7 Think Global, Garden Local! – Effects of Virtual School Garden Exchange

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Abstract

Virtual School Garden Exchange (VSGE) is the virtual international networking of learners with a focus on their school gardens and related issues using digital media like videos, photos or videoconferences. VSGE use the topic of school gardens to induce an exchange between learners. The exchange highlights parallels, provokes a process of reflection, supports intercultural learning, creates connectivity and imparts knowledge. This is an attempt to integrate and implement the global perspective of Education for Sustainable Development (ESD) in local school garden work. ESD aims to enable children, young people and adults to think and act in a sustainable manner. It puts people in a position to make decisions for the future and to estimate in which way their actions affect future generations or life elsewhere in the world. Such competences are in particular needed in a time which is shaped by global challenges.

Figure 13: Visualization of a Virtual School Garden Exchange

7.1 Coming from a different direction

We are living in a time of global challenges such as climate change, displacement and migration, loss of biodiversity, etc. Various scientific researches show that the current production and consumption patterns of the growing world population exceed the capacity of renewable resources of the planet (Crutzen & Stoermer, 2000; Hardin, 1968; Meadows, Meadows, Randers, & Behrens, 1972; Rockström et al., 2009). The question how to deal with it is probably the most important challenge of this generation. Virtual School Garden Exchange is an innovative educational tool that can be applied to foster learning processes related to a variety of topics relevant to sustainable development like hunger, health and

wellbeing, consumption and production, life on land etc. These topics are part of the 17 Sustainable Development Goals (SDGs) which belong to the 2030 Agenda, adopted by the UN in 2015. ESD is an essential part of the SDG 4 'quality education'. The target 4.7 states, that by 2030, "all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development" (UN, 2015, p. 21). VSGE as it is understood in this paper has lots of potentials to contribute to SDG 4. In my research I aim to find out, how the participation in a VSGE affects the learners.

The question how to mitigate global crisis is much discussed in different disciplines. My background is agricultural sciences with a focus on Education for Sustainable Development (ESD). The interdisciplinary exchange with environmental psychologists in the international summer school on environmental psychology in June 2018, showed me, that we are dealing with similar issues, but addressing them differently. It is enriching to look at these issues from different disciplinary perspectives.

7.2 Local gardening & Global exchanging!

School gardens are often part of school grounds or located in close proximity. They exist all around the world, have different shapes and sizes and different purposes such as learning, recreation or food production (FAO, 2010, p. 2; Milicevic & Nowikow, 2017, p. 2). However, school gardening often does not get much further than composting, although gardens offer many ways to address global challenges to learners (Richards, n. d., p. 3).

School gardens are ideal ESD learning locations (Schreiber & Siege, 2016): School gardens are a place for local action embedded in global issues: Crops growing in the garden, come from all over the world, climate affects the gardening, loss of biodiversity – like the dying of insects – gets tangible in the garden, different cuisines can be explored through the garden, etc. There are different organizations and initiatives with an emphasis on bringing such aspects in the school garden such as the Schools Global Gardens Network (SGGN, 2010), Ackerdemia e.V. with the educational program GemüseAckerdemie (Ackerdemia e.V., 2018), the International School Garden Forum (Spieler & Nowikow, 2006) and different school garden exchange programs (Lochner, 2016).

In a VSGE, learners from primary or secondary schools around the world who are engaged in school gardening can communicate in the virtual world about their garden experiences and related topics using media such as emails, photos, films, or video conferences (see Figure 13). The goal of a VSGE is to use the topic of school garden to enable an exchange between learners, which highlights parallels, provokes a process of reflection, supports intercultural learning, creates connectivity and imparts knowledge.

7.3 Global youth partnerships using digital media

The empowerment and mobilization of youth is one of five priority action areas of the Global Action Program on Education for Sustainable Development of UNESCO (United Nations Educational, Scientific and Cultural Organization), which seeks to generate and scale up concrete actions in Education for Sustainable Development (UNESCO, 2014). The Global

Action Program aims to contribute to the 2030 Agenda and in particular towards SDG 4. The necessity to work globally together is captured in the last of the SDGs: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development (UN, 2015). “Creating settings in which learners can deal with global sustainability topics and can communicate and collaborate with people from other countries can thus be seen as essential elements of ESD. However, few learning settings can be found that offer and stimulate an interactive dialogue between learners from the North and the South” (Barth & Rieckmann, 2008, p. 27).

Digital media offer learners from different countries opportunities to overcome geographical barriers to connect and engage with each other. They open up ways for the implementation of Education for Sustainable Development. It is a way to experience our globalized existence as learners (Schreiber, 2001, p. 176; Schreiber & Siege, 2016, p. 65). Therefore, the use of digital media is firmly anchored in the framework of Global Development Education (Schreiber & Siege, 2016, p. 65-71). Through the internet a quick and direct communication is possible, which can be part of school partnerships. VSGE (Lochner, 2016) draw on these advantages by direct linking.

7.4 Effects of Virtual School Garden Exchanges on the participants

As far as I know there is yet no research published on the effects of Virtual School Garden Exchanges on the participating learners. Do Virtual School Garden Exchanges really reach their intended goals of showing parallels, provoking a process of reflection, supporting intercultural learning, creating connectivity and imparting knowledge?

Bowker & Tearle (2007) suggest in their paper about a planned Virtual School Garden Exchange that it leads to an exchange of “knowledge, ideas and experience, and hence (learner) gain insight into other cultures and ways of life” (Bowker & Tearle, 2007, p. 84). "It could be that, as the global links grow and become more active, children can use their different perceptions and knowledge bases positively, and can begin to learn from each other via their shared focus of gardening and growing" (l.c., p.98).

A comparable argumentation can be found in the field of environmental psychology. Römpke (2017) writes in her article: “bringing people in contact with people in other countries will be a motivating factor to care more about the own influence on the wellbeing of people in other places; when it is not just the environment that is harmed, but at the same time a friend of mine” (Römpke, 2017, p. 21). She follows the theory of the contact hypothesis by Allport (1954), dealing with relations between groups. There are different ways how groups can get in contact, one “exceptionally promising” (Amichai-Hamburger & McKenna, 2006, p. 839) medium is the internet. “Groups that are segregated and/or geographically distant from each other” (l.c., p.827) can communicate easily via internet. A positive international contact might contribute towards a global identity. “Global identity reflects social identification with the world and the largest, most inclusive human ingroup and is generally associated with behavior that serves the world and all humans, such as transnational cooperation or pro-environmental engagement” (Renger & Reese, 2017, p. 1).

These approaches coming from the field of psychology have many parallels with the understanding of ESD and the concept of VSGE. ESD is expected to enable learners to estimate how their actions affect future generations or life elsewhere in the world, which is in

other words a “global responsible behavior” (Römpke, 2017). Does the participation in a VSGE contribute towards a global identity?

7.5 Current research

In my research I am addressing VSGE from different perspectives. Together with Robischon and Rieckmann, we carried out a systematic literature review which illuminates the scientific literature on school gardens from 1992 to 2018. The findings of the systematic literature review led us to conclude that no scientific literature – at least not fulfilling our conditions – has been published on the experiences gathered during the implementation of VSGE (Lochner, Rieckmann, & Robischon, forthcoming). Bowker and Tearle (2007) formulated some hypotheses in their paper, such as the assumption that ‘as the global links grow and become more active, children can use their different perceptions and knowledge bases positively, and can begin to learn from each other via their shared focus of gardening and growing’ (Bowker & Tearle, 2007, p. 98).

Future research shall address how the participation in a VSGE affects the learners. I will conduct qualitative expert interviews with teachers who have been engaged in a VSGE and are experts for learning processes of their learners. Furthermore, I will conduct group interviews with participating learners at the end of the exchange. So far, I was able to identify VSGE in different parts of the world.

I will try to be aware of perspectives on my field of subject coming from totally different disciplines, calling it maybe differently and having a different research approach. I see it as very enriching to have a look out of the box and maybe be able to understand a bit how other disciplines and people see my field of research.

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