Library Science, highlighting its values and principles, relevance and potential benefits for ETDs.
- iii) To conduct a comprehensive analysis of OATD.org, a prominent repository for ETDs, to examine the trends, characteristics, and contributions of ETDs in the field of Library Science over the selected time frame.
- iv) To identify and discuss the challenges and future directions for ETDs in the context of Open Science.

Importance of ETDs in the Library Science Landscape

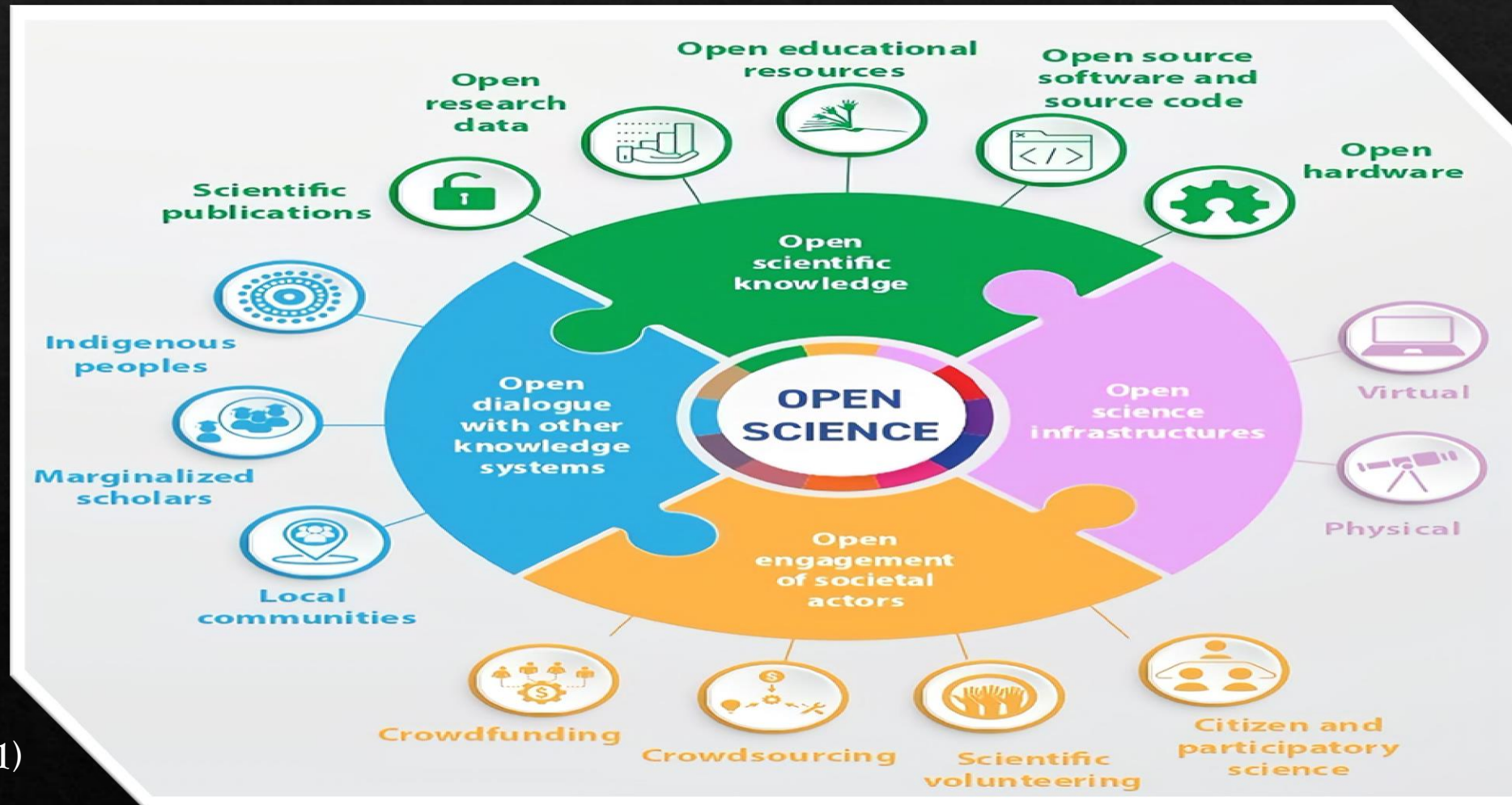
The significance of Electronic Theses and Dissertations (ETDs) in the realm of library science is underscored by several key factors:

- ◊ **Repository of Knowledge**
- ◊ **Resource for Future Research**
- ◊ **Pro Professional Development fissional Development**
- ◊ **Global Accessibility**
- ◊ **Interdisciplinary Insights**
- ◊ **Informed Decision-Making**
- ◊ **Advancing Innovation**
- ◊ **Enhancing Visibility**
- ◊ **Preservation of Knowledge**
- ◊ **Contributing to Open Science**

Open Science in Library Science: Concept and Relevance

- ❖ Open Science represents a transformative approach to scholarly research characterized by transparency, collaboration, and the unrestricted sharing of research outputs. At its core, Open Science seeks to make research findings, data, methodologies, and even software openly accessible to the global research community and the public. This approach fosters innovation, accelerates scientific progress, and enhances the reliability of research outcomes.
- ❖ Further, Open Science in the UNESCO Recommendation (2021), “is a set of principles and practices that aim to make scientific research from all fields accessible to everyone for the benefit of scientists and society as a whole. The Recommendation aims to ensure not only that scientific knowledge is accessible but also that the production of that knowledge itself is inclusive, equitable and sustainable”

Pillars of the Open Science



(UNESCO, 2021)

Values and Principles of Open Access



(UNESCO, 2021)

◇ UNESCO's Open Science Recommendation provides a global framework, defining shared values and principles for international open science efforts. It aims to bridge technological and knowledge gaps, fostering an impartial and just open science environment globally.

Integration of Open Science Practices in Library Science

In the realm of library science, the principles of Open Science align seamlessly with the field's ethos of information accessibility and sharing. By integrating Open Science practices, library science professionals can contribute to the advancement of the discipline while enhancing the dissemination of knowledge. Open access to research findings, resources, and educational materials can significantly benefit library professionals, educators, students, and the wider community.

Potential benefits and challenges of Open Science in ETDs:

Benefits

- ◆ Increased Visibility and Impact
- ◆ Knowledge Sharing
- ◆ Innovation and Collaboration
- ◆ Public Engagement

Challenges

- ◆ Quality Control
- ◆ Data Privacy
- ◆ Sustainability
- ◆ Intellectual Property

OATD.org: A Comprehensive Analysis

Overview and Significance

Open Access Theses and Dissertations (OATD.org) holds a pivotal role as a global repository for scholarly theses and dissertations. With over 6.6 million indexed works sourced from 1100 academic and research institutions worldwide, OATD.org stands as a premier resource for open access research. Its alignment with Open Science principles promotes transparency and knowledge sharing. Through comprehensive analysis, OATD.org uncovers valuable insights, enhancing our understanding of scholarly trends and contributions across fields like Library Science.

The study provides an in-depth and thorough analysis of OATD.org will be undertaken. This analysis aims to scrutinize the trends, attributes, and contributions of ETDs within the domain of Library Science during the 21st century.

Research Methodology

- ❖ **Data Collection:** Data was obtained from the OATD.org database on June 12, 2023, using the search term: (subject:(Library AND Science) AND pub_dt:[2001-01-01T00:00:00Z TO *]).
- ❖ **Sample Selection:** A total of 2683 ETDs meeting the search criteria were chosen as the primary sample for analysis.
- ❖ **Data Organization:** The primary data was compiled in MS Excel, facilitating subsequent analysis.
- ❖ **Analytical Parameters:** Various parameters were utilized for analysis, including growth trends, country-wise and university-wise contributions, department-wise contributions, levels of ETDs, degrees awarded, and languages used in the ETDs.
- ❖ **Method of Analysis:** The percentage method was applied to interpret the data concerning the total universal set (N).

Data Analysis and Findings

Year-wise Contribution of ETDs:

Sr. No.	Range (Year)	Quantity	Percentage	Rank
1	2000-2003	211	7.86%	5
2	2004-2008	883	32.91%	1
3	2009-2013	669	24.94%	2
4	2014-2018	631	23.52%	3
5	2019-2023	289	10.77%	4
Total		2683	100.00%	-

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Data Analysis and Findings

Country-wise Contribution of ETDs:

Rank	Country	Quantity	Percentage (N=2683)
1	Sweden	1042	38.84%
2	US	851	31.72%
3	India	160	5.96%
4	UK	130	4.84%
5	South Africa	111	4.14%

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Data Analysis and Findings

University-wise Contribution of ETDs:

Rank	University	Quantity	Percentage (N=2683)
1	University of Borås	573	21.36%
2	Uppsala University	413	15.39%
3	University of Michigan	110	4.10%
4	Florida State University	89	3.31%
5	University of KwaZulu-Natal	84	3.13%

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Data Analysis and Findings

Department-wise Contribution of ETDs:

Rank	Departments	Quantity	Percentage (N=2683)
1	Swedish School of Library and Information Science	572	21.32%
2	ALM	413	15.39%
3	Library and Information Science	130	4.85%
4	Information	99	3.69%
5	Library and information science	87	3.24%

Contd...

Data Analysis and Findings

Level of ETDs:

Rank	Levels	Quantity	Percentage (N=2683)
1	Doctoral	640	23.85%
2	Masters	207	7.72%
3	Thesis	85	3.17%

Contd...

Data Analysis and Findings

Degrees Awarded:

Rank	Degrees	Quantity	Percentage (N=2683)
1	PhD	541	20.16%
2	MS	98	3.65%
3	M.I.S.	35	1.30%
4	MA	28	1.04%
5	EdD	13	0.48%

Contd...

Data Analysis and Findings

Languages of the ETDs:

Rank	Language	Quantity	Percentage (N=2683)
1	Swedish	1020	38.02%
2	English	925	34.48%
3	Portuguese	47	1.75%
4	English New Zealand (nz_en)	34	1.27%
5	Spanish	30	1.12%

Challenges and Future Directions

Addressing legal and ethical considerations

The growth of Electronic Theses and Dissertations (ETDs) introduces intricate legal and ethical dimensions that require careful consideration:

- ◆ **Copyright and Intellectual Property**
- ◆ **Data Protection and Privacy**
- ◆ **Authorship and Attribution**
- ◆ **Access Control**
- ◆ **Ethical Use of Data**
- ◆ **Repository Management**

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Challenges and Future Directions

Overcoming technical and infrastructural challenges:

The successful operation of ETD repositories hinges on addressing complex technical and infrastructural challenges:

- ◊ **Scalable Infrastructure**
- ◊ **Sustainability**
- ◊ **Metadata Accuracy**
- ◊ **Interoperability**
- ◊ **Search Mechanisms**
- ◊ **Multimedia and Complex Content**
- ◊ **User Experience**

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Challenges and Future Directions

Exploring emerging trends and possibilities:

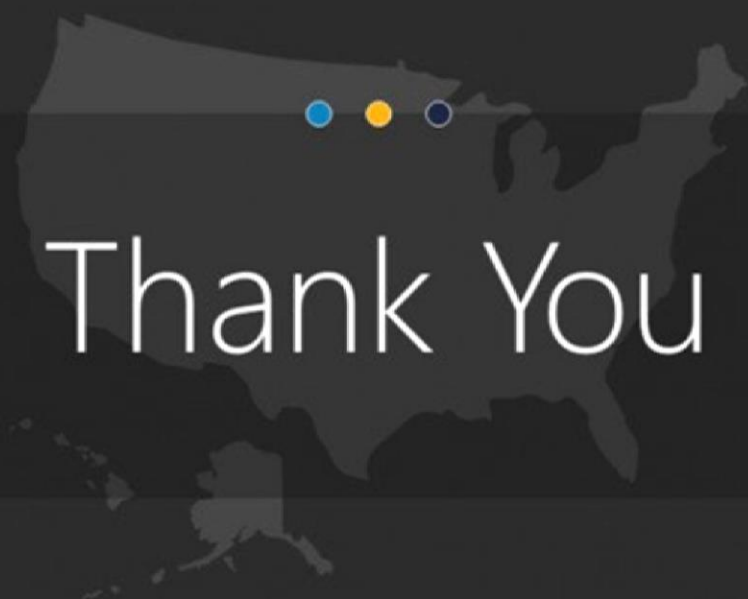
The realm of Electronic Theses and Dissertations (ETDs) is poised for dynamic transformation through emerging trends and possibilities:

- ◆ **Multimedia Integration**
- ◆ **Artificial Intelligence (AI) and Machine Learning**
- ◆ **Blockchain Technology**
- ◆ **Extended Open Science Principles**
- ◆ **Integration with Scholarly Communication Networks**
- ◆ **Global Collaboration**

Conclusions

The study's conclusion can be summarized in the following points:

- ◆ **ETDs' Significance:** ETDs are crucial resources, enriching scholarly discourse and knowledge dissemination, catering to researchers, educators, and practitioners.
- ◆ **Study Insights:** The research explored OATD, unveiling global ETD distribution, emphasizing their role in fostering accessible, transparent, and shared scholarly insights.
- ◆ **Importance for Library Science:** Understanding ETDs is vital for the Library Science community, offering diverse perspectives, methodologies, and literature reviews, advancing the field.
- ◆ **Integration with Open Science:** ETDs, aligned with Open Science principles, promote open collaboration, accelerating research innovation within the scholarly ecosystem.
- ◆ **Challenges and Solutions:** Stakeholders need to address legal, ethical, technical, and infrastructural challenges collectively to ensure seamless dissemination and preservation of valuable research.



Thank You