CanCore Guidelines Version 2.0: Educational Category

History of Educational Category Document

Date	Version	Comment	Person
June 6, 2002	1.1	Based on IMS Learning Resource Meta-data 1.2.1	Sue Fisher
March 7, 2003	1.8.9	Revised and reformatted	Scott Habkirk and Norm Friesen
August 7, 2003	1.9	Feedback incorporated; examples added	Norm Friesen
November 21, 2003	2.0	Final revisions incorporating feedback	Norm Friesen

Use of Educational Category Elements in Other Application Profiles

Element	CanCore	SCORM	Curriculum Online	TLF	Sing-CORE	UK LOM Core	Dublin Core
5:Educational	Y	O	M	Y	Y	O	
5.1:Interactivity Type	N	O	O	N	N	O	
5.2:Learning Resource Type	Y	O	M	Y	Y	O	DC.Type
5.3:Interactivity Level	Y	O	O	N	N	O	
5.4:Semantic Density	N	O	O	N	N	O	
5.5:Intended End User Role	Y	O	M	Y	Y	O	
5.6:Context	Y	O	O	N	Y	O	
5.7:Typical Age Range	Y	O	C	N	Y	O	
5.8:Difficulty	N	O	O	N	N	O	
5.9:Typical Learning Time	Y	O	O	N	N	O	
5.10:Description	N	O	O	N	N	O	
5.11:Language	Y	O	O	N	N	O	

Legend
Y = Yes, Included in Subset
O = Optional
N = No, Not Included in Subset
M = Mandatory
DC = Dublin Core

5:Educational

Explanation	Size	Order	Value Space	Datatype
This category describes the key educational or pedagogic characteristics of this learning object. NOTE: This is the pedagogic information essential to those involved in achieving a quality learning experience. The audience for this metadata includes teachers, managers, authors, and learners.	Smallest permitted maximum: 100 items	Unspecified	-	-

This element category describes the educational dimensions of the learning resource. The educational or pedagogic features of a learning resource can change depending on the context in which that resource is used or reused.

- This element group can be repeated up to 100 times. This means that for each educational application, audience, and/or environment in which the learning resource can be used, all of the elements in this element group can be repeated, and new instances of all this aggregate element can be populated.

The sub-elements in this category are:

    5.1:Interactivity Type
    5.2:Learning Resource Type
    5.3:Interactivity Level
    5.4:Semantic Density
    5.5:Intended End User Role
    5.6:Context
    5.7:Typical Age Range
    5.8:Difficulty
    5.9:Typical Learning Time
    5.10:Description
    5.11:Language

Elements listed in **bold** are included in the CanCore application profile.

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5.1:Interactivity Type

Explanation	Size	Order	Value Space	Datatype
Predominant mode of learning supported by this learning object.	1	Unspecified	active expositive mixed	Vocabulary (State)
Indicate whether the resource requires action on the part of the user (e.g., the resource presents imperative statements, requires input), simply provides information, or presents a mix of these two approaches. CanCore does not recommend the use of this element for the purposes of interoperation in distributed environments: • It describes characteristics of the resource that are indicated by other elements (e.g., a value of exam or simulation for 5.2:Learning Resource Type will be Active; a value of JPEG or text or 4.1:Technical.Format will likely be Expositive). • The criterion for interactivity presented by this element is different from that presented by element 5.3:Interactivity Level. The categories in these two elements can be understood as relating to one another orthogonally (as indicated by the table provided for element 5.3). However, this orthogonal relationship between types of interactivity and levels of interactivity is not a simple one, and not reflected in the literature. It may not be readily understood by metadata record creators. • Note that Active, Expositive, and Mixed are attributes of the resource, rather than "modes of learning" (as stated in the LOM explanation).				

Vocabulary Recommendations

active
"Existing in action, working, effective, having practical operation or results" (*OED*). (Note that in this context, Active does *not* refer to "active learning," understood as a pedagogical orientation in which students are encouraged to take responsibility for and direct their own learning.)

expositive
"Tending to set forth or describe in detail; descriptive; serving to explain" (*OED*).

mixed
"Consisting of different or dissimilar elements or qualities; not of one kind, not pure or simple; composite" (*OED*).

Example

- mixed

XML Example

```
<interactivityType>
    <source>LOMv1.0</source>
    <value>mixed</value>
</interactivityType>
```

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5.2:Learning Resource Type

Explanation	*Size*	*Order*	*Value Space*	*Datatype*
Specific kind of learning object. The most dominant kind shall be first. NOTE: The vocabulary terms are defined as in the *OED*: 1989 and as used by educational communities of practice.	Smallest permitted maximum: 10 items	Ordered	exercise simulation questionnaire diagram figure graph index slide table narrative text exam problem statement self assessment lecture	Vocabulary (State)

Indicate the potential educational use(s) or type(s) of content associated with the learning resource. Use LOM vocabulary values as defined and interrelated below in conjunction with an additional, referenced vocabulary that extends these.

Consistent and effective use of this element may be challenging. The LOM allows this element to be understood as designating *types* or *formats* of content as well as potential *uses* of this content. Also, the values recommended by the LOM exclude many important types of content (e.g., sound, animation/video/film, discussion, hypermedia), and also exclude many educational applications of content (e.g., syllabus/outline/schedule, example, module/unit). Many LOM implementations use widely varying approaches to vocabulary in place of that presented in the LOM. A survey of these implementations is provided in Appendix A of this document.

There is evidence in the LOM to support the use of this element for the description of either resource format or resource use:

- Some vocabulary values recommended by the LOM describe educational use or application of the resource (exercise, simulation, questionnaire, exam, problem statement, self assessment, lecture). Other values are relevant only to its format or genre (diagram, figure, graph, index, slide, table, narrative text).

- Appendix B of the LOM datamodel indicates that this element is equivalent to the Dublin Core element Type. The Dublin Core defines DC.Type in terms that refer exclusively to the genre or type of resource: "The nature or genre of the content of the resource." It reinforces this by providing a recommended vocabulary of "collection, dataset, event, image, interactive resource, service, software, sound, text, physical object."

Other considerations for the use of this element:

- CanCore discourages the use of the 9:Classification element category as a means of indicating the potential educational use(s) or type(s) of content associated with the learning resource.

- To accommodate hierarchically structured vocabularies or taxons in this element, CanCore recommends that corresponding values from different levels in the taxon be listed together, and be separated by semicolons. (For example, using the taxon suggested by the DLESE [Digital Library for Earth System Education], compound values such as "AUDIO: audio book" and "SERVICE: Listserv" could be formulated. See Appendix A for more about the DLESE taxon.)

Vocabulary Recommendations

CanCore recognizes that the vocabulary values recommended by the LOM for this element may be suboptimal for many implementations. CanCore advises the use of the recommended LOM vocabulary in conjunction with an additional, referenced vocabulary that extends it. The precise manner for doing this is outlined in the Introduction (under Vocabulary in the Characteristics of the LOM/CanCore Datamodel section). This approach allows an implementation to preserve some of semantic interoperability with other implementations through the use of the LOM vocabulary, while also allowing that implementation to apply a vocabulary suited to its own, particular purposes.

This approach also implies that that the LOM vocabulary values would be best understood each in the most general sense possible, serving as broad equivalents or containers for more specific values: Accordingly, the definitions below provide **use for** recommendations to direct implementers to the broadest terms, and to broaden the significance of these recommended terms as much as possible. (The example terms provided as equivalents are taken from the vocabularies listed in Appendix A.) These definitions also identify certain values (with very specific and/or overlapping meanings) as preferable over others for use as general container terms (e.g., diagram, figure).

exercise
An exercise is "the use of or method of using; a task prescribed or performed for the sake of attaining proficiency, for training either body or mind, or as an exhibition or test of proficiency or skill" (*OED*).
Use for any learning resource that is associated with a planned sequence of actions that are not evaluated and not part of a simulation (e.g., critical thinking activity, brainstorming, assignment, tutorial, worksheet.) Note that some alternative or custom vocabularies may classify educational resource types as types of educational activities. In such cases, the LOM value of

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Exercise may be the closest equivalent value that is available for any and all values from such vocabularies.

simulation
A simulation is "the technique of imitating the behaviour of some situation or process (whether economic, military, mechanical, etc.) by means of a suitably analogous situation or apparatus" (*OED*).

questionnaire
A questionnaire is "a list of questions by which information is sought from a selected group, usually for statistical analysis" (*OED*).

diagram
A diagram is "an illustrative figure which, without representing the exact appearance of a resource, gives an outline or general scheme of it, so as to exhibit the shape and relations of its various parts; a set of lines, marks, or tracings which represent symbolically the course or results of any action or process, or the variations which characterize it" (*OED*).
Use figure as a preferred container term.

figure
A figure is "the image, likeness, or representation of something material or immaterial" (*OED*).
Use for any learning resource that consists of or contains visual representation(s) other than text, including photographs, maps, video, animations, and visual hypermedia.

graph
A graph is "a kind of symbolic diagram (used in Chemistry, Mathematics, etc.) in which a system of connections is expressed by spots or circles, some pairs of which are colligated by one or more lines" (*OED*).
Use figure as a preferred container term.

index
An index is "a reference list; an alphabetical list" (*OED*).
Use for any resource that constitutes a dataset, collection, list of links, references or pointers, or a searchable database (e.g., clearinghouse, search engine, glossary, reference). This value does not include a list of objectives or goals.

slide
A slide is "a photographic transparency for use in a slide projector" (*OED*).
Use figure as a preferred container term.

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table
A table is "an arrangement in columns and lines…as the multiplication table, tables of weights and measures, a table of logarithms, astronomical tables, insurance tables, time-tables, etc. " (*OED*).

narrative text
A narrative text is "an account or narration; a history, tale, story, recital (of facts, etc.) that is a portion of the contents of a manuscript or printed book, or of a page, which constitutes the original matter, as distinct from the notes or other critical appendages" (*OED*).
Use for any learning resource that consists of or contains text (including hypertext, and text-based communications), except where that text is a listing (use Index) or serves an evaluative purpose (use Exam).

exam
An exam is "the process of testing, by questions oral or written, the knowledge or ability of pupils, or of candidates for office, degrees, etc." (*OED*).
Use for any learning resource whose primary purpose is the evaluation of the user's actions or input (e.g., assessment item, quiz).

experiment
An experiment is "an action or operation undertaken in order to discover something unknown, to test a hypothesis, or establish or illustrate some known truth" (*OED*).
Use Exercise as a preferred container term when the learning resource does not specifically correspond to or contain an experiment

problem statement
A problem statement is "a written or oral communication setting forth… a difficult or puzzling question proposed for solution" (*OED*).
Use for any learning resource that helps define instruction (e.g., objectives, outcomes, lesson plan, problem set, syllabus, prerequisites, attractor, curriculum)

self-assessment
A self-assessment is an "assessment or evaluation of oneself, one's actions or attitudes by oneself" (*OED*).
Use Exam as a preferred container term.

lecture
A lecture is "a discourse given before an audience upon a given subject, usually for the purpose of instruction" (*OED*).
Use the value narrative text instead of lecture if the lecture is in textual form.
Use for any audio or sound recording

Examples
- LOMv1.0: narrative text
  GEM Resource Type Controlled Vocabulary
  http://www.geminfo.org/Workbench/Metadata/Vocab_Type.html:
  educator's guide
- LOMv1.0: narrative text
  EdNA Curriculum http://www.edna.edu.au/edna/go/cache/offonce/pid/621:
  training package

XML Examples

```
<learningResourceType>
  <source>LOMv1.0</source>
  <value>narrative text</value>
</learningResourceType>
<learningResourceType>
  <source>GEM Resource Type Controlled Vocabulary
  http://www.geminfo.org/Workbench/Metadata/Vocab_Type.html
  </source>
  <value>educator's guide</value>
</learningResourceType>

<learningResourceType>
  <source>LOMv1.0</source>
  <value>narrative text</value>
</learningResourceType>
<learningResourceType>
  <source>EdNA Curriculum
  http://www.edna.edu.au/edna/go/cache/offonce/pid/621</source>
  <value>training package</value>
</learningResourceType>
```

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5.3:Interactivity Level

Explanation	Size	Order	Value Space	Datatype
The degree of interactivity characterizing this learning object. Interactivity in this context refers to the degree to which the learner can influence the aspect or behaviour of the learning object. NOTE: Inherently, this scale is meaningful within the context of a community of practice.	1	Unspecified	very low low medium high very high	Vocabulary (Enumerated)
Indicate the degree to which the learning resource is able to respond to the actions and input of the user. CanCore does not recommend the use of this element for the purposes of interoperation in distributed environments. • The degree of interactivity provided by a resource is indicated by other metadata elements, such as 5.2:Learning Resource Type and 4.1:Technical.Format.				

Vocabulary Recommendations

The table indicates how different resource types might correspond to the recommended vocabulary values. It also shows how these values might relate orthogonally the Active and Expositive values of 5.1:Interactivity Type.

	Very Low	Low	Medium	High	Very High
Active	Test questions formatted for printing	Links provided with instructions for their exploration	Online multiple-choice exercise providing feedback	Dissection simulation with pre- and post-tests	3-D immersive simulation for completing prescribed series of steps
Expositive	Essay formatted for printing	Video clip with play, pause, and replay controls	Hypertext in which readers choose ending	Dissection simulation *without* evaluation components	3-D immersive environment for exploring remote location

Example

• high

XML Example

```
<interactivityLevel>
  <source>LOMv1.0</source>
  <value>high</value>
</interactivityLevel>
```

5.4:Semantic Density

Explanation	Size	Order	Value Space	Datatype
The degree of conciseness of a learning object. The semantic density of a learning object may be estimated in terms of its size, span, or—in the case of self-timed resources such as audio or video—duration. NOTE: Inherently, this scale is meaningful within the context of a community of practice.	1	Unspecified	very low low medium high very high	Vocabulary (Enumerated)
Indicate the degree of concision or brevity of expression in a resource. This can be determined as a ratio of spoken or written words and the total number of words or the total length of the resource. CanCore does not recommend the use of this element for the purposes of interoperation in distributed environments. • It describes aspects of a resource that are indicated by combinations of other elements (e.g., duration or file size, in combination with description or coverage). • Like 5.3:Interactivity Level, it can relate orthogonally to 5.1:Interactivty Type to form a complex interrelationship that may not be readily apparent to metadata record creators. • It is uncertain as to how it would be used in resource discovery and selection. • The meanings of the vocabulary values for this element are not widely understood. • Although instructors may make judgements about the brevity and concision of a resource, they generally do not conceptualize these characteristics in terms of semantic density.				

Example

• very low

XML Example

```
<semanticDensity>
 <source>LOMv1.0</source>
  <value>very low</value>
</semanticDensity>
```

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5.5:Intended End User Role

Explanation	Size	Order	Value Space	Datatype
Principal user(s) for which this learning object was designed, most dominant first. NOTE: A learner works with a learning object in order to learn something. An author creates or publishes a learning object. A manager manages the delivery of this learning object, e.g., a university or college. The document for a manager is typically a curriculum.	Smallest permitted maximum: 10 items	-	teacher author learner manager	Vocabulary (State)
Indicate the role of the typical user of the resource. • In business or employment contexts, learners are often differentiated by roles (e.g., training for clerks, mechanics, or machine operators). This element would be the most appropriate place to accommodate these more detailed learner roles. In these cases, CanCore advises the use of the recommended LOM vocabulary in conjunction with an additional, referenced vocabulary that extends it. The precise manner for doing this is outlined in the Introduction (under Volcabulary in the Characteristics of the LOM/CanCore Datamodel section). This approach allows an implementation to preserve some semantic interoperability with other implementations through the use of the LOM vocabulary, while also allowing that implementation to apply a vocabulary suited to its own, particular purposes. • The smallest permitted maximum of 10 items allows for the extension of the value space associated with this element.				

Vocabulary Recommendations

teacher *(enseignant)*
A teacher is "one who or that which teaches or instructs; an instructor" (*OED*).

author *(auteur)*
An author is "the person who originates or gives existence to anything" (*OED*).

learner *(apprenant)*
A learner is "one who learns or receives instruction" (*OED*).

manager *(gestionnaire)*
A manager is "a person who organizes, directs, or plots something; a person who regulates or deploys resources" (*OED*). Note that manager can be considered as a broad equivalent for more specific values not included in this listing, such as parent, guardian, or supervisor.

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Examples

- LOMv1.0: learner
- LOMv1.0: manager

XML Examples

```
<intendedEndUserRole>
  <source>LOMv1.0</source>
  <value>learner</value>
</intendedEndUserRole>

<intendedEndUserRole>
  <source>LOMv1.0</source>
  <value>manager</value>
</intendedEndUserRole>
```

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5.6:Context

Explanation	Size	Order	Value Space	Datatype
The principal environment within which the learning and use of this learning object is intended to take place. NOTE: Suggested good practice is to use one of the values of the value space and to use an additional instance of this data element for further refinement.	Smallest permitted maximum: 10 items	Unordered	school higher education training other	Vocabulary (State)
Indicate the institutional environment or the level of education appropriate for use of the learning resource. • When dealing with learning components that must be combined or repurposed for an eventual end user, indicate the level of the ultimate end user, not the level of the instructional designer or content repurposer who must first access the resources. • The smallest permitted maximum of 10 items allows for the extension of the value space associated with this element.				

Vocabulary Recommendations

school *(école primaire/secondaire)*
A school is "an establishment in which boys or girls, or both, receive instruction" (*OED*).

higher education *(post-secondaire)*
Higher education refers to "education at universities or similar educational establishments, especially to degree level" (*OCED*).

training *(formation)*
Training refers to "systematic instruction and exercise in some art, profession, or occupation, with a view to proficiency in it" (*OED*).

In keeping with the LOM recommendation for this element ("Suggested good practice is to use one of the values of the value space and to use an additional instance of this data element for further refinement"), implementors may want to use the LOM vocabulary in conjunction with an additional, referenced vocabulary that extends it. (Note that this additional vocabulary value must be referenced in the Source sub-element of the Vocabulary datatype.) This allows an implementation to preserve a minimum of semantic interoperability with other implementations through the LOM terms used, while also applying a vocabulary suited to its own, particular purposes.

Other vocabularies developed for this element (or its equivalent) include:

GEM Grade Element Controlled Vocabulary
(http://www.geminfo.org/Workbench/Metadata/Vocab_Grade.html)

EdNA Education Network Australia
http://www.edna.edu.au/index.html?file=/edna/aboutedna/metadata/schemes.html&sp=eec099eeeeeb

The Merlot Primary Audience Vocabulary
http://merlot.org/search/AdvArtifactSearch.po

Examples

- LOMv1.0: training
- LOMv1.0: school

XML Examples

```
<context>
  <source>LOMv1.0</source>
  <value>training</value>
</context>

<context>
  <source>LOMv1.0</source>
  <value>school</value>
</context>
```

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5.7:Typical Age Range

Explanation	Size	Order	Value Space	Datatype
Age of the typical intended user. This data element shall refer to developmental age, if that would be different from chronological age. NOTE 1: The age of the learner is important for finding learning objects, especially for school-aged learners and their teachers. NOTE 2: Alternative schemas for what this data element tries to cover (such as various reading age or level schemes, IQs or developmental age measures) should be represented through the 9:Classification category.	Smallest permitted maximum: 5 items	Unordered	-	LangString (smallest permitted maximum: 1000 char)

Indicate the age of the end user, preferably in numerical form.

- Broad designations for educational levels will differ between jurisdictions and communities. For this reason, and to encourage simple numeric searches, CanCore strongly encourages the use of numeric values for this element.

- If a number of ages apply, repeat the element for each relevant integer or numeric value.

- If more than five age values apply, indicate as a comma-separated list using a single instance of this element, or as a range (e.g., "8-" for 8 to adult).

- Indicating developmental age numerically is often not appropriate (e.g., an adult of 45 reading at a level of 11-year-old). In these cases, a brief textual description may be more appropriate.

- If multilingual descriptions of age range are required, use a single 5.7:Typical Age Range element with multiple LangString sub-elements.

- When dealing with learning components that must be combined or repurposed for an eventual end user, use the age of the ultimate end user (not the age of the instructional designer or content repurposer who must first access the resource).

- This element can be used to indicate the grade level or common sets of grade levels, using equivalencies such as:
  o Grade 1: 5,6 years
  o Grade 2: 6,7 years
  o Grade 3: 7,8 years
  o Grade 4: 8,9 years
  o Grade 5: 9,10 years
  o Grade 6: 10,11 years
  o Grade 7 (*secondaire 1*): 11,12 years

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> o   Grade 8 (*secondaire 2*): 12,13 years
> o   Grade 9 (*secondaire 3*): 13,14 years
> o   Grade 10 (*secondaire 4*): 14,15 years
> o   Grade 11 (*secondaire 5*): 15,16 years
> o   Grade 12 (*CEGEP*): 16,17 years
> o   1st yr. University (*CEGEP*): 17,18 years
> o   2nd yr. University (*université 1*): 18,19 years
> o   3rd yr. University(*université 2*): 19,20 years
> o   4th yr. University (*université 3*): 20,21 years

Examples

- 6;7
- 9,10,11,12
- Adult
- Adult learners with a 7-9-year-old developmental comprehension

XML Examples

```
<typicalAgeRange>
  <string language="none">6,7</string>
</typicalAgeRange>

<typicalAgeRange>
  <string language="none">9,10,11,12</string>
</typicalAgeRange>

<typicalAgeRange>
  <string language="eng">Adult</string>
</typicalAgeRange>

<typicalAgeRange>
   <string language="eng">Adult learners with a 7-9-year-old
   developmental comprehension</string>
</typicalAgeRange>
```

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5.8:Difficulty

Explanation	Size	Order	Value Space	Datatype
How hard it is to work with or through this learning object for the typical intended target audience. NOTE: The "typical target audience" can be characterized by data elements 5.6:Educational.Context and 5.7:Educational.TypicalAgeRange.	1	Unspecified	very easy easy medium difficult very difficult	Vocabulary (Enumerated)
Indicate the level of ease associated with the use of the learning resource. CanCore does not recommend the use of this element for the purposes of interoperation in distributed environments: • This element has the potential to enable a very granular or specific indication of the learner level associated with the resource, especially when used in conjunction with 5.7:Typical Age Range. However, record creators can rely on only one instance of this element being supported for every five instances of 5.7:Typical Age Range. This makes it difficult to realize the potential of this element.				

Example

• very difficult

XML Example

```
<difficulty>
  <source>LOMv1.0</source>
  <value>very difficult</value>
</difficulty>
```

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5.9:Typical Learning Time

Explanation	Size	Order	Value Space	Datatype
Approximate or typical time it takes to work with or through this learning object for the typical intended target audience. NOTE: The "typical target audience" can be characterized by data elements 5.6:Educational.Context and 5.7:Educational.TypicalAgeRange.	1	Unspecified	-	Duration

If a meaningful estimate can be made, indicate how long it will likely take a learner or other user to use the resource.

- If the resource has a set length or playing time that is the same for all users, refer to 4.7:Technical.Duration.

- If possible, indicate duration using a formatted value; if necessary, provide a longer text description for duration to ensure clarity for the user.

- This datatype is based the ISO 8601:2000 standard for expressing date and time. The relevant aspects of this ISO standard for expressing duration are summarized at http://www.w3.org/TR/xmlschema-2/#duration.

Examples

- PT5H20M25S (five hours, twenty minutes, twenty-five seconds)
- For average students, this unit may take one full day of class time including a few hours of homework. Advanced students may need only a half-day in total.

XML Examples

```
<typicalLearningTime>
  <duration>PT5H20M25S</duration>
</typicalLearningTime>

<typicalLearningTime>
   <string language="eng">For average students, this unit may
   take one full day of class time including a few hours of
   homework. Advanced students may need only a half-day in
   total.</string>
</typicalLearningTime>
```

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5.10:Description

Explanation	Size	Order	Value Space	Datatype
Comments on how this learning object is to be used.	Smallest permitted maximum: 10 items	Unspecified	-	LangString (smallest permitted maximum: 1000 char)

Provide a concise yet thorough description of the use of the resource.

- This element can be used to augment any or all of the elements in the Educational category, including general, contextual pedagogical, or audience information that is not appropriate for any of the other Educational elements.

CanCore does not recommend the use of this element for the purposes of interoperation in distributed environments:

- The way that the learning resource is to be employed can be indicated through the use and extension of 5.2:Learning Resource Type.

- The 8:Annotation element category can also be used to accommodate general educational descriptions, as well as the individual author and date associated with those descriptions.

- Descriptions are typically human-generated values; creating them can be resource-intensive. Their formulation should be undertaken carefully, with unnecessary redundancy avoided where possible.

- A description of the resource and its content should be provided in 1.4:General.Description.

Example

- This resource can be very effective when utilized as a generator for discussion in a grade two classroom. However, it can also be used for individual writing assignments for grade 4 students, or for grade 5 students who are challenged.

XML Example

```
<description>
   <string language="eng">This resource can be very effective
   when utilized as a generator for discussion in a grade two
   classroom. However, it can also be used for individual
   writing assignments for grade 4 students, or for grade 5
   students who are challenged.</string>
</description>
```

5.11:Language

Explanation	Size	Order	Value Space	Datatype
The human language used by the typical intended user of this learning object.	Smallest permitted maximum: 10 items	Unordered	See 1.3:General. Language	CharacterString (smallest permitted maximum: 100 char)

Indicate the language of the intended end user of the resource using the appropriate language code. Use only if the natural language of the user would differ from the language of the learning resource referred to in 1.3:General.Language (e.g., in the case of foreign-language studies).

- The LOM datamodel indicates that both two-letter language codes (ISO 639-1) and three-letter language codes (ISO 639-2) can be used for this element.
  - Two-letter language codes are widely used in XML and LOM communities, and should be acceptable for implementations in many jurisdictions, and for the description of materials in common languages.
  - Some policies and official practices in Canada, the US, and elsewhere require three-letter language codes to be used to be able to accommodate indigenous and other languages.

- Implementations using either predominantly one or the other of these language code sets in record creation should be able to accommodate both types.

- For listings of two- and three-letter language codes, see the Library of Congress (the official ISO 639-2 Registration Authority) at http://lcweb.loc.gov/standards/iso639-2/langcodes.html.

- Use the optional country code (ISO 3166) only if it provides information necessary to your community of users. Indication of country code is generally desirable, but not always practical. Identifying variations in written or spoken language use can be challenging. Further identifying regional variations (e.g., cockney English, Philadelphia English) may sometimes be desirable, but may introduce even further challenges.

Examples

- eng-CA (English as used in Canada)
- fra-CA (French as used in Canada)
- iuk (Inuktitut)

XML Examples

```
<language>eng-CA</language>
<language>fra-CA</language>
<language>iuk</language>
```