IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Interactive Presentations - IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (IP)

Author: Mrs. Gunel Valiyeva
National Aviation Academy - Azerbaijan, Azerbaijan

INTEGRATING SPACE EDUCATION INTO STEAM

Abstract

STEAM courses are becoming a major concern in education systems. Researches indicates that students who participate in space education programs become more interested in STEAM fields. Many of these space education initiatives are informal. Space education gives students the opportunity to study multiple disciplines, enabling them to acquire critical skills. This abstract suggests a method for including space education in formal education systems to incorporate transdisciplinary STEAM subjects. It offers a summary of space education and recommends a number of original space education exercises that might be incorporated into formal education programs. The term STEAM is frequently used to refer to simply one of the subjects that it encompasses, most frequently science. Even while an increasing number of studies are promoting the integration of STEAM fields, few of them deal with several fields, and the ones that offer conflicting results and insufficient guidance for furthering STEAM research. Prior research indicates that applying knowledge and abilities from multiple disciplines to real-world challenges and projects might enhance the overall learning experience. This requirement is met by space education, which combines a multidisciplinary approach with real-world application. Therefore, it is proposed that space education be included in the formal framework within the context of disciplinary integration, transdisciplinary learning, and the application of theory. Earlier research describes a range of informal SEPs provided globally by space agencies. According to assessments of these non-formal learning initiatives, space education through these programs can pique kids' interest and inspire them to enroll in classes and subsequently seek jobs in engineering, science, or technology.Though informal SEPs have proven beneficial, space education has not yet been widely incorporated into formal education curriculum. This abbstract defines a space education program (SEP) as the formal instruction, training, and incorporation of space-related topics within science and technology curricula. The following cognitive abilities are referred to as STEM skills: critical thinking, scientific literacy, digital literacy, mathematical literacy, and creative thinking. The research findings presented in this paper will be utilized to develop a SEP teaching model that can be incorporated into science and technology curricula for middle schools. The purpose of the study is to investigate how SEP affects middle school students' cognitive skill acquisition; analyze how SEP has affected middle school pupils' understanding of science and technology; analyze the general perspectives of students regarding science and technology; create a SEP program that can be incorporated into high school science and technology curricula.