ASSESS
MAKE 21

THE ASSESSMAKE 21 PROJECT

INNOVATIVE DIGITAL SOLUTIONS TO ASSESS 21ST CENTURY SKILLS IN MAKERSPACES

NOVEMBER 2020- OCTOBER 2022

SUMMARY

As the maker movement is increasingly adopted into primary and post-primary schools and nonformal makerspaces, students have more opportunities to generate unique, personalized projects and artifacts, such as computer programs, robots, DIY electronics, and develop new competencies and skills. Digital making technologies if coupled with proper learning methodologies can provide learning experiences that promote young people's creativity, critical thinking, collaboration and problem-solving skills - the essential skills necessary in the workplace of the 21st century.

However, assessment of these higher order skills is not easy, particularly within these open-ended environments where students create unique solution paths to problems, interact with peers, and act in both the physical and digital worlds. Currently, digital technologies offer novel methods and solutions to assess 21st century skills and offer insights into learners' efforts and achievements.

Thus, the goal of the ASSESSMAKE 21 project is to provide, pilot, and validate novel assessment methods and tools for the assessment of 21st century skills. The assessment solutions will be piloted in different learning contexts, with a focus on makerspaces. The project partnership will create learning environments that enable students to act as makers using a wide variety of physical and digital tools. This will be facilitated through hands-on experiences that emphasize collaboration and creativity following inquiry-based approaches instead of direct instruction of facts and formulas. Teachers and educators will receive training in this approach and will be highly involved in planning and implementing the activities.

Finally, the project will report findings and conclusions from implementations and assessments that will take place in 5 schools and 4 non-formal maker spaces in Ireland, Sweden, Greece, and Cyprus.
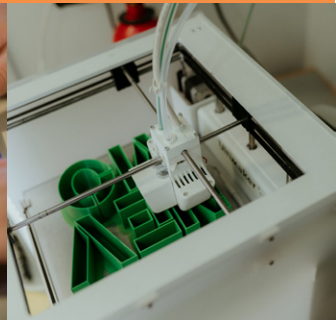
OBJECTIVES

The objectives for this project are to develop and pilot a digital assessment solution specific to the needs of makerspaces and thereby to:

- enable teachers to provide evidence of competencies and skills development
- improve the scalability of the maker movement in education by revealing students' skills developed throughout specific learning activities
- assist researchers and teachers/educators to design better curricula, pedagogical approaches, and learning resources for makerspaces in schools and nonformal centres
- and facilitate the integration of makerspaces into formal education systems

TARGET GROUPS

The target groups for this project are:

- student-learners and participants in makerspaces aged 12 -18 years
- secondary school teachers engaged with makerspaces
- nonformal educators and facilitators working in makerspaces

PROJECT OUTPUTS

Principal outputs include:

- A digital solution to assess 21st century skills for teachers and students
- Open Educational Resources to help teachers and students to implement the solution available via the project website and other online platforms
- An evaluation report on findings and results from the implementation of the assessment solution in pilots with teachers and students
- Training workshops and 4 multiplier events for the promotion of the project ideas and results

PARTNERSHIP

Learnovate Centre at Trinity College Dublin, www.learnovatecentre.org/, Ireland

European Lab for Educational Technology, http://edumotiva.eu, Greece

Cyprus Interaction Lab, www.cyprusinteractionlab.com/, Cyprus

Karlstad Univeristy, www.kau.se, Sweden

Dublin Maker, http://dublinmaker.ie/, Ireland

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