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Information technology for learning, education and training — Reference model for information and communications technology (ICT) evaluation in education

Technologies de l'information pour l'apprentissage, l'éducation et la formation — Modèle de référence pour l'évaluation des technologies de l'information et de la communication (TIC) dans l'éducation

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Foreword

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Introduction

Information and communications technology (ICT) has been pervasive in the modernization of society. ICT in education has become integral to achieving quality learning and supporting lifelong learning. The Reference Framework for the Description of Quality Approaches (RFDQ) (ISO/IEC 40180) is an elaborate and extensive process model. It harmonizes existing concepts, specifications, terms and definitions for learning, education and training.

Evaluation of ICT in education is a key issue for policy and strategy development in education. It is also integral to quality assurance of ICT development in education, but also essential to management and decision-making.

This document provides a standard reference for evaluation reports, education policies, related research and significant issues related to ICT in education. As such it aims to support the quality processes related to ICT in education by informing governmental agencies, management organizations, local evaluation units and schools.

This document presents a scientific and rational indicator model and framework of ICT in education to support evaluation and development of ICT deployment in education. Specifically, this document aims to:

i) establish an evaluation indicators framework for ICT in education with respect to data collection, performance monitoring and decision support services based on the investigation of typical ICT evaluation cases;

ii) outline approaches to reflect the development level of ICT in education for description or comparison between different regions or schools;

iii) take localized demand into consideration, proposing optional indicators and expanded indicators based on the information gaps.

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Information technology for learning, education and training — Reference model for information and communications technology (ICT) evaluation in education

1 Scope

This document defines an abstract model and an indicator system framework for the evaluation of information and communications technology (ICT) in learning, education and training (LET). The abstract model accommodates requirements domains, including K12 education, vocational education, higher education and continuing education. The framework describes ICT service levels in the areas of learning, education and training, and aims to assist in quality processes associated with ICT in LET contexts.

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 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
indicator
quantitative, qualitative or descriptive measure

3.2
performance
way in which an individual, group or organization carries out, accomplishes and fulfils its important functions and processes, usually with regard to effectiveness

3.3
evaluation
systematic determination of the extent to which an entity meets its specified criteria

4 Abstract model of the evaluation of ICT in education

4.1 Evaluation of ICT in education

Evaluation of ICT in education refers to the use of information technology and scientific performance assessment methods to reflect the development process and level of the implementation, execution, benefits or other aspects scientifically according to the goals and performance standards of ICT in education. The definition of evaluating indicators is beneficial in analysing the situation, achievements and limitations for the development of ICT in education.

The evaluation indicators of ICT in education have two levels: macro and micro. For the macro level, evaluation indicators provide scientific and reasonable assessment system and empirical data to reflect

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