

Gender and Science Mini-Simulation: Background Information

UN Body In Focus: *United Nations Educational, Scientific, and Cultural Organization*

Facts:

- The UNESCO committee has existed under slightly varying names and mandates since 1922 during the founding of the League of Nations, although the UNESCO Constitution of the modern committee was not ratified until 1946.
- UNESCO encompasses 195 member states plus nine associate members, the latter being composed of important or semiautonomous subregions of existing states. The only UN member state not represented is Liechtenstein, while 3 non-member states (Niue, Cook Islands, and Palestine) do have voting membership. Observer status has been granted to the Holy See and several multinational organizations and regional blocs.
- UNESCO's mandate revolves around "the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information". It cites two Actions global priorities at the present: Africa and Gender Equality.
- UNESCO has undertaken many proactive human rights policies. Some examples of its programs include funding uncensored newspapers in Serbia, giving awards to imprisoned journalists, and building free-speech infrastructure and policies in less developed nations.
- One of UNESCO's most high profile projects is the World Heritage program, which takes effect in nations that cannot afford to protect their cultural history. It both publicizes these sites to tourists and the private sector as something worth preserving and aids in the preservation process.

Background on Gender and Science:

- According to the UNESCO fact sheet, no region of the world has been able to maintain an average representation of women in research of 50% or above.
- Developed nations have the issue of reversing existing patterns of exclusion in the workplace and school. While women have the right to enter the scientific field, many feel that there are cultures of objectification or inequality that make them feel unwelcome.
- It is important to recognize that this issue, while its effects are seen most prominently in the workplace, begins with primary education and gender-biased upbringings.
- Technology plays an enormous role in integrating women into scientific fields, as nations that are just beginning to come online have the opportunity to involve men and women equally in the foundations of their computer science programs.



- Even in regions where women are highly involved in science, such as Myanmar, where the majority of STEM degrees go to women, women's role in the industry is often limited to teaching positions.
- It is also important to recognize that involvement in STEM fields is not a level playing field, but a hierarchy. In nations with relatively equal representation, the majority of highly funded startups are male-dominated, as are upper management positions.
- UNESCO currently partners with L'Oréal to initiate programs that support women in developing research careers, give publicity and recognition to accomplished women in STEM fields, and offer regional fellowships targeted at regions like the Middle East and Sub-Saharan Africa where women are especially underrepresented.
- It is important to place the issue of gender and science within the framework of larger issues of inequality in order to understand all the factors at play. Namely, 60% of countries do not have equal access to primary and secondary education for the genders.
- There are gender differences within STEM fields as well. Life and environmental sciences as well as medicine have generally strong representation of women across the international community, while engineering and computing are still largely dominated by men. This is an essential fact to recognize if UNESCO's efforts and resources are to be placed where they are most needed.
- Corporations have begun to tackle the issue of gender inequality in STEM fields independently of international and state actors. For example, Google initiated a campaign to get young girls interested in coding by offering free 3D printing for bracelets that girls designed using simple coding techniques.
- Women who receive education and training in STEM fields are often cited as having lower confidence than their male counterparts, which may contribute to the wide gender gap in upper management positions.
- One set of reasons that women find it difficult to seek out careers in science and to attain the high level of education required to seek out research careers pertains to the broader inequalities that exist throughout the world. For example, girls face the risk of early marriage or teen pregnancy.
- Women are also excluded from STEM fields because of negative stereotypes surrounding their intellects and abilities. When the prevailing assumption is that a male-dominated industry is natural, women are deterred from considering these careers.
- UNESCO has begun combating the effects of negative stereotypes by creating a classroom training module for schools in Africa. The content is designed to motivate women to seek out scientific careers and trains teachers to actively recognize and reverse the negative stereotypes surrounding women in science.
- Women who do enter the field face issues of unequal pay and gender discrimination when seeking promotions.
- Stereotypes surrounding the woman's role as a housekeeper and child-bearer make it less socially acceptable to focus on one's career.

- Dutch researchers published a study showing that often grant applications from women are judged more harshly than those of men, which may partially explain the lack of women in research as opposed to salaried positions.
- Many nations see issues with motivating young girls to initiate changes in their scientific cultures because of a lack of existing role models in the field.
- Many nations recognize that women are an untapped resource for human capital and economic growth but must work around existing religious and social standards that are dangerous to break and are often counterproductive to women taking an active role in the workforce. Such nations must consider how religion and the need for female involvement in the workplace can be reconciled.
- Many nations lack supportive communities in which female scientists can take part. In Latin America in particular, many nations lack a women's scientific society that could be integral in creating role model relationships and mentoring other women to enter the field, as well as advancing the careers of existing female scientists.

Priorities to be Discussed:

- Encouraging and supporting women to seek employment in research and development instead of teaching.
- Finding policies that reconcile strict religious and cultural practices with the need to involve women in science.
- Facilitate the creation of professional groups for women in science to support one another and create a culture of cooperation.
- Reverse the effects of classroom priming that teaches young girls that they cannot or should not seek careers in science.
- Combat cultural stereotypes against women that create unwelcoming workplace atmospheres and prevent women from reaching leadership positions.