



Technical Report

ISO/TR 29996

Education and learning services — Distance and digital learning services (DDLs) — Case studies

*Services d'éducation et de formation — Services d'apprentissage
numérique et à distance — Études de cas*

**First edition
2024-01**

iTech Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/TR 29996:2024

<https://standards.iteh.ai/catalog/standards/iso/61039b08-3730-428e-a5bb-e23003527569/iso-tr-29996-2024>

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/TR 29996:2024

<https://standards.iteh.ai/catalog/standards/iso/61039b08-3730-428c-a5bb-e23003527569/iso-tr-29996-2024>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

| | |
|---|-----------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Methodology and overview of selected cases | 2 |
| 4.1 Methodology | 2 |
| 4.2 Overview of selected cases | 2 |
| 5 Practices of needs analysis | 4 |
| 5.1 General | 4 |
| 5.2 Market needs analysis for launching a new programme | 4 |
| 5.3 Syllabus “Digital competences for PA” | 5 |
| 5.4 Learning needs analysis for international talent cultivation | 6 |
| 6 Practices of design of DDLS | 7 |
| 6.1 General | 7 |
| 6.2 An ecological model indicating learner-centredness in online education | 8 |
| 6.3 Engagement and co-design by administrations in “Digital competences for PA” | 8 |
| 6.4 Intelligent design systems for training programmes | 9 |
| 6.4.1 General | 9 |
| 7 Practices of technology-supported distance learning | 10 |
| 7.1 General | 10 |
| 7.2 An intelligent auxiliary environment with artificial intelligence (AI) and VEM technology | 10 |
| 7.3 A “learning hub” IT platform | 11 |
| 7.4 A “crowded innovation space” cloud classroom learning platform | 11 |
| 8 Practices of learning materials available via distance learning | 12 |
| 8.1 General | 12 |
| 8.2 Learning materials designed with the principle of 3-M learning | 12 |
| 8.3 E-learning digital competences catalogue with course category as the elementary unit | 12 |
| 8.4 A learning resource system with timely updating and rich test questions | 13 |
| 9 Practices of learner support | 13 |
| 9.1 General | 13 |
| 9.2 A mentorship model that highlights different learner support elements | 13 |
| 9.3 A FAQ system on the public site | 15 |
| 9.4 An intelligent talent development system for young learners | 16 |
| 10 Practices of assessment of learning | 16 |
| 10.1 General | 16 |
| 10.2 A dual system of both formative and summative assessment | 16 |
| 10.3 Analysis of “incoming” and “outgoing” competences | 17 |
| 10.3.1 General | 17 |
| 10.3.2 Analysis of “incoming” competences | 17 |
| 10.3.3 Analysis of “outgoing” competences | 18 |

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 232, *Education and learning services*.

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.

ISO/TR 29996:2024

<https://standards.iteh.ai/catalog/standards/iso/61039b08-3730-428c-a5bb-e23003527569/iso-tr-29996-2024>

Introduction

Distance and digital learning services (DDLS) have been developing and increasing rapidly at the global level. In order to implement and maintain quality DDLS, there are some requirements and recommendations to be met by distance and digital learning service providers (DDLSP), which are provided by ISO 29992, ISO 29993 and ISO 29994, for example:

- ISO 29992 provides recommendations on assessment planning and assessment development applicable to DDLS;
- ISO 29993 puts forward requirements for education and learning services, including DDLS, from the aspects of needs analysis, design of the learning service, etc;
- ISO 29994 provides specific requirements for technology-supported distance learning, learning materials available via distance learning and learner support for DDLS on the basis of ISO 29992 and ISO 29993.

As a methodology, case studies can help DDLSP to identify, clarify and achieve the requirements and recommendations related to the goal of quality DDLS in the International Standards mentioned above, by providing practical solutions and effective experiences. By understanding and referring to the cases in this document, DDLSP can find out the applicable practices and strategies, and apply them under similar circumstances to promote and/or improve the quality of DDLS.

The purpose of this document is to support DDLSP to understand how to apply the related contents of ISO 29992, ISO 29993 and ISO 29994 through case studies, by providing DDLSP with situational understanding and practical illustrations for the relevant requirements and recommendations.

This document can be helpful for DDLSP who wish to analyse and improve their DDLS, by providing practical solutions and suggestions for DDLSP to pursue and realize quality DDLS with the help of ISO 29992, ISO 29993 and ISO 29994.

Document Preview

[ISO/TR 29996:2024](https://standards.iteh.ai/catalog/standards/iso/61039b08-3730-428c-a5bb-e23003527569/iso-tr-29996-2024)

<https://standards.iteh.ai/catalog/standards/iso/61039b08-3730-428c-a5bb-e23003527569/iso-tr-29996-2024>

Education and learning services — Distance and digital learning services (DDLSP) — Case studies

1 Scope

This document provides real cases, situational understanding and practical solutions to apply the related contents of ISO 29992, ISO 29993 and ISO 29994 in the scenario of DDLSP.

This document can be used as a reference and/or inspiration for DDLSP analysing and improving their DDLSP, and pursuing quality DDLSP, by applying ISO 29992, ISO 29993 and ISO 29994.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 29992, *Assessment of outcomes of learning services — Guidance*

ISO 29993, *Learning services outside formal education — Service requirements*

ISO 29994, *Education and learning services — Requirements for distance learning*

ISO 29995, *Education and learning services — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 29992, ISO 29993, ISO 29994, and ISO 29995 and the following apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 distance and digital learning services DDLSP

sequence of activities, designed to enable learning, delivered by digital technology while learners and facilitators are separated by time, space or both

[SOURCE: ISO 29994:2021, 3.1, modified — Term and definition revised, examples removed.]

3.2 distance and digital learning service provider DDLSP

organization or individual providing *distance and digital learning services* (3.1), including any associates involved in the provision of the distance and digital learning services

[SOURCE: ISO 29994:2021, 3.2, modified — Term and definition revised.]

4 Methodology and overview of selected cases

4.1 Methodology

This document contains cases with detailed descriptions of practices gleaned from countries, for the possible realization of quality DDLS.

The practices of these highly acclaimed cases were collected and determined their relevance to the related elements of ISO 29992, ISO 29993 and ISO 29994.

The linkages between the related elements from ISO 29992, ISO 29993 and ISO 29994 and the practices of cases in this document are identified in [Table 1](#).

Table 1 — Relationship between related elements, cases and practices

| Element | Element of DDLS from ISO documents | | | Practice in this document | | |
|--|------------------------------------|----------------|----------------|---------------------------|--------|--------|
| | ISO 29992:2018 | ISO 29993:2017 | ISO 29994:2021 | Case 1 | Case 2 | Case 3 |
| Needs analysis | — | Clause 7 | 7.2, 7.3 | 1-1 | 2-1 | 3-1 |
| Design of DDLS | — | Clause 8 | 8.2, 8.3 | 1-2 | 2-2 | 3-2 |
| Technology-supported distance learning | — | — | 10.1 | 1-3 | 2-3 | 3-3 |
| Learning materials available via DDLS | — | — | 10.2 | 1-4 | 2-4 | 3-4 |
| Learner support | — | — | 10.3 | 1-5 | 2-5 | 3-5 |
| Assessment of learning | Clauses 4 and 5 | Clause 12 | 12.2 | 1-6 | 2-6 | / |

4.2 Overview of selected cases

An overview of selected cases is shown in [Table 2](#).

ISO/TR 29996:2024

<https://standards.itech.ai/catalog/standards/iso/61039b08-3730-428c-a5bb-e23003527569/iso-tr-29996-2024>

Table 2 — Overview of cases

| No. | Country | Type of DDLSP | Overview |
|--------|---------|--|---|
| Case 1 | China | University/college | <p>DDLSP 1, established in 2000, offers online and distance tertiary degree education in over 20 provinces, with 100 learning centres distributed across the country, in nine specialities of English, business administration, accounting, information management, electronic commerce, international economics and trade, finance, computer science and technology, Chinese language and literature.</p> <p>DDLSP 1 is a school within a first-tier university, aiming to provide quality education via the use of digital technology to learners who do not have access to formal education across the country and contributes tremendously to education equity and inclusive education.</p> <p>DDLSP 1 provides three programmes for learners: 1) diploma programmes; 2) BA programmes; and 3) post-diploma BA programmes. To cater to the increasing needs of learners, DDLSP 1 has been providing master programmes in English language education and Chinese language education since 2015.</p> <p>Following the educational philosophy of “whole-person development”, DDLSP 1 establishes a unique learner-constructed modular educational system through 3-M learning design (i.e. multimodal learning via multimedia in multiple environments), making possible a genuine “five-any” learning: anybody, any time, any place, any mode and any need.</p> <p>Whole-person development will enable learners to be:</p> <ol style="list-style-type: none"> 1) able to learn independently as well as collaboratively; 2) capable of self-discipline, self-management and self-monitoring 3) capable of resource-seeking and resource-selecting; 4) capable of solving the conflict between study and other commitments; 5) capable of initiative-taking; 6) capable of applying interpersonal skills; 7) capable of help-seeking; 8) confident and persevering; 9) capable of developing personal learning styles and strategies; 10) able to lead and control. |
| Case 2 | Italy | Continuing education (adult education) | <p>DDLSP 2 is a division of the Prime Minister’s office responsible for public sector modernization and reform policies. It was set up in 1983 to meet the need to modernize the public administration across the country.</p> <p>In 2019, DDLSP 2 launched the “Digital competences for PA (public administration)” project (recently renamed “Syllabus for digital competences training”), that aims at:</p> <ul style="list-style-type: none"> — providing employees with personalized e-learning courses on foundational digital competences based on a structured assessment of training needs; — enabling the progress measurement at the individual and organizational levels through a dedicated IT platform. <p>The Digital competences for PA project aims to strengthen common digital competences among non-IT professional civil servants (about 3,2 million employees), with the objective of increasing the overall inclination for change and innovation within public administration. In more detail, the project aims to:</p> <ul style="list-style-type: none"> — strengthen civil servants’ basic digital competences and spread a common vision on digital citizenship, e-government and open government topics; — promote competency mapping in administrations at different government levels and to foster more effective human resource policies, enacting data-driven policy-making processes. |

Table 2 (continued)

| No. | Country | Type of DDLS | Overview |
|--------|---------|---------------------|--|
| Case 3 | China | Vocational training | <p>DDLSP 3 was established in December 2002. As an internal service provider of a public service enterprise, DDLSP 3 primarily serves incumbent employees of power utilities, with 300 staff members, including more than 70 instructional designers and implementers.</p> <p>DDLSP 3 adopts an instructional pattern that integrates online and offline methods. More specifically, offline, distance and online-offline blended teaching methods are applied to provide multi-user and cross-border learning services across the spectrum of service scenarios. In respect of distance learning, this agency implements over 300 projects on a yearly basis, providing more than 500 000 learning opportunities.</p> <p>DDLSP 3 has been certified with ISO 9001. Its distance and digital learning services, as well as international talent training, have been given the excellent practice award by the Association of Talent Development (ATD) and the excellent performance improvement award by the International Society for Performance Improvement (ISPI).</p> |

5 Practices of needs analysis

5.1 General

ISO 29994:2021, 7.2, 7.3 and ISO 29993:2017, Clause 7 specify the requirements for needs analysis.

This clause presents practices from three DDLSs on needs analysis.

5.2 Market needs analysis for launching a new programme

DDLSP 1 has a practice (1-1) that relates to ISO 29994:2021, 7.2 and 7.3 and ISO 29993:2017, Clause 7. This practice shows how DDLSP 1 conducts the market needs analysis for launching a new programme.

Prior to launching a new degree programme, DDLSP 1 first identifies the specific needs for the programme through conducting extensive desktop research and interviewing potential employers for their opinions on the current and prospective development of the degree programme, the content to be studied, the qualities deemed, employment opportunities, etc.

Then based on the result of preceding market needs analysis, DDLSP 1 conducts a feasibility study of the degree programme, including its strengths in terms of content design and delivery, teaching expertise, learner support and quality assurance, along with proposed enrolment requirements, course objectives and main subjects to be learned, as shown in [Figure 1](#).