

Where do we stand?

In 2017, the OECD reviewed progress made by countries in implementing the 2013 OECD *Recommendations on Gender Equality in Education, Employment and Entrepreneurship and on Gender Equality*.

Report's conclusions:

- in the past five years, countries have made very little progress (21/35) in fostering gender equality goals;
- much remains to be done to meet the G20 target of reducing the gender gap in labour force participation between men and women by 25% by 2025.

Gender differences in education and professions: Young women are under-represented in STEM (OECD area)

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- The career paths of boys and girls already start to diverge by the age of 15;
- OECD countries: 15-year-old boys are, on average, more than twice as likely as girls to expect to work as engineers, scientists or architects;
- And while less than 0.5% of girls wish to be ICT professionals, almost 5% of boys do;
- Women account for less than 20% of entrants into tertiary-level computer science programmes and only around 18% of engineering entrants;
- These differences reflect persistent stereotypes about which career choices are suitable for boys and girls on the part of teachers, peers and parents.

Source: OECD (2017), *The Pursuit of Gender Equality: An Uphill Battle*, OECD Publishing, Paris.
<http://dx.doi.org/10.1787/9789264281318-en>

A New Pedagogical Approach?

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- The pedagogic approaches are crucial factors in terms of outcomes: students often say that it is 'hard';
- Need to develop a curriculum not biased towards certain groups, such as boys rather than girls;
- Having an inspiring teacher is instrumental in sparking interest: female teachers are more likely to engage girls in computer science; gender of the instructor doesn't influence boys' interest;
- A 2016 US study *Cracking the Gender Code* found that computing appeal for girls peaks in middle school;
- 74% of women working in computing were exposed to coding in middle school.

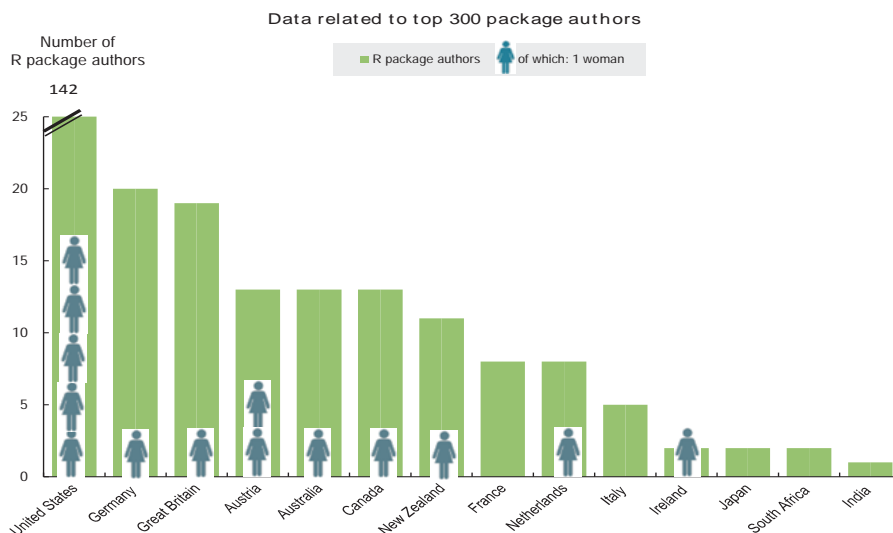
ICT: a male dominated sector?

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- OECD experiment using information about a popular open-source programming language for data analysis: R;
- During the period 2012-17, $\frac{3}{4}$ (i.e. 77%) of the 12.000 R-based software packages were produced by teams of only men;
- Women-only teams accounted 6% of such packages, whereas the remaining 17% came out of mixed teams of software developers.

Source: OECD (2018), *Empowering women in the digital age: Where do we stand?*
<https://www.oecd.org/going-digital/empowering-women-in-the-digital-age-brochure.pdf>

R Package authors, by country



Source: OECD (2018), *STI Micro-data Lab: Intellectual Property*, <http://oe.cd/ipstats> (accessed February 2018).

Source: OECD (2018), *Empowering women in the digital age: Where do we stand?*
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All genders needed to reduce the ICT gap but ..

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- Innovation goes increasingly digital, software use and creation becomes a key asset for the digital transformation;
- But there is also an issue with wider social implication;
- More women presence and in general, more diversity in tech: (artificial intelligence, data analytics teams) crucial to counteract bias-rooted errors and avoid discrimination and inequality (predictive-policing and criminal justice);
- Diversity cannot be reached without more women with the right skills.

Contrast Women Marginalization in ICT Sector: Enhance equity in learning opportunities

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- Ongoing efforts of many different IOs: OECD, ITU, G7, G20, etc.;
- EU: EC Digital Skills Coalition + Digital Champions + Countries initiatives (Cohesion Funds);
- Raising awareness and encourage initiatives especially in middle/high schools;
- Re-thinking and re-targeting beneficiaries of training programmes to give women opportunities to effectively adapt their skills (NEETs).