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Information technology for learning, education and training — Learning analytics interoperability —

Part 4: Privacy and data protection policies

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Foreword

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

A list of all parts in the ISO/IEC 20748 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

The ISO/IEC 20748 series clarifies and regularizes the behaviour of components related to learning analytics interoperability. Privacy and data protection are identified as important cross-cutting requirements impacting all sub-processes of learning analytics (LA). Even if privacy and data protection are regulated by law in some jurisdictions, there is a need to specify privacy requirements as part of this series to establish principles that can influence design and operation of learning analytics systems.

The concepts of privacy and data protection are used differently around the world. In this document, which is designed to be used in an educational setting, 'privacy and data protection' are used as one concept to capture both the social and contextual aspects of privacy and the more technical and managerial aspects of data protection for learning, education and teaching (LET). Privacy and data protection requirements for learning analytics can be derived from multiple sources, both written and non-written, including educational policy frameworks, ICT infrastructure principles, international privacy frameworks (e.g., OECD, APEC, European Union), trade agreements, national legal frameworks, ethical principles observed in LET, etc. These requirements are often expressed as high level principles that different constituencies could agree upon. This document develops detailed privacy and data protection attributes pertaining to the learning analytics process cycle (described in ISO/IEC TR 20748-1). This document enables the development of LA privacy and data protection attribute specifications, which detail how information exchange should be performed to fulfil the aims of LA operations without compromising privacy and data protection of the individual.

This document is intended to inform system developers in designing LA systems and processes supporting inclusive privacy and data protection policies. The primary beneficiaries of privacy and data protection policies are the individuals who share their PII, in this case the students (and their parents or guardians), teachers and other actors who take part in learning, education and training. Educational organizations and third party providers are also target user groups.

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Information technology for learning, education and training — Learning analytics interoperability —

Part 4: Privacy and data protection policies

1 Scope

This document specifies privacy and data protection requirements and attributes to inform design of learning analytics systems and learning analytics practices in schools, universities, workplace learning and blended learning settings.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
accountability
principle that individuals, organizations, and the community are responsible for their actions and may be required to explain them to others

[SOURCE: ISO/TS 14441:2013, 3.1, modified — Note 1 to entry has been deleted]

3.2
anonymization
process by which personally identifiable information (PII) is irreversibly altered in such a way that a PII principal can no longer be identified directly or indirectly, either by the PII controller alone or in collaboration with any other party

[SOURCE: ISO/IEC 29100:2011, 2.2]

3.3
consent
process that provides the data subject (learner, teacher, instructor, or other natural person participating in LET) with explanations that will help that data subject in making educated decisions about whether to begin or continue participating in data collection, use or disclosure of personally identifiable information (PII) (3.9)

Note 1 to entry: Consent is an ongoing, interactive process over the lifetime of the data rather than a one-time information session.

Note 2 to entry: For the collection, use or disclosure of PII for individuals who are not of legal age or cannot consent for other reasons, depending on the nature of the data, additional consent requirements may apply, e.g., permission from a responsible adult or guardian.

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3.4
data controller
natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of PII

[SOURCE: Adapted from GDPR Article 4(7)]

3.5
data protection
technical and social regimen for negotiating, managing, and ensuring informational privacy, confidentiality, and security

[SOURCE: ISO/TS 14265:2011, 2.9]

3.6
learning analytics
LA
measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs

[SOURCE: ISO/IEC TR 20748-2:2016, 3.12]

3.7
learning analytics service
system that aggregates and analyses learner data that is collected when learners interact with a platform and software

3.8
personally identifiable information
PII
any information that (a) can be used to identify the PII principal to whom such information relates, or (b) is or might be directly or indirectly linked to a PII principal

[SOURCE: ISO/IEC 29100:2011, 2.9, modified — Note 1 to entry has been deleted]

3.9
PII actor
stakeholder involved in the processing of PII

Note 1 to entry: According to ISO/IEC 29100:2011, 4.2 there are four types of actors who can be involved in the processing of PII: PII principals, PII controllers, PII processors and third parties.

3.10
PII controller
privacy stakeholder (or privacy stakeholders) that determines the purposes and means for processing personally identifiable information (PII) other than natural persons who use data for personal purposes

[SOURCE: ISO/IEC 29100:2011, 2.10, modified — Note 1 to entry has been deleted]

3.11
PII principal
natural person to whom the personally identifiable information (PII) relates

[SOURCE: ISO/IEC 29100:2011, 2.11, modified — Note 1 to entry has been deleted]

3.12
PII processor
privacy stakeholder that processes personally identifiable information (PII) on behalf of and in accordance with the instructions of a PII controller

[SOURCE: ISO/IEC 29100:2011, 2.12]

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3.13
privacy
freedom from intrusion into the private life or affairs of an individual when that intrusion results from undue or illegal gathering and use of data about that individual

3.14
privacy policy
overall intention and direction, rules and commitment, as formally expressed by the personally identifiable information (PII) controller related to the processing of PII in a particular setting

[SOURCE: ISO/IEC 29100:2011, 2.16]

3.15
privacy and data protection attribute
learning analytics privacy and data protection attribute
LA privacy and data protection attribute
specification of a privacy and data protection requirement related to a learning analytics process

3.16
pseudonymization
de-identification technique that replaces an identifier (or identifiers) for a data principal with a pseudonym in order to hide the identity of that data principal

[SOURCE: ISO/IEC 20889:2018, 3.27]

3.17
sensitive data
data with potentially harmful effects in the event of disclosure or misuse

[SOURCE: ISO 5127:2017, 3.1.10.16]

3.18
sensitive PII
category of personally identifiable information (PII), either whose nature is sensitive, such as those that relate to the PII principal's most intimate sphere, or that might have a significant impact on the PII principal

Note 1 to entry: In some jurisdictions or in specific contexts, sensitive PII is defined in reference to the nature of the PII and can consist of PII revealing the racial origin, political opinions or religious or other beliefs, personal data on health, sex life, or criminal convictions, as well as other PII that might be defined as sensitive.

[SOURCE: ISO/IEC 29100:2011, 2.26]

4 Abbreviated terms

APEC	Asia-Pacific Economic Cooperation
FERPA	Family Educational Rights and Privacy Act (USA)
GDPR	General Data Protection Regulation (of European Union)
LA	learning analytics
LET	learning, education and training
OECD	Organization for Economic Co-operation and Development
PII	personally identifiable information

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