

Australian/New Zealand Standard™

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

Part 4: Technical elements



AS/NZS ISO/IEC 19788.4:2015

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 30 November 2015 and on behalf of the Council of Standards New Zealand on 23 November 2015. This Standard was published on 23 December 2015.

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Part 4: Technical elements

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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.

The objective of this Standard is to specify in a rule-based manner, metadata elements and their attributes for the description of technical aspects of learning resources. This includes the rules governing the identification of metadata elements and the specification of metadata attributes.

This Standard is identical with, and has been reproduced from ISO/IEC 19788-4:2014, *Information technology—Learning, education and training—Metadata for learning resources*, Part 4: *Technical elements*.

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

- (a) In the source text ‘this International Standard’ 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/IEC	AS/NZS ISO/IEC
19788 Information technology—Learning, education and training—Metadata for learning resources	19788 Information technology—Learning, education and training—Metadata for learning resources
19788-1 Part 1: Framework	19788.1 Part 1: Framework

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

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INTRODUCTION

Overall purpose of this International Standard

The primary purpose of this International Standard 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. This International Standard is based on identified user requirements.

This International Standard has a modular structure 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 accessibility, and intellectual property aspects, bindings, etc.

Purpose and overview of this part of ISO/IEC 19788

Learning resources, like any others, can have technical characteristics that affect or limit how the resource can be used. These technical metadata elements describing learning resources are illustrated in a conceptual model in [Annex B](#). Some characteristics of significance in educational contexts have not yet been defined in metadata standards. This part of ISO/IEC 19788 defines how such characteristics should be described. These metadata elements can be used in combination with metadata elements from other parts of this International Standard. They can also be used in combination with elements from other metadata specifications, IEEE 1484.12.1-2002 Learning Object Metadata (LOM) or other metadata schemas. More detailed media format can be extracted from the media file(s) for example information about the codec required, bandwidth, resolution, and other technical information.

In particular, metadata elements in this part of ISO/IEC 19788 anticipate technical characteristics for emerging technologies such as tablets and mobile phones. This part of ISO/IEC 19788 metadata elements can be refined, conforming to this International Standard, by particular communities according to their needs.

AUSTRALIAN/NEW ZEALAND STANDARD

**Information technology—Learning, education and training—
Metadata for learning resources****Part 4:
Technical elements****1 Scope**

This International Standard specifies, in a rule-based manner, metadata elements and their attributes for the description of learning resources. This includes the rules governing the identification of metadata elements and the specification of metadata attributes.

These metadata elements are used to form the description of a learning resource, i.e. as a metadata learning resource (MLR) record.

This part of ISO/IEC 19788 specifies, using ISO/IEC 19788-1, technical aspects of learning resources, i.e., requirements for use, location, size, etc.

2 Normative references

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

ISO/IEC 19788-1:2011 *Information technology — Metadata for Learning Resources (MLR) — Part 1: Framework*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19788-1:2011 and the following apply.

3.1**attribute**

characteristic of an object or entity

[SOURCE: ISO/IEC 19788-1:2011, 3.4]

3.2**attribute value**

information recorded as the *attribute* (3.1) in a *data element* (3.4)

[SOURCE: ISO/IEC 19788-1:2011, 3.5]

3.3**content value**

information recorded as the content of the *data element* (3.4), in compliance with its *data element specification* (3.5)

[SOURCE: ISO/IEC 19788-1:2011, 3.10]