FEMALE UNDERREPRESENTATION IN SPACE SCIENCE:
A CASE STUDY OF THE AFRICAN REGIONAL CENTER FOR SPACE
SCIENCE AND TECHNOLOGY EDUCATION

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Female Underrepresentation in Space Science

Student research for the Regional Academy on the United Nations and UNOOSA

Research question: Why are there so few women in space science? A case study of ARCTE-E

Methods: interviews and survey

Results: lack of female applicants, lack of role models, gender discrimination, some existing programmes

Recommendations

Our Team (left to right):
Tamara Pataki – Free University Berlin
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Our Research Question: Why so few women at ARCSSTE-E?

- To what extent are women involved in the field of space science today?
- What is the situation women face while pursuing a space related career?
- What initiatives are currently in place at the regional centers and what could be added?

ARCSSTE-E

- Inaugurated in 1998, Partner Institution: Obafemi Awolowo University
- Participants’ countries of origin: 17 English-speaking countries
Methods

Interviews
- 5 Qualitative, semi-structured Interviews
- Interview partners: senior staff, female teachers, alumni
- Snowball sampling

Survey
- Female alumni
- Questions developed from our interviews
Results I: The Gender Gap among Students and Staff

Gender Gap

- 14-40% women among total student body at ARCSSSTE-E
- 20% of the total staff are female
- Women in senior members’ positions: rather the exception, not the norm
- Upward trend in female participation
Results II: Applications and Admissions

Applications

ARCSSTE-E receives a lower amount of female applications, in comparison

● Different reasons:
  → little interest
  → pressure by family and environment,
  → ‘a global phenomenon’

● Problem: different perception by actors
Results III: Lack of Female Role Models

“During the summer camp in Abuja, I once told a young girl how to draw a rocket, how to make a satellite. We did a lot of things. And I told them, you can do these things, and, in fact, the mothers that came were so surprised.” (female teacher)

Half of our respondents were inspired by a role model


Results IV: Issues of discrimination

“The male students, they think they are superior and that they have superior brains”  (female teacher)

“In Nigeria and Africa at large [discrimination] is a very serious problem. We have this mindset that a girl and a boy are not supposed to work together and knowing that engineering and science at large is a man’s cause, so it has always made them to believe that[it] is not for girls.”  (female alumni)

9 respondents reported experiences of day-to-day discrimination based on their gender
Results V. Existing projects

Mentorship

Self-help groups

Outreach programmes
Results VI. Lack of awareness

““If you are good, you are good. If you are wise, there are no limits for you. If you are a lady - women have the same opportunities.”

(male respondent)
Recommendations

How to enhance female participation in space science?

Enhance the number of female participants
- Target female students at outreach programmes
- Gender-specific admission criteria

Create a more supportive environment
- Raise awareness for gender-related policies
- Support existing programmes

Use role models to motivate students to apply
- Training for students, teachers and management
- Provide funding
- Create networks

+ Further research is needed
THANK YOU!

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