# Ways of knowing about children's creativity development

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## Introduction

My PhD research is about children's creativity development in primary years. In the first phase of the research, a field investigation and a systematic literature review are conducted. This systematic literature review about two decades of research on children's creativity development during primary years with a focus on tasks, is almost finished to be submitted to a peer-reviewed journal. In the second phase of the research, creativity tasks are developed and tested and design principles for creativity tasks are extracted. The literature review generated a taxonomy of creativity tasks which is used to design the creativity tasks. In my research fundamental understanding and a practical application are both important goals. The fundamental understanding builds on earlier research and focuses on knowledge about creativity development of children within primary years in relation to different creativity task characteristics. The practical application focuses on creativity tasks for children which give guidance to teachers on how to stimulate creativity of children in a broad manner and can be applied in regular primary educational settings.

## Why creativity and why children's creativity?

Creativity is nowadays known as a crucial skill since creative solutions are very much needed for current and future societal problems. Although this did motivate me to choose this subject for my PhD research, the most important reason for my choice is that I think and feel that creativity is connected to the natural process of life. Creativity is related to development and growth and in my opinion, creativity is the natural power of life. To give your creativity space is to come closer to who you really are and thereby it helps to step into life and relate to your surroundings. Creativity is especially interesting to examine in children. Children demonstrate a large development and grow in their childhood, development in constant interaction with their environment. Especially young children seem to be, in a natural way, connected and driven by their creative powers, but when children grow older, in some way and under certain circumstances, their creativity stabilizes or even decreases. These irregularities of creativity development (besides increases, also decreases and plateaus) happen mostly at the higher grades of primary education, which makes the age-group 8-12 especially interesting to examine.

**The task as opportunity**

In general teachers want to stimulate creativity, but their conception of creativity is sometimes limited and need to be broadened to recognize multiple forms of children's creativity (Oosterheert & Meijer, 2017; SLO, 2015). Furthermore, practical ways how to stimulate creativity are needed (Beghetto & Kaufman, 2014). There are many definitions of creativity but in all these definitions creativity is related to two criteria which define if something is creative. These are novelty (originality) and usefulness (appropriateness) (Plucker et al, 2004). These two criteria are opposite and intertwined at the same time. This makes creativity a complex skill to capture in education and thereby guidance in a task-based approach provides possibilities. These tasks capture on the one hand a broad definition of creativity which has recently gained more attention in creativity research (Barbot, 2019) and on the other hand these tasks are designed to stimulate creativity. In this part of my research, we designed tasks in and with practice and developed on a more abstract level design principles for creativity tasks. Creativity tasks are environmental influences. It is in my opinion not the question if a child is creative, but how the creativity of this child can flow successfully and powerful, and which environmental influences (for example which tasks) helps the creative process.

**Participatory collaborative research in living labs**

The tasks are designed, and the data collected, in a qualitative participatory collaborative action research in hands-on living labs (workshops) with stakeholders of creativity of children. A living lab is an open innovative democratic prototype environment in real life settings in which user-driven innovations and new products are designed in a co-creating process (Bergvall-Kåreborn & Ståhlbröst, 2009). I translated this approach to a primary education setting. In the living labs stakeholders of creativity of children came together to make and reflect upon the tasks, upon the products made and on the creative process. These stakeholders are children, teachers, researchers and a figural drawing artist. All these stakeholders bring their own expertise and experience and thus different perspectives on creativity and creativity tasks are included in the research. In between the living labs we asked the teachers to explore and reflect upon the developed creativity tasks in their educational practices by conducting small pilots, and the artist and I further developed new assignments in between. The research was an iterative process of designing tasks, testing tasks, analyzing data, designing tasks and so on. In this process we collected rich empirical data, namely observations of the living labs, interviews with all children, interviews with teachers and interviews with the artist, group- discussions between researchers and artist/teachers and the artefacts the children made.

This participatory collaborative living lab methodology is chosen for four reasons. First, it captures in a structured way the complexity of real life. Second, participation, interaction, and dialogue in the living labs of all stakeholders (including researchers) fosters the dynamic process in the lab. Third, different stakeholders are included and given importance based on their experience and expertise in the design process which contributes to the inclusion of multiple perspectives and a democratic process. Fourth, iteratively doing and reflecting on tasks and artefacts by different stakeholders (including co-creation) contributes to the practical applicability of the tasks. Limitations of these methodology are related to the large number of influences shaping the findings, by which it is difficult to say what is causing what and this, and the small numbers of participants in just one setting makes generalizations complicated. However, the benefits of this approach are substantial in relation to the internal validity which is related to questions as: do the findings of the study make sense? do we have an authentic portrait of what we are looking at? (Miles & Huberman, 1994) and the external validity which can be seen as the practical applicability of the findings (Guba, 1981). The creativity tasks and the design principles are outcomes of this part of my research. Besides, a metaphor is used to describe creativity. A metaphor can make findings more vivid and structure our understandings linguistically and philosophically, which is contributive for fundamental understanding and practice (Lakoff & Johnson, 2003).

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**Bio**

Olga Potters MSc is trained as a product designer at ArtEZ, as a primary school teacher and as an educational scientist at the University Utrecht. She worked several years as an independent designer and had several national and international exhibitions with her autonomous work. Furthermore, she worked as a kindergarten teacher at a school with a very diverse learning population. Now at ArtEZ, she teaches at the Master Art education Zwolle and is a PhD candidate connected to the professorship AECT. Her promotor is Dr. Joke M. Voogt (University of Amsterdam) and her co-supervisors are Dr. Tessa J.P. van Schijndel (University of Amsterdam) and Dr. Jeroen Lutters (ArtEZ). The research is conducted at the Research Institute Child Development and Education of the UvA. Olga follows an educational PhD-program at the Interuniversity Centre for Educational Sciences (ICO).