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## Metadata

ETD-MS v1.1: an Interoperability Metadata Standard for Electronic Theses and Dissertations

### version 1.1

<http://www.ndltd.org/standards/metadata/etd-m>

### Editors

*Thom Hickey*

*Ana Pavani*

*Hussein Suleman*

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## 1. Introduction

*This document defines a standard set of metadata elements for electronic theses and dissertations.*

*Institutions dealing with electronic theses and dissertations have developed their own metadata standards. These metadata standards all attempt to describe a way that will be useful to the researcher as well as the institution.*

*This document is not a replacement for the metadata standards of individual institutions. This document should be used as a guideline to develop a fair and open standard for sharing information about ETDs.*

## 2. Authorities

*Each reference to an individual or institution in any field of the record is an authority reference. It identifies the name as it appears in the work. The reference may also contain a link to a detailed description of the authority record.*

## 3. Metadata Elements

*The following is a description of the common Dublin Core elements. The descriptions are given as to which information related to an ETD belongs to each element.*

*If a more general element is described as mandatory, it should be assumed that the element is required. If a general element is repeatable, it should be assumed that the element is repeatable to allow for ETDs that provide metadata in multiple languages.*

### 3.1 dc.title

Element	Description
dc.title	A name given to the resource, either the main title or a subtitle, as it appears on the resource itself.
dc.title.alternative	alternative title of the resource

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### 3.2 *dc.creator*

<i>Element</i>	<i>Description</i>
<i>dc.creator</i>	<i>An entity primarily responsible for making available, managing, and preserving digital resources such as manuscripts, images, and sound recordings, this field is appropriate for institutions, this field should be entered equivalent, with a link to to an author or organization information.</i>

### 3.3 *dc.subject*

<i>Element</i>	<i>Description</i>
<i>dc.subject</i>	<i>The topic of the content of the resource. The subjects listed on the title page can be used to indicate a controlled vocabulary.</i>

### 3.4 *dc.description*

<i>Element</i>	<i>Description</i>
<i>dc.description</i>	<i>An account of the content of the resource. This is the full text of the qualified element dc.description.</i>
<i>dc.description.abstract</i>	<i>The full text of the abstract.</i>
<i>dc.description.note</i>	<i>Additional information including a note of the department.</i>
<i>dc.description.release</i>	<i>Description of the version.</i>

### 3.5 *dc.publisher*

<i>Element</i>	<i>Description</i>
<i>dc.publisher</i>	<i>An entity responsible for making available the resource. This may or may not be exactly the same entity that is most directly responsible for the resource. This field should be entered equivalent, with a link to a section for more information.</i>
<i>dc.publisher.country</i>	<i>The country the thesis was published in.</i>

### 3.6 *dc.contributor*

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<i>Element</i>	<i>Description</i>
<i>dc.contributor</i>	<i>An entity responsible for making use would be for co-authors or members. Co-authors of the field.</i>
<i>dc.contributor.role</i>	<i>Role the person played in the committee member, chair,</i>

### 3.7 *dc.date*

Element	Description
<code>dc.date</code>	A date associated with an event in the ILL dissertations, this should be the date the dissertation was submitted. Should be recorded as defined in ISO 8601 dates in Dublin Core.

## 3.8 *dc.type*

Element	Description
<code>dc.type</code>	<i>The nature or genre of the content of a work, from works in other genres and to identify string "Electronic Thesis or Dissertation" element. In addition, specify types of content handled by the thesis.degree field.</i> <a href="http://dublincore.org/documents/dcm/">http://dublincore.org/documents/dcm/</a>

### 3.9 *dc.format*

Element	Description
<code>dc.format</code>	<i>The physical or digital manifestation of the dissertation, this should contain a list of types, visit <a href="ftp://ftp.isi.edu/in-notes">ftp://ftp.isi.edu/in-notes</a>, "unknown" if no format information is present.</i>

### 3.10 *dc.identifier*

Element	Description
<i>dc.identifier</i>	An unambiguous reference to the resource for which the metadata object is created, often a URL.

### 3.11 *dc.language*

<i>Element</i>	<i>Description</i>
<i>dc.language</i>	<i>A language of the intellectual content of the work. This is the language in which the work is recorded. Portion of the element name is the language code. See Global Qualified Elements for more information.</i> See <a href="#">Global Q</a> using ISO 639-2 (or RFC 1766). If the language is English, use the code (en).

### 3.12 *dc.coverage*

<i>Element</i>	<i>Description</i>
<i>dc.coverage</i>	<i>The extent or scope of the content, such as the spatial or temporal period covered, or the spatial regions. For any type of resource, this element may be used to specify where it can be found or what areas it applies to.</i>

### 3.13 *dc.rights*

<i>Element</i>	<i>Description</i>
<i>dc.rights</i>	<i>Information about rights held in and over the resource, under which the work may be distributed, used, reproduced, and/or displayed over time, and whom to contact regarding rights.</i>

*Three levels are valid:*

- 0 Not publicly accessible
- 1 Limited public access
- 2 Publicly accessible

### 3.14 *thesis.degree*

<i>Element</i>	<i>Description</i>
<i>thesis.degree.name</i>	<i>Name of the degree associated with the resource. (example: Masters in Oceanography)</i>
<i>thesis.degree.level</i>	<i>Level of education associated with the degree.</i>

*Three levels are valid:*

- 0 Undergraduate
- 1 Masters (pre-doctoral)
- 2 Doctoral (including postdoctoral)

<i>thesis.degree.discipline</i>	<i>Area of study of the individual or program. This is the name of a program or field of study.</i>
<i>thesis.degree.grantor</i>	<i>Institution granting the degree. This is the name of the institutions, this field is optional.</i>

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## 4. Global Qualifiers

*In addition to the attributes specified for various elements, there are three global qualifiers:*

### 1. lang

*An indication of the language in which the value of the element is provided, which indicates the primary language of the work.*

### 2. translated

*An empty element that indicates that the value of the element is a translation of another element, such as translations provided by the author, simply indicated by the element.*

### 3. scheme

*Description of the vocabulary or scheme used to define the element.*

## 5. Encodings and Crosswalks

*The abstract set of elements defined in this document can be used to encode metadata for electronic theses and dissertations. The elements defined in this document are the MARC standard core elements and the ETD-MS group provides a "Vanilla" encoding of the standard elements. This document follows Dublin Core standards everywhere that the abstract elements are used. The recommendations follow AACR-2 policies and procedures. The recommendations for elements particular to electronic theses and dissertations are based on the recommendations for the ETD-MS standard. The version goes public, that encoding has not yet been completed.*

### 5.1 "Vanilla" XML Encoding

*In this encoding, each of the fields and subfields is represented by its corresponding tag name. The XML Schema used for this encoding is available at <http://www.ndltd.org/standards/metadata/etdms.xsd>.*

#### 5.1.1 Sample Record

*The following is the metadata for an ETD from the ETD-MS standard, encoded according to the XML Encoding of the ETD-MS standard.*

```
<thesis xmlns="http://www.ndltd.org/standards/metadata/etdms.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.ndltd.org/standards/metadata/etdms.xsd" dc="http://purl.org/dc/elements/1.1/" dcterms="http://purl.org/dc/terms/" xsi:type="ETD-MS">
```

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<dc:title xml:lang="en">Conceptual Development of a Recreation Experience Model: The Recreation Opportunity Spectrum</dc:title>

<dc:creator>Walker, Gordon James</dc:creator>

<dc:subject>outdoor recreation</dc:subject>  
 <dc:subject>recreation experience preference</dc:subject>  
 <dc:subject>recreation experience matrix</dc:subject>  
 <dc:subject>recreation opportunity spectrum</dc:subject>  
 <dc:subject scheme="DCC">796.5</dc:subject>  
 <dc:subject scheme="LCSH">GV 191.2-201

<dc:description role="abstract" xml:lang="en">  
 (a) whether outdoor recreation experiences can be categorized into Recreation Experience Preference (REP); (b) how these experiences can be categorized into Recreation Experience Matrix (REM); (c) how the Recreation Opportunity Spectrum (ROS) variables and recreationists' expertise explain the types of experiences recreationists receive; and (d) how well two new variables--activity and setting--explain mode dependence--explain the types of experiences recreationists receive. In order to answer these questions, a questionnaire was distributed at the Virginia State Parks and Recreation Area in Virginia during October 1996. A total of 410 people completed this questionnaire, and 300 provided useable addresses for a follow-up questionnaire, with 169 (50.3%) actual recreationists performing a variety of statistical analyses. (a) some outdoor recreationists did not receive experiences involving identity, cognition, self-concept; (b) indirect support does not explain outdoor recreation experiences using the ROS variables of activity, setting, and time; (c) some outdoor recreation experiences, including identity, cognition, and self-concept, are primary mode and mode dependence.</dc:description>

<dc:publisher country="USA">Virginia Institute of Technology</dc:publisher>

<dc:contributor role="committee\_member">Joseph W. Walker</dc:contributor>  
 <dc:contributor role="committee\_member">R. Bruce Lusk</dc:contributor>  
 <dc:contributor role="committee\_member">John C. Hartman</dc:contributor>  
 <dc:contributor role="chair">Joseph W. Walker</dc:contributor>  
 <dc:contributor role="chair">R. Bruce Lusk</dc:contributor>

<dc:date>1997-03-31</dc:date>

<dc:type>Electronic Thesis or Dissertation</dc:type>

<dc:format>application/pdf</dc:format>

<dc:identifier><http://scholar.lib.vt.edu/theses/available/etd-03311997-0331-0000.html></dc:identifier>

<dc:Language>en</dc:Language>

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```
<dc:rights>2</dc:rights>
```

```
<degree>
```

```
<name>PHD</name>
```

```
<level>2</level>
```

```
<discipline xml:lang="en-us">Foresti
```

```
<grantor>Virginia Polytechnic Insti
```

```
</degree>
```

```
</thesis>
```

## 5.2 MARC-21 Crosswalk

*The question of encoding the abstract metadata set*

*Those NDLTD member institutions that prefer to store their ETDs in MARC (e.g., UNIMARC) will benefit from a standard "location*

*Communications between institutions storing ETDs in different formats can benefit from the "crosswalk" below, a MARC-based institution can import ETDs stored in MARC data, and can export MARC data that can be used by OAI data providers on its oriented site.*

*Finally, NDLTD members who function as OAI data providers can benefit from the ability to generate standard XML-encoded MARC data, irrespective of the source system.*

### Crosswalk Specification

ETD-MS Element	MARC-21 field & subfield	Notes
<i>dc.title</i>	245a	
<i>dc.title.alternative</i>	246	<i>Both title.alternative and title.translations are encoded in 246 \$a. Translations are parallel titles encoded in X00 \$a, qualifiers, and language titles are encoded in X00 \$b.</i>
<i>dc.title translated</i>	242	<i>Translations are parallel titles encoded in X00 \$a, qualifiers, and language titles are encoded in X00 \$b.</i>
<i>dc.creator</i>	100a	<i>"Creator" is a required element. It requires a \$x00 \$a subfield.</i>
<i>dc.subject</i>	653a	<i>Since 653 has a subfield \$a, it requires a separate &lt;subfield&gt; element.</i>
<i>dc.description.abstract</i>	520a	
<i>dc.description.note</i>	Any 5xx field not	

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			<i>otherwise used, e.g., 504</i>
<i>dc.description.release</i>			
<i>dc.publisher</i>	260a+b	<i>Publisher name element itself.</i>	
<i>dc.contributor</i>	720a	<i>In ETD-MS, "committee. A [a subfield) a</i>	
<i>dc.contributor.role</i>	720e	<i>(see note abc</i>	
<i>dc.date</i>	008 positions 7-10	<i>The year portion of the 008 field and position publication date first is date a should be 't' practices for 8601) but be</i>	
<i>dc.type</i>	leader 6&7; 655	<i>Electronic the monographs objects, but in leader positions ETD's may have but all should include the te</i>	
<i>dc.format</i>	856q		
<i>dc.identifier</i>	856u	<i>This assigns theses or dis. as identifiers to name each</i>	
<i>dc.language</i>	008 positions 35-37; [546]	<i>MARC-21 map the two-letter 1766 standard used in filling human-readable document metadata language names</i>	
<i>dc.coverage</i>	651 or 690	<i>"DC Coverage" temporal extent. Coverage is considered modifying subject recognized temporal subject purpose subject</i>	
<i>dc.rights</i>	540		
<i>thesis.degree.name</i>	502a	<i>AACR-2 guide generate a 502a. We recommend ETD-MS theses field of an extended thesis.degree</i>	
<i>thesis.degree.level</i>	502a	<i>(see <a href="#">Traduzir</a>)</i>	

<i>thesis.degree.discipline</i>	710b	<i>Unable to find a suitable 710a subfield for the discipline, fallen back on 710a subfield "a".</i>
<i>thesis.degree.grantor</i>	502a; 710ab	<i>In addition to the 710a subfield, the 502a and 710ab fields are considered to be best practice standard MARC fields for the thesis.degree.grantor element.</i>

*This covers all the elements defined in the ETD-MS schema ("ETD-like object") containing values for all the fields above. We expect MARC-ETD-MS records produced by the procedures of those institutions.*

*Accordingly, institutions that create ETD-MS comp*

- *They may share the MARC records as they are encoded as XML using the OAI XML MARC encoder.*
- *They may share just the parts of their records as ETD-like objects or using the XML encoding of ETD.*
- *They may share the records as Dublin Core, using a tool. Just as DC and ETD-MS overlap to a great extent, so do the crosswalks defined by LoC.*

### 5.2.1 Sample Record

*The following is the metadata for an ETD from the [Encoding of the Open Archives Initiative](#), with some annotations.*

```

<oai_marc xmlns="http://www.openarchives.org/OAI/2.0/orexamples/marcxml">
  <xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/orexamples/marcxml
    http://www.openarchives.org/OAI/1.1/orexamples/marcxml.xsd">
    <Level="m" encLvl="u" catForm="u">
      <fixfield id="008">
        " s1997     vau|     sm     00/ 0/en
      </fixfield>
      <varfield i1="" i2="" id="035">
        <subfield label="a">
          (VPI) etd-3345131939761081
        </subfield>
      </varfield>
      <varfield i1="1" i2="" id="035">
        <subfield label="a">
          Traduzir
        </subfield>
      </varfield>
    </Level>
  </xsi:schemaLocation>
</oai_marc>
```

```

<subfield label="a">
Walker, Gordon James
</subfield>
</varfield>
<varfield i1="0" i2="0" id="245">

<subfield label="a">
Conceptual Development and Empirical
Experience Model: The Recreation and
</subfield>
</varfield>
<varfield i1=" " i2=" " id="256">

<subfield label="a">
Computer data - 4 files(s)
</subfield>
</varfield>
<varfield i1=" " i2=" " id="260">

<subfield label="a">
Blacksburg, Va.
</subfield>
<subfield label="b">
University Libraries, Virginia Polytechnic
University
</subfield>
<subfield label="c">

1997
</subfield>
</varfield>
<varfield i1=" " i2=" " id="502">

<subfield label="a">
Thesis (PHD)--Virginia Polytechnic
1997-03-31
</subfield>
</varfield>
<varfield i1=" " i2=" " id="504">

<subfield label="a">
Includes bibliographical references.
</subfield>
</varfield>
<varfield i1="3" i2=" " id="520">

<subfield label="a">
This dissertation examines four
outdoor recreation experiences using
Experience Preference (REP) scaling.
experiences can be categorized using
Recreation Experience Matrix (REM)
Opportunity Spectrum (ROS) variables.
expertise explain the types of experiences.
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```

*receive; and (d) how well two new dependence--explain the types of receive. In order to address the was distributed at Mount Rogers during October and November, 199. this questionnaire. Of these, 331 follow-up mail-out questionnaire it. After performing a variety of that: (a) some outdoor recreation experiences involving identity, self-concept; (b) indirect support recreation experiences using the variables of activity, setting, outdoor recreation experiences, mode and mode dependence.*

*</subfield>*

*</varfield>*

*<varfield i1=" " i2=" " id="538">*

*<subfield label="a">*

*System requirements: PC, World Wide Web browser, Microsoft Internet Explorer 4.0 or higher.*

*</subfield>*

*</varfield>*

*<varfield i1=" " i2=" " id="538">*

*<subfield label="a">*

*Available electronically via Internet.*

*</subfield>*

*</varfield>*

*<varfield i1=" " i2=" " id="653">*

*<subfield label="a">*

*outdoor recreation*

*</subfield>*

*</varfield>*

*<varfield i1=" " i2=" " id="653">*

*<subfield label="a">*

*recreation experience preference matrix*

*</subfield>*

*</varfield>*

*<varfield i1=" " i2=" " id="653">*

*<subfield label="a">*

*recreation experience matrix*

*</subfield>*

*</varfield>*

*<varfield i1=" " i2=" " id="653">*

*<subfield label="a">*

*recreation opportunity spectrum*

*</subfield>*

*</varfield>*

*<varfield i1="2" i2=" " id="710">*

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```

<subfield label="a">
Virginia Polytechnic Institute and State University
</subfield>
<subfield label="b">
Forestry
</subfield>
</varfield>

<varfield i1="1" i2=" " id="720">
<subfield label="a">
Daniel R. Williams
</subfield>

<subfield label="e">
Committee Member
</subfield>
</varfield>
<varfield i1="1" i2=" " id="720">

<subfield label="a">
K. Jill Kiecolt
</subfield>
<subfield label="e">
Committee Member
</subfield>
</varfield>

<varfield i1="1" i2=" " id="720">
<subfield label="a">
Bradley R. Hertel
</subfield>

<subfield label="e">
Committee Member
</subfield>
</varfield>
<varfield i1="1" i2=" " id="720">

<subfield label="a">
Joseph W. Roggenbuck
</subfield>
<subfield label="e">
Committee Co-Chair
</subfield>
</varfield>

<varfield i1="1" i2=" " id="720">
<subfield label="a">
R. Bruce Hull
</subfield>

<subfield label="e">
Committee Co-Chair
</subfield>
</varfield>
```

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```

<varfield i1="4" i2="0" id="856">

    <subfield label="z">
        2
    </subfield>
    <subfield label="u">
        http://scholar.lib.vt.edu/theses/available/etd-08192010-085645/unrestricted/etd-08192010-085645.pdf
    </subfield>
</varfield>

</oai_marc>

```

## 6. Document History

*2010-08-19 XML Schemas and examples updated*

*2009-12-01 Draft version 1.1 of standard*

*This document was originally derived from the ETDMS v1.1 standard.*

## 7. Contributors

*Members of the NDLTD Standards and Services Committee*

*The following people participated in a review of the standard:*

- *Ana Pavani*
- *Hussein Suleman*
- *Gail McMillan*
- *Thomas Hickey*

Subpages (1): [etdms](#)



etd-ms-v1.1.... Hussein Sulem... v.1



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