

## Article 51-1: APPENDIX: Gender reports from Times Higher Education, Elsevier and U-Multirank

The reports acknowledge that overall there are more female students than males and more males in STEM (science, technology, engineering, and mathematics). They also acknowledge that progress has been made, and more needs to be done.

### TIMES HIGHER EDUCATION- THE Report: Gender equality: Parts 1 and 2

*How global universities are performing Part 1* is tied to THE's impact rankings, specifically SDG 5, Gender equality. It uses the results of the 2021 rankings to formulate its conclusions. Part 2 uses international data from UNESCO.

Part 1 covers students, researchers and academics, and university-wide policies and services based on results of THE's Impact ranking 2021.

The results from Part 1 are based on the 776 institutions from 87 countries that provided data for SDG 5. Data for six metrics with a total of 18 indicators are collected from the participating universities.

SDG 5 METRICS	# of Indicators	Weight
Research	3- bibliographic information from Scopus	27%
Proportion of first-generation female students	1 – data based on FTEs	15.4%
Student access measures	4 – including assistance for females	15.4%
Proportion of senior female academics	1 – includes” professorships, deanships, and senior university leaders. “	15.4%
Proportion of women receiving degrees	1 – weighted by subject	11.5%
Women's progress measures	8- policies, facilities, and tracking	15.3%

The distribution of universities by country is based on the number of institutions that chose to reply. For example, the results for the US are based on 27 institutions.

The report is very readable. Readers need to keep in mind that the conclusions are derived from results from institutions that chose to provide data. Women are receiving more degrees not only in Social Sciences and Humanities but also in medicine. Thailand has over 50% in STEM. The report notes the absence of universities systematically collecting graduation rates by gender. It reports that the graduation rate is 54% for the universities in SDG 5.

For comparison, CWTS Leiden gender rankings of female authorship only cover bibliometrics across five broad subject areas for 1,225 institutions with all data originating with Clarivate. As reported in article 51, CWTS uses its own methodology to determine male, female, and not identifiable gender. The two rankings are complementary. It provides information on how they determine gender.

<https://www.timeshighereducation.com/impact-rankings-2021-gender-equality-sdg-5-methodology>

Results for SDG 5: <https://www.timeshighereducation.com/rankings/impact/2022/gender-equality#!/page/0/>

Searching for SDG 5: Click [here](#) to see how to search for SDGs

I find Part 2 more useful. It adds a new dimension, integrating data from UNESCO, with links to finding the data. These data are at country, regional, and income levels. Part 2 raises concerns about the distribution of research by gender. It also raises concerns about the availability of input data, such as how many women enter university, and the lack of data on graduation rates

Bothwell, Ellie, ed. (March 2022). Gender equality: How global universities are performing Part 1. THE UNESCO

[https://www.timeshighereducation.com/sites/default/files/the\\_gender\\_equality\\_report\\_part\\_1.pdf](https://www.timeshighereducation.com/sites/default/files/the_gender_equality_report_part_1.pdf) ; also available through UNESCO: <https://unesdoc.unesco.org/ark:/48223/pf0000380987>

Bothwell, Ellie, ed. (20 May 2022) Gender equality: How global universities are performing Part 2. THE UNESCO-IESALC <https://www.timeshighereducation.com/digital-editions/gender-equality-how-global-universities-are-performing-part-2>

#### **ELSEVIER REPORTS ON GENDER in RESEARCH,**

**2015-2021** <https://www.elsevier.com/connect/gender-report>

“The Researcher journey through a gender lens”. (March 2020, updated June 2021). An examination of research participation, career progression, and perceptions across the globe. The first global report was in 2017 with two case studies, one for Germany and one for Portugal.

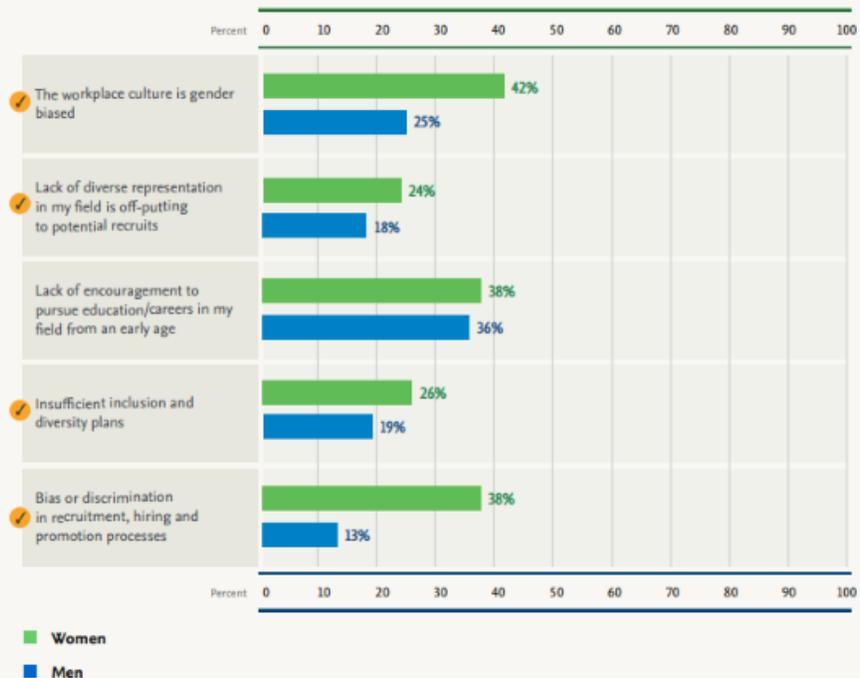
This global analysis sees movement toward global parity, but women still trail men in the number of publications and citations. [https://www.elsevier.com/\\_data/assets/pdf\\_file/0011/1083971/Elsevier-gender-report-2020.pdf](https://www.elsevier.com/_data/assets/pdf_file/0011/1083971/Elsevier-gender-report-2020.pdf).

The report is in five parts: Research participation, research footprint, researching careers, collaboration, and research perspectives. Bibliometric data are from Scopus. One finding supports an outcome noted in the main article, the low percent of female authors, that Japanese women are underrepresented in all subject areas. The report drills down into researchers and subjects at a country level. Appendix C of the Report includes the results of a 2019 survey of self-identified researchers. It is designed to answer the question “Why do you think there is a lack of gender balance in your field?”.

FIGURE C.1

Summary of survey responses to the question, “Why do you think there is a lack of gender balance in your field?”

Responses were collected from 948 researchers, including 338 women and 594 men. Results were disaggregated by gender and responses were weighted to be representative of the global researcher population by country (UNESCO 2014 data). A check mark indicates that the difference was statistically significant based on Z-test of proportion and that we can be 90% confident the difference is explained by gender ( $p < 0.10$ ).



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Women’s and men’s reasons for the imbalance are statistically significant.

Based on findings in earlier reports, the Elsevier Foundation has set up a fund to help women and other underrepresented groups in academic research in seven countries, providing localized approaches. Japan, China, and Singapore are three of the countries. An example of an initiative is [Asian Scientist-Elsevier Foundation Salon for Leadership in STEM](#): Our partnership with the [Asian Scientist](#) magazine will offer a two-day intensive leadership program in Singapore to equip women with the skills required for professional development and success

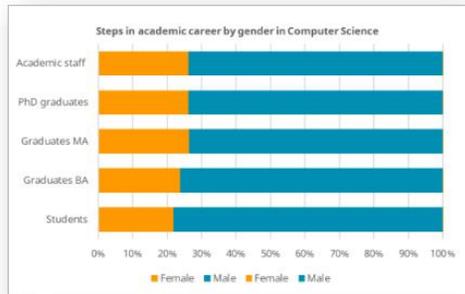
Elsevier Foundation invests in early career researchers (ECR) (11 Apr 2022).

<https://www.elsevier.com/about/press-releases/corporate-social-responsibility/elsevier-foundation-invests-in-early-career-researchers>

**U-MULTIRANK GENDER MONITOR** – An analysis of the female to male ratio within the higher education ladder”. <https://www.umultirank.org/export/sites/default/.galleries/generic-images/Gender-Monitor-2021/u-multirank-gender-monitor-2021.pdf>

Topics include percent of male and female university students, faculty, and administrators and percent by specific subject areas and countries. Overall, there is gender parity among students, slightly above 50%, with 44% for academic staff and 28% for professors. Data are taken from the U-Multirank database covering the years 2018-2019, including 900 universities from 80 countries. 25 subject areas are covered.

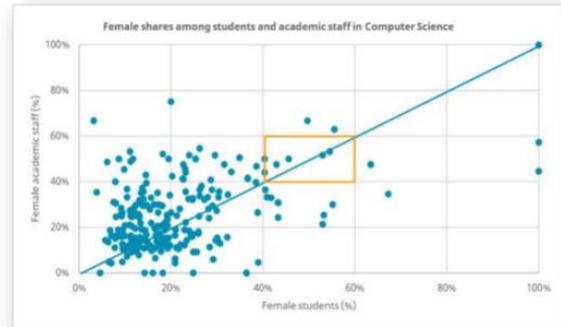
Computer Science is an outlier. It has a higher share of women among academic staff than students.



At all U-Multirank institutions only 21% of all computer science students are female. Based on this very small share, the portion of females even rises slightly by the academic status. This general view is confirmed for many individual institutions at which female percentages among staff are higher than among students.

It seems that women – once they have entered the field – have a chance to advance.

Most departments have less than 40% female students, while a number have a higher share of women among academic staff than among students. Only a couple of departments are balanced (percentages from 40 – 60% each) on both levels.



The introduction notes that “gender requires more than a binary classification of female and male, the current data available for such an analysis is limited”, a topic I cover in-depth in Part 2

U-Multirank uses a 2010 European Commission definition of gender balance of at least 40% of both sexes. Using that definition 149 rather than 16 CWTS universities would be considered balanced, and 530 universities would be balanced in social science and humanities. The report refers users to its dataset. However, the dataset does not include the metrics that they use in this analysis. Individual university participation has always centered on Europe, while areas such as the United States are slow to participate. U-Multirank has expanded the data it is pulling from national educational systems.

For a Multirank summary see Roman, J (15 Nov 2021) U-Multirank launches analysis of gender balance in higher education institutions – traditional patterns of gender inequality still prevail in higher education, <https://www.umultirank.org/press-media/press-releases/umultirank-gender-monitor-2021/>

The three reports complement each other and confirm the existing imbalance that still exists. The respondent groups for each differs but results remain similar.

For additional educational data see the OECD Gender Data Portal, [education - OECD](https://www.oecd-ilibrary.org/education/education-at-a-glance-2021_c1e9f22a-en) and specifically these tables from *Education at a Glance* that provide data for topics covered in THE. [https://www.oecd-ilibrary.org/education/education-at-a-glance-2021\\_c1e9f22a-en](https://www.oecd-ilibrary.org/education/education-at-a-glance-2021_c1e9f22a-en). There is a specific chapter on “Who is expected to graduate from tertiary education”