RiSE: participatory design in East Jerusalem
Data on education in East Jerusalem

88.000
Registered students

20.000
Non-registered children

East Jerusalem
= occupied territory

Israel
= main duty bearer

Chronic shortage of classrooms and substandard school infrastructure
- Small size of classrooms

Access restrictions and protection issues for teachers and students
- Delays, harassment or revocation of permits.
- 20% of students and teachers have difficulties in reaching schools
- 178 students from East Jerusalem were imprisoned
- 51 were put under house arrest
- 1 student was killed by Israeli Security Forces (ISF)
- 2 students were wounded by ISF
- 88.2% of students are exposed to violence within schools

High drop-out and underachievement of students
- 36% of children do not complete all 12 years of school
- Low quality education is a function of the lack of qualified teachers
Lessons learned from the E-Learning Project

- 288 schools defined their ICT needs & were provided with ICT material
- Teachers were supported in the development of Learning Objects Using ICT, a total of 1,600 learning objects were developed.
- Over 14,000 teachers were trained on student-centered learning through the use of ICT.
- Development of training material.
- Development of a digital training portal to share knowledge & experiences.
- More than 6,500 active users at the beginning of 2016.
- Mobile Learning Training organized in 53 Palestinian schools.
- 500 students developed mobile applications.
- Training & equipment for the use of robotics for STEM education.
- Policy advice was provided to learn from the activities & pilots.
- 6 policy papers were published the fuel the Palestinian policy on digitation in education.
RiSE project: EU (3.8MIO) + Belgium

**Output 1**
The infrastructure of schools in East Jerusalem is improved and provides an inclusive, safe, healthy and environmentally friendly environment.

**Output 2**
*Students have gained life skills* and have an increased sense of ownership of the school by being actively involved in the rehabilitation process.

**Output 3**
The community is actively involved in the creation of 5 *semi-public external spaces* in or around the upgraded schools rehabilitation process.

- STEAM activities, digital skills
- Fab-labs/technology labs
- Design thinking using design software
- Collective artwork

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Adolescents gain sense of ownership by participating in rehabilitation process through collective artwork, designing of public spaces.

Increased access to education through creation of healthy, safe, child and environment friendly schools involving the end user and the educational communities.

Ownership needs motivation, collective (art)work needs life skills.

- Artists & architects selected
- Artistic projects defined
- Technology labs built
- Teachers trained
- Artwork made by students

- STE+A+M
- Digital skills
- Design thinking, design software
  => Essential life skills

Strengthen the resilience of the community in East Jerusalem by improving access to education and school infrastructure.
The transition from STEM to STEAM

STEM > STEAM

Science, technology, engineering, and math (STEM) subjects are the focal point of both educational approaches. The “A” in “arts” turns STEM into STEAM.

(-) STEM

The critical process of creativity and innovation is still missing.

Economies require more than an understanding of the four areas of study (science, technology, engineering & math), it requires application, creation and ingenuity as well. That’s why STEM needs an art component.

For EJ: art to be connected to IDENTITY

(+ ) STEAM

STEAM activities can help increase motivation as well, helping to fight early drop out while living in highly stressful conditions.
Redesigning the technology labs
Using software to design spaces

SKETCHUP: very user friendly, sketchup for Education, intuitive design, connection to 3-D printing, CNC wood cutting...

MINECRAFT: Belgian experience in Gaza, interesting tool for public spaces, collaborative work possible
Pedagogical methods

1. Problem based learning

   - Present Problem: Students engage in self-paced problem-solving.
   - Students derive the problem and brainstorm ideas based on prior knowledge.
   - Students engage in independent study.
   - Students present their solutions and review what they have learned.

2. Design thinking

   - Empathize: Clearly articulate the problem you want to solve.
   - Define: Develop a deep understanding of the challenge.
   - Ideate: Brainstorm potential solutions; select and develop your solution.
   - Prototype: Design a prototype (or series of prototypes) to test all or part of your solution.
   - Test: Engage in a continuous short-cycle innovation process to continually improve your design.

3. Instructional design

   - Assess Gaps, Needs, & Set Goals
   - Analyze Learners & Context
   - Develop Objectives
   - Develop Assessments
   - Develop Strategy
   - Develop & Select Instructional Materials
   - Implementation

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Proposed activities

1. **Procurement process** to select local Palestinian artists or design bureaus

2. **Preparation** of intra & extra-curricular activities in the schools, to design artworks and to design public spaces

3. **Execution** of intra & extra-curricular workshops in each school

4. **Procurement process to create/rehabilitate and equip STEAM labs** in 3 secondary schools to produce the artwork for all schools

5. **Finishing of final artwork** in collaboration with students, execute works for public spaces

6. **Training of teachers** by the MoEHE to continue using the STEAM labs within the curriculum & assure training on safety procedures

7. **Execution of additional extracurricular workshops** to increase life skills in particularly vulnerable schools

8. Organise event for the school community to **unveil the artwork**