



INTERNATIONAL TELECOMMUNICATION UNION

**TELECOMMUNICATION
STANDARDIZATION SECTOR**

STUDY PERIOD 2025-2028

SG20-TD1431-R1

STUDY GROUP 20

Original: English

Question(s): 8/20

Geneva, 12-21 May 2026

TD

Source: Rapporteur Q8/20

Title: A.1 justification for draft new Recommendation ITU-T Y.IoTSpEd_req – “Requirements on AI-enabled personalised learning support systems for persons with disabilities in IoT-integrated digital learning environments”, Q8/20 meeting (Geneva, 12-21 May 2026)

Contact: Yong Jick Lee
Rapporteur Q8/20

E-mail: ylee@caict.re.kr

Abstract: This document contains an initial text of Draft Recommendation ITU-T Y.IoTSpEd_req – “Requirements on AI-enabled personalised learning support systems for persons with disabilities in IoT-integrated digital learning environments”, output of Q8/20 meeting on Geneva, 12-21 May 2026.

This document contains an initial text of Draft Recommendation ITU-T Y.IoTSpEd_req – “Requirements on AI-enabled personalised learning support systems for persons with disabilities in IoT-integrated digital learning environments”, output of Q8/20 meeting on Geneva, 12-21 May 2026.

A.1 justification for proposed draft new ITU-T Y.IoTSpEd_req “Requirements on AI-enabled personalised learning support systems for persons with disabilities in IoT-integrated digital learning environments”

Question:	Q8/20	Proposed new ITU-T Recommendation	Geneva, 13-22 May 2026
Reference and title:	ITU-T Y.IoTSpEd_req, “Requirements on AI-enabled personalised learning support systems for persons with disabilities in IoT-integrated digital learning environments”		
Base text:	SG20-TD1432	Timing:	2028-Q2
Editor(s):	Yong Jick Lee, Korea (Republic of), ylee@caict.re.kr Guksik Jeong, Korea (Republic of), jgsigi@tta.or.kr	Approval process:	AAP
<p>Purpose and scope (Define what this document will address and its intent or objectives in order to indicate the limits of its applicability):</p> <p>This Recommendation defines a technical framework that enables the provision of personalized learning services reflecting disability-specific information processing characteristics. It establishes requirements for:</p> <ul style="list-style-type: none"> - disability-aware learner profile data models; - functional requirements for AI-based adaptive learning services; - IoT-enabled adaptive learning environment integration. 			
<p>Summary (provides a brief overview of the proposal):</p> <p>Personalized learning support for persons with disabilities cannot rely solely on alternative information formats or isolated assistive solutions. While accessibility standards ensure equivalent presentation of content, research shows that differences in language development, working memory, executive function, spatial processing, and sensory reliance significantly affect how persons with disabilities understand and retain educational content. These differences mean that simply converting materials into alternative formats is insufficient to ensure equitable learning outcomes. Therefore, AI-enabled personalised learning systems that reflect disability-specific information processing characteristics are required. This Recommendation defines service-level technical requirements for learner profiling, adaptive learning, and interoperable data frameworks to support inclusive, human-centric digital education.</p> <p>This proposal does not aim to regulate pedagogical theories, instructional models, or curriculum design methodologies. Decisions regarding teaching strategies, content organization, assessment methods, and educational philosophy remain within the domain of national education policies, institutional practices, and professional expertise. Rather, the purpose of this Recommendation is to establish the technical foundation to ensure diverse pedagogical approaches can be effectively implemented in digital learning environments.</p>			
<p>Relations to ITU-T Recommendations or other documents (approved or under development):</p> <p>ITU-T Recommendation Y.4204, Y.4485, Y.4234/F.742.3, Y.4243</p>			
<p>Liaisons with other study groups or with other standards bodies:</p> <p>ITU-T Q1/21, JCA-AHF, IRG-AVA, ISO/IEC JTC1 SC35, SC36, ASTAP EG AU</p>			
<p>Supporting members that are committing to contributing actively to the work item:</p> <p>Korea (Republic of), ETRI, Daejeon University, China Unicom, UAB</p>			