5 Virtual School Garden Exchange – thinking globally, gardening locally

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Abstract

This paper gives an overview of nine different Virtual School Garden Exchange (VSGE) projects. In VSGEs, learners from primary or secondary schools with school gardens exchange virtually on their garden experiences and related topics, using digital media like emails, photos, films, or videoconferences. In this manner, the global perspective of Education for Sustainable Development (ESD) can be integrated in the school garden. 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 how their actions affect future generations or life elsewhere in the world. In this paper, the research procedures and main results of the preliminary study of my PhD research project are presented.

Keywords: virtual exchange, school garden, education for sustainable development, global perspective.

1.   Introduction

Virtual Exchange (VE) refers to "education programmes or activities in which constructive communication and interaction take place between individuals or groups who are geographically separated and/or from different cultural backgrounds, with the support of educators or facilitators" (Evolve, 2018,

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para. 1). An emerging form of VE for educational purposes is VSGE; it is a form of virtual international networking of learners from primary and secondary schools about their school gardens and related issues using digital media such as emails, videos, photos, or videoconferences. VSGE is an educational tool that links local gardening with global thinking. It is an attempt to integrate and implement the global perspective of ESD in local school gardens. 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 to which extent their actions may affect future generations or life elsewhere in the world.

Since the Conference on Environment and Development of the UN in 1992 in Brazil, ESD is on the international agenda. The adopted agreement Agenda 21 captures that education has to make a significant contribution towards sustainable development (UNCED, 1992, p. 329 ff.). Since 1992, remarkable developments have occurred, e.g. in 2015, the 2030 Agenda was adopted by the UN, including the 17 Sustainable Development Goals (SDGs), and ESD as part of SDG 4 (UN, 2015). The target 4.7 of the SDG 4 'quality education' states that, by 2030, "all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through [ESD] 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).

There are many different learning settings where ESD can be put into practice, school gardens are one of them. School gardens exist all around the world. They are often part of school campuses or located in close proximity and have different shapes, sizes, and purposes, e.g. learning, recreation, or food production (FAO, 2010, p. 2; Milicevic & Nowikow, 2017, p. 2). School gardens provide multiple links to global issues which can be explored: for example the different origins of the crops being cultivated in the garden, the climate that affects the gardening, or different cultural eating habits. In VSGEs learners can discuss with their peers from abroad about such topics. In this paper, the research procedures and

main results of Lochner (2016) will be presented. Approaches and experiences in the implementation of VSGE as a method of ESD in school gardens will be surveyed.

2. Methodology

In this study nine VSGE projects have been identified through snowball sampling (Schnell, Hill, & Esser, 2013). Their approaches, including similarities and differences, were highlighted through standardized questionnaires and expert interviews. The experts were the coordinators of the projects.

During the analysis, the focus was on the similarities, representative statements, joint shared knowledge, relevance structures, constructions of realities, interpretations, and patterns of importance (Meuser & Nagel, 1991, p. 452). The expert interviews were analyzed in MAXQDA after the principle of qualitative content analysis by Mayring (2000).

3. Findings

The earliest developments in the practice of VSGE that I am aware of date to 2001: the 'Food for Thought School Linking Programme', a British-Ugandan joint project organized by Devon Development Education (DDE, n.d.) and the 'North-South Education School Garden' project in Germany and Ecuador from the organization Inka e. V., with a particular focus on old crop varieties (INKA e.V., 2003). Both projects mainly exchange(d) via letters, drawings, and photos. In 2004/2005 an 'International School Garden Network' between schools in Brazil, Germany, Russia, South Africa, Taiwan, and Czech Republic existed, which promoted the exchange of German school gardens with school gardens worldwide. The exchanges mainly took place between multipliers who worked with school gardens and introduced the global perspective with photos and emails into the classroom (Lochner, 2016, p. 30 ff.). A follow up project was conducted in 2013-2017 in the 'Global Classroom' project (Grüne Liga, 2018).

In 2015, three more exchanges between individual teachers from Europe and Africa and their schools during one and four months took place (Lochner, 2016, p. 33 ff.).

Two more expansive programs are the 'Global Garden Exchange E-Pen Pal Program' (GGE) from Slow Food USA and the 'Go! Global Garden' project (GGG) from the ESD Expert Net. The GGE connected 80 schools in 2016 and 2017, but end of 2017 the program was closed. GGG conducted in 2015 and 2016 two pilots with learners from South Africa, Mexico, Germany, and India exchanging via videos, photo collages, and videoconferences. GGG is now embedded in Go! Global, which is focusing more generally on VE between sustainability activities (school gardening, waste management, etc.) in schools (ESD Expert Net, n.d.).

In the years 2000-2017 the media used in the exchanges did not vary much (see Figure 1). All projects used photos, some letters and drawings, and just in two of the exchanges videos and video conferences were used (see Figure 1). The duration of the different VSGEs ranged between one and 48 months, some had just two interactions, others up to ten. Themes like varieties of plants, cultivation methods, food, cultures, climate conditions, and school life were covered.

The connecting link between the learners is the school garden. An interviewee mentions "gardens can [...] be so fundamentally unifying across cultures" (Lochner, 2016, p. 38). The conditions and actors in and with which the VSGE is implemented, like the schools, teachers, and learners, are very diverse. The experts emphasize that the peculiarity of VSGEs is the thematic focus: the common goal of growing something. An expert sees it as "good conditions to reduce prejudices and stereotypes" (Lochner, 2016, p. 39). The learners are exposed to different countries and cultures, which can encourage reflection, convey a sense of cosmopolitanism, and create space to discuss global challenges. Some experts hope that the exchange may create a sense of connectedness. Four of the experts emphasize that they want to achieve knowledge transfer, which can be knowledge regarding other cultures or garden related.

Figure 1. Different aspects of nine VSGE projects
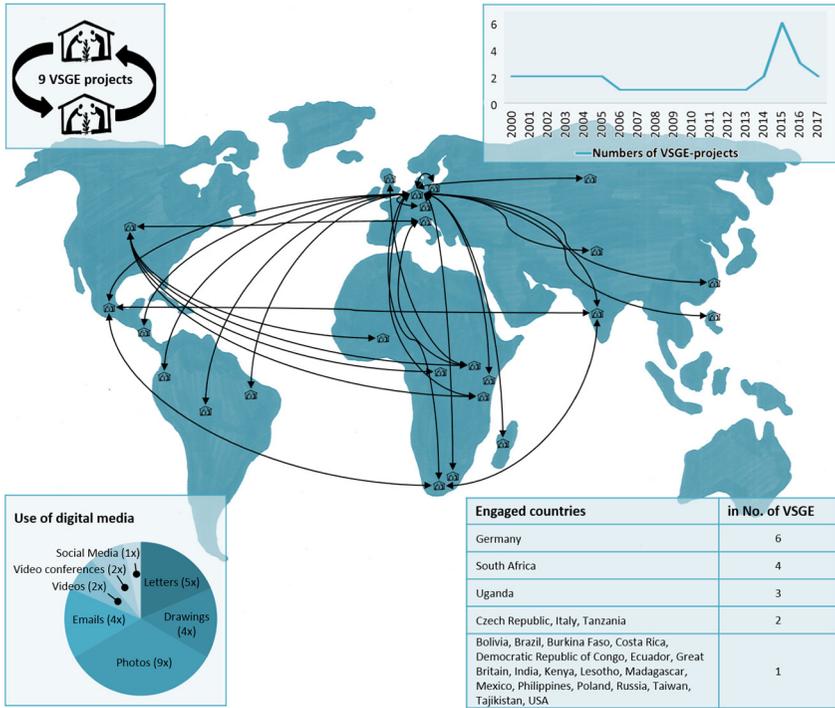
4.   Conclusion

These nine VSGE projects give a first idea on how diverse but also similar such VSGEs can look like. Nine projects during nearly 20 years is not a lot, which implies that there is still limited experience with VSGE. There might exist more projects, but so far I have not been able to identify them. This can be caused by language barriers and/or the lack of a unifying terminology. Even in the identified projects the terminology was very diverse: some projects use the terms 'school linking' or 'twinning'. One project calls it 'international school garden networking'.

In literature, VSGE seems to be nearly non existent. To prove this, in the next step of my research I reviewed 158 peer-reviewed articles related to school gardening to identify research on VSGE or similar approaches (Lochner, Rieckmann, & Robischon, forthcoming). To find out how participation in a VSGE affects learners, I will conduct qualitative expert interviews with teachers who have been engaged in VSGEs and can be seen as experts for their learners' learning processes. Furthermore I will conduct group interviews with participating learners at the end of the exchange.

My research focuses on school gardens in primary and secondary schools, but of course VE can be also implemented between other types of gardens. Why not linking two university gardens?

This paper and future research shall help to establish the terminology of VSGE, to be able to identify projects, to share experiences, and to contribute to a more frequent practice of VSGE.

Acknowledgements

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