

Eleonet Metadata Application Profile – Full metadata specifications

The table below provides the full metadata specifications for Eleonet metadata schema. The table comprises all the LOM metadata elements as defined in IEEE LOM 1484_12_1_v1_Final_Draft.

Parent mandatory elements, that is metadata having no value space or datatype but acting as “containers” for other elements, are marked in **yellow**.

Simple mandatory data elements, that is metadata having individual values which are to be provided by LOs publishers and must retain SCORM conformant value spaces and datatype are marked in **grey**.

Elements automatically generated by the system are marked in **green**

Optional data elements and **optional parent elements** are not highlighted.

Note : According to Eleonet metadata specifications, some LOM data elements, even if optional, are **strongly recommended** to be provided by the publishers due to their relevance for LOs descriptions, searchability and interoperability with other LOs repositories.

Please see column “Requirements” in the table below to locate recommended vs. optional data elements.

ELEONET AP: LOM Mandatory + Optional Data Element Based on IEEE Draft Standard for Learning Object Metadata (LOM)									
Nr.	Name	Description	Size	Requirements	Order	Value Space	Datatype	Notes	Example
1	General (SCORM:M)	This category groups the general information that describes this learning object as a whole.	1	Mandatory	Unspecified	-	-	-PARENT ELEMENT Not to be provided by the publisher	
1.1	General. Identifier (SCORM:M)	A globally unique label that identifies this learning object.	smallest permitted maximum: 10 items	Mandatory	Unspecified	-	-	-PARENT ELEMENT Not to be provided by the publisher	

1.1.1	General. Identifier. Catalog	The value of the identifier within the identification or cataloging scheme that designates or identifies this learning object. A namespace specific string.	1	Recommended	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 1000 char)		"2-7342-0318", "LEAO875", "http://www.ieee.org/documents/1234" "DOI"
1.1.2	General. Identifier. Entry (SCORM:M)	The value of the identifier within the identification or cataloging scheme that designates or identifies this learning object. A namespace specific string.	1	Mandatory	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 1000 char)	-	"DB123456", "2-7342-0318", "LEAO875", "http://foo.org/1234" "10.1007/s00453-001-0061-3"
1.2	General. Title (SCORM:M)	Name given to this learning object.	1	Mandatory	Unspecified	-	LangString (smallest permitted maximum: 1000 char)	-	("en", "The life and works of Leonardo da Vinci")
1.3	General. Language (Curriculum on line: M)	The primary human language or languages used within this learning object to communicate to the intended user.	smallest permitted maximum: 10 items	Recommended	Unordered	ISO 639: 1988 (also including "ancient" languages, like Greek and Latin). If necessary, a country code from the code set ISO 3166-1:1997 can be added. "none" shall also be an acceptable value. For example, a picture of the Mona Lisa has "none" for 1.3:General.Language.	CharacterString (smallest permitted maximum: 100 char)	This element corresponds with the Dublin Core element DC.Language.	"fr", "en-GB"
1.4	General. Description (SCORM:M)	A textual description of the content of this learning object	smallest permitted maximum: 10 items	Mandatory	Unordered	-	LangString (smallest permitted maximum: 2000 char)	This element corresponds to the Dublin Core element DC.Description. It's recommended to specify only one description per language.	("en", "In this video clip, the life and works of Leonardo da Vinci are briefly presented. The focus is on his artistic production, most notably the Mona Lisa.")

1.5	General. Keyword (SCORM:M)	A keyword or phrase describing the topic of this learning object. Note: If a thesaurus will be implemented (using section 9.Classification) then this field could carry the values which are not included into the thesaurus (i.e person names, names of literally, political movement, etc)	smallest permitted maximum: 10 items	Mandatory	Unordered	-	LangString (smallest permitted maximum: 2000 char)	-	("en", "Mona Lisa", "Leonardo da Vinci")
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1.6	General. Coverage	<p>The time, culture, geography or region to which this learning object applies.</p> <p>The extent or scope of the content of the learning object.</p> <p>Coverage will typically include spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity).</p> <p>Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [TGN]) and that, where appropriate, named places or time periods be used in preference to numeric identifiers such as sets of coordinates or date ranges.</p> <p>NOTE 1:--This is the definition from the Dublin Core Metadata Element Set, version 1.14.</p>	smallest permitted maximum: 10 items	Optional	Unordered		LangString (smallest permitted maximum: 1000 char)		<p>("en", "16th century France")</p> <p>NOTE 2:--A learning object could be about farming in 16th century France: in that case, its subject can be described with 1.5:General.Keyword=("en","farming") and its 1.6:General.Coverage can be ("en","16th century France").</p>
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1.7	General. Structure	Underlying organizational structure of this learning object.	1	Optional	Unspecified	<p>atomic: an object that is indivisible (in this context).</p> <p>collection: a set of objects with no specified relationship between them.</p> <p>networked: a set of objects with relationships that are unspecified.</p> <p>hierarchical: a set of objects whose relationships can be represented by a tree structure.</p> <p>linear: a set of objects that are fully ordered. Example: A set of objects that are connected by "previous" and "next" relationships.</p>	Vocabulary (State)		<p>NOTE:--A learning object with Structure="atomic" will typically have 1.8:General.AggregationLevel=1. A learning object with Structure="collection", "linear", "hierarchical" or "networked" will typically have 1.8:General.AggregationLevel=2, 3 or 4.</p>
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1.8	General. Aggregation Level	The functional granularity of this learning object.	1	Optional	Unspecified	1: the smallest level of aggregation, e.g., raw media data or fragments. 2: a collection of level 1 learning objects, e.g., a lesson. 3: a collection of level 2 learning objects, e.g., a course. 4: the largest level of granularity, e.g., a set of courses that lead to a certificate. NOTE 1: --Level 4 objects can contain level 3 objects, or can recursively contain other level 4 objects.	Vocabulary (Enumerated)	NOTE :A learning object with AggregationLevel=1 will typically have 1.7:General.Structure="atomic". A learning object with AggregationLevel=2, 3 or 4 will typically have 1.7:General.Structure="collection", "linear", "hierarchical" or "networked".	If the learning object is a digital picture of the Mona Lisa, 1.7:General.Structure=Atomic and 1.8:General.AggregationLevel=1. If the learning object is a lesson with the digital picture of the Mona Lisa, 1.7:General.Structure=Collection or Networked (since there are two descriptions of the same type of Structure) and 1.8:General.AggregationLevel=2. If the learning object is a course on the Mona Lisa, 1.7:General.Structure=Linear if the documents are intended to be viewed linearly and 1.8:General.AggregationLevel=3. If the learning object is a collection of lessons on the Mona Lisa from different sources, 1.7:General.Structure=Collection and 1.8:General.AggregationLevel=3. Lastly if the learning object is a set of courses with a full history, description, interpretation, etc. of the Mona Lisa, 1.7:General.Structure=Linear or Hierarchical and 1.8:General.AggregationLevel=4.
2	Life Cycle (SCORM:M)	This category describes the history and current state of this learning object and those entities that have affected this learning object during its evolution.	1	Mandatory	Unordered	-	-	-PARENT ELEMENT Not to be provided by the publisher	

2.1	Life Cycle. Version (SCORM:M)	The edition of this learning object.	1	Mandatory	Unordered	-	LangString (smallest permitted maximum: 100 char)	Note that element 2.1 "Version" and element 2.2 "Status" are slightly different: the former specifies the edition/version number of a learning object; the latter specifies the completion status of a learning object (i.e., whether it is still a draft version, or final version, or a revised version, etc.).	("en", "1.2.alpha"), ("it", "Versione 2.0, aggiornamento della precedente versione 1.9")
2.2	Life Cycle. Status (SCORM:M)	The completion status or condition of this learning object.	1	Mandatory	Unordered	Draft Final Revised Unavailable	Vocabulary (SCORM : Restricted Vocabulary)		
2.3	Life Cycle. Contribute. (Curriculum Online: M)	Those entities (i.e., people, organizations) that have contributed to the state of this learning object during its life cycle (e.g., creation, edits, publication).	smallest permitted maximum: 30 items	Recommended	Ordered	-	-	PARENT ELEMENT Not to be provided by the publisher	
2.3.1	Life Cycle. Contribute. Role (Curriculum Online: M)	Kind of contribution. NOTE : Minimally, the publisher(s) of the learning object should be described.	1	Recommended	Unspecified	Author; Publisher; Initiator; Editor; Content provider; Subject matter expert; Graphical designer; Technical implementer; Technical validator; Reviewer; Educational reviewer; Educational validator; Script writer; Instructional designer; Translator Unknown;	Eleonet vocabulary (based on LOM and Digiscuola)		

2.3.2	Life Cycle. Contribute. Entity (Curriculum Online: M)	The identification of and information about entities (i.e., people, organizations) contributing to this learning object. The entities shall be ordered as most relevant first.	smallest permitted maximum: 40 items	Recommended	Ordered	vCard, as defined by IMC vCard 3.0 (RFC 2425, RFC 2426).	CharacterString (smallest permitted maximum: 1000 char)	If Role (2.3.1) is "author", then the entity is typically a person and this element corresponds with the Dublin Core element DC.Creator. If Role equals "publisher", then the entity is typically an organization and this element corresponds with the Dublin Core element DC.Publisher. If Role is not equal to "author" or "publisher", then this element corresponds with the Dublin Core element DC.Contributor.	
2.3.3	Life Cycle. Contribute. Date (Curriculum Online: M)	The date of the contribution.	1	Optional, but Recommended when if Role equals "publisher".		ISO 8601:2000			"2003-09-04"
3	Meta-metadata (SCORM:M)	This category describes this metadata record itself (rather than the learning object that this record describes).	1	Mandatory.	Unspecified	-	-	-PARENT ELEMENT Not to be provided by the publisher	
3.1	Meta-Metadata. Identifier (SCORM:M)	A globally unique label that identifies this metadata record.	smallest permitted maximum: 10 items	Mandatory Data elements in section 3.1 will be automatically provided by the system administrator	Unspecified	-	-	-PARENT ELEMENT Not to be provided by the publisher	
3.1.1	Meta-Metadata. Identifier. Catalog	The name or designator of the identification or cataloging scheme for this entry. A namespace scheme.	1	Recommended	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 1000 char)	automatically provided by the system	"ARIADNE", "URI"

3.1.2	Meta-Metadata. Identifier. Entry (SCORM:M)	The value of the identifier within the identification or cataloging scheme that designates or identifies this metadata record. A namespace specific string.	1	Mandatory	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 1000 char)	automatically provided by the system	"http://ieee.org/descriptions/1234" "10.1330/ieee-schema"
3.2	Meta-Metadata. Contribute (Curriculum Online: M)	Those entities (i.e., people or organizations) that have affected the state of this metadata instance during its life cycle (e.g., creation, validation).	smallest permitted maximum: 30 items	Optional (anyway, please note that Data elements in section 3.2 could be automatically provided by the system administrator)	Ordered	-	-	-PARENT ELEMENT Not to be provided by the publisher	
3.2.1	Meta-Metadata. Contribute.Role (Curriculum Online: M)	Kind of contribution to the metadata record.	1	Optional, but Mandatory if the 3.2 element is present	Unspecified	Creator Validator Translator	Vocabulary (State)	Exactly one instance of this data element with value "creator" should exist. IF possible, this value should be provided automatically.	"Creator" "Validator"

3.2.2	Meta-Metadata. Contribute. Entity (Curriculum Online: M)	The identification of and information about entities (i.e., people, organizations) contributing to this metadata instance. The entities shall be ordered as most relevant first. i.e. According to Curriculum Online, it is mandatory to have at least the name and e-mail of the creator of the metadata record.	smallest permitted maximum: 10 items	Optional, but Mandatory if the 3.2 element is present	Ordered	vCard, as defined by IMC vCard 3.0 (RFC 2425, RFC 2426).	CharacterString (smallest permitted maximum: 1000 char)	- IF possible, this value should be provided automatically.	<pre> <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns:vCard="http://www.w3.org/2001/vcard-rdf/3.0#" > <rdf:Description rdf:about="http://www.indire.it/istituzionale/index.php?sezione=chiamo"> <rdf:type rdf:resource="http://www.w3.org/2001/vcard-rdf/3.0#internet"/> <vCard:EMAIL> <vCard:ORG rdf:parseType="Resource"> <vCard:Orgname>Istituto Nazionale di Documentazione per l'Innovazione e la Ricerca Educativa (Indire) - </vCard:Orgname> <vCard:Orgunit> <rdf:seq> <rdf:li>Dipartimento Documentazione - </rdf:li> <rdf:li>Sede di Firenze, via Buonarroti, 10 - 50122 - Tel: +39 0552380301; Fax: +39 0552380330;</rdf:li> </rdf:seq> </vCard:Orgunit> </vCard:ORG> </rdf:Description> </rdf:RDF> <vCard:EMAIL rdf:parseType="Resource"> <rdf:value>e-mail: documentazione@indire.it</rdf:valu e> </pre>
3.2.3	Meta-Metadata. Contribute. Date (Curriculum Online: M)	The date of the contribution.	1	Optional	Unspecified	ISO 8601:2000	-	IF possible, this value should be provided automatically.	"2003-03-13"

3.3	Meta-Metadata. Metadata Schema (SCORM:M)	The name and version of the authoritative specification used to create this metadata instance.	1	Mandatory (automaticall y provided)		Repertoire ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 30 char)	automatically provided by the system Note that SCORM CAM v.1.3.1 requires at least the following meta-data schemas to be documented in all meta-data instances: <ul style="list-style-type: none"> • LOM v1.0 • SCORM CAM v1.3 	"IEEE 1484.12.1-2002: Standard for Learning Object Metadata" "LOM v.1.0"
3.4	Meta-Metadata. Language	Language of this metadata instance. This is the default language for all LangString values in this metadata instance. If a value for this data element is not present in a metadata instance, then there is no default language for LangString values. NOTE 1:--This data element concerns the language of the metadata instance. Data element 1.3:General.Language concerns the language of the learning object.	1	Optional	Unspecified	see 1.3:General.Language For this data element, "none" shall not be an acceptable value. NOTE 2:--"none" is unacceptable, because the metadata instance is in one or more human languages. "none" is acceptable for 1.3:General.Language, as the learning object itself may be in no particular human language. For example, a picture of the Mona Lisa has "none" for 1.3:General.Language. If its description (i.e., metadata instance) is in Swedish, then 3.4:Meta-Metadata.Language has value "sv".	CharacterString (smallest permitted maximum: 100 char)		"en"
4	Technical (SCORM:M)	This category describes the technical requirements and characteristics of this learning object.	1	Mandatory	Unspecified	-	-	-PARENT ELEMENT Not to be provided by the publisher	-

4.1	Technical. Format (SCORM:M)	Technical datatype(s) of (all the components of) this learning object.	smallest permitted maximum: 40 items	Mandatory	Unordered	MIME types based on IANA registration (see RFC2048:1996) or "non-digital"	CharacterString (smallest permitted maximum: 500 char)	This element corresponds with the Dublin Core element DC.Format. This data element shall be used to identify the software needed to access the learning object.	"video/mpeg", "application/x-toolbook", "text/html"
4.2	Technical. Size	The size of the digital learning object in bytes (octets). The size is represented as a decimal value (radix 10). Consequently, only the digits "0" through "9" should be used. The unit is bytes, not Mbytes, GB, etc. This data element shall refer to the actual size of this learning object. If the learning object is compressed, then this data element shall refer to the uncompressed size.	1	Optional	Unspecified	ISO/IEC 646:1991, but only the digits "0".."9"	CharacterString (smallest permitted maximum: 30 char)		"4200"
4.3	Technical. Location (Curriculum Online: M)	A string that is used to access this learning object. It may be a location (e.g., Universal Resource Locator), or a method that resolves to a location (e.g., Universal Resource Identifier, DOI). The first element of this list shall be the preferable location.	smallest permitted maximum: 10 items	Recommended	Ordered	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 1000 char)	This is where the learning object described by this metadata instance is physically located. Note: If used to specify the DOI string that resolves to the LO, this field must be considered mandatory (regardless SCORM conformance requirements)	http://dx.doi.org/10.1392/digital_object_1

4.4	Technical Requirement	The technical capabilities necessary for using this learning object. If there are multiple requirements, then all are required, i.e., the logical connector is AND.	smallest permitted maximum: 40 items	Optional	Unordered				
4.4.1	Technical Requirement. OrComposite	Grouping of multiple requirements. The composite requirement is satisfied when one of the component requirements is satisfied, i.e., the logical connector is OR.	smallest permitted maximum: 40 items	Optional	Unordered				
4.4.1.1	Technical Requirement. OrComposite. Type	The technology required to use this learning object, e.g., hardware, software, network, etc	1	Optional	Unspecified	operating system browser Plug-in	Eleonet Vocabulary (based on LOM and Digiscuola)		
4.4.1.2	Technical Requirement. OrComposite. Name	Name of the required technology to use this learning object. NOTE 1:--The value for this data element may be derived from 4.1:Technical.Format automatically, e.g., "video/mpeg" implies "multi-os". NOTE 2:--This vocabulary includes most values in common use at the time that this Standard was approved.	1	Optional	Unspecified	if Type="operating system", then: pc-dos ms-windows macos unix multi-os Linux None if Type="browser" then : any netscape communicator ms-internet explorer opera amaya safari mozilla if Type="plug-in ", then: flash	Eleonet Vocabulary (based on LOM and Digiscuola)		

4.4.1.3	Technical. Requirement. Or Composite. Minimum Version	Lowest possible version of the required technology to use this learning object.	1	Optional	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 30 char)		"4.2"
4.4.1.4	Technical. Requirement. Or Composite. Maximum Version	Highest possible version of the required technology to use this learning object.	1	Optional	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 30 char)		"6.2"
4.5	Technical. Installation Remarks	Description of how to install this learning object.	1	Optional	Unspecified		LangString (smallest permitted maximum: 1000 char)		("en", "Unzip the zip file and launch index.html in your web browser.")
4.6	Technical. Other Platform Requirements	Information about other software and hardware requirements. NOTE:--This element is intended for descriptions of requirements that cannot be expressed by data element 4.4:Technical.Requirement.	1	Optional	Unspecified		LangString (smallest permitted maximum: 1000 char)		("en", "sound card"), ("en", "runtime X")
4.7	Technical. Duration	Time a continuous learning object takes when played at intended speed. NOTE:--This data element is especially useful for sounds, movies or animations.	1	Optional	Unspecified		Duration		"PT1H30M", "PT1M45S"
5	Educational (Curriculum Online: M)	This category describes the key educational or pedagogic characteristics of this learning object.	smallest permitted maximum: 100 items	Optional	Unspecified	-	-	--PARENT ELEMENT Not to be provided by the publisher	

5.1	Educational Interactivity Type	Predominant mode of learning supported by this learning object.	1	Optional	Unspecified	active expositive mixed	Vocabulary (State)	<p>"Active" learning (e.g., learning by doing) is supported by content that directly induces productive action by the learner. An active learning object prompts the learner for semantically meaningful input or for some other kind of productive action or decision, not necessarily performed within the learning object's framework. Active documents include simulations, questionnaires, and exercises.</p> <p>"Expositive" learning (e.g., passive learning) occurs when the learner's job mainly consists of absorbing the content exposed to him (generally through text, images or sound). An expositive learning object displays information but does not prompt the learner for any semantically meaningful input. Expositive documents include essays, video clips, all kinds of graphical material, and hypertext documents. When a learning object blends the active and expositive interactivity types, then its interactivity type is "mixed".</p> <p>Note:--Activating links to navigate in hypertext documents is not considered to be a productive action.</p>	<p>active documents (with learner's action):</p> <ul style="list-style-type: none"> · simulation (manipulates, controls or enters data or parameters); · questionnaire (chooses or writes answers); · exercise (finds solution); · problem statement (writes solution). <p>expositive documents (with learner's action):</p> <ul style="list-style-type: none"> · hypertext document (reads, navigates); · video (views, rewinds, starts, stops); · graphical material (views); · audio material (listens, rewinds, starts, stops). <p>mixed document:</p> <ul style="list-style-type: none"> · hypermedia document with embedded simulation applet.
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5.2	Educational Learning Resource Type (Curriculum Online: M)	Specific kind of learning object. The most dominant kind shall be first.	smallest permitted maximum: 10 items	Recommended	Ordered	self assessment exercise experiment lecture problem statement simulation exam/questionnaire case study guide drill and practice questionnaire information resource glossary open Activity tool	Eleonet vocabulary based on LOM and extended with Celebrate; Note: for a greater level of interoperability with Curriculum Online resources, the values "Open Activity" and "Tools" have been added to this vocabulary		"exercise" + "lecture"
5.3	Educational Interactivity Level	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 behavior of the learning object . NOTE 1:--Inherently, this scale is meaningful within the context of a community of practice.	1	Optional	Unspecified	very low low medium high very high	Vocabulary (Enumerated)		NOTE 2:--Learning objects with 5.1:Educational.InteractivityType ="active" may have a high interactivity level (e.g., a simulation environment endowed with many controls) or a low interactivity level (e.g., a written set of instructions that solicit an activity). Learning objects with 5.1:Educational.InteractivityType ="expositive" may have a low interactivity level (e.g., a piece of linear, narrative text produced with a standard word processor) or a medium to high interactivity level (e.g., a sophisticated hyperdocument, with many internal links and views).

5.4	Educational. Semantic Density	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. The semantic density of a learning object is independent of its difficulty. It is best illustrated with examples of expository material, although it can be used with active resources as well. NOTE 1:--Inherently, this scale is meaningful within the context of a community of practice.	1	Optional	Unspecified	very low low medium high very high	Vocabulary Enumerated)	<p><i>Active documents:</i> user interface of a simulation</p> <p>low semantic density: a screen filled up with explanatory text, a picture of a combustion engine, and a single button labeled "Click here to continue"</p> <p>high semantic density: screen with short text, same picture, and three buttons labeled "Change compression ratio", "Change octane index", "Change ignition point advance"</p> <p><i>Expository documents:</i> medium difficulty text document of medium semantic density: "The class of Marsupial animals comprises a number of relatively primitive mammals. They are endowed with a short placentation, after which they give birth to a larva. The larva thereafter takes refuge in the mother's marsupium, where it settles to finish its complete development."</p> <p>high semantic density: "Marsupials are primitive mammals, with short placentation followed by the birth of larva, which thereafter takes refuge in the marsupium to finish its development."</p> <p>easy video document of low semantic density: The full recorded footage of a conversation between two experts on the differences between Asian and African elephants; 30 minutes duration.</p> <p>high semantic density: An expertly edited abstract of the same conversation; 5 minutes duration</p> <p>difficult mathematical notation of medium semantic density: The text representation of the theorem: For any given set ϕ, it is always possible to define another set ψ, which is a superset of ϕ.</p> <p>very high semantic density: The symbolic representation (formula) of the theorem $(\forall\phi \exists\psi: \psi \supset \phi)$</p>
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5.5	Educational. Intended End User Role	Principal user(s) for which this learning object was designed, most dominant first. NOTE 1:--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. NOTE 2:--In order to describe the intended end user role through the skills the user is intended to master, or the tasks he or she is intended to be able to accomplish, the category 9:Classification can be used.	smallest permitted maximum: 10 items	Optional		teacher author learner manager	Vocabulary (State)		An authoring tool that produces pedagogical material is a typical example of a learning object whose intended end user is an author
5.6	Educational. Context	The principal environment within which the learning and use of this learning object is intended to take place.	smallest permitted maximum: 12 items	Recommended	Unordered	nursery school; primary school; lower secondary school; upper secondary school; post-secondary and higher education special education vocational education distance education adult / continuing education professional development school libraries / documentation centre educational administration policy making other	Eleonet vocabulary - based on LOM, CELEBRATE and Digiscuola		

5.7	Educational. Typical Age Range	Age of the typical intended user.	smallest permitted maximum: 5 items	Recommended	Unordered	To foster interoperability (especially with systems based on other natural languages) the string should be formatted as "minimum age-maximum age" or "minimum age - ".	LangString (smallest permitted maximum: 1000 char)		8-10 8-
5.8	Educational. Difficulty	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	Optional	Unspecified	very easy easy medium difficult very difficult	Vocabulary Enumerated)		
5.9	Educational. Typical Learning Time	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	Optional	Unspecified		Duration		"PT1H30M", "PT1M45S"
5.10	Educational. Description	Comments on how this learning object is to be used.	smallest permitted maximum: 10 items	Optional	Unspecified		LangString (smallest permitted maximum: 1000 char)		("en", "Teacher guidelines that come with a textbook.")

5.11	Educational. Language	The human language used by the typical intended user of this learning object.	smallest permitted maximum: 10 items	Optional	Unordered	See 1.3:General. Language	CharacterString smallest permitted maximum: 100 char)		"en", "en-GB", "de", "fr-CA", "it" NOTE:--As an example, for a learning object in French, intended for English-speaking students, the value of 1.3:General.Language will be French, and the value of 5.11:Educational.Language will be English.
6	Rights (SCORM:M)	This category describes the intellectual property rights and conditions of use for this learning object.	1	Mandatory	Unspecified	-	-	-PARENT ELEMENT Not to be provided by the publisher	-
6.1	Rights. Cost (SCORM:M)	Whether use of this learning object requires payment.	1	Mandatory	Unspecified	Yes No	Vocabulary (SCORM : Restricted Vocabulary)		
6.2	Rights. Copyright and Other Restrictions (SCORM:M)	Whether copyright or other restrictions apply to the use of this learning object.	1	Mandatory	Unspecified	Yes No	Vocabulary (SCORM : Restricted Vocabulary)		
6.3	Rights. Description (Curriculum Online: M)	Comments on the conditions of use of this learning object.	1	Recommended	Unspecified	-	LangString (smallest permitted maximum: 1000 char) (Some guidelines for compiling this field could be defined).	If there are some restrictions about the use and/or reuse of the learning object, they should be specified here. Note: Curriculum Online uses this field for carrying the copyright owner and copyright year. Example: "Copyright © Scorchio ES LTD 2002"	"en", "Use of this learning object is only permitted after a donation has been made to Amnesty International!";

7	Relation	This category defines the relationship between this learning object and other learning objects, if any. To define multiple relationships, there may be multiple instances of this category. If there is more than one target learning object, then each target shall have a new relationship instance.	smallest permitted maximum: 100 items	Optional	Unordered				
7.1	Relation. Kind	Nature of the relationship between this learning object and the target learning object, identified by 7.2:Relation.Resource	1	Optional	Unspecified	Based on Dublin Core: ispartof: is part of haspart: has part isversionof: is version of hasversion: has version isformatof: is format of hasformat: has format references: references isreferencedby: is referenced by isbasedon: is based on isbasisfor: is basis for requires: requires isrequiredby: is required by	Vocabulary (State)		
7.2	Relation. Resource	The target learning object that this relationship references.	1	Optional	Unspecified				
7.2.1	Relation. Resource. Identifier	A globally unique label that identifies the target learning object.	smallest permitted maximum: 10 items	Optional	Unspecified				

7.2.1.1	Relation. Resource. Identifier. Catalog	The name or designator of the identification or cataloging scheme for this entry. A namespace scheme.	1	Optional	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString smallest permitted maximum: 1000 char)		"ISBN", "ARIADNE", "URI"
7.2.1.2	Relation. Resource. Identifier. Entry	The value of the identifier within the identification or cataloging scheme that designates or identifies the target learning object. A namespace specific string.	1	Optional	Unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 1000 char)		"2-7342-0318", "LEAO875", "http://www.ieee.org"
7.2.2	Relation. Resource. Description	Description of the target learning object.	smallest permitted maximum: 10 items	Optional	Unspecified -		LangString (smallest permitted maximum: 1000 char)		("en", "The Quicklime movie of the Mona Lisa on the web site of the Louvre museum.")
8	Annotation	This category provides comments on the educational use of this learning object, and information on when and by whom the comments were created. This category enables educators to share their assessments of learning objects, suggestions for use, etc.	smallest permitted maximum: 30 items	Optional	Unordered				
8.1	Annotation. Entity	Entity (i.e., people, organization) that created this annotation.	1	Optional	Unspecified	vCard, as defined by IMC vCard 3.0 (RFC 2425, RFC 2426).	CharacterString (smallest permitted maximum: 1000 char)		"BEGIN:VCARD\nFN:Joe Friday\nTEL:+1-919-555-7878\nTITLE:Area Administrator,\nAssistant\nEMAIL;TYPE=INTERNET:jfriday@host.com\nEND:VCARD\n"
8.2	Annotation. Date	Date that this annotation was created.	1	Optional	Unspecified		Date Time		"2001-08-23"

8.3	Annotation. Description	The content of this annotation.	1	Optional	Unspecified		LangString (smallest permitted maximum: 1000 char)		("en", "I have used this video clip with my students. They really enjoy being able to zoom in on specific features of the painting. Make sure they have a broadband connection or the experience becomes too cumbersome to be educationally interesting.")
9	Classification (Curriculum Online: M)	This category describes where this learning object falls within a particular classification system.	smallest permitted maximum: 40 items	Optional	Unspecified	-	-	-PARENT ELEMENT Not to be provided by the publisher	
9.1	Classification. Purpose	The purpose of classifying this learning object.	1	Optional	Unspecified	discipline idea prerequisite educational objective accessibility restrictions restrictions educational level skill level security level competency	Vocabulary (State)	Note: For each classification scheme (s) implemented in Eleonet (and specified in 9.2.1) this element could be automatically provided by the system. For example, if the LOs are classified by teaching subject, this element carries the value "discipline"	"discipline"
9.2	Classification. Taxon Path (Curriculum Online: M)	A taxonomic path in a specific classification system. Each succeeding level is a refinement in the definition of the preceding level. There may be different paths, in the same or different classifications, which describe the same characteristic.	smallest permitted maximum: 15 items	Optional	unordered	-	-	-PARENT ELEMENT Not to be provided by the publisher	

9.2.1	Classification. Taxon Path. Source (Curriculum Online: M)	The name of the classification system.	1	Optional, but mandatory if 9.2 is present	Unspecified	Repertoire of ISO/IEC 10646-1:2000	LangString (smallest permitted maximum: 1000 char) Automatically provided by the system		"it", "Thesaurus ETB (European Treasury Browser)" "en", "MESH" "en" "Eleonet Teaching subject scheme"
9.2.2	Classification. Taxon Path. Taxon (Curriculum Online: M)	A particular term within a taxonomy. A taxon is a node that has a defined label or term. A taxon may also have an alphanumeric designation or identifier for standardized reference. Either or both the label and the entry may be used to designate a particular taxon.	smallest permitted maximum: 15 items	Optional, but mandatory if 9.2.1 is present	Ordered		According to the classification scheme implemented	-PARENT ELEMENT Not to be provided by the publisher	{{["12",("en","Physics")], ["23",("en","Acoustics")], ["34",("en","Instruments")], ["45",("en","Stethoscope")]}}
9.2.2.1	Classification. Taxon Path. Taxon. Id	The identifier of the taxon, such as a number or letter combination provided by the source of the taxonomy.	1	Optional, but mandatory if 9.2.2.2 is not present	unspecified	Repertoire of ISO/IEC 10646-1:2000	CharacterString (smallest permitted maximum: 100 char)		"320", "4.3.2", "BF180"
9.2.2.2	Classification. Taxon Path. Taxon. Entry (Curriculum Online: M)	The textual label of the taxon.	1	Optional, but mandatory if 9.2.2.1 is not present	unspecified	-	LangString (smallest permitted maximum: 2000 char)		("en", "Medical Sciences")
9.3	Classification. Description	Description of the learning object relative to the stated 9.1:Classification.Purpose of this specific classification, such as discipline, idea, skill level, educational objective, etc.	1	recommended	unspecified		LangString (smallest permitted maximum: 1000 char)		("en", "A medical instrument for listening called a stethoscope.")

9.4	Classification. Keywords (Curriculum Online: M)	Keywords descriptive of the learning object provided by the indexing system stated in 9.2.1	smallest permitted maximum: 10 items	Recommended	Ordered	-	LangString (smallest permitted maximum: 100 char)	The most dominant concepts should be expressed first	"en" "poetry" + "author" + "20th century" +
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