

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Enabling the Future - Developing the Space Workforce (5)

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IMPORTANCE AND CHALLENGES OF HANDS-ON-EXPERIENCE IN ASTRONAUTICAL
EDUCATION

Abstract

This paper discusses the role of hands-on-activities in tertiary education with particular focus on the space sector in Europe. Such activities include European educational programmes managed and supported by several national space agencies and the European Space Agency (ESA), such as REXUS/BEXUS (Rocket Experiments for University Students / Balloon Experiments for University Students), medium-sized national programmes like the STERN (Studentische Experimental-Raketen, Germany) or PERSEUS (Projet Etudiant de Recherche Spatiale Européen Universitaire et Scientifique) as well as smaller projects run by student organisations themselves. First of all, the quantitative value of practical education will be presented to display the percentage of students who participate in hands-on-activities. Moreover, the impact of such initiatives will be detailed, followed by a discussion of the roles of different stakeholders like students, universities and industry. Another major point of this contribution is the depiction of administrative and executional challenges that come along with the conduction of hand-on-activities with respect to ordinary theoretical education. Concluding, recommendations to improve this relation and thus the education of young space professionals will be given. This contribution bases on the main tasks identified by the working group that addressed to “How can universities contribute to the acquisition of hands-on experience?” during the first European Student Workshop held in Padova in December 2015 in conjunction with the 1st Symposium on Space Educational Activities.