

THE BELLE PROJECT

Best Practice Metadata Guidelines

Version 1.0
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For questions and answers please join the BELLE indexers' list:

indexer_information@telecampus.com

(To subscribe, send a message to majordomo@teleeducation.nb.ca with just

"subscribe indexer_information" in the body)

Primary Elements

Please fill out the primary elements for each resource submitted.

Note: The primary elements are considered "primary" on the basis of their use in metadata specifications like Dublin Core, and on their ease-of-access employing the ALOHA interface.

Overview

Common name	Page	IMS Number and Name	
Title	2	1.2	General.Title
Description	3	1.5	General.Description
Keywords	4	1.6	General.Keyword
Author or Contributor	5	2.3.2	Lifecycle.Contribute.Entity - N: or ORG:
Location, Address or URL	6	4.3	Technical.Location
Date	7	2.3.3	LifeCycle.Contribute.Date
Learning Resource Type	8	5.2	Educational.LearningResourceType
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Title

IMS Name: General.Title

Definition: The name by which the resource is formally known. Use any existing title associated with the resource.

Recommendations:

- Do **not** change the word-order of the title (e.g. do not enter "Great Gatsby, The").
- Capitalization is not significant. The field should be regarded as case-insensitive.
- If the resource does not have a title, create one that is succinct and descriptive. Always try to facilitate resource discovery.
- If the resource is deliberately untitled, use "Untitled" as its title but make certain to provide a description of the resource in 1.5 Description.

Examples:

- *Learning Style Questionnaire*
- *The Virtual Factory*
- *Nuclear Power Plant Simulator*
- *Le detective de l'internet*

Description

IMS Name: General.Description

Definition: An account of the content of the resource. Description may include but is not limited to: an abstract, table of contents or a free-text account of the content.

Recommendations:

- Use this element to provide a rich, keyword-intensive description of the resource that is suited to search and retrieval.
- If the resource has an existing description or abstract, copy and paste it here, expanding or explicating where appropriate.

Examples:

- *This is a simulation of the National Budget in which the student can make decisions such as whether to increase or decrease certain expenditures in the National Budget. There is a short version and a long version, so a simple assignment or a complicated one can be created. Students are able to see the impact of expenditure decisions.*
- *This resource includes interactive exercises in French grammar, vocabulary, reading and composition based on a corpus of literary texts by French Canadian authors from the western part of the country. A version with grammar and exercises only is also available. Originally conceived as supporting material for an existing basic course at university level for students with a French immersion background, this website may be adapted for a variety of other purposes.*

Keywords

IMS Name: General.Keywords

Definition: Discipline-specific terms that most accurately describe the content and purpose of the learning resource.

Recommendations:

- Feel free to provide alternate or even redundant terms or phrases, if they are likely to be used by some searchers.
- Separate individual keywords with semicolons
- Capitalization is not significant. The field should be regarded as case-insensitive.

Examples:

- *Macroeconomics; federal government; United States; fiscal policy*
- *French language instruction*

Author or Contributor

IMS Name: Lifecycle.Contribute.Entity

Definition: The entity primarily responsible for making the content of the resource. A creator can be a person, institution, group or other entity.

Recommendations:

- **To properly indicate that the entity being named is an author or creator, ensure that Lifecycle.Contribute.Role has been given a value of "author."**
- **If the author or creator is one or more persons:**
 - The following code (shown here in **bold**) must be entered when adding the author's or creator's name:
BEGIN:vCard N: Smith;John END:vCard
 - List personal name elements as follows: Family Name, Given Name, Additional Names, Name Prefix, and Name Suffix. Separate each element with a semi-colon.
- **If the author or creator is one or more institutions:**
 - The following code (shown here in **bold**) must be entered when adding the author's or creator's name:
BEGIN:vCard ORG: University of Alberta; Faculty of Extension END:vCard
 - List institutional names from general to specific.

Examples:

- *BEGIN:vCard ORG:ABC, Inc.;North American Division;Marketing END:vCard*
- *BEGIN:vCard N:Public;John;Quinlan;Mr.;Esq. END:vCard*

Date

IMS Name: LifeCycle.Contribute.Date

Definition: The year the resource was created.

Recommendations:

- Enter the year the resource was originally created.

Examples:

- 1997
- 2002

Location, Address or URL

IMS Name: Technical.Location

Definition: The Web address of the resource.

Recommendations:

- If you are uploading the resource with the metadata record, do not fill out this field.
- If the resource is a Web page or embedded in a Web page, this address should be entered exactly as it appears in the "Location" (Netscape) or "Address" (Internet Explorer) bar of the Web browser. To ensure complete accuracy, copy the address from the location/address bar and paste it in the data entry form.

Examples:

- <http://www8.org/w8-papers/3c-hypermedia-video/comparison/exercise.html>
- <http://www.atl.ualberta.ca/symbols/reference.cfm>
- <ftp://nscrc.sdct.itl.nist.gov/locations/simulation.pdf>

Learning Resource Type

IMS Name: Educational.LearningResourceType

Definition: The type of learning resource in terms of its genre or format; or the type of learning activity or interaction anticipated for the resource.

Recommendations:

- Choose the term that seems most appropriate for the resource you are adding. Try to ensure that the term is consistent for all similar resources added over a period of time or between collaborating indexers.
- The **technical file format** type is should be automatically recorded in the Technical.Format field. The file format does not need to be indicated here.

Examples:

- **Use one of the following values:** *Exercise, Simulation, Questionnaire, Diagram, Figure, Graph, Index, Slide, Table, Narrative Text, Exam, Experiment, ProblemStatement, SelfAssesment*

Learner Level

IMS Name: Educational.Context

Definition: The typical learning level or context intended for the resource.

Recommendations:

- Refer to the list below for recommended values and their definitions
- Do NOT use "University Second Cycle" or "Technical School Second Cycle"; their meaning is uncertain.

Terms and Definitions:

- **Primary Education:** Kindergarten and grades 1-6. Material for preschool use is also included in this category. Use age range to specify exact grade or range of grades.
- **Secondary Education:** Grades 7-12. Material appropriate for grade 13 (Ontario) is also included in this category. Use age range to specify exact grade or range of grades.
- **Higher Education:** Use for material appropriate to any adult (18+) learning or teaching contexts that are not covered by the terms provided in this list.
- **University Undergraduate:** Appropriate to the Bachelor's degree or the first four years of full-time university study. Use age range to specify exact year(s) of study.
- **University Postgraduate:** Appropriate to a Master's, PhD or other degree that follows a Bachelor's degree.
- **Technical School:** Use for material suitable to institutes offering certificates, apprenticeships and other formal programs of instruction to adults.
- **Professional Formation:** Use for material suitable to any type of professional development activity.
- **Vocational Training:** Work-related training in areas not regarded as professions.

Secondary Elements

Please fill out these elements only if necessary.

To determine whether any of these elements are important for the resource being described, consider the following questions. If the answer to any of them is "no", the element associated with that question can be left blank.

1. Is it your first time creating a metadata record?

If yes, fill in element 3.3.2 MetaMetaData.Contribute.Entity, following the instructions provided for "Author or Contributor" in the primary elements section.

2. Does the learning resource use a language other than English?

If yes, fill in element 1.4 General.Language, using the appropriate language code from "Appendix A: Language Codes."

3. Are there Special technical requirements?

If yes, describe them in element 4.6 Technical.OtherPlatformRequirements, including any hardware or software requirements

4. Are there any specific copyright restrictions?

If yes, ensure that 6.2 Rights.CopyrightAndOtherRestrictions contains the value "yes," and provide a description of these restrictions in 6.3 Rights.Description.

5. Are there any related resources?

If yes, ensure that 7.1 Relation.Kind contains one of the values provided below, and that 7.2.3.2 Relation.Resource.Identifier.Catalogentry.Entry contains the Web address or file name for the related resource.

- **is part of:** The described resource is a component of a larger or more general referenced resource.
- **has part:** The described resource has more specific sub-components that are of special importance and are not directly accessible through the content provided for 4.3 Technical.Location.
- **is version of:** The described resource is a version, edition, or adaptation of the referenced resource. Changes in version imply substantive changes in content rather than differences in format.
- **has version:** The described resource has a version, edition, or adaptation, namely, the referenced resource. Changes in version imply substantive changes in content rather than differences in format.
- **is format of:** The described resource is the same intellectual content of the referenced resource that pre-existed it, but presented in another format.
- **has format:** The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.

- **is based on:** The described resource is a derivation, adaptation, interpretation, translation, performance or production of the referenced resource.
- **is basis for:** The described resource serves as the basis for a derivation, interpretation, translation, performance or production, of the referenced resource.
- **references:** The described resource is referenced, cited, or otherwise pointed to by the referenced resource.
- **is referenced by:** The described resource references, cites, or otherwise points to the referenced resource.

6. Are there people or organizations other than the primary author whose contribution to the resource you wish to record?

If yes, ensure that 2.3.1 LifeCycle.Contribute.Role is set to one of the values described below, and that 2.3.3 LifeCycle.Contribute.Date is filled out according to the instructions provided under "Author or Contributor" in the primary elements section.

- **Author:** An entity primarily responsible for making the content of the resource. A creator can be a person, institution, group or other entity.
- **Publisher:** "The individual or organization responsible for making the resource available in its present form, such as a publishing house, a university department, or a corporate entity." (Dublin Core)
- **Unknown:** Use this term for any named individual or organization whose contribution or role you are unsure of.
- **Initiator:** The person, institution, or funding agency responsible for originally causing the development process. If the initiator is the same entity as the creator, simply list once as the creator.
- **Terminator:** The person or entity responsible for intentionally removing access to the resource.
- **Validator:** The person or entity responsible for confirming the overall integrity of the resource.
- **Editor:** The person or entity responsible for the revision of the resource for the purposes of publication or public presentation. May compile the work of multiple creators, or enforce common style and usage practices.
- **Graphical Designer:** The specialist or entity responsible for the construction of the visual elements of a resource. Usually works with a team that typically includes roles for Instructional Designer(s), Content Provider(s), etc.
- **Technical Implementer:** The specialist or entity using specialized software or equipment in the development of a resource, or for technical support. Usually works with a team that typically includes roles for Instructional Designer(s), Content Provider(s), etc.
- **Content Provider:** A person or entity that is secondarily responsible for the content of the resource. It can also be an original creator, the content of whose resource has been significantly changed in being aggregated, repurposed or digitized. In the context of an instructional design team, the content provider may be the subject matter expert, qualified to provide information about content used in the development process.
- **Technical Validator:** The person or entity responsible for confirming the technical integrity of the resource.
- **Educational Validator:** The person or entity responsible for confirming the educational integrity of the resource.
- **Script Writer:** The person or entity responsible for the creation of a text read or performed in an audio, video, and/or interactive learning resource. Usually works with a team that typically includes roles for Instructional Designer(s), Content Provider(s), etc. Use "creator" if the script writer is primarily responsible for the content of the resource as a whole.
- **Instructional Designer:** The specialist or entity responsible for applying research-based principles to the design of instruction. Usually plays a consultative role in a team that typically includes roles for Graphical Designer(s), Content Provider(s), etc.

Tertiary Elements

Tertiary elements should have their use and their potential values determined or constrained by one or more of the following:

1. The value may be supplied automatically by the indexing or database system.
2. The application of the element and range of recommended values should be determined through coordination and consultation on a project-wide level.
3. The application of the element and range of recommended values should be determined through coordination and consultation at the indexing site.

Note: Definitions provided for tertiary elements, below, are taken directly from IMS documentation.

1.1 General.Identifier

Globally unique label for learning object.

1.3 General.CatalogEntry

Designation given to resource.

1.3.1 General.CatalogEntry.Catalog

Source of following string value.

1.3.2 General.CatalogEntry.Entry

Actual value.

1.7 General.Coverage

Temporal / spatial characteristics of content (e.g., historical context).

2.1 LifeCycle.Version

The edition of the learning object.

3.1 MetaMetaData.Identifier

A unique label for the meta-data.

3.2.1 MetaMetaData.CatalogEntry.Catalog

Source of following string value.

3.2.2 MetaMetadata.CatalogEntry.Catalog

Actual string value.

3.3.1 MetaMetadata.Contribute.Role

Kind of contribution.

3.3.3 MetaMetadata.Contribute.Date

Date of contribution.

3.4 MetaMetadata.MetaDataScheme

Names the structure of the meta-data.

3.5 MetaMetadata.Language

Language of the meta-data instance.

4.1 Technical.Format

Technical data type of the resource.

4.2 Technical.Size

The size of the digital resource in bytes.

4.7 Technical.Duration

Time a continuous learning object takes when played at intended speed, in seconds.

5.5 Educational.IntendedEndUserRole

Normal user of the learning object, most dominant first.

5.7 Educational.TypicalAgeRange

Age of the typical intended user.

5.11 Educational.Language

User's natural language.

6.1 Rights.Cost

Whether use of the resource requires payment.

7.2.3.1 Relation.Resource.Identifier.Catalogentry.Catalog
Source of following string value.

9.1 Classification.Purpose

Characteristics of the resource described by this classification entry.

9.2.1 Classification.TaxonPath.Source

A specific classification. single value

9.2.2 Classification.TaxonPath.Taxon

An entry in a classification.

9.2.2.2 Classification.TaxonPath.Taxon.Entry

Taxon's name or label.

9.4 Classification.Keyword

Keywords describing learning objective relative to its stated purpose.

Appendix A: Language Codes

ISO 639 CODES ALPHABETIC BY LANGUAGE NAME (ENGLISH SPELLING)

LANGUAGE NAME	CODE	LANGUAGE FAMILY
ABKHAZIAN	AB	IBERO-CAUCASIAN
AFAN (OROMO)	OM	HAMITIC
AFAR	AA	HAMITIC
AFRIKAANS	AF	GERMANIC
ALBANIAN	SQ	INDO-EUROPEAN (OTHER)
AMHARIC	AM	SEMITIC
ARABIC	AR	SEMITIC
ARMENIAN	HY	INDO-EUROPEAN (OTHER)
ASSAMESE	AS	INDIAN
AYMARA	AY	AMERINDIAN
AZERBAIJANI	AZ	TURKIC/ALTAIC
BASHKIR	BA	TURKIC/ALTAIC
BASQUE	EU	BASQUE
BENGALI ; BANGLA	BN	INDIAN
BHUTANI	DZ	ASIAN
BIHARI	BH	INDIAN
BISLAMA	BI	[not given]
BRETON	BR	CELTIC
BULGARIAN	BG	SLAVIC
BURMESE	MY	ASIAN
BYELORUSSIAN	BE	SLAVIC
CAMBODIAN	KM	ASIAN
CATALAN	CA	ROMANCE
CHINESE	ZH	ASIAN
CORSICAN	CO	ROMANCE
CROATIAN	HR	SLAVIC
CZECH	CS	SLAVIC
DANISH	DA	GERMANIC
DUTCH	NL	GERMANIC
ENGLISH	EN	GERMANIC
ESPERANTO	EO	INTERNATIONAL AUX.
ESTONIAN	ET	FINNO-UGRIC
FAROESE	FO	GERMANIC
FIJI	FJ	OCEANIC/INDONESIAN
FINNISH	FI	FINNO-UGRIC
FRENCH	FR	ROMANCE
FRISIAN	FY	GERMANIC
GALICIAN	GL	ROMANCE
GEORGIAN	KA	IBERO-CAUCASIAN
GERMAN	DE	GERMANIC
GREEK	EL	LATIN/GREEK
GREENLANDIC	KL	ESKIMO
GUARANI	GN	AMERINDIAN

GUJARATI	GU	INDIAN
HAUSA	HA	NEGRO-AFRICAN
HEBREW	HE	SEMITIC [*Changed 1989 from original ISO 639:1988, IW]
HINDI	HI	INDIAN
HUNGARIAN	HU	FINNO-UGRIC
ICELANDIC	IS	GERMANIC
INDONESIAN 639:1988, IN]	ID	OCEANIC/INDONESIAN [*Changed 1989 from original ISO
INTERLINGUA	IA	INTERNATIONAL AUX.
INTERLINGUE	IE	INTERNATIONAL AUX.
INUKTITUT	IU	[]
INUPIAK	IK	ESKIMO
IRISH	GA	CELTIC
ITALIAN	IT	ROMANCE
JAPANESE	JA	ASIAN
JAVANESE	JV	OCEANIC/INDONESIAN
KANNADA	KN	DRAVIDIAN
KASHMIRI	KS	INDIAN
KAZAKH	KK	TURKIC/ALTAIC
KINYARWANDA	RW	NEGRO-AFRICAN
KIRGHIZ	KY	TURKIC/ALTAIC
KURUNDI	RN	NEGRO-AFRICAN
KOREAN	KO	ASIAN
KURDISH	KU	IRANIAN
LAOTHIAN	LO	ASIAN
LATIN	LA	LATIN/GREEK
LATVIAN;LETTISH	LV	BALTIC
LINGALA	LN	NEGRO-AFRICAN
LITHUANIAN	LT	BALTIC
MACEDONIAN	MK	SLAVIC
MALAGASY	MG	OCEANIC/INDONESIAN
MALAY	MS	OCEANIC/INDONESIAN
MALAYALAM	ML	DRAVIDIAN
MALTESE	MT	SEMITIC
MAORI	MI	OCEANIC/INDONESIAN
MARATHI	MR	INDIAN
MOLDAVIAN	MO	ROMANCE
MONGOLIAN	MN	[not given]
NAURU	NA	[not given]
NEPALI	NE	INDIAN
NORWEGIAN	NO	GERMANIC
OCCITAN	OC	ROMANCE
ORIYA	OR	INDIAN
PASHTO;PUSHTO	PS	IRANIAN
PERSIAN (farsi)	FA	IRANIAN
POLISH	PL	SLAVIC
PORTUGUESE	PT	ROMANCE
PUNJABI	PA	INDIAN

QUECHUA	QU	AMERINDIAN
RHAETO-ROMANCE	RM	ROMANCE
ROMANIAN	RO	ROMANCE
RUSSIAN	RU	SLAVIC
SAMOAN	SM	OCEANIC/INDONESIAN
SANGHO	SG	NEGRO-AFRICAN
SANSKRIT	SA	INDIAN
SCOTS GAELIC	GD	CELTIC
SERBIAN	SR	SLAVIC
SERBO-CROATIAN	SH	SLAVIC
SESO THO	ST	NEGRO-AFRICAN
SETSWANA	TN	NEGRO-AFRICAN
SHONA	SN	NEGRO-AFRICAN
SINDHI	SD	INDIAN
SINGHALESE	SI	INDIAN
SISWATI	SS	NEGRO-AFRICAN
SLOVAK	SK	SLAVIC
SLOVENIAN	SL	SLAVIC
SOMALI	SO	HAMITIC
SPANISH	ES	ROMANCE
SUNDANESE	SU	OCEANIC/INDONESIAN
SWAHILI	SW	NEGRO-AFRICAN
SWEDISH	SV	GERMANIC
TAGALOG	TL	OCEANIC/INDONESIAN
TAJIK	TG	IRANIAN
TAMIL	TA	DRAVIDIAN
TATAR	TT	TURKIC/ALTAIC
TELUGU	TE	DRAVIDIAN
THAI	TH	ASIAN
TIBETAN	BO	ASIAN
TIGRINYA	TI	SEMITIC
TONGA	TO	OCEANIC/INDONESIAN
TSONGA	TS	NEGRO-AFRICAN
TURKISH	TR	TURKIC/ALTAIC
TURKMEN	TK	TURKIC/ALTAIC
TWI	TW	NEGRO-AFRICAN
UIGUR	UG	[]
UKRAINIAN	UK	SLAVIC
URDU	UR	INDIAN
UZBEK	UZ	TURKIC/ALTAIC
VIETNAMESE	VI	ASIAN
VOLAPUK	VO	INTERNATIONAL AUX.
WELSH	CY	CELTIC
WOLOF	WO	NEGRO-AFRICAN
XHOSA	XH	NEGRO-AFRICAN
YIDDISH JI]	YI	GERMANIC [*Changed 1989 from original ISO 639:1988,
YORUBA	YO	NEGRO-AFRICAN

ZHUANG	ZA	[]
ZULU	ZU	NEGRO-AFRICAN

From: <http://www.oasis-open.org/cover/iso639a.html>

Appendix B: Date and Time Codes

Different standards may need different levels of granularity in the date and time, so this profile defines six levels. Standards that reference this profile should specify one or more of these granularities. If a given standard allows more than one granularity, it should specify the meaning of the dates and times with reduced precision, for example, the result of comparing two dates with different precisions.

The formats are as follows. Exactly the components shown here must be present, with exactly this punctuation. Note that the "T" appears literally in the string, to indicate the beginning of the time element, as specified in ISO 8601.

Year:

YYYY (eg 1997)

Year and month:

YYYY-MM (eg 1997-07)

Complete date:

YYYY-MM-DD (eg 1997-07-16)

Complete date plus hours and minutes:

YYYY-MM-DDThh:mmTZD (eg 1997-07-16T19:20+01:00)

Complete date plus hours, minutes and seconds:

YYYY-MM-DDThh:mm:ssTZD (eg 1997-07-16T19:20:30+01:00)

Complete date plus hours, minutes, seconds and a decimal fraction of a second

YYYY-MM-DDThh:mm:ss.sTZD (eg 1997-07-16T19:20:30.45+01:00)

where:

YYYY = four-digit year

MM = two-digit month (01=January, etc.)

DD = two-digit day of month (01 through 31)

hh = two digits of hour (00 through 23) (am/pm NOT allowed)

mm = two digits of minute (00 through 59)

ss = two digits of second (00 through 59)
s = one or more digits representing a decimal fraction of a second
TZD = time zone designator (Z or +hh:mm or -hh:mm)

This profile does not specify how many digits may be used to represent the decimal fraction of a second. An adopting standard that permits fractions of a second must specify both the minimum number of digits (a number greater than or equal to one) and the maximum number of digits (the maximum may be stated to be "unlimited").

This profile defines two ways of handling time zone offsets:

1. Times are expressed in UTC (Coordinated Universal Time), with a special UTC designator ("Z").
2. Times are expressed in local time, together with a time zone offset in hours and minutes. A time zone offset of "+hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes ahead of UTC. A time zone offset of "-hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes behind UTC.

A standard referencing this profile should permit one or both of these ways of handling time zone offsets.

Examples

1994-11-05T08:15:30-05:00 corresponds to November 5, 1994, 8:15:30 am, US Eastern Standard Time.

1994-11-05T13:15:30Z corresponds to the same instant.

From: <http://www.w3.org/TR/NOTE-datetime>