IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Lift Off - Secondary Space Education (2)

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Abstract

FUTURE SPACE is the Erasmus+ project focused on astronomy space exploration to provide a catalyst change in understanding and teaching STEM subjects in European educational systems. Its results are directed to secondary schools teachers and educators in organizations such as small science centres and NGOs, but also directly to students. The Project aims to inspire students through space matters, increase the number of candidates for STEM studies, and introduce young people to professional development in the space sector and other innovative areas. Besides, the FUTURE SPACE is designed to build the cross-sectional and soft competencies which have a significant importance on the labour market. It also helps to reduce low achievement in natural science subjects. The two main deliverables of the Project are the Space Schools Programme and the Space Programme for small science centres and other non-formal education organizations. The third deliverable is a module unveiling career paths in the space sector. The Space Schools Programme includes thematic modules devoted to the XXI century's global challenges, practical solutions offered by research and exploration of the near-space environment and astronomy. The essence of the Programme is to show the applications of theoretical knowledge and to indicate the interdisciplinary nature and connections between science subjects that young people learn at school. The Programme contains also practical information for teachers on how to organize the teaching process at school. The Space Programme for small science centres consists of 4 activities – two of them are based on games, one is a DIY activity for younger students, and there is also a planetarium show to be used in mobile planetarian. All to strengthen understanding of space matters, extend knowledge and critical thinking, as well as working in group skills. Both programmes aim to show also the economic and social benefits of space exploration. The 3rd area of activities is role models presentation through movies, written interviews and podcast. Chosen representatives of the sector envision three dimensions of diversity: gender, geography and age. Content published on the project's website and shared among students and teachers is designed to help understand what it means to work in space sector, what competences are helpful and needed, what kind of career one can have. Moreover, to help high schools students understand variety of possibilities two catalogues were prepared: 1) study opportunities in STEM in the European Union, 2) early career opportunities. In order to match project materials to actual needs of students and teachers pilot projects were carried out in 2021. Secondary schools and educators tested scenarios, games and videos with students and shared their feedback. Preliminary evaluation results confirmed that the chosen methodology and topics enrich the educational offer for schools and non-formal learning organizations. It helps to increase the competencies of teachers, educators and support them in developing the quality of the teaching process in science and technology. Future Space project founded by Erasmus+ (2019-1-PL01-KA201-065434).