

# Should We Play or Should We Learn (First)? Findings from the Space Academy/MakEY

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“Should we play or should we learn?” summarises the negotiation that took place between two boys during their participation in one of the workshops that were given in the Romanian case study of MAKEY project. Workshops focusing on the concept of space had been offered by the makerspace staff together with academics to 7 years old children in an attempt to create some mobile makerspaces in schools for introducing young children in science knowledge.

Space Academy, the Romanian empirical study in MakeEY project is set at the intersection of two main topics: 1. Tangential learning of STEM subjects in video games, 2. Cooperation and communication in tasks involving digital (video game), non-digital (artistic creation) and a blend of these two (robots). Moreover, we encouraged children to film and document their activities and to create visual data in a collaborative way. We were particularly interested in 1. how kids with various socio-economic status would engage in the making activities in these mixed environment; 2. what are the benefits and the challenges of young children’s long term engagement in makerspaces and 3. how do they develop their creative and digital skills during this engagement. To answer these questions we relayed on the data collected during 3 series of 9 workshops each, that have been offered to three groups of 10 children (7 years old) of various economic background. The tools that have been used during these workshops were Kerbal Space Program, Universe Sandbox, Cublets modular robots and 3D doodlers, pearl bead-ers, plasticine and drawing. Data were collected with fixed cameras, mobile cameras operated by re-searchers and children and with chest- fixed Go Pro cameras.

We will present some of the empirical data and also discuss the methodological and ethical challenges of working with children under 8, while using video games.

**Keywords:** Young Children; Makerspace; Kerbal Space Program; Play; Learn.