

---

---

**Information technology — Learning,  
education and training — Metadata for  
learning resources —**

**Part 3:  
Basic application profile**

*Technologies de l'information — Apprentissage, éducation et  
formation — Métadonnées pour ressources d'apprentissage —*

*Partie 3: Profil d'application de base*



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

Foreword .....	iv
0 Introduction.....	v
0.1 Overall purpose of ISO/IEC 19788 .....	v
0.2 Purpose and overview of ISO/IEC 19788-3 .....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 Symbols and abbreviations .....	3
5 Specification of the Application profile.....	3
6 Data element group specifications .....	4
6.1 The application profile underlying data element group specification (top level) .....	4
6.2 Component data element group specifications .....	5
7 Data element specifications from other parts of the MLR standard .....	5
7.1 Title (MLR-2/DES0100) .....	5
7.2 Creator (MLR-2/DES0200) .....	6
7.3 Subject (MLR-2/DES0300) .....	7
7.4 Publisher (MLR-2/DES0500) .....	8
7.5 Contributor (MLR-2/DES0600) .....	9
7.6 Relation (MLR-2/DES1300) .....	10
7.7 Coverage (MLR-2/DES1400) .....	11
7.8 Rights (MLR-2/DES1500) .....	12
8 Data element specifications (locally defined) .....	12
8.1 Date (MLR-3/DES0100) .....	13
8.2 Description (MLR-3/DES0200) .....	14
8.3 Format (MLR-3/DES0300) .....	15
8.4 Identifier (MLR-3/DES0400) .....	16
8.5 Language (MLR-3/DES0500) .....	17
8.6 Source (MLR-3/DES0600) .....	18
8.7 Type (MLR-3/DES0700) .....	19
9 Predefined rule sets (from ISO/IEC 19788-1) .....	20
9.1 PRS0001 MLR String .....	20
9.2 PRS0002 Date .....	20
Annex A (informative) MLR Vocabularies .....	21
Annex B (informative) Concept map of ISO/IEC 19788-3 .....	25
Annex C (informative) Learning Object Metadata and Dublin Core Metadata crosswalk .....	26
Bibliography .....	28

## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 19788-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 36, *Information technology for learning, education and training*.

ISO/IEC 19788 consists of the following parts, under the general title *Information technology — Learning, education and training — Metadata for learning resources*:

- *Part 1: Framework*
- *Part 2: Dublin Core elements*
- *Part 3: Basic application profile*

The following parts are under preparation:

- *Part 4: Technical elements*
- *Part 5: Educational elements*
- *Part 6: Availability, distribution, and intellectual property elements*

*Bindings and Data elements for MLR records* will form the subjects of future parts.

## 0 Introduction

### 0.1 Overall purpose of ISO/IEC 19788

The primary purpose of ISO/IEC 19788 is to facilitate: (1) the description of a learning resource by providing a standards-based approach to the identification and specification of the metadata elements required to describe a learning resource, e.g. as a metadata learning resource (MLR) record; and (2) the search, discovery, acquisition, evaluation, and use of learning resources, for instance by learners, instructors or automated software processes. The interoperability of these functions can be achieved through harvesting or federated search processes, among other technologies and solutions. ISO/IEC 19788 is based on identified user requirements.

ISO/IEC 19788 is modularly structured with all subsequent parts corresponding to a specified set of user requirements for the identification and specification of metadata elements having a particular focus and intended use in the description of a learning resource. This includes categories of metadata elements focused on technical perspectives, pedagogical aspects, availability and intellectual property aspects, bindings, etc.

### 0.2 Purpose and overview of this part of ISO/IEC 19788

This part of ISO/IEC 19788 provides a basic application profile as a recommended approach to enhance interoperability through an application profile with attributes such as presence type indicator, repeatability indicator and order indicator, applied to the Dublin Core elements specified in ISO/IEC 19788-2. Whenever learning resource descriptions are exchanged across repositories, interoperability issues are raised. For example, processing a query for learning resources in a given format requires that format information be available in all descriptions being searched. Likewise, searching or sorting based on date can only be done when a common format such as ISO 8601 is used in all sets.

This application profile is an ISO/IEC 19788 Type 2<sup>1</sup> standard. It is recommended that it be used as a best practice guide that can be further refined by communities with data elements additions from other authorities or communities, including the *IEEE Standard for Learning Object Metadata* (LOM) [4]. However, there is no obligation for MLR stakeholders to use this application profile.

This application profile provides records of metadata elements promoting best practices based on an international survey<sup>2</sup> of commonly used data elements in an ITLET (information technology for learning, education and training) context. It also reflects the actual practices of both the Dublin Core Metadata Initiative (DCMI) and the *IEEE Standard for Learning Object Metadata* (LOM) [4].

As further Type 1 parts of ISO/IEC 19788 become available, it is likely that future editions of this part of ISO/IEC 19788 will be updated to include additional data element specifications, such as Technical data elements or Educational data elements.

---

<sup>1</sup> For meaning of a Type 1 MLR standard versus a Type 2 MLR standard, etc., see 13.2 *Categorization of ISO/IEC 19788 Parts* in ISO/IEC 19788-1:2011.

<sup>2</sup> *Final Report on the "International LOM Survey"* [17].

# Information technology — Learning, education and training — Metadata for learning resources —

## Part 3: Basic application profile

### 1 Scope

The primary purpose of ISO/IEC 19788 is to specify metadata elements and their attributes for the description of learning resources. This includes the rules governing the identification of data elements and the specification of their attributes.

ISO/IEC 19788 provides data elements for the description of learning resources and resources directly related to learning resources.

This part of ISO/IEC 19788 is designed to help implementers with a starting point for adopting ISO/IEC 19788, defining an application profile that specifies, through adding constraints to the use of some data elements, how the ISO/IEC 19788-2 element set can be used.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 639-2:1998, *Codes for the representation of names of languages — Part 2: Alpha-3 code/Codes pour la représentation des noms de langue — Partie 2: Code alpha-3*

ISO 639-3:2007, *Codes for the representation of names of languages — Part 3: Alpha-3 code for comprehensive coverage of languages*

ISO 8601:2004, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO/IEC 10646:2011, *Information technology — Universal Coded Character Set (UCS)*

ISO/IEC 19788-1:2011, *Information technology — Learning, education and training — Metadata for learning resources — Part 1: Framework*

ISO/IEC 19788-2:2011, *Information technology — Learning, education and training — Metadata for learning resources — Part 2: Dublin Core elements*