# THE IMPORTANCE OF WOMEN AND MINORITIES IN STEM FIELDS

Chipochashe Mukori Omosede Osagie Darion Tate



### The Topic At Hand

• Today, we will be talking about women and minorities in the field of STEM, the importance, and the need of increase.

## Lets understand STEM and Minorities

Stem is an abbreviation for Science, Technology, Engineering and Mathematics. It is a field of study in advanced education which is carried further on into employment to build ones career and climb up the ladder of employment.

Minorities are underrepresented parts of a population and in this particular case we are referring to the population of the STEM field. African Americans, American Indians, Alaska Natives and Latinos have historically comprised the minority in size and influence

Black and Hispanic students are less likely to earn degrees in STEM than in other fields. For instance, Black students earned 7 percent of bachelor's degrees in STEM in 2018 (the most recent year with available data) — lower than their 10 percent share of all bachelor's degrees that year. White and Asian students, on the other hand, are overrepresented among STEM college graduates and men vastly outnumber women majoring in STEM fields in college.

Black and Hispanic students are also underrepresented among those earning advanced STEM degrees. Minorities are more likely to come from low-income families and therefore don't have access to academic resources that can help support them through completion.

Lack of representation and cultural awareness contribute to the bias which impacts academic success and entering the STEM workforce. Since these education stats are similar to employment stats, the study authors see no major shifts in workplace representation in the near future.

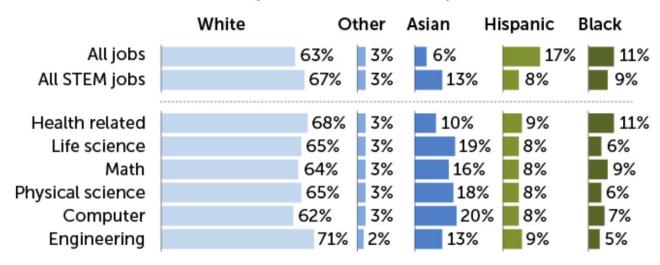
From 2017 to 2019, Black professionals made up only 9 percent of STEM workers in the United States — lower than their 11 percent share of the overall U.S. workforce.

Some STEM occupations, such as engineers and architects, skew particularly white. But even fields that include more professionals from marginalized backgrounds do not necessarily boast more supportive environments and this leads to ever growing gender based gaps in pay

### **STEM stats**

Employment data from 2017-2019 show that Black and Hispanic professionals are underrepresented in STEM, compared with their share of the overall U.S. workforce. Asian and white workers, on the other hand, are overrepresented in STEM.

Racial and ethnic representation in STEM jobs, 2017-2019

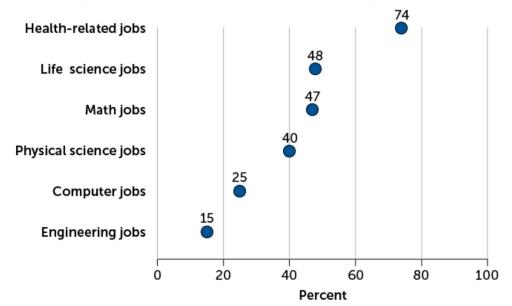


PEW RESEARCH CENTER, E. OTWELL/SCIENCE NEWS

#### Women's work

Representation of women in STEM varies by field. Women are vastly overrepresented in health care work, as they have been for decades. They now make up about 40 percent of physical scientists, up from 22 percent in 1990. But women constitute only 25 percent of workers in computing, down from 32 percent in 1990.

Percentage of STEM professionals who are women by field, 2017-2019

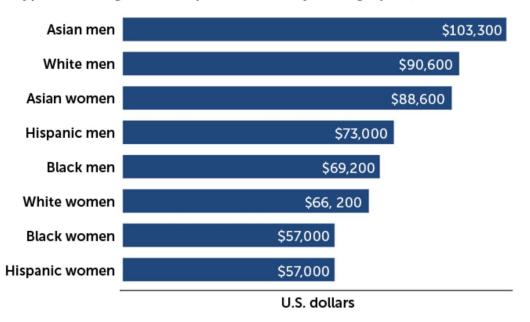


PEW RESEARCH CENTER, E. OTWELL/SCIENCE NEWS

### **Getting paid**

STEM workers' typical pay varies by gender, race and ethnicity. Black and Hispanic professionals earn less than their white and Asian colleagues. Women in STEM, on average, earn less than men.

Typical earnings of STEM professionals by demographic, 2017-2019



PEW RESEARCH CENTER, E. OTWELL/SCIENCE NEWS

# Differences of men vs. Women

### Women

- Better team players
- They have the skill of persuasion
- They are proven to stress less over a challenge
- Honest and hard workers

the degree to which the masculine and feminine qualities are represented and are utilized well is the essence of balance.

### Men

- tend to be early adopters of technology
- they ask more question on certain wants
- when comes across a problem will just "wing it"
- networking in high places

### Closing the Gender Pay Gap

An example would be Intel declaring in January that it has achieved female pay parity across the board, including salary, bonuses, and stock-based compensation. The company's gender pay gap was 2.6 percent internationally and just 0.7 percent in the United States (after accounting for business factors like as performance and tenure), which was significantly lower than the national average. According to Overcash, Intel's turnover has decreased after the announcement. The U.S. is cracking down by bringing it to everyone's attention, and protecting workers from that unfair level of pay between genders.

### Conclusion

Although women and men might have different skills when it come to certain workforce jobs, when working together they often balance out the effort it takes to complete task. Studies even show proof that women are better in certain things then men. There should be no reason a high percentage of a certain gender should get a significantly higher paycheck for the same job. Especially when women even are proven better and more efficient workers in some cases.

### Work Cited

- Arcidiacono, Peter, et al. "University Differences in the Graduation of Minorities in STEM Fields." The American Economic Review, vol. 106, no. 3, 2016, pp. 525–562. University differences in the graduation of minorities in STEM fields: Evidence from California TWU-Alma (exlibrisgroup.com)
- Griffith, Amanda L. "Persistence of Women and Minorities in STEM Field Majors: Is It the School That Matters?" Economics of Education Review, vol. 29, no. 6, 2010, pp. 911–922. Persistence of women and minorities in STEM field majors: Is it the school that matters? TWU-Alma (exlibrisgroup.com)
- MacLean, Lisa M. Cracking the Code: How to Get Women and Minorities into STEM Disciplines and Why We Must. 2017. <u>Cracking the code: how to get women and minorities into STEM disciplines and why we must TWU-Alma (exlibrisgroup.com)</u>
- Palmer, Robert T., and Wood, J. Luke. Community Colleges and STEM: Examining Underrepresented Racial and Ethnic Minorities. Routledge, 2013. Community colleges and STEM: examining underrepresented racial and ethnic minorities TWU-Alma (exlibrisgroup.com)
- Russell, Lauren. "Can Learning Communities Boost Success of Women and Minorities in STEM?" Economics of Education Review, vol. 61, 2017, pp. 98–111. Can learning communities boost success of women and minorities in STEM?: Evidence from the Massachusetts Institute of Technology TWU-Alma (exlibrisgroup.com)
- Temming, Maria. *STEM's Racial, Ethnic and Gender Gaps Are Still Strikingly Large*. Science News, 14 Apr. 2021, www.sciencenews.org/article/science-technology-math-race-ethnicity-gender-diversity-gap. Accessed 17 Apr. 2022.