



## THE POTENTIAL OF THE INTERNET OF THINGS TO PROMOTE PARTICIPATORY CITIZENSHIP

**Abstract:** This study is based on the issue of the poor involvement of students in their respective educational community, as far as participatory citizenship is concerned. In order to answer the research question – “How to develop citizen science strategies using the Internet of Things, within the scope of a Smart School Lab, aiming to enhance the participatory citizenship of students?” – open and interventionist design-based research strategies will be applied. An iterative evolutionary approach will also be used, involving action and reflection in an interchanging way, with integrative activities that will fuel the project in a cyclic process.

Several workshops were conducted to develop a smart education community, the community of users, and to build community dynamics. Research instruments were implemented in the educational community to build the portrait of the institution and of the participants.

Artefacts and guidelines are being co-constructed between researchers, teachers, students and the local community – didactic kits with transdisciplinary contents, promoters of citizen science skills and supported by digital electronics and IoT – that should persist beyond the study and be subsequently adopted, adapted and used by other teachers from the institution where this study takes place. Regarding the results expected with this study, we highlight: design principles and technology innovation, i.e., the production of “education” and “citizen” didactic kits, which will contribute, per se, to the common good, with the detection of environmental problems in the target city of study; the improvement of the students’ citizen science skills and their participatory citizenship; and the realization of the potential of the IoT by the teachers who take part in the study, mainly as far as the development of pedagogical-didactic and social-communicative skills are concerned.

**Reference:** Santos, M., Carlos, V., Moreira, A. (2020). The potential of the Internet of Things to promote participatory citizenship. Research Summit 2020. Book of Abstracts – PhD pitches. 24th-27th june (online) (<https://www.ua.pt/file/61884>)