

GENDER INEQUITY IN STEM IN CHILE

WOMEN ARE UNDERREPRESENTED IN STEM CAREERS GLOBALLY

AMONG OECD COUNTRIES, CHILE HAS THE LOWEST FEMALE GRADUATION RATE ON STEM AREAS (19%)

CHILE PRESENTS ONE OF THE HIGHEST GENDER GAPS ON MATH AND SCIENCE PERFORMANCE

THE PROBLEM

SOLUTIONS

GAPS AND LEVERS OF CHANGE



HOUSEHOLD

CHILDREN AND PARENTS present a stereotype that associates mathematics with masculinity.

PISA TEST SURVEY shows that parents hold higher expectations for boys to study STEM related careers.

In interviews, teachers commented on how stereotypes come strongly marked from the student's homes.

Few to none initiatives are working directly with parents to change gender stereotypes that have impact on girls achievement and aspirations.



GOVERNMENT & THIRD SECTOR (Comunidad Mujer) have indirectly provided solutions by creating national campaigns through media (Internet, Television), where the message is to change gender stereotypes.

LACK OF INITIATIVES WORKING ON GENDER STEREOTYPES REPRODUCTION



Household



School & Classroom

1. Work with parents to eradicate gender stereotypes that STEM subjects are for boys.

2. Examples: Short videos, children's books where girls are into science and math, science camps and clubs for girls.

3. Work with teachers to work on interactions, expectations, methodologies and gender bias.

LACK OF PARTNERSHIPS AND DIALOGUE



Private Sector



Government



Third Sector

1. Partnerships to fund initiatives related to girls in STEM

2. Connect with outstanding graduate women from STEM courses.

3. Create networks of mentoring between graduates and women in science



SCHOOL & CLASSROOM

CHILE HAS THE THIRD LARGEST gender gap in mathematics among OECD countries, ranking second among Latin America

TEACHERS ASK more complex questions and interact more with boys than girls.

Undergraduates preparing to be teachers show higher expectations for boys than for girls in math



GOVERNMENT



Class-observation instruments to measure the gender bias and free online courses to support teachers reduce of gender bias.

But... It is uncertain if the new government will maintain these initiatives.



EDUCATIONAL SECTOR



Two universities have developed face-to-face courses on gender theory and education for teachers. One school has created a Gender Unit.

But... The impact is high but the scale is small.



THIRD SECTOR



Few initiatives are creating workshops of gender awareness for teachers, or connecting women in STEM as role models to school girls.

But... Schools in Chile are very intervened and it is difficult to settle dates for workshops.



GOVERNMENT



The Ministry of Education (2015) has developed a special unit to conduct a gender-sensitive analysis of educational results.

But... It is uncertain if the new government will maintain these initiatives.



EDUCATIONAL SECTOR



Universidad de Chile introduced quotas for women in STEM careers who are close to meet the admission test score.

But... This initiative is still small; more STEM faculties could adopt quotas mechanisms for women.



THIRD SECTOR



Initiatives are working into providing math class support for female students and create mentoring networks between graduates and undergraduates.

But... These initiatives have low budgets and scale capacity.

LACK OF KNOWLEDGE CREATION



School & Classroom



Third Sector

1. Create knowledge from Teacher Training initiatives coming from Third Sector. Examples: evaluations and researchs.

2. Initiatives working on STEM and gender equality should create knowledge to feed public policy.

LACK OF ADMISSION MECHANISMS



Labour Market



Higher Education

1. Evaluate new mechanisms for STEM courses admissions.

2. More universities could apply quotas for women in STEM courses.

3. Private companies could consider quotas for women in STEM in recruitment process.



HIGHER EDUCATION

CHILE HAS THE LARGEST gender gap in mathematics among OECD countries.

IN CHILE, ONLY 20% of women enrolled are in STEM-related fields of study.

Only 19% of total STEM graduates in Chile are women; THE LOWEST among OECD countries.



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LACK OF NATIONAL CAMPAIGNS



Government

1. National campaigns to change gender sociocultural mind-sets.

LACK OF CONNECTION BETWEEN RESEARCH AND ACTION



Third Sector



Educational Sector



Government

1. Government can provide funding for evidence-based initiatives coming from the Third Sector to work on STEM gender equality.

2. Example: connection between Academia, Government and Third Sector

3. Coordinate networking events as technology and STEM fairs.



LABOUR MARKET

LESS THAN 10% of the technological industry in Latin America is composed of women.

IN CHILE, from the total of graduates working in Technology, only 36% are women.

In the finance areas, only 7% of the boards are women.

In addition, STEM areas are related to higher payments.



GOVERNMENT AND PRIVATE SECTOR

Ministries have done partnerships to implement workshops from STEM companies to young students.

STEM private companies have subscribed to conventions to improve female participation and gender equality.



THIRD SECTOR AND PRIVATE SECTOR

Initiatives such as Laboratoria are connecting outstanding women in STEM areas, in this case, to connect them with tech companies.

LACK OF LEGAL FRAMEWORKS



Labour Market



Government

1. Evaluate new mechanisms for STEM courses admissions.

2. Legal frameworks to improve family and work conciliation.