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LAUNCHING THE FIRST HIGH-ALTITUDE BALLOON IN ZIMBABWE: THE ROLE OF STUDENT-LED INITIATIVES IN SPACE ECOSYSTEM DEVELOPMENT

Abstract

The backbone of well-established space agencies has often been Research development (RD), which stems mainly from academic institutions, primarily driven by students. This demonstrates the importance of student engagement, especially in space ecosystem development. Student-led initiatives are particularly important for developing countries, as it shows a willingness to include the youth as partners and beneficiaries of sustainable development through space. Student-led initiatives are programmes wherein students design and run projects of their own accord. These students are responsible for the funding, event planning, and recruitment of volunteers and The future of the space industry is undoubtedly in the hands of the youth, and will be determined by their ability to engage and contribute to its development. Space agencies and other stakeholders within the space industry need to begin to pass the torch on to the future generation by empowering student-led initiatives. They can do this by providing meaningful learning experiences for students. Once such experience which is the focus of this paper is the launching of Zimbabwe's first high-altitude balloon, which was achieved by the Students for Exploration development of Space, (SEDS), Zimbabwe Chapter, during World Space Week (WSW) 2020. On the 10th of October, Following from this, the students will be continuing with the building and operation of a small-satellite and accompanying ground station segment. Such a feat and those to follow are a testament to the driving force of the youth in Zimbabwe and many other nations, and is a case study worthy of evaluation and further support. Student's contributions spans a number of disciplines including engineering, business, communications, law, mathematics and physics. Making these kinds of connections allows students and the youth to be closer to the consequences and benefits of their actions undoubtedly this will help to foster their agency in the development of the space industry in Zimbabwe. This paper presents SEDS Zimbabwe as a case study and template for supporting the future of the space industry and ways in which space agencies can equip future engineers, administrators and space explorers not only in Zimbabwe but beyond.