Chapter 16
Sustainability Online?
Actors, Hierarchies, and Communication Patterns in Collaborative Development of Open Educational Resources

Jana Dlouhá
Charles University, Czech Republic

Eduard Petiška
Charles University, Czech Republic

Marie Pospíšilová
Charles University, Czech Republic

Jiří Dlouhý
Charles University, Czech Republic

ABSTRACT

The concept of ESD is innovative, aiming to catalyse changes in the way we learn; in this context, new teaching/learning approaches and ESD pedagogies have been widely discussed in the literature. Digital media may also change the learning process if different actors including students are involved in co-creating learning content. The question raised in this chapter is whether these changes in the "metabolism" of information could contribute to the transformations foreseen by ESD, and how. The authors focus on open educational resources (OER) used in higher education, specifically wiki systems, and explore mutual relationships/hierarchies of actors involved in its development. In a case study, they discuss whether competences to collaboratively develop OER may support ESD competences, what the opportunities/limitations of this synergy are, and offer a framework to reflect academic writing processes from sustainability point of view.

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INTRODUCTION

There is common understanding that sustainable development (SD) cannot be achieved without educational input, and education systems should be reoriented towards this goal at all levels of education. The concept of Education for Sustainable Development (ESD) evolved particularly during the UN Decade of Education for SD when its principles were outlined (Tilbury, 2009). There is ongoing discussion on pedagogical approaches that would translate these principles into practice in higher education (Lozano et al., 2019). The sustainability perspective focuses on competences that have a normative dimension (Rodríguez Aboytes, 2020) with the aim both to support learners' critical perspectives, capacity for anticipating change, and to develop the ability to implement these changes in practice. To have a real impact and meet the Sustainable Development Goals, these changes need to take place on a personal, community and societal level (Boström et al., 2018) pointing unequivocally towards the transformative learning dimension in ESD.

In the ESD discourse, competences are considered to be the basis of sustainability literacy: the ability to describe, analyse, plan and solve sustainability issues in different contexts, using knowledge and information. Michelsen and Adomssent (2007) also emphasise the formative role of this approach in terms of the impact on learner development. In further expert discussions, core competences for sustainability have been identified (Wiek et al., 2011) providing a foundation for defining competences for the implementation of the SDGs (UNESCO, 2017). An important component of sustainability transformation are action competences, which according to Jensen and Schnack (1997) are based on students' self-awareness and ability to identify what needs to change and work together to bring this about. Education in general re-orients towards a competence-based system that then underpins decision-making and action in the context of policy development (Dlouhá, 2014). The recognition of these imperatives then drives curriculum development and requires re-organization of higher education in practice (Brundiers et al., 2021).

In contrast to the intense discussion on sustainability pedagogies, the "genres" of the written text have not yet been reflected in depth. The texts used for educational purposes are specific - they "didactically" transform knowledge (cf. Riemann et al., 2020) to meet the needs of the target group of learners, thus addressing specific learning objectives which may in themselves be innovative. This is an opportunity for ESD where learners are supposed not only to read and learn from the texts but also to use the information as a basis for action. Moreover, as the SD terrain is highly uncertain, the learner should be able to critically assess and identify texts relevant for this action, select evidence as a basis for decisions, and to develop one's own arguments that "translate" information into strategies for practice. Other sustainability competences (such as self-awareness and normative competence) are needed to align the questions posed by learners, and arguments to answer these questions, with sustainability values (Henderson et al., 2021).

In general, the ability to learn critically from texts is essential at all levels, but especially in higher education (HE). Here we deal with the *educational resources* for use of which general reading literacy is needed. Our focus is on *digital educational resources,* some of which may be particularly appropriate for developing writing literacy as is the case with the Open Educational Resources (OER); they provide students with the opportunity to participate in the writing process. These resources offer opportunities for pedagogical innovation - *OER enabled pedagogies* are students-centred and interactive (DeRosa, 2017), involving constructivist approaches which are otherwise missing at HE level (Scarff Seatter, 2017) but are necessary for understanding and building capacity to take action in a multi-dimensional sustainability context (Evans, 2020). OER also support varied, self-regulated learning with a decentralised organisational structure (in contrast to the standardised, directed learning in a centralised environment