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Highlights from "Integrating Education for Sustainable Development through Storyline"

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Sustainable development?

The term sustainable development is widely used by both politicians, media, the public and others. But what does it mean that a society is sustainable and what type of competencies should be emphasised in schools? The definition of sustainable development was established by the World Commission on Environment and Development in 1987 and is as follows: "Sustainable development is about preserving life on earth and taking care of the needs of people living today, without destroying the needs and opportunities of the future generations" (Page 42). However, the definition is applied in many different ways with different understandings and also criticised through media and research for hiding power and conflict of interest (Klein, 2020). We can also ask questions such as, for whom will development be sustainable; you, me, rich, poor, etc., and why do politicians have different solutions to sustainable development? In our research we wanted to contribute with knowledge about how teachers can use Storyline to meet challenges of teaching about sustainable development with a critical approach.

The national curricula in the Northern countries are in line with UNICEF (2019), which claims that education at every stage should include education for sustainable development (ESD) in the curricula (Utdanningsdirektoratet 2017; Utbildningsstyrelsen, 2019; Skolverket, 2022). The Storyline Approach may serve as a facilitator for implementing social, ecological and economic sustainability dilemmas (Motzfeldt & Häggström, 2023; Häggström, 2022).

Although it can be difficult to balance realistic teaching and learning situations with the challenges we are facing today and in the future, teachers around the world must try to provide a comprehensive understanding for sustainable development combined with hope for a better and more sustainable world. There is a broad academic consensus that environmental education requires a shift towards participatory teaching and learning methods that enables students to critically assess what sustainability might imply for various people in various locations. Such pedagogical methods need to transform in the direction of empowering pupils to "lead sustainable development as agents of change", Leicht et al (2018) suggest. In our research, we have seen that Storyline enables critical thinking, stimulates the ability of imagining future scenarios, and promotes collaboration skills, which we consider as a prerequisite for education for sustainable development. Rational thinking and knowledge of the world interlinked with imagination, as in a Storyline, seems to connect both affective and cognitive engagement, which is crucial for education including issues of sustainability. There are many challenges when integrating ESD. For example, how to educate for survival amid the current global crisis, and at the same time bring hope and a sense of action competence. As ESD is concerned with group dynamics, dialogical interaction, social movements and co-creations, Storyline

is both a relevant and fruitful choice.

Today, societies, economies and cultures have been more and more interlinked globally. These links are vulnerable to different crises the world faces at present. Even small disturbances have long-term consequences. Some are anticipated, some occur unexpectedly. How can we be prepared for and resilient to such incidents?

Stockholm Resilience Center argues that the best way to deal with a crisis is by combining diverse responses. We do not suggest that young pupils shall solve the world's problems, but we stress that education has a major role to play, not least in the process of transformative learning.

Education as a driving force for change is also acknowledged in the 17 Sustainable Development Goals from 2015 (UN, 2015). The complexity within and between the goals is highlighted. How society deals with one goal will affect the others, which indicates that we need to have a holistic perspective, and not to work with one goal at a time. Transformative learning enables changes in attitude and challenges fixed patterns of thinking (Mezirow, 2000). This depends on critical thinking and self-reflection on one's assumptions, beliefs, and pre-understandings.

In our research, we have seen that pupils need to have real experiences, to deal with real issues and to work collaboratively in creative ways. In Häggström's (2022) study, the characters had to escape from their countries for various reasons, over the Atlantic Sea, in a boat together. They found an island to settle down, built a new sustainable community, and learnt how to be self-sufficient. During this, they had to solve different problems. For example, one day a large oil tanker ran aground and leaked oil offshore of their island. All this was well planned by the teacher, as real incidents.

Image 3. Oil tanker leaking oil offshore of the island (Häggström, 2023).

Another example is the incident called "climate sceptics" that happened in a Storyline called "Sea City". The students were about to discuss how their city, located by the seashore, could develop in a sustainable manner, when two climate sceptic individuals "attacked" the Sea City sustainability project and called it a political spectacle, wasted money and climate hysteria (Eie & Storhaug, 2023). The residents of the Sea City then had to together investigate information and current research about climate change, causes and future forecasts in order to respond and debate and present a reasoned submission to them. This incident actualises critical reflections on contemporary social development, especially climate change, and different narratives and ideas about the future.

Although transformative learning has emerged as the most relevant departure regarding ESD (Qablan, 2018), we need to be aware of the demanding process involved here. Häggström's (2022) study, shows that pupils' intertwined products of imagination and rational thinking, through a Storyline that included ESD, seemed to be transformative enough for pupils in Grade 2. The democratic processes used, allowed for developing the pupils' comprehension of both ecological and social sustainability, which was a result of learning *about* sustainability *through* a sustainable teaching approach.

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