How to Inspire, Motivate and Form the Future Generation of Girls in STEAM

The Experience of Girls in Technology (Chicas en Tecnología) in Argentina - Mariana Varela, Chicas en Tecnología
AGENDA

1- Introduction
2- Why there aren’t many women in tech
3- How to influence in STEAM
4- How stereotypes affect us
5- Lack of gender diversity
6- What we do in Chicas en Tecnología
7- What you can do
We are a Civil Association dedicated to closing the gender gap in technology and entrepreneurship.

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Graphic Design

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Computer Science

Sofia Contreras
Entrepreneurship

+ 14 people team
permanent staff & volunteers per event of project
<< Rewind
文部科学省奨学金
2012-2014
慶應義塾大学湘南藤沢キャンパス
政策・メディア研究科
An interesting talk with a good friend happened in Tokyo a couple of years ago.
What kind of impact can we make in future services and products if there aren’t many of us around?
THE PROBLEM

Jobs in technology are the fastest growing ones in the world. However, girls are falling behind.

While girl’s interest in technology fades over time, the biggest drop occurs between the ages of 13 and 16 years old.

THE GENDER GAP IN TECHNOLOGY HAS INCREASED SINCE THE 80’S

In 1984, 37% of graduates in computer science and related careers were women. At present, that number has dropped dramatically.
“They just don’t care”

“The feminine touch”

“better dealing with people, not machines”

“Maternal instinct”

“Not good at math”

“Their talents are somewhere else”
What did you play with when you were little?
BOY’S GAMES 1980

Turn your TV into the most exciting home video game ever.

Serve...return. You move to the net for a volley and, when your opposing player rallies, you stroke the electronic ball past him... for a point!

This is Tennis, played on the all-new Odyssey, the most exciting home video game you can get for your own TV.

Odyssey is high-speed action—and reaction—with realistic sound and on-screen scoring (Model 260).

Serve...return. You move to the net for a volley and, when your opposing player rallies, you stroke the electronic ball past him... for a point!

You control the flight of the ball and pace of the games. Games that are fun for the whole family. Tennis (singles and doubles), Hockey and Smash.

Put TV’s fun and excitement on your side of the screen. Get—and give—Odyssey.

For the name of your Odyssey dealer call 800-243-6100, toll-free. (In Conn. 1-800-862-6500.) pong-picture-page.de

ODYSSEY
All new from Magnavox.
GIRL’S TOYS 1980 AND TODAY
WORDS RELATED TO TOYS

Words used in TV toy adverts featuring girls
www.lettoysbetoys.org.uk/tvads

Words used in TV toy adverts featuring boys
www.lettoysbetoys.org.uk/tvads
DON'T YOU HAVE ANYTHING RELEVANT TO SAY?

STACY: Don't ask me. I'm just a girl.

Thinking too much gives you wrinkles.
Children's toys, games and movies influence in their career choices.
Girls think they do bad at math. . . .

... Reality shows that they do as good as boys

Organisation for Economic Co-operation and Development
HOW TO INFLUENCE INTO

1- Encourage girls to find what they are good at and what feels is good for them.

2- Foster their attitude regarding science (if they think science is important, useful and interesting).

3- Introduce her to role models, stories of challenges and success.
“Young girls need to see role models in whatever careers they may choose. ... You can’t be what you can’t see.”

Dr. Sally Ride, first American woman to travel in space
There are no innate or natural factors
Real numbers show the gender gap
The Reshaping of the World: Vision from Japan with Abe Shinzo.

Shinzo Abe, Prime Minister of Japan.

日本は女性が輝く国とならなくてはなりません。


The Reshaping of the World: Vision from Japan with @AbeShinzo, #wef14 @wef_jp http://wef.ch/53494
What causes gender barriers?

- Stereotyped gender roles
- Lack of policies
- Lack of professional opportunities
- Lack of knowledge and information
- Lack of communities and networks that incentivize

Equals, 2018
How do stereotypes affect us?
In 2002 a professor from the U. of Columbia takes the case of Heidi Roizen to compare results between two groups of students modifying a single word: change the name of Heidi to Howard. Then he surveyed the students and both groups and asked what they thought about Heidi and Howard...

- Howard is a great guy, you want to work with him or even go fishing with him.
- Heidi is self-centered and has a political bias. You can not rest assured working with her.
#ILookLikeAnEngineer
What happens when there is no diversity in teams?

Decisions are made by a very limited / like minded group of people.
Gender Diversity in the Tech Industry

82% Men / 18% Women
Only 10% of Silicon Valley tech jobs are held by women.

Only 6% of app developers are women.

Equals, 2018
LACK OF GENDER DIVERSITY

Until 2003, Airbag tests were not carried out with female dolls or children.

BECAUSE THERE WERE NO WOMEN IN THE TEAMS

https://medium.com/hh-design/the-world-is-designed-for-men-d06640654491
LACK OF GENDER DIVERSITY

I don’t know what you mean by ‘I was raped’. How about a web search for it?

Search the Web

“My husband is beating me”
I’m not sure I understand.

If you are thinking about suicide, you may want to speak with someone at the National Suicide Prevention Lifeline.

They're at 1 800 273 8255. Shall I call them for you?

No  Yes
LACK OF GENDER DIVERSITY

Apple 5th Avenue NY
LACK OF GENDER DIVERSITY

* After some controversy in 2015, menstrual cycles and reproductive health were included in iOS Health.
## Benefits of Diverse Teams

<table>
<thead>
<tr>
<th>Category</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation</td>
<td>Different cultural perspectives inspire creativity and innovation</td>
</tr>
<tr>
<td></td>
<td>Knowledge and understanding of the local market make a company more competitive and profitable</td>
</tr>
<tr>
<td>Skills</td>
<td>Different skills allow to offer a wider and more adaptable range of products and services</td>
</tr>
<tr>
<td>Talent</td>
<td>A culturally diverse talent pool allows an organization to attract and retain the best talent</td>
</tr>
<tr>
<td>Productivity</td>
<td>Diverse teams are more productive and work better</td>
</tr>
</tbody>
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What we do in Chicas en Tecnología
It is necessary to break the stereotypes that are generated around these areas and make more young women get interested in technology sectors from an early age. Not just as users, but also as creators and entrepreneurs.
WE INSPIRE, MOTIVATE AND FORM GIRLS IN HIGH SCHOOL AGE

BREAK WITH STEREOTYPES AROUND WHAT IT MEANS TO WORK IN THE TECH FIELD

WE APPLY, DEVELOP AND VALIDATE WORK METHODOLOGIES

WE IMPACT ON LOCAL AND NATIONAL COMMUNITIES

ALL OF OUR PROGRAMS ARE FREE

+1000 to graduate in 2018

Programando un Mundo Mejor

Clubes CET

Comunidad CET
We are creating the talent pipeline that will bring gender parity to the sector.

* Number of girls participating in our programs through time.
METHODOLOGY

PROBLEM

SOLUTION

THE GIRLS

AT THE CENTER

OF THE

EXPERIENCE

COMMUNICATE

MULTIPLY

PROGRAMMING

SOCIAL

IMPACT

EDUCATION

ENTREPRENEURSHIP

GENDER

TECHNOLOGY

LEADERSHIP
THEIR DEVELOPMENTS
Some of the APPS with social impact developed by the girls

Contectad@s  don.ar  5contar

Mascotify  I’m Here  StopBull  ...and many more
SUSTAINABILITY

SCHOLARSHIPS
62 CET GIRLS HAVE RECEIVED SCHOLARSHIPS FOR FURTHER STUDIES

72% OF THE GIRLS KEEP ON PARTICIPATING

#COMUNIDADCET
WORKSHOPS IN:
ENTREPRENEURSHIP
TECHNOLOGY
FUTURE WORKS

#CLUBESCET
GRADUATED GIRLS BECAME REFERENTS IN THEIR SCHOOLS TO CARRY ON CLUBS
What can you do to bring more women to your company/community
STUDY YOUR ECOSYSTEM

Find **specific data** about women, where they are, how many. Set goals.

**Report their problems:** Harassment, discrimination, stereotyping.

**Raise their voices:** Find them, celebrate them, bring them to panels and talks.
ACT AND WAIT FOR IMPACT


Rise awareness: Talk about this issue in conferences like this ;) +friends +coworkers

Articulate concrete actions to end stereotypes like we do in CET.
どうもありがとうございました。

www.chicasentecnologia.org
@chicasentec
/chicasentecnologia