

Australian/New Zealand Standard™

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

Part 1: Framework



AS/NZS ISO/IEC 19788.1:2013

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research. It was approved on behalf of the Council of Standards Australia on 19 April 2013 and on behalf of the Council of Standards New Zealand on 8 April 2013.
This Standard was published on 13 May 2013.

The following are represented on Committee IT-019:

Australian Computer Society
Australian Library and Information Association
Council of Australian University Librarians
CSIRO Information and Communication Technologies Centre
Department of Education and Training, NSW
Education Services Australia
Institute of Metadata Management
La Trobe University
Macquarie E-Learning Centre of Excellence
National Library of Australia
National Library of New Zealand
Tertiary Library Networks
University of New South Wales
Victoria University
Waikato Institute of Technology

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

Australian/New Zealand Standard™

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

Part 1: Framework

First published as AS/NZS ISO/IEC 19788.1:2013.
Reissued incorporating Amendment No. 1 (December 2015).

COPYRIGHT

© Standards Australia Limited/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research.

This Standard incorporates Amendment No. 1 (December 2015). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard 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.

A1 | This Standard is identical with, and has been reproduced from ISO/IEC 19788-1:2011, *Information technology—Learning, education and training—Metadata for learning resources*, Part 1: *Framework*, and its Amendment 1 (2014), which has been added at the end of the source text.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘this part of ISO/IEC 19788’ should read ‘this Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>	<i>Australian/New Zealand Standard</i>
ISO	AS ISO
8601 Data elements and interchange formats—Information interchange—Representation of dates and times	8601 Data elements and interchange formats—Information interchange—Representation of dates and times

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

CONTENTS

1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Abbreviated terms	6
5	Principles governing the development of ISO/IEC 19788	6
5.1	A multipart standard	6
5.2	Development driven by user requirements	6
5.3	Multilingual equivalencies and multicultural requirements support	7
5.4	Support for various levels of granularity	7
5.5	Re-use of international standards and specifications	7
5.6	User extensions	7
6	Specification of MLR data elements	7
6.1	Introduction	7
6.2	Data element specification attributes	7
6.3	Data element specification: Matrix template	12
6.4	A “Data element specification” example	12
7	MLR data elements	13
7.1	Data element	13
8	Resource class	14
8.1	Definition of a Resource class	14
8.2	Attributes of a Resource class	14
8.3	Example of the definition of a Resource class	15
8.4	Predefined Resource classes	15
9	Predefined rule sets	16
9.1	Introduction	16
9.2	MLR string	16
9.3	Date	17
9.4	Date & Time	17
9.5	Duration	18
10	Metadata learning resource record	18
10.1	Definition of a MLR record	18
10.2	Attributes of a MLR record	18
11	Data element groups	19
11.1	Introduction	19
11.2	Data element group	19
11.3	Data element group specification attributes	19
11.4	Specification of a data element group	21
11.5	Tree notation for data element group specifications	24
12	Specification of application profiles	24
12.1	Introduction	24
12.2	Application profile attributes	25
12.3	Data element specification in an application profile specification	26
12.4	Issues related to vocabularies	26
12.5	Specification of an application profile	26

	<i>Page</i>
13 Rules governing the management and addition of new parts of the multipart MLR.....	27
13.1 Introduction	27
13.2 Categorization of ISO/IEC 19788 Parts	27
13.3 Content of parts specifying data elements	27
13.4 Content of parts specifying MLR application profiles	29
13.5 Other rules.....	30
Annex A (informative) Clause 3 terms and definitions: ISO French and Chinese.....	31
Annex B (normative) MLR Identifiers	46
Annex C (informative) Concept Maps for the MLR-1	49
Bibliography	53
Index of Clause 3 terms and definitions.....	54

INTRODUCTION

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.

This part of ISO/IEC 19788 includes rules for the assignment and management of identifiers, and the development of subsequent parts fulfilling specific user needs.

Additionally, this part of ISO/IEC 19788 specifies how to define application profiles.

At the same time, ISO/IEC 19788 takes into account the diversity of cultural and linguistic contexts in which learning resources and their metadata are likely to be created and exploited. ISO/IEC 19788 also facilitates the sharing and reuse of learning resource descriptions by providing specific elements to support metadata harvesting.

ISO/IEC 19788 aims to specify data elements relating to learning resources to be expressed in a range of established formats, providing optimal compatibility with IEEE 1484.12.1-2002 and ISO 15836:2009 (see Bibliography), while also addressing user-driven requirements and uses not explicitly addressed in those two standards. These data elements are used to form the description of a learning resource.

In addition to this part of ISO/IEC 19788, ISO/IEC 19788-2 and ISO/IEC 19788-3, ISO/IEC 19788 is modularly structured with all subsequent parts having a distinct scope. Each of these parts represents a specified set of user requirements for the identification and specification of data elements having a particular focus and intended use in the description of a learning resource. This includes categories of data elements focused on technical perspectives, educational (pedagogical) aspects, availability and intellectual property aspects, classification schemes, life cycle management, registration, etc. This also includes the use of application profiles stating the rules for combining metadata elements from various parts of ISO/IEC 19788 and other specifications to support the description of a learning resource, e.g. a MLR record, in a particular context, as well as that of a particular jurisdictional domain, organization, public administration, etc.

The identification and specification of particular metadata elements are not included in this part of ISO/IEC 19788 but in subsequent parts. Also excluded from this part of ISO/IEC 19788 are the specification of bindings for data elements (e.g. XML bindings) and the description of particular application profiles. These will be considered in subsequent parts. Nevertheless, XML snippets can be used in an informal way in examples.

The following aspects might be addressed in a subsequent edition of ISO/IEC 19788-1 or in another part of ISO/IEC 19788:

- additional data element specification attributes;
- registration of MLR records (see 3.23) and assignment of their unique identifiers;
- detailed rules governing coded domains;
- Person as a learning resource.

AUSTRALIAN/NEW ZEALAND STANDARD

**Information technology—Learning, education and training—
Metadata for learning resources****Part 1:
Framework****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.

NOTE All concepts are defined in Clause 3.

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 provides principles, rules and structures for the specification of the description of a learning resource; it identifies and specifies the attributes of a data element as well as the rules governing their use. The key principles stated in this part of ISO/IEC 19788 are informed by a user requirements-driven context with the aim of supporting multilingual and cultural adaptability requirements from a global perspective.

This part of ISO/IEC 19788 is information-technology-neutral and defines a set of common approaches, i.e. methodologies and constructs, which apply to the development of the subsequent parts of ISO/IEC 19788.

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(E/F), *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(E), *Codes for the representation of names of languages — Part 3: Alpha-3 code for comprehensive coverage of languages*

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

ISO/IEC 10646:2003(E), *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*