FROM CRADLE TO CAREER: DOES THIS RING TRUE FOR GIRLS IN MAINSTREAM EDUCATION? A FOCUS ON YOUTH STEM SUBJECT CHOICES.

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THOPE FOUNDATION

$x^2 = 64$

$x \times x = 64 \div 2$

$2 \times 4 = $
THOPE FOUNDATION

- A registered nonprofit organisation established in 2013,
- Operates in Khayelitsha, Cape Town,
- Provides educational support in:
  - STEM tutoring,
  - Specialised robotics camps,
  - Life skills and leadership programs,
  - Positive deviant model for mentoring,
  - Mama-Mentors intergenerational dialogues
- Target primary school girls aged 10-17 years old
EVIDENCE OF WOMEN IN STEM

• US data says girls and boys in primary and high school do not significantly differ in abilities in science and math,
• Boys are three times more likely to be interested in pursuing STEM majors,
• Women earn 57% of bachelor’s degree in all fields,
• Only 19% in degrees in computer science & physics,
• Women make up 47% of employees, but only represent 14% of maths, science and engineering careers,
• Glass ceilings, sexual harassment, unequal pay, invisibility in the workplace
WHAT HAPPENS BETWEEN PRIMARY SCHOOL AND WORK PLACE?

A myriad of interpersonal and personal factors such as:

• Teachers impact perceptions about learning and careers,

• Early exposure to professions and visible role models in STEM careers,

• Peer pressure to pursue ‘cool’ careers such as fashion/journalism/psychology etc,

• Heteronormative institutions of higher learning,

• Sexism in the workplace,
SOCIALISATION AND GENDER

• Deeply ingrained gender socialisation and the role of women,
• Internalised ideas about what girls/boys can/can’t do,
• The school as a mirror for the household and community,
• Media and societal messaging about women often detrimental to self-perception
THREE CRITICAL BLOCKAGES TO ENTRY

• In developing countries, often girls do not have access to technology, exposure and opportunities to knowledge and education,

• Access to support programs that fast track and support girls interested STEM careers,

• Limited knowledge about careers in STEM,
WHAT WE ARE SEEING WITH GIRLS

• Significantly more diminished confidence in mathematics and science ability,
• Even if they know the answer, they will hesitate to volunteer a response,
• When girls are alone, are more likely to exercise agency and voice,
• Girls code switch language and behaviour when among boys/males,
• The result= girls lean OUT of STEM more readily,
WHAT WE ARE SEEING CONT...

• Girls only spaces are key to building confidence, self-esteem and sharing lessons,

• Women play a vital role in transmitting messages (both verbal and non-verbal) about agency, ability and capability to girls.

• Words shape behaviour- what we say, how we say it significantly impacts young girls’ self-perceptions.
HOW WE ARE CHANGING STATUS QUO

• Starting with representation of girls and women in STEM,
• Using technology as an enabler for programs,
• Equipping girls with technological tools to increase access,
• Growing online persona and presence of girls,
• Focused annual robotics programs for girls across the age spectrum,
• Linkages to support programs and bursaries to STEM schools,
Thank You