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Strand 3 : Digital education, ICT and ESD

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Policy framework

The place of digital technology in our society has increased rapidly over the past decades, in particular with the development of tools and applications that have caused profound transformations, in particular by modifying our relation to knowledge. These transformations have manifested themselves in various forms but it appears that in the pre-Covid situation we were far from a generalized use of digital technology in education because, whatever the devices implemented, they suffered from insufficient computer equipment, insufficiently trained teachers in the use of digital technology, and the limited number of quality digital resources.

Assessment and context

Eight months ago, the Covid 19 pandemic has developed, which has caused the closure of educational establishments and confined a large number of people (around 1.5 billion learners worldwide). This situation has led to urgently develop distance education in a variety of ways that have highlighted multiple obstacles related to insufficient qualification of teachers, lack of computer equipment and appropriate resources without forgetting the difficulty of managing teachers and learners in a context of strong social, emotional and behavioral dimensions.

These various observations underlined the need to define an integrated digital strategy to generalize the processes of access to science, technology and innovation, particularly with regard to ESD. This digital ambition, which must mobilize all stakeholders according to their skills and their missions, involves an evaluation of current educational processes, better training of educators and trainers, and improved relations with users, by modernizing operations with redesigned information systems, without forgetting a necessary forward-looking approach in order to better anticipate future needs.

Vision and objectives

The learning objectives of ESD can be summarized as "acquisition of transversal key competences for sustainability considering all 17 SDGs". To achieve these goals, the learner must acquire, in addition to basic knowledge, a range of competences such as critical thinking, normative and strategic skills, collaboration, self-awareness, problem solving, etc. . Faced with this challenge, ICT, and more broadly digital methods, benefit from a wide range of applications that facilitate innovative pedagogies for learning ESD.

This strategy should make it possible to implement, within the framework of UNECE's 2021-2030 strategy, mechanisms capable of building resilient ESD structures to ensure that ESD learning continues in digital form and gives everyone the feeling that we are acting together for the establishment of a more sustainable society.

Expected outcomes : a 9-point strategy

1. *Systematize the use of digital tools* to strengthen the potential of ICTs by combining formal, non-formal and informal learning and to highlight their impact in the current educational scenario. This combination will encourage design, creation and sharing between learners, teachers and society, so that knowledge can be combined and jointly developed.

2. Mainstream e-learning and blended learning combining face-to-face training, conducive to interactions between learners and trainers, and e-learning, which is an effective way to train using immersive learning models.

3. Strengthen the production of and access to open educational resources (OER) which represent a key factor to facilitate ESD, especially for education and technical and vocational training.

4.Apply Learning Analytics and other artificial intelligence techniques to collect, analyze and process data associated with learners and their environment, in order to optimize learning and the conditions under which it occurs.

5. Develop social networks as a key instrument, knowing that these social networks are totally useless without an educational goal and without a judicious integration into a framework, a strategy or a learning path.

6. Integrate an Open Science framework, as well as a practical implementation plan, allowing the use, creation and sharing of open educational resources and good practices at all levels of training

7. Identify new qualifications and skills in the field of SD in order to integrate them into professional profiles and facilitate effective integration of learners, both in initial and continuing training, in particular in cooperation with UNEVOC-TVET (cf. BILT program).

8. Media education to help young and adults acquire and develop the capacity to understand and analyze, with a critical sense, media content and to communicate in diverse contexts.

9. Combat illectronism in order to help those who do not have the keys to the use of electronic resources in accessing, manipulating or understanding digital information.