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WOMEN IN STEM IN CENTRAL ASIA: Perspectives and Challenges

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STEM Initiatives in Kyrgyzstan

- Girls and Space: first ever satellite in Kyrgyzstan built by girls
- Kyrgyzstani female winner of Biotechnology Award
- Technovation Challenge
- Ilim Kyz (Smart Girl)
- Hackathon
- Women TechMakers and TechWomen

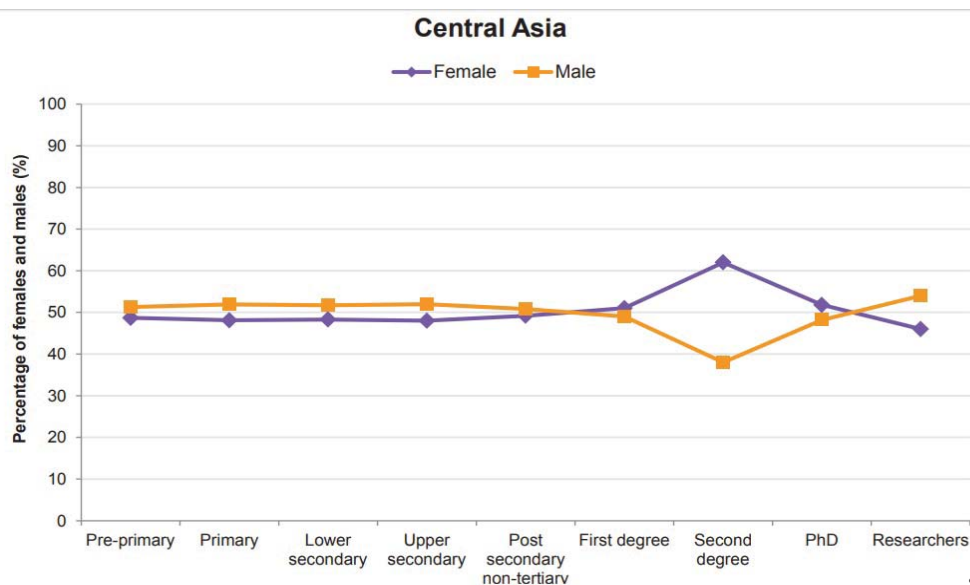
<https://www.youtube.com/watch?v=wj9vK0ZfOpw>



Current status of women in STEM education

- Gender differences in STEM education are present at all levels of education
- Gender gaps in STEM education participation become more obvious in higher education
- Although interest in STEM exists, few girls consider it their number one career choice

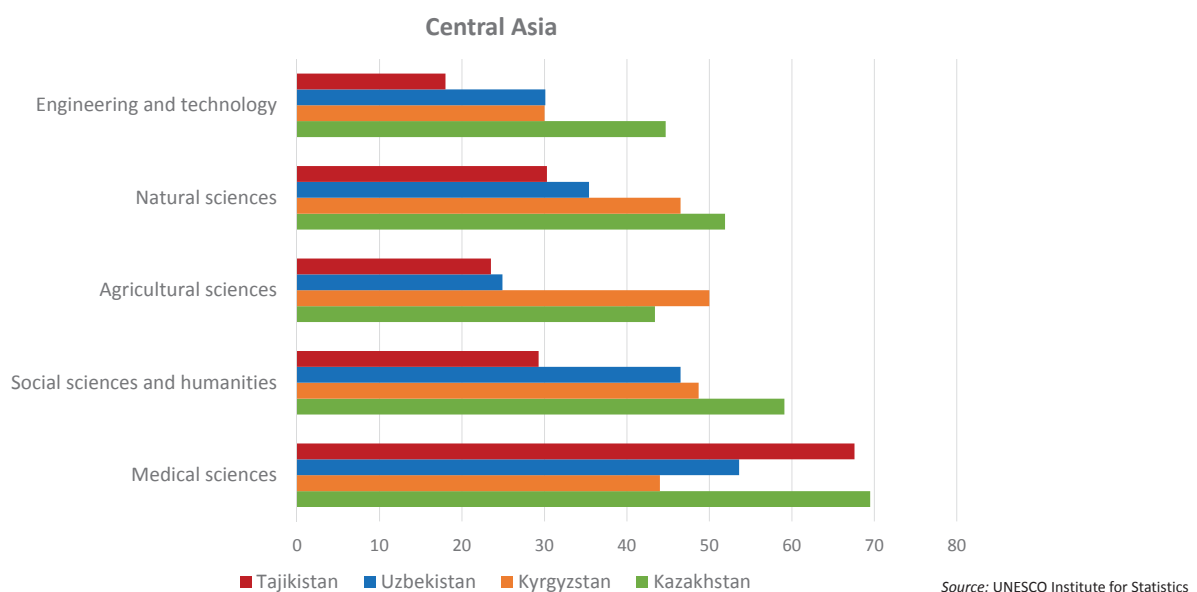
Share of males and females in different level of education, 2012 or latest



Current status of women in STEM research

- More women are enrolling in university, but few pursue careers in STEM research
- Men continue to predominate in research jobs
- Women are well represented among social and medical sciences, but makeup a small minority in engineering and technology

Female researchers by field of science, 2013 or closest year (%)



Women in engineering and technology field, 2013 or closest year



Kazakhstan 45%



Uzbekistan 30%



Kyrgyzstan 30%



Tajikistan 18%

	PhDs		PhDs in Science		PhDs in Engineering	
	Total	Women %	Total	Women %	Total	Women %
Kazakhstan (2013)	247	51	73	60	37	38
Kyrgyzstan (2012)	499	63	91	63	54	63
Tajikistan (2012)	331	11	31	-	14	-
Uzbekistan (2011)	838	42	152	30	118	27

Note: PhD graduates in science cover life sciences, physical sciences, mathematics and statistics, and computing; PhDs in engineering also cover manufacturing and construction. For Central Asia, the generic term of PhD also encompasses Candidate of Science and Doctor of Science degrees.

Source: UNESCO Institute for Statistics

Challenges in STEM

- Educational policies does not promote STEM
- Gender based discrimination
- A persistent bias that women cannot do as well as men
- Work-family conflict
- Less family-friendly flexibility in the STEM fields
- Overwhelmingly male-centered culture

Recommendations to close the gender gap

- International community must strongly encourage CA government to increase representation of women in STEM by providing consultative expertise and funding of innovation projects. Science programs should be expanded and financed both by government in CA and international donors
- Governments and Ministries of Education should foster educational measures that can contribute to promotion of science and innovation as a value of any modern society
- Specifically designed state programs should be developed for assisting in acquiring adequate level of proficiency in tech sciences for girls

Recommendations to close the gender gap

- Business sector should support and invest in participation of girls and women in STEM
- Engraft the interest to girls to technologies from early ages
- Offer work-life design elements for women in STEM
- Ensure that science and education systems are accessible, of a high quality and affordable
- Introduce fellowships and grants to increase the representation of underrepresented groups
- Adopt open, transparent and competitive recruitment and advancement policies

Thank you for your attention!