

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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PLANNING A KOREAN STEM EDUCATION PROGRAM BASED ON THE 'WOMEN'S STUDENT
RESEARCH GUIDANCE PROGRAM' CONDUCTED BY THE KOREA AEROSPACE RESEARCH
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Abstract

With the rapid growth of the space industry worldwide, more space industry personnel are needed. But, compared to men, the female workforce still accounts for a small percentage. In addition, there are many students who want to work in the space industry, but have difficulty setting their careers because they are ignorant of the space industry and practice. Accordingly, the Korea Aerospace Research Institute selected three fourth-grade female college students who want to go to graduate schools in the space field to expand the base of female manpower, and conducted short-term research guidance education for eight weeks. This program was consisted of major lectures in the space field, paper writing education, and one-on-one mentoring with female researchers who engaged in satellites and projectiles. Students were able to build background knowledge of the space industry and set direction for their careers by receiving education and advice from various researchers. However, as it is a new program, it inevitably experienced several problems. First of all, the administrative system was not clear, so the students were confused in their roles, such as belonging to the education department and doing educational work, even though they were research students. Second, unlike the program name "Expanding the base of female manpower," there were no women among the lecturers except for mentor researchers. Third, the field of lectures was uneven, with all lectures on satellites and only one lecture on rockets. As an improvement, first of all a clear manual that summarizes the roles and administrative parts of students should be introduced to realize the purpose of the program called 'research guidance'. The manual should present the role of research students and managers, the direction of mentoring progress, and the topic, frequency, and time of the lecture. Second, to clarify the purpose of education, we considered a system of scholarships instead of wages and making the students' departments belong to the mentor's research department, rather than the education department. Finally, in line with the purpose of the program, the proportion of women among practical lecturers should be at least 30%. In this paper, as participants of this program, not only the positive effects of this program, but also the points to be improved and the direction of improvement were discussed. Ultimately, based on the feedback of students, this program was supplemented to plan Korean-style STEM materials that provide better education programs to university students.