

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Ignition - Primary Space Education (1)

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DOMI INTER ASTRA (DIA): A CHILDREN'S BOOK TO EMPOWER THE NEXT GENERATION IN
STEAM EXPLORATION AND PURSUIT

Abstract

Globally, only 35% of gender minorities choose to pursue STEM. As a result, only 28% of the STEM workforce constitutes gender minorities. Women earn only 20% of bachelor's degrees in STEM, and the number of women majoring in STEM has declined over the past two decades. The major reasons include gender stereotypes, lack of role models, educational barriers and social pressures. The ages of 9-11 have been identified as those where gender minorities lose interest in STEM.

Through this paper, we aim to address these discrepancies through a children's book to introduce the concept of STEAM to the next generation. It highlights the story of a young girl from an underrepresented country who is invited to visit a moon base. Through her journey, the readers can gauge an understanding of both scientific concepts and creative imagination.

A keen emphasis on research methods and design framework is explored through user interviews, user research and empathetic modelling with young readers to identify the opportunities and issues that users may face while deciding to pursue STEAM. These are implemented while developing the storyline and the framework can be used as a baseline to address the gaps in the curriculum in schools.

One of the key strengths of "Domi Inter Astra (DIA): A home among the stars" is its ability to make complex STEAM concepts accessible and engaging for young readers. The book uses a combination of clear language, vivid illustrations, and interactive activities to bring STEAM topics to life and help children understand how they can apply these concepts in their everyday lives. Moreover, it provides an opportunity for children to portray themselves in the book, explore various professions in STEAM and allow access to space exploration to all, with an emphasis on its distribution to the underprivileged through non-profit organizations.

The book also places a strong emphasis on the role of gender minorities in STEAM fields, highlighting the achievements of pioneering female scientists and encouraging young children to follow in their footsteps. By showcasing the diversity and creativity of STEAM careers, DIA seeks to challenge gender stereotypes and inspire children to pursue their passions and ambitions.