



INFLIBNET Centre
सूचना एवं पुस्तकालय नेटवर्क केन्द्र
Information and Library Network Centre



Evaluation of Shodhganga Metadata Standards: A Comparative Study with Global ETD Standards

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Shodh
ganga
a reservoir of Indian theses

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AGENDA

Introduction

Literature Review

Data Collection and Analysis

Results and Findings

Future Directions and Suggestion

Conclusion



ETD 2023
NDLTD

Gandhinagar, Gujarat, India

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Introduction

Shodhganga

- **Created and Maintained by the INFLIBNET**
- **Prominent Indian digital repository since 2011 Specializes in Electronic Theses and Dissertations (ETDs)**
- **Emphasizes standardized metadata for global accessibility**

Introduction

Shodhganga Role

- **Shodhganga bridges the gap between ETDs and users**
- **Offers standardized metadata for enhanced global discoverability**
- **Supports academic research, collaboration, and recognition**



Steps for Submission of Thesis in Shodhganga

Step1: Register or create UC account.

Step2: Verify the login account by INFLIBNET.

Step3: Registered UC submit their University theses content and associated information

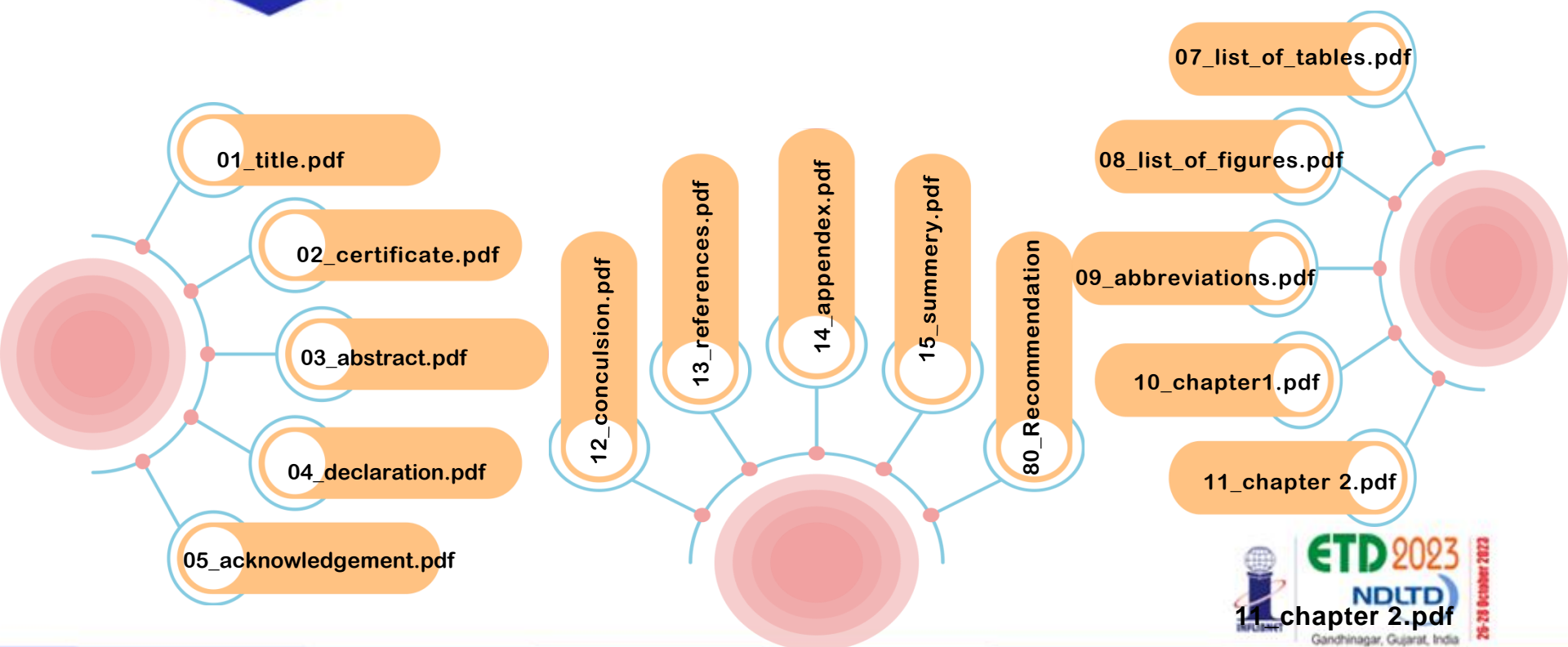
Step4: The INFLIBNET team validates the submitted Metadata, thesis content and information.

Step5: Publish the PhD thesis on the Shodhganga Repository.

Step6: Notify Admin and University Coordinators about the published theses.



File Naming Conventions and Types used within Shodhganga





Objectives of the Study

**Evaluating Shodhganga
a ETD Metadata
Standards**



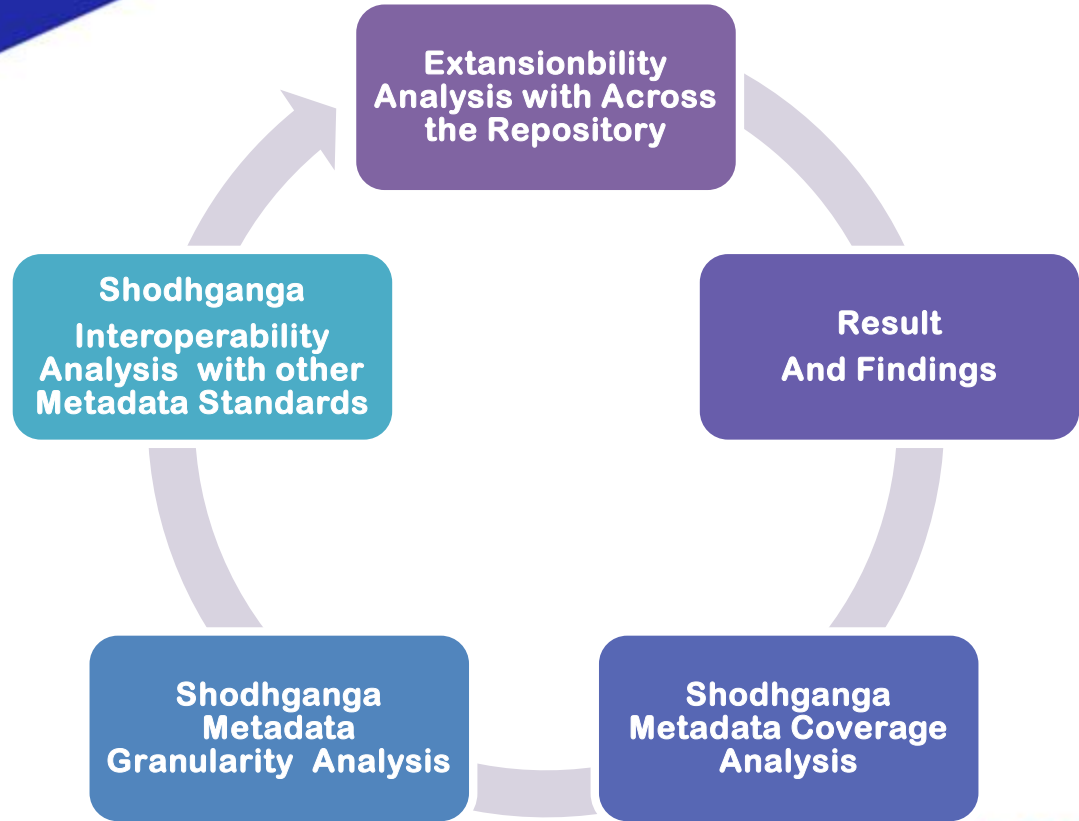
**Comparative analysis
Shodhganga ETD Metadata
Standards with others Metadata
Standards**

**To make recommendations for
improving Shodhganga metadata
standards and contributing to the
progress of ETD repositories
worldwide**





5-Steps of Analysis





Data Collection and Analysis

Identify relevant sources

Gather Information

Develop a search strategy

Collect pertinent publications

Evaluate and analyze

Document and organize

Synthesize and interpret



Evaluating Shodhganga ETD Metadata Standards

| Shodhganga Metadata | Coverage | Granularity |
|--------------------------|---|-------------|
| dc.format.accompanying | DVD | Title |
| dc.date.completed | Awarded,Completed | subtitle |
| dc.creator.researcher | Creator/Researcher | Creator |
| dc.date.issued | Registration date | Researcher |
| dc.publisher.university | Institutions, Publishers | Subject |
| dc.source.inflibnet | INFLIBNET/University | keyword |
| dc.language | Language,Eng,Hindi,Support Unicode. | Description |
| Department | Department of Research Scholar | Note |
| dc.subject.keyword | Data Warehouse,ETL,DSG,Data Extractor,Data Sharehouse,Testing | Release |
| dc.publisher.place | Place of Institution,University,Inflibnet | Contributor |
| dc.format.extent | Pege Number | Guide |
| dc.right | University | Publisher |
| dc.description.note | Notes | University |
| dc.publisher.institution | Name of University | Institution |



| Shodhganga Metadata | Coverage | Granularity |
|----------------------|------------------|-----------------------|
| dc.contributor.guide | Guide | Type |
| dc.Date.acquisition | Acquisition Date | Dcm.type |
| dc.date.available | Uploaded Date | Format |
| | | medium |
| | | extent |
| | | dimensions |
| | | accompanying material |
| | | Identifier |
| | | URI |
| | | Thesis Number |
| | | Handle |
| | | Source |
| | | University |
| | | Selfsubmission |
| | | guidesupervisor |
| | | Inflibnet |
| | | Language |
| | | Relation |
| | | Coverage |
| | | Spatial |

Interoperability

| Metadata Element | MODS | METS | Dublin Core | ETD-MS | VRA Core | Shodhganga |
|---------------------------|--------------------|-------------|--------------------------------|-----------------------------|----------|------------------------|
| Title Information | Title | - | dc.title | - | Title | Title |
| Creator/Agent/Contributor | dc.creator, etc. | - | dc.contributor.guide, etc. | dc.creator.researcher, etc. | - | dc.creator.guide, etc. |
| Subject | dc.subject | - | dc.subject, dc.subject.keyword | dc.subject | subject | dc.subject |
| Date | dc.date | - | dc.date | dc.date, etc. | - | dc.date |
| Language | - | dc.language | dc.language | - | - | dc.Language |
| Behavior/Description | dc.description | - | dc.description, etc. | dc.description | - | dc.description |
| Abstract | - | - | - | - | - | dc.abstract |
| Publisher/Material | dc.publisher, etc. | - | dc.publisher, etc. | dc.publisher | - | dc.publisher |



| | | | | | | |
|-------------------------------------|------------------------------------|---|--|-------------------------------------|---|--|
| Coverage | - | - | dc.coverage | - | - | dc.coverage |
| Source/Related Item | - | - | - | - | - | - |
| Type/Style Period | dc.type, dc.subject.k eyword | - | - | dc.type | - | - |
| Format/Technique | - | - | - | - | - | - |
| Format Dimensions | - | - | - | - | - | dc.format.dimension s |
| Identifier | dc.identifier | - | dc.identifier, dc.identifier.uri | dc.identifier, dc.Identifier.uri | - | dc.Identifier.uri |
| Publisher University/Institution | - | - | dc.publisher.university , dc.publisher.institution | - | - | dc.publisher.universi ty, dc.publisher.instituti on |





Extansionbility

| Metadata Element | Shodhganga | NDLTD | ProQuest Dissertations (MARCXML) | DART |
|-------------------------|------------------------|------------|--|----------------------|
| Author Name | Author Name | Na | <datafield tag="100"><subfield code="a"> (Author Name) | Na |
| Title | dc.title | dc.title | <datafield tag="245"><subfield code="a"> (Title) | Na |
| Qualification Level | Na | Na | Na | Qualification Level: |
| Additional Author Names | Na | Na | <datafield tag="700"><subfield code="a"> (Additional Author Names) | Na |
| Subjects | dc.subject | dc.subject | Na | Subjects |
| Colleges/Schools | Na | Na | Na | Na |
| General Note - Advisor | General Note - Advisor | Na | <datafield tag="500"><subfield code="a"> (General Note - Advisor) | Na |
| Supervisor's Name | - | Na | Na | Supervisor's Name |
| Date of Award | Date of Award | dc.date | <datafield tag="720"><subfield code="a"> (Date of Award) | Date of Award: |
| Embargo Date | Embargo Date: | Na | <datafield tag="210"><subfield code="a"> (Embargo Date) | Embargo Date |



| | | | | |
|--------------------------|--------------------------|-----------------|----|-----------------|
| Depositing User | Na | Na | Na | Depositing User |
| Unique ID | Na | Na | Na | Unique ID: |
| Copyright | Na | Copyright: | Na | Copyright: |
| Date Deposited | Na | Date Deposited: | Na | Date Deposited: |
| Last Modified | Na | Last Modified: | Na | Last Modified: |
| Thesis DOI | Na | Thesis DOI: | Na | Thesis DOI: |
| URI | dc.identifier.uri | Na | Na | Na |
| dc.coverage.spatial | dc.coverage.spatial | Na | Na | Na |
| dc.date.accessioned | dc.date.accessioned | Na | Na | Na |
| dc.format.extent | dc.format.extent | Na | Na | Na |
| dc.relation | dc.relation | Na | Na | Na |
| dc.creator.researcher | dc.creator.researcher | Na | Na | Na |
| dc.subject.keyword | dc.subject.keyword | Na | Na | Na |
| dc.contributor.guide | dc.contributor.guide | Na | Na | Na |
| dc.publisher.university | dc.publisher.university | Na | Na | Na |
| dc.publisher.institution | dc.publisher.institution | Na | Na | Na |
| dc.date.completed | dc.date.completed | Na | Na | Na |
| dc.format.dimensions | dc.format.dimensions | Na | Na | Na |
| dc.source.university | dc.source.university | Na | Na | Na |
| dc.type.degree | dc.type.degree | Na | Na | Na |



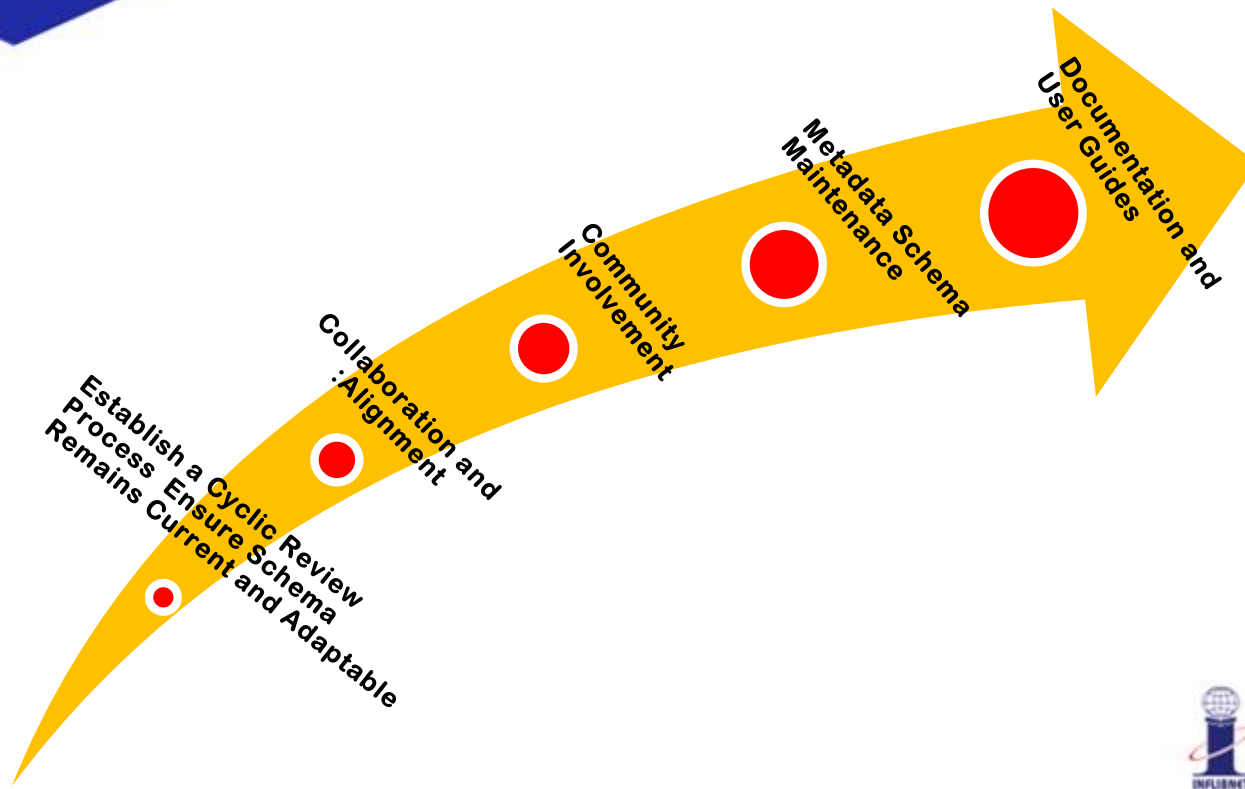
The Table Below Compares Metadata Elements between Shodhganga, Against Global Standards Like Dublin Core, ETD-MS, METS, And MODS

| Metadata Element | Shodhganga | DCMS | ETD-MS | METS | MODS | DART | NDLTD | ProQuest-Etd |
|-----------------------|------------|------|--------|------|------|------|-------|--------------|
| dc.title | ✓ | ✓ | ✓ | ✓ | X | ✓ | ✓ | ✓ |
| dc.subject | ✓ | ✓ | ✓ | X | X | ✓ | ✓ | ✓ |
| dc.date | ✓ | ✓ | ✓ | X | X | ✓ | ✓ | ✓ |
| dc.creator | ✓ | ✓ | X | X | X | ✓ | ✓ | ✓ |
| dc.publisher | ✓ | X | X | ✓ | ✓ | ✓ | ✓ | ✓ |
| dc.contributor .guide | ✓ | X | X | ✓ | ✓ | ✓ | ✓ | ✓ |
| dc.identifier.u ri | ✓ | X | X | X | X | ✓ | ✓ | ✓ |
| dc.language | ✓ | X | X | X | X | ✓ | ✓ | ✓ |
| dc.subject.key word | ✓ | X | X | X | X | ✓ | ✓ | ✓ |
| dc.format.dim ensions | ✓ | X | X | X | X | ✓ | ✓ | ✓ |
| dc.source.univ ersity | ✓ | X | X | X | X | ✓ | ✓ | ✓ |





Enhancing Shodhganga Metadata





Description:

- JSON-LD (JavaScript Object Notation for Linked Data) can improve Shodhganga's metadata standards and contribute to a more connected scholarly ecosystem.

Benefits of JSON-LD:

- **Standardization:** Ensures consistent metadata representation.
- **Interconnectedness:** Links data to external resources.
- **Semantic Enrichment:** Adds semantic meaning to metadata.
- **Integration with Semantic Web:** Aligns with the semantic web for data linking and querying.

Leveraging JSON-LD for Shodhganga:

- **Improved Interoperability:** Enhances discoverability across platforms.
- **Efficient Data Exchange:** Streamlines collaborative initiatives.
- **Contextual Information:** Enriches metadata by linking to external resources.
- **Future-Proofing:** Ensures alignment with emerging metadata trends.

Code Representation the Shodhganga Elements

```
[  
{  
  "DC Field": "dc.coverage.spatial",  
  "Value": "",  
  "Language": "",  
  "DC Field": "dc.date.accessioned",  
  "DC Field": "dc.date.available",  
  "DC Field": "dc.identifier.uri",  
  "DC Field": "dc.description.abstract",  
  "DC Field": "dc.format.extent",  
  "DC Field": "dc.language",  
  "DC Field": "dc.relation",  
  "DC Field": "dc.rights",  
  "DC Field": "dc.title",  
  "DC Field": "dc.title.alternative",  
  "DC Field": "dc.creator.researcher",  
  "DC Field": "dc.subject.keyword",  
  "DC Field": "dc.subject.keyword",  
  "DC Field": "dc.subject.keyword",  
  "DC Field": "dc.subject.keyword",  
  "DC Field": "dc.description.note",  
  "DC Field": "dc.contributor.guide",  
  "DC Field": "dc.publisher.place",  
  "DC Field": "dc.publisher.university",  
  "DC Field": "dc.publisher.institution",  
  "DC Field": "dc.date.registered",  
  "DC Field": "dc.date.completed"  
}
```



Implication

Shodhganga is well-prepared to adapt to evolving scholarly needs, fostering compatibility and comprehensive documentation.





Key Findings

**Alignment with
Global Standards**

**Coverage and
Granularity**

Interoperability

Extensibility

**Comparison with Other
Repositories**

**Interoperability is emphasized
through elements like
"dc.identifier.uri,"
"dc.source.university," and
"dc.language."**

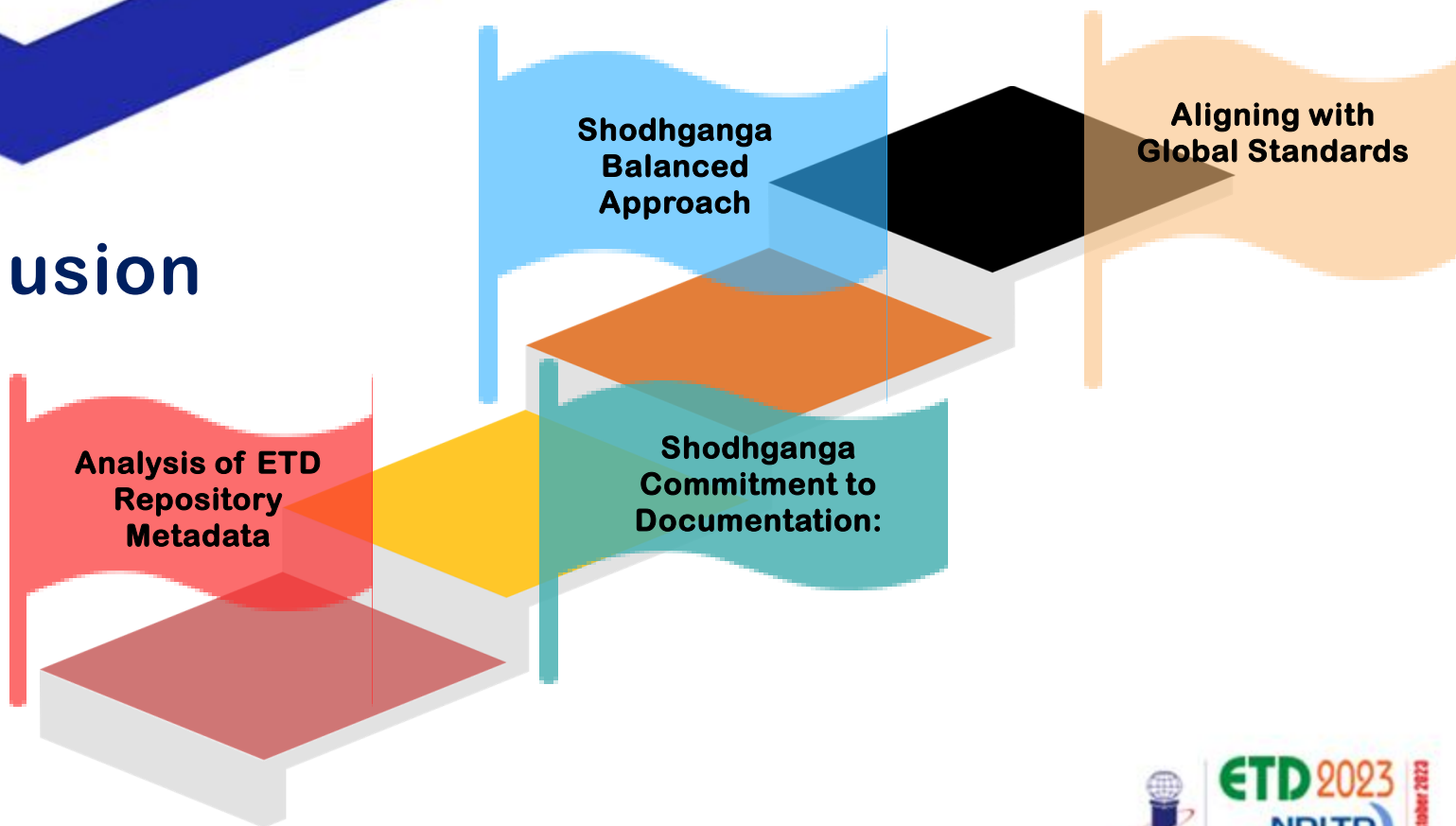


KEY Findings

1. Shodhganga's metadata elements align closely with global standards like Dublin Core and ETD-MS.
2. Interoperability is emphasized through elements like "dc.identifier.uri," "dc.source.university," and "dc.language."
3. Shodhganga's extensibility is demonstrated by elements like "dc.subject.keyword" and "dc.format.dimensions."
4. Shodhganga's metadata practices strike a balance between regional and global norms.



Conclusion





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Key Messages

Shodhganga metadata practices are aligned with international standards. Comprehensive coverage and interoperability enhance research accessibility. Flexibility in metadata standards positions Shodhganga for future adaptation.



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