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DISRUPTIVE SPACE TECHNOLOGY EDUCATIONAL MODEL IN VENEZUELA

Abstract

The high tendency towards competitiveness and growing demand for sustainability of space activities around the world, due to the space technology development continuous influence, and the emergence of new space activities, require in the space technology present and future, educational models or strategies formulation that foster the teaching and learning on space technology in a systematic way from an early ages, with the purpose to stimulate a major participation of children and adolescents in activities linked to space technology, in order to encourage their interest to study careers related to space technology, which will allow in the future to have a greater amount of human talent to meet the growing demand for professionals required in the new space sector scenarios. In this sense, the Bolivarian Agency for Space Activities (ABAE), has designed a Space Technology Educational Model in Venezuela by incorporating cutting-edge technologies and innovative teaching methods, a disruptive education model that has changed in the Venezuelan state the methodology and strategies previously used in the country for teaching science and technology at the primary and high school level. Space Education Model designed under the approach of two (02) space technology education field: Educational robotics based on space topics and Educational Space Applications; considering applications such as communications satellites, remote sensing satellite, Global Navigation Satellite Systems and Rocket Principles. Using teachings tools or strategies stratified by students ages, education level (primary and high school), activities complexity developed and projects conceptualized that allow throughout the students entire training process improve their willingness to collaborative work, as well as their cognitive skills, logic of process, spatial and temporal notion, learning by doing, critical analysis and versatility to solve problems. In addition, this model incorporate a teaching scheme to train trainer of trainers with the objective to reduce the technology gap in primary and high school teachers, training them to articulate the space technology topics with the new science and technology curriculum formulated in Venezuelan. As result, the model presented seeks to inspire and engage students in the field of space technology. Likewise, through hands-on projects, interactive simulations, and real-world applications, students will be able to develop a deep understanding of space technology and its potential impact on society preparing them for future careers in the space industry.

Key Words: Space Technology, Educational Model, Innovative Teaching Methods, Educational robotics, Educational Space Applications, Trainer of Trainers