

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

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THE PROS AND CONS OF ENTERING A UNIVERSITY VIA SCHOOL SCIENCE PROJECT

Abstract

For several decades, school science projects around the world have been an integral part of the secondary education system. In Russia, this method of knowledge acquisition is a current practice in schools that claim a special place on the scale of quality of education. Special contests that allow students to enter universities based on the results of defending the project on the topic of their future specialty help to consolidate the "project" in the school curriculum. An example of such a competition is the special program "Step into the future. Cosmonautics", which exists for more than 20 years. More than 15000 pupils participated in this contest and 3000 pupils managed to enter Bauman University based on the successful defence of their project in the field of astronautics. In this report, we examine the pros and cons of this method of recruitment of students. The advantages of this approach are clear: the first-year students are motivated and have a primary (no longer intuitive) understanding of the future specialty. It becomes nearly impossible to choose the specialty from deceptive shiny wrapper with given present public stereotypes and the lack of awareness. However, this method has two significant drawbacks. First, a good project is not an indicator of successful completion of the mandatory minimum school curriculum. This is clearly confirmed by the facts: after the introduction of the requirement for the winners of the program "Step into the future" to have a score for the state exam in physics at least 75%, the number of such applicants have decreased by 3 times. Secondly, there is an issue with the depth of study of the topic. Since the project is put up for competition, the wish of both the scientific advisor and the student is to make it the most competitive. However, this may require much deeper knowledge of the material that lies far beyond the school curriculum — as a result, the school project can be extended to the level of a course work of a student of 3-4 years of study with minimal participation of the student in the submitted work. The report focuses on the positive aspects of admission to the university based on the qualification results of student's research project. At the same time, we discuss the need for introducing a competence threshold that would limit the content of such a project to the actual capabilities of a student.