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Forum: UN WOMEN

Issue: Promoting women's participation in STEM Fields

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INTRODUCTION

It is every women's right to pursue a career in a profession they choose. Unfortunately, in some fields, the involvement of women is significantly low. STEM comes across as a highly male-dominated field, with 70% of the researchers worldwide being male. So what is the cause of the unpopularity? How does it affect the world? What can be done to change the situation?

There are many reasons why women prefer not to be engaged in STEM fields. Sometimes it is out of sheer disinterest that women decide to pursue other careers, which is acceptable, but sometimes it is the lack of opportunity that drives them away from following their passion. The UN must not tolerate young girls and women wasting their potential because of elements they are unable to control. Scientist and engineers form the backbone of development and technology, and with women also contributing to the cause, progress would be made much quicker.

The following article will explore women's role in the STEM fields in a detailed manner, focusing on the historical process, the reasons why it seems not to be favored, and how to make them more dominant in said areas.

DEFINITION OF KEY TERMS

STEM: Science, Technology, Engineering, and Mathematics

Patriarchal Society: a society in which the oldest male is the leader of the family or a society controlled by men in which they use their power to their own advantage

Gender Pay Gap: the difference between the amounts of money paid to women and men, often for doing the same work

GENERAL OVERVIEW

The participation of women in STEM fields can be observed in main parts: the cause, the effects, and how to take action to promote it. According to the UNESCO Institute for Statistics (UIS), only %30 of the STEM field researchers are women, which shows that to this day, we have not been able to include women in science. There are three main reasons why women do not end up working in said areas: underrepresentation, the lack of self-esteem and cultural restrictions. Without tackling these issues and changing certain approaches, it is impossible to expect women to be more involved in STEM.

It is intimidating to work in a field where you are the minority. Women are often discouraged to pursue a career in STEM fields since there is a lack of role models. Research shows that many women automatically imagine a male figure when they are asked to draw scientists. Women who cannot even imagine a female scientist The lack of proper representation, alongside many other elements push women towards quitting at some part of their education or career. Research conducted on 15-year-olds proves that girls tend to think they lack the ability to succeed more so than boys. Women hold back from following their dreams since they do not feel assured that they will achieve success.

The most common problem girls face is, unfortunately, the hardest to overcome. The general view of society on women’s participation in the field is very restricting. The ideologies which affected women’s role in society throughout history, still have a considerable impact. In most cultures, patriarchy is considered the norm, which has a major influence on people’s perception of women and science. In a male-dominated society, STEM fields are also lead by men. This hinders women from engaging in STEM fields.

A very interesting point of view, which should be kept in mind, is called the “Gender Equality Paradox”. This phenomenon refers to how women who live in countries which have higher gender equality tend to be less involved in STEM, which can be observed in the table below. The phenomenon was recently discussed in the magazine ‘Psychological Science’ by Gijbert Stoet and David Geary. In the article, the psychologists argue that the lack of interest in STEM in highly gender-equal countries comes from the “overall life satisfaction”. Women who live in countries in which gender equality is a problem, tend to lean towards STEM, since financial security is possible in these areas. One could theoretically say that women are allowed to pursue the career they wish to pursue in wealthy countries, which is not necessarily science-oriented. The research, however, does not mean that promoting science is unnecessary. There are still a lot of women who lack the opportunity to participate in STEM fields, despite their wish to do so. The UN and all parties involved are responsible for providing these people with the opportunities they deserve.

It may not seem like a big concern to have fewer women participating in certain activities, but this is a critical issue. Sustainable Development Goals’ Goal 15 states that gender equality is a fundamental human right. Nearly half the world’s population are women, and if they are not able to contribute, half the world’s potential is wasted. According to predictions made by UNESCO, 7 million new STEM jobs will be created in Europe by 2025. Unfortunately, the current rate of participation in the field suggests that the people working in the field will not meet the demands. This suggests that promoting women in STEM is not only important because of diversity, but necessary to have a sustainable future. Improvement in science and technology is only possible with the involvement of women in STEM, which is necessary for sustaining mankind effectively.



Women matter. Women's opinions and ideas matter. Therefore, women's participation in STEM fields is a necessary contribution to the well-being of the world. The Secretary-General of the UN, António Guterres mentions the gravity of the matter by stating, "We need to encourage and support girls and women achieve their full potential as scientific researchers and innovators. Women and girls need this, and the world needs this if we are to achieve our ambitions for sustainable development on a healthy planet.". These words should inspire parties to devote themselves to help promote female involvement in STEM.

MAJOR PARTIES INVOLVED

ALGERIA: Has one of the highest percentages of women working in STEM fields, even though it is a country where gender equality is not at an optimal state. It presents a great example of the "Gender Equality Paradox".

UN WOMEN: the organization supports female involvement in STEM areas by supporting and funding projects around the world informing using the media

Global Fund for Women: The NGO promotes economic justice for women around the world through funding women-led organizations. Eventhough the organization is mainly focused on women's role in agriculture and environmental issues, the work should not be ignored.

UIS (UNESCO Institute on Statistics): Collects data through surveys and statistics regarding women's involvement in STEM areas. The data are used in order to conduct futher research on the issue.

UNESCO: Promoting gender equality in education is one of the main goals of UNESCO. This goal is aimed to be achieved through many projects, such as:

WISE: A UK based organization which helps increase women's participation in STEM fields. It is more effective in the UK, yet its work is important since it is supported by remarkable companies, such as Amazon UK.

TIMELINE OF EVENTS

The history of women's relationship with science dates back to ancient times. It is quite simple to understand why women have been passive in the area when this is examined. Women have been seen as "weak" and "incapable" since ancient times, which has allowed the society to block their involvement in science. Even in Ancient Greece, where science and free thinking were relatively more encouraged, women were kept from working in certain areas. Despite this, there still were women working on fields such as mathematics, physics, and chemistry, which is remarkable, considering the conditions of the era.

It was the Medieval Era where women's influence on science was put on hold. In Medieval Europe, the Church was already very oppressive against science, which made women's involvement even harder and rarer. Even though a few women practiced in medicine, no remarkable act of scientific research was conducted. When universities were

first established by the eleventh century, women were not allowed to attend the classes, though there were a few exceptions in Italy, regarding the study of medicine, again.

The situation improved with the ‘Scientific Revolution’ in the sixteenth century, which gave women more opportunities to be included in science. This inclusive approach, however, was not because of the changing perspective of society on women’s capacity of grasping science, but the decreased pressure on scientists in general. In fact, until the nineteenth century, despite many valuable female scientists have been studying in various practices, women’s role in science did not change significantly.

It was in the nineteenth century when women started to be recognized in science. Russian Women were very active in STEM fields, and by the end of the nineteenth century, women’s colleges were founded in the United States. This attracted a big mass of women, and the number of women receiving an education increased six times with the establishment of these colleges. The most important step in the nineteenth regarding women’s involvement in STEM fields, however, was Marie Curie’s research on radioactivity and its properties. Her research got her not one but two Nobel Prizes, which made her one of the most influential scientists of her time.

In WW1 and WW2, since the times were desperate, women were encouraged to participate in many aspects of life which they had not been included before. This proved that society did, indeed, need women to be more than housewives, which helped the mindset on the weakness of women change. This improvement enabled women to push certain boundaries and get more involved in science and technology.

The first International Women’s Day in 1991, though was not related to STEM directly, was significant in the sense that it was the first time the wage gap was brought up.

PREVIOUS ATTEMPTS TO RESOLVE THE ISSUE

Women’s involvement in STEM fields has been an issue for a long time, yet most of the time the “natural process” aided the issue on its own. Projects aiming to improve women’s rights and promote gender equality eventually lead to women having a more dominant role in science, however, there were relatively little action taken targeting women’s role in STEM fields specifically. Parties such as UN WOMEN and UNESCO should be credited for their contributions regarding the issue, since they have been aiming to provide aid for the improvement of the case.

RELEVANT UN DOCUMENTS AND TREATIES

- A/RES/70/212
- UNESCO Priority Gender Equality Action Plan: 2014-2021
- Cracking the code: girls' and women's education in science, technology, engineering and mathematics (STEM)

POSSIBLE SOLUTIONS

The upsetting lack of participation of women in STEM fields is a fragile issue, which should be tackled delicately. Fortunately, there are many actions that could be taken to achieve gender equality.

The solution process starts with education. By providing girls with a good education, starting from primary school, we can have powerful and confident females who know what they want and how to achieve it. This way, girls will not lose faith and change their minds about pursuing a career in STEM. In addition to this, educating girls increases the number of potential scientists to be reached out to.

The lack of female role models in the industry has affected the enthusiasm shown for STEM fields. With more media coverage of women in STEM, young girls will have people to look up to and feel represented, which will build their courage.

The working environment in STEM fields must also be reformed to apply to women. It can not be expected to have women prefer working in areas where discriminatory practices, such as the gender pay gap, are not diminished. Employers should also consider having gender-sensitive policies such as having a tolerating approach on family leave, since most women are at a huge disadvantage when it comes to their responsibility to balance their career and family.

Most important of all the possible solutions is to empower women. A woman who is still treated like she is the property of men, who has no right to express her opinions, who is not allowed to decide for herself and take action cannot be expected to engage in science. So while coming up with solutions, it is critical to keep in mind the role of women in society. Uneducated, non-liberalized, oppressed, powerless women will certainly not be able to contribute to STEM, which is something that parties should try to avoid.

BIBLIOGRAPHY

Projects, C. T. (2019, March 14). Women have contributed significantly to the field of science. Retrieved from <http://www.wikizeroo.net/index.php?q=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnL3dpa2kvV29tZW5faW5fc2NpZW5jZQ>

Gender equality and women's empowerment. (n.d.). Retrieved from <https://www.un.org/sustainabledevelopment/gender-equality/>

“Women in Science.” *UNESCO UIS*, 3 Dec. 2018, uis.unesco.org/en/topic/women-science.

Khazan, O. (2018, October 31). The More Gender Equality, the Fewer Women in STEM. Retrieved from <https://www.theatlantic.com/science/archive/2018/02/the-more-gender-equality-the-fewer-women-in-stem/553592/>

Women in Stem: Critical to Innovation. (n.d.). Retrieved from <https://www.globalpolicyjournal.com/blog/10/01/2019/women-stem-critical-innovation>

International Day of Women and Girls in Science. (n.d.). Retrieved from <http://www.unwomen.org/en/news/in-focus/international-day-of-women-and-girls-in-science>

Sticking points in STEM. (n.d.). Retrieved from <http://www.unwomen.org/en/news/stories/2019/2/feature-sticking-points-in-stem>

What UNESCO does on education and gender equality. (2018, May 14). Retrieved from <https://en.unesco.org/themes/education-and-gender-equality/action>

Rimmer, M. (2016, August 31). The History Of Women In STEM | Articles | Women In Enterprise. Retrieved from <https://channels.theinnovationenterprise.com/articles/the-history-of-women-in-stem>

Closing the gap for women in STEM: UN Volunteer in Ethiopia engages more girls in science education. (n.d.). Retrieved from <https://www.unv.org/our-stories/closing-gap-women-stem-un-volunteer-ethiopia-engages-more-girls-science-education>

Economic Justice. (2018, April 18). Retrieved from <https://www.globalfundforwomen.org/economic-political-empowerment/#.XJ5Bm5gzaM->