



Project Square

CC BY-NC-SA Educreators Foundation Full list of contributors available on projectsquare.cc

WHAT IS PROJECT SQUARE?

Project Square is an open education Computational Thinking initiative

The project aims to support the development of computational thinking as a transversal skill at primary and secondary school levels. It champions the **co-creation of embodied, playful learning activities in a problem solving environment** that is connected to real world challenges.

Playful learning activities are designed, tested, iterated and assessed by a growing **interdisciplinary community** of students, educators, researchers and experts from academia, as well as the public and private sectors.

The overarching narrative of Project Square is a human smart city inhabited by **caring, collaborative and creative citizens** who use knowledge and technology to better their communities' lives: from envisioning an optimal city infrastructure to delivering goods in a sustainable manner or building ethical communication systems.



THE CO-CREATION FRAMEWORK

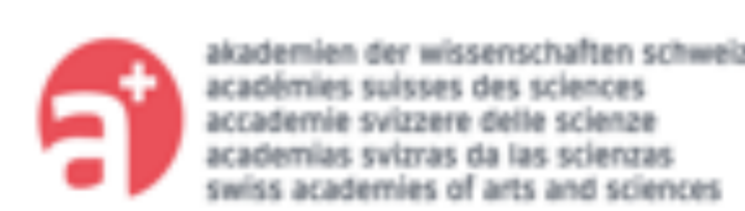
Evidence based, Project Square is a "living" educational resource for educators and experts. It evolves in time through participative design and iterations.

The co-creation of playful learning activities by interdisciplinary communities gravitates around the central topic of human smart cities and draws on research from learning sciences.

In this context, computation thinking is seen as a transversal skill, applied to different fields of knowledge: computer science, robotics, artificial intelligence, ethics, sustainability, etc.



- Successful pilot 124 primary school classes in canton VD
- Creation of 21 Robotics Activities, primary level
- Co-Creation Workshops with EPFL LEARN, Science Lab of University of Zurich, Pro Juventute, primary level
- 2 Testing workshops with teachers at PH SH, primary level
- 4 How-to-videos for robotics activities
- 16 activities posted on Roteco
- First Playbook in the finalization stage



Project Square activities enable students to experience, perceive and conceive the facets of CT.



STEP 1 EXPERIENCE

In the first stage of a Square activity, students will experience a problem.



STEP 2 ACTION

In a second stage, the representation follows the action (by drawing or using the tiles cards).



STEP 3 REFLECTION

In a third stage, students will perceive in the situation the invariants that will be necessary for conceptualisation



November 11, 2020

Année pilote 2019-2020 EQUIPE EDUNUM DU CENTRE LEARN

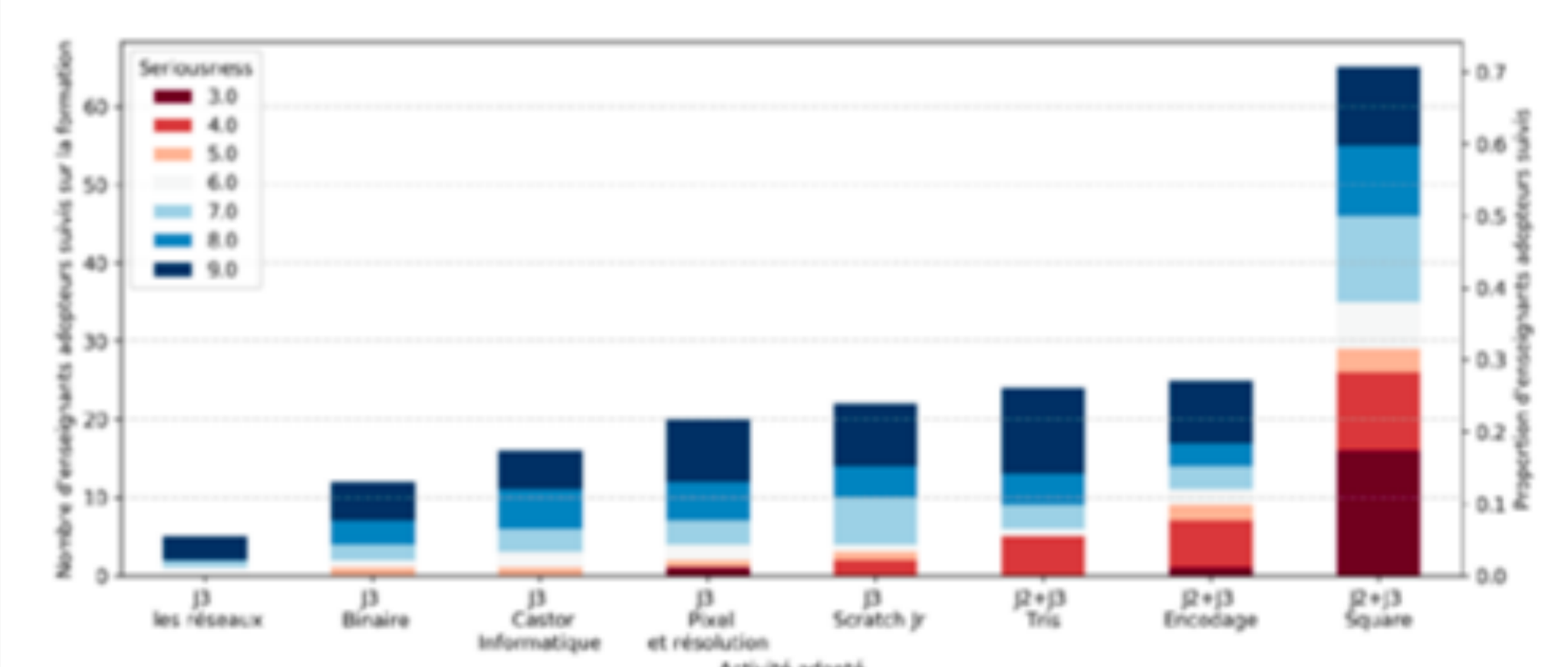


Figure 42: SI Cycle 2 - Distribution du nombre de personnes ayant adopté une activité par rapport à leur intensité d'adoption globale (seriousness). L'intensité d'adoption varie du rouge pour les moins investies en montant jusqu'au bleu pour les plus investies. Notons que cette analyse n'a pu être effectuée qu'avec les enseignant-e-s ayant pu être suivi-e-s sur les trois journées de formation (92 suivi-e-s sur les 177 ayant répondu au sondage en journée 1). Sur ces 92 enseignants, 78% (soit 72 enseignants) étaient des adopteurs.

Tableau 13: SI Cycle 2 - Nombre de périodes effectuées par activité en lien avec l'intérêt et la confiance moyenne rapportée des enseignants.

Activité	Intérêt Moyen	Confiance Moyenne	Nombre de périodes totales	Nombre de périodes moyennes par enseignant (rapporté à tous les enseignants)	Nombre de périodes moyennes par enseignant ayant effectué l'activité
D1 - Tris	3.13	3.01	99	0.36	3.30
D1 - Square	3.49	3.30	181	0.67	2.48
D1 - Chiffrement et codage de l'information	3.10	3.02	74	0.27	3.40
D2 - Binaire	3.05	2.58	36	0.13	1.89
D2 - Scratch Jr	3.76	3.42	121	0.44	3.67
D2 - Square	3.10	3.29	239	0.88	3.62
D2 - Castor Informatique	3.06	2.83	48	0.18	2.09
D2 - Réseaux	2.75	2.69	17	0.06	1.42
D2 - Pixelisation			74	0.27	3.39
Autre			32		



UNPLUGGED ACTIVITIES

