One-Size-Won't-Fit-All

The Unique Challenges of Women and Girls in Computing

STUDENT RESEARCH foundation

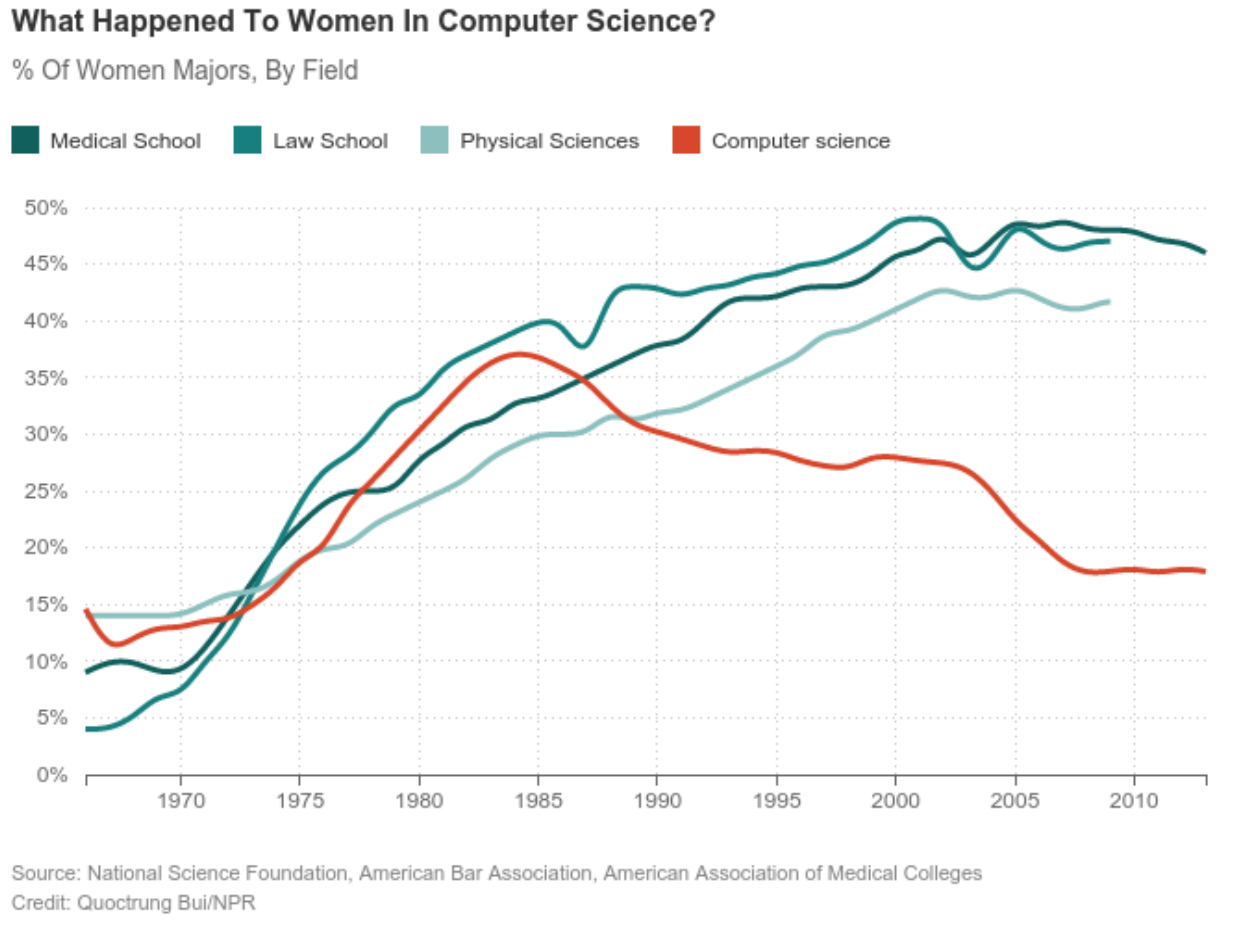
OUR FOCUS

STEM: Computing

vs.

STEM: Non-Computing

Women's Declining Presence in Computing



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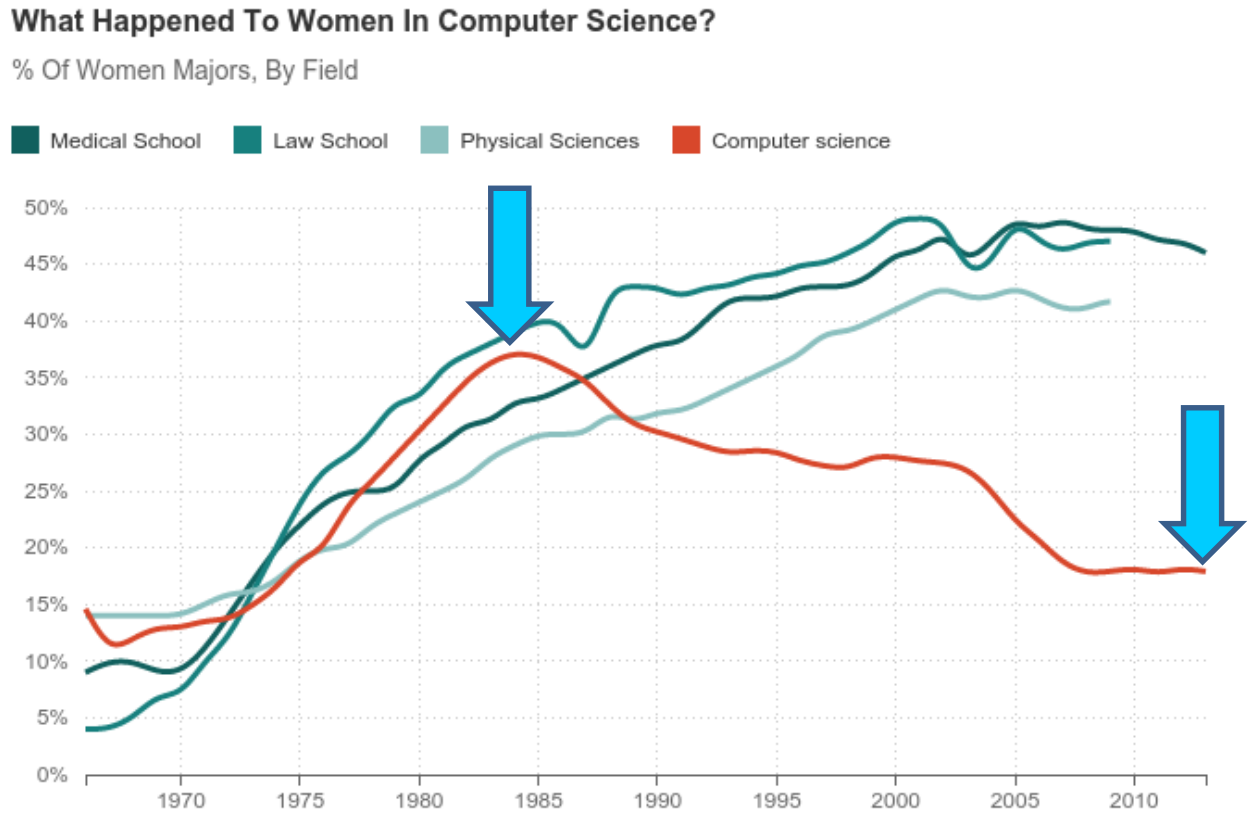
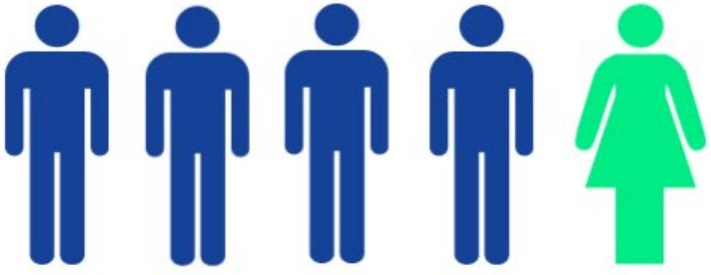


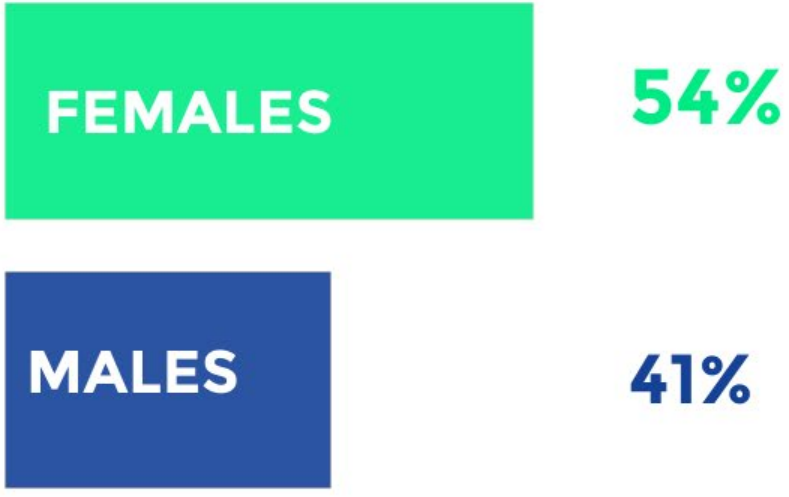
Students Aspiring to **Computing Careers**

Males outnumber Females



79% of aspirants are Males and 21% are Females

"A" Students more common among Females



NEEDED: Computer & IT Workers

Expected Growth

13%

Between 2018 & 2018

Expected New Jobs

593,900

Source: https://www.bls.gov/emp/tables/emp-by-major-occupational-group.htm

STEM Confidence and Experience

Gender Gap in STEM Confidence:
Computing Aspirants

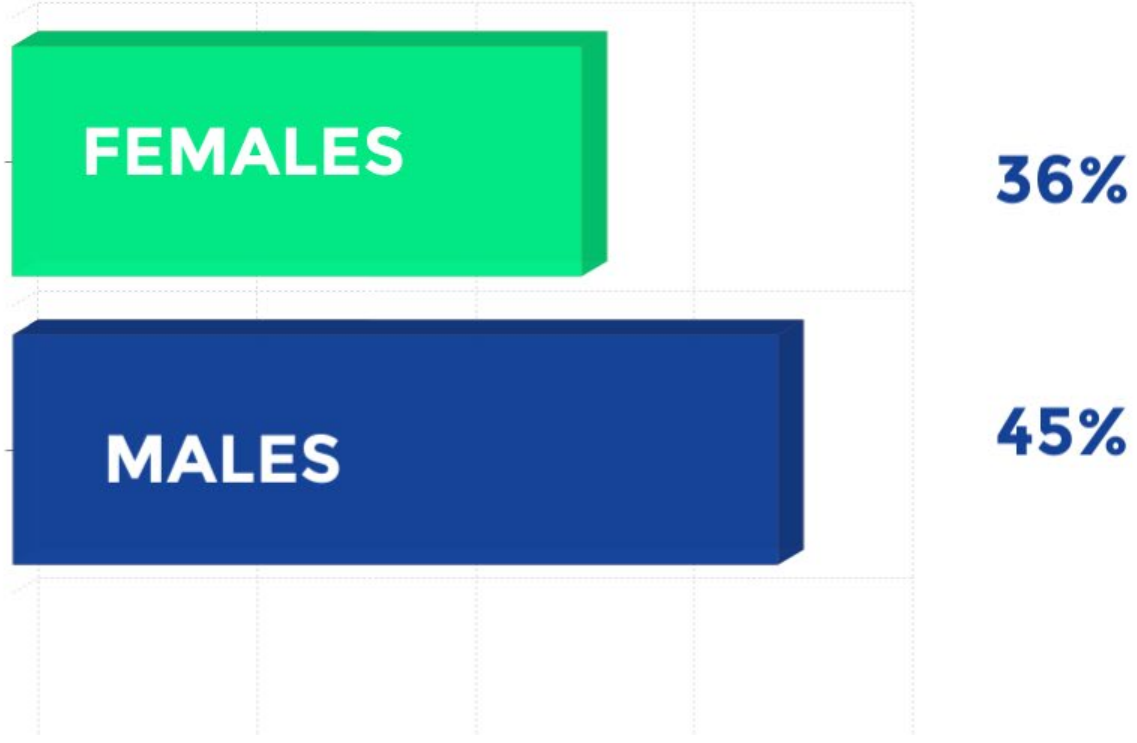
(% Females - % Males Completely Confident)

Gender Gap in STEM Confidence:
Computing Aspirants vs. Other STEM Aspirants

(% Females - % Males Completely Confident)

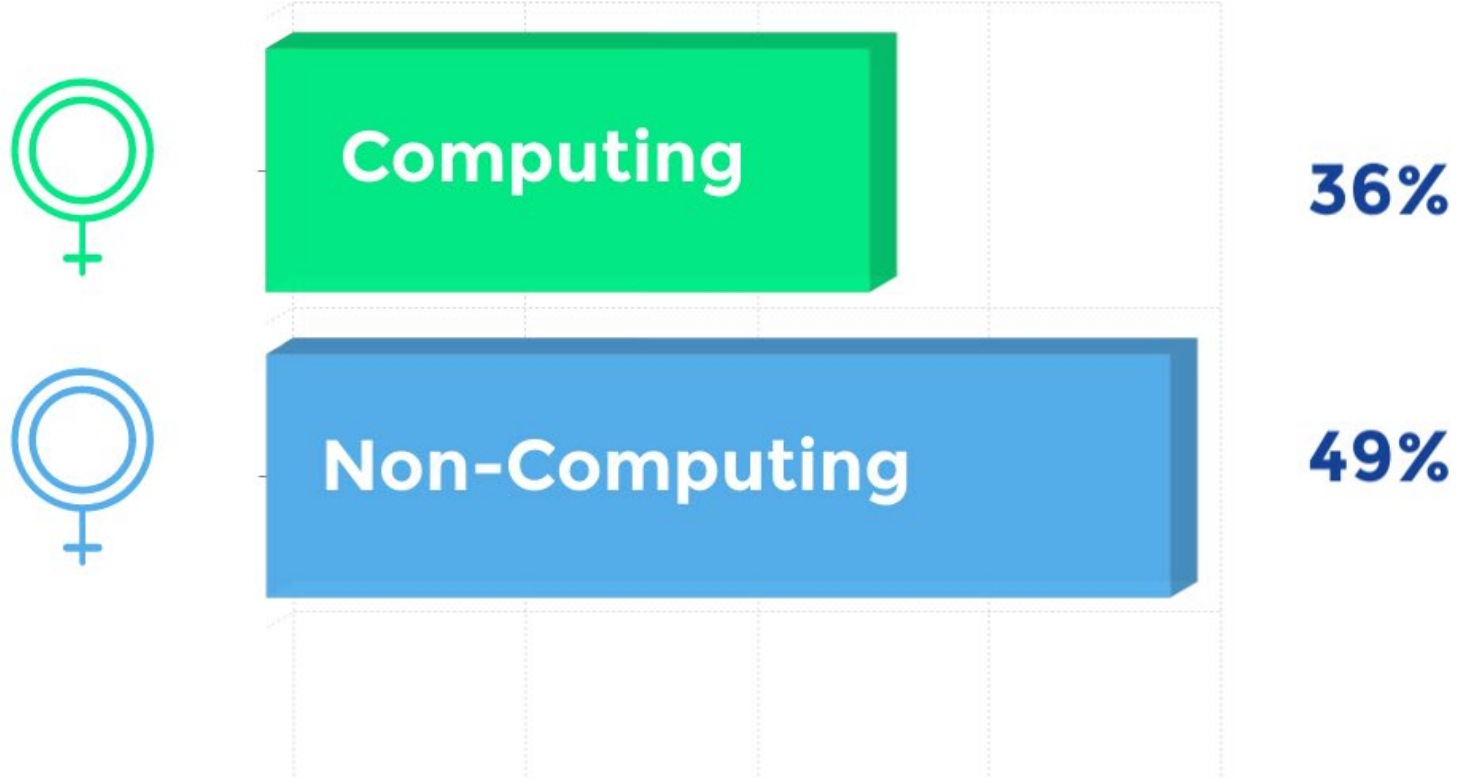
Computing Career Aspirants:
Confidence of Fair Treatment in STEM Classes

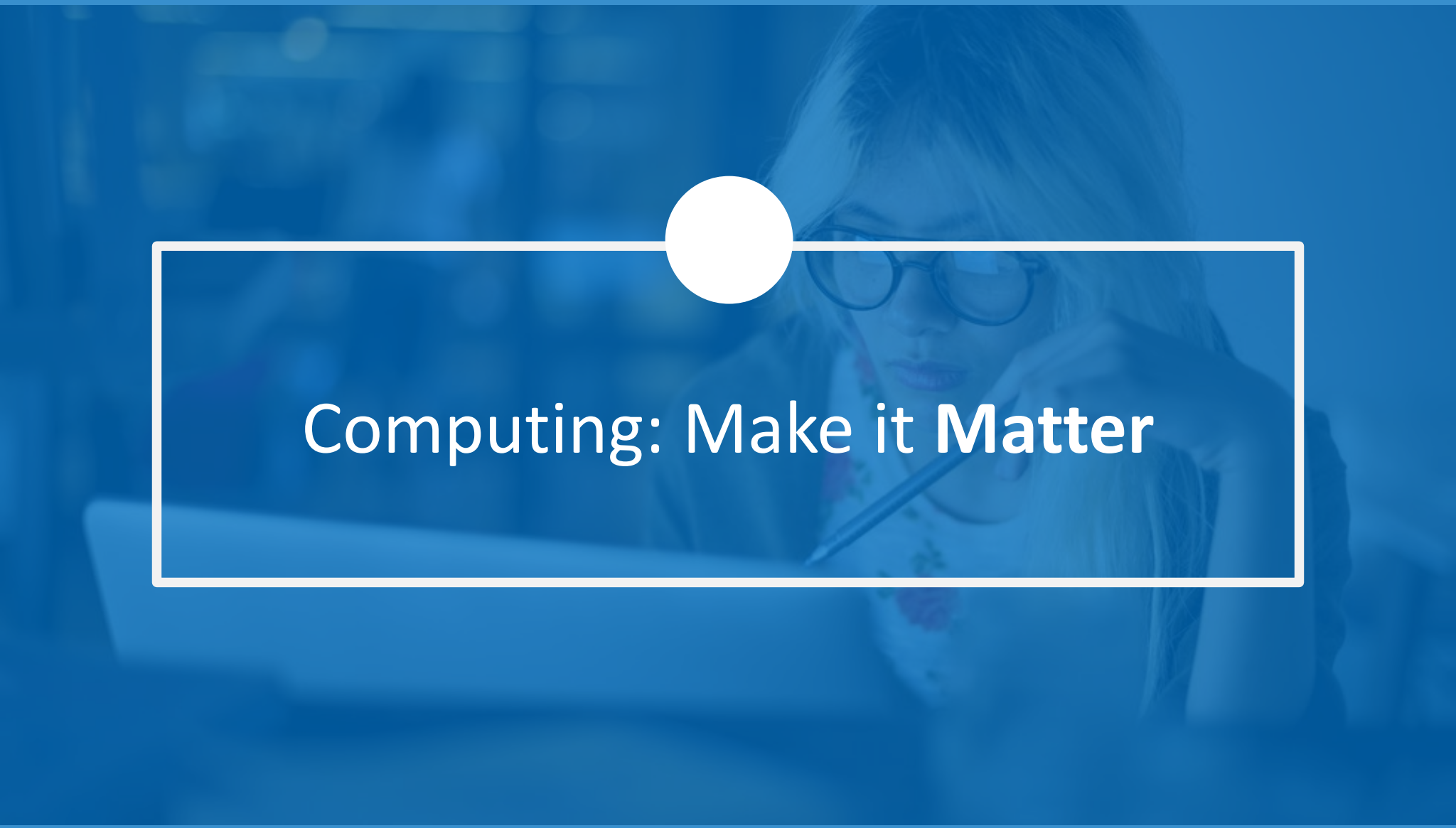
(% Completely Confident)



Fair Treatment in STEM Classes:
Female STEM Aspirants

(% Completely Confident)





Computing: Make it **Matter**

Top Interests of Computing Career Aspirants*

Computing Aspirants' Top Interests*

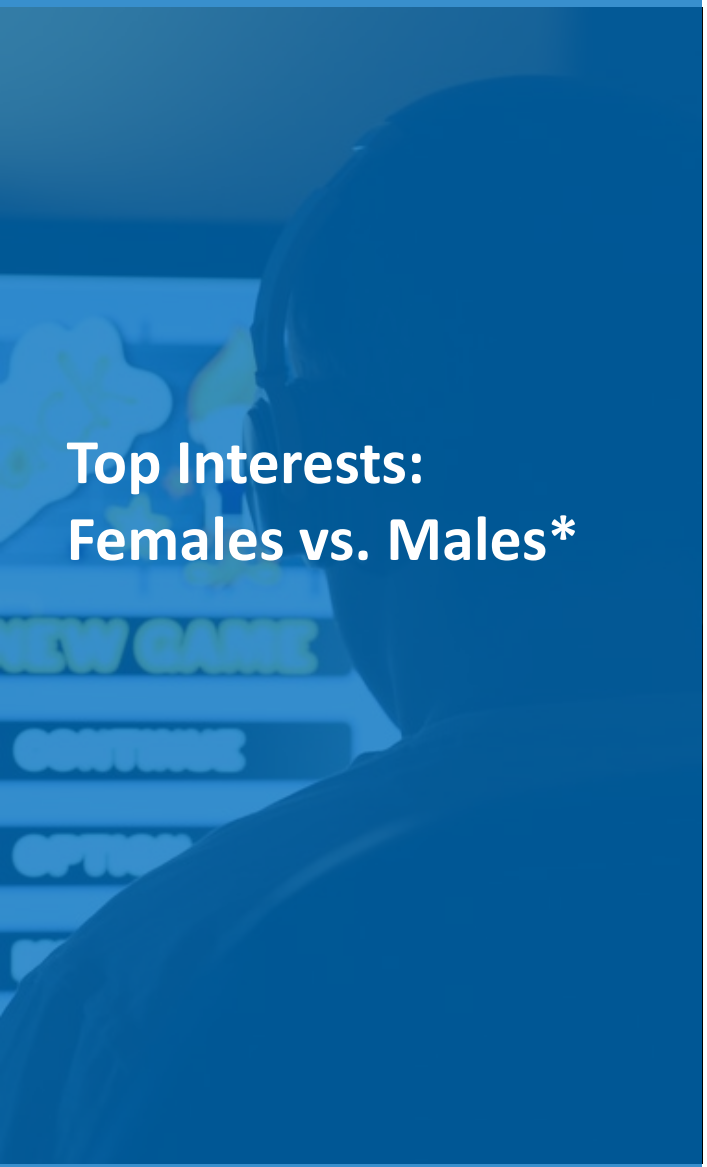
39%
eSports

24%
PAINTBALL

16%
BASKETBALL

*Interests are assessed based on the following question: Which SPORTS or ACTIVITIES might you participate in during college?

Top Interests: Males*



Top Interests: Females vs. Males*

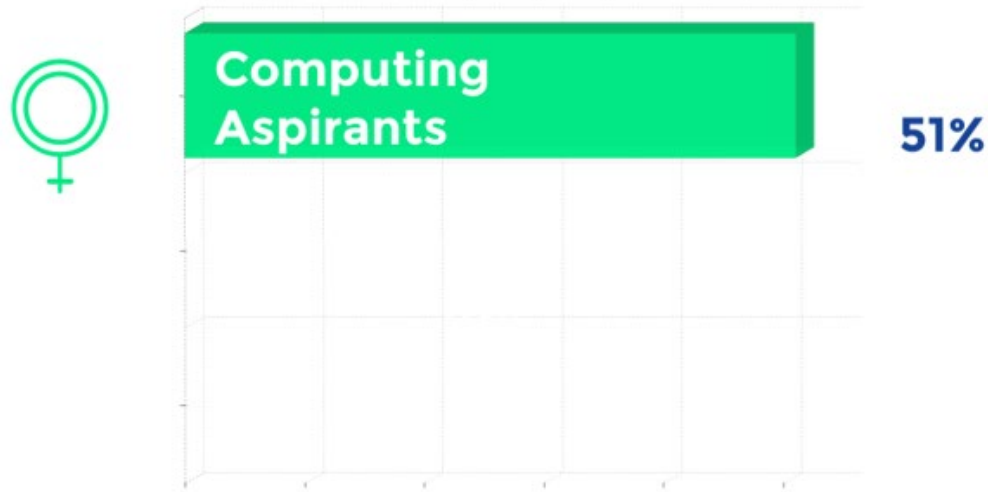
FEMALE:	MALE:
51% ART	45% eSports
28% MUSIC	26% PAINTBALL
21% COMMUNITY SERVICE	18% BASKETBALL

*Interests are assessed based on the following question: Which SPORTS or ACTIVITIES might you participate in during college?

What Matters?

Intend to Pursue Art as Extracurricular

(% intend to pursue ART in college)



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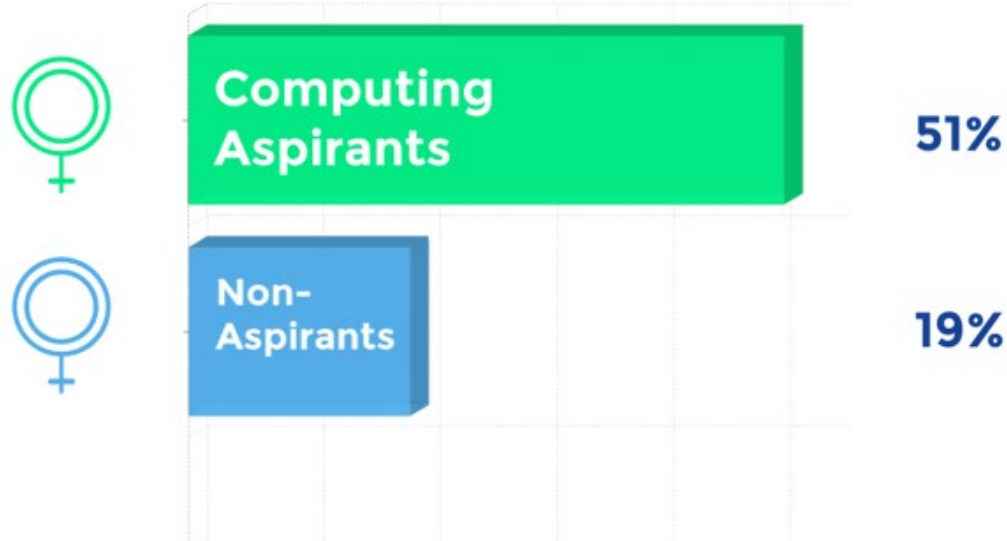
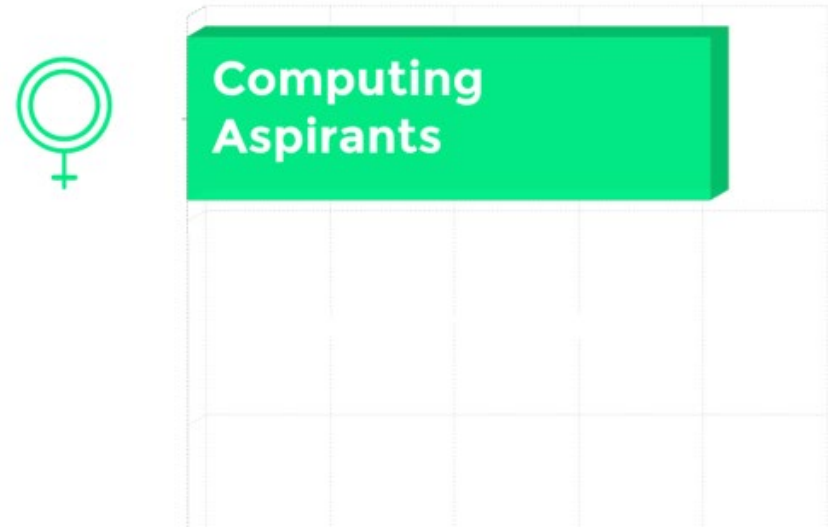


What Matters?

Intend to Pursue Community Service as Extracurricular

(% intend to pursue COMMUNITY SERVICE in college)



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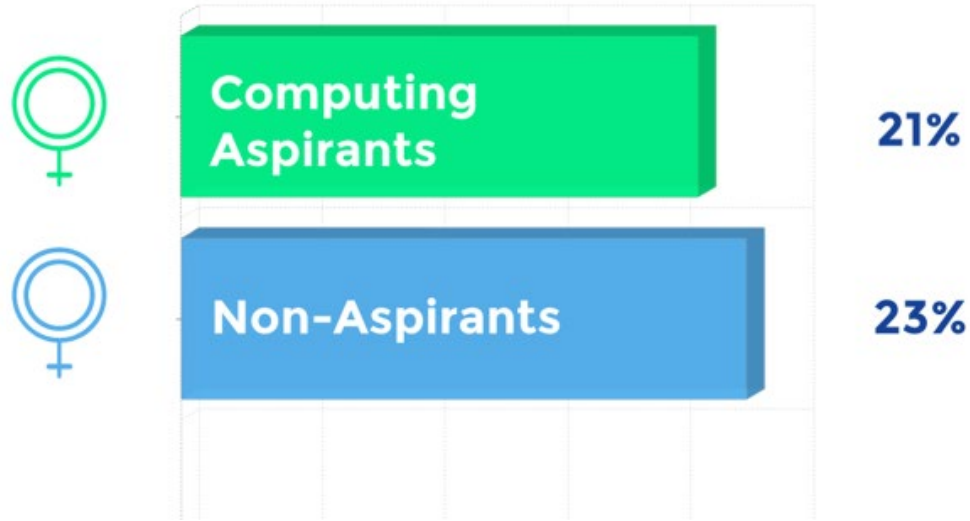
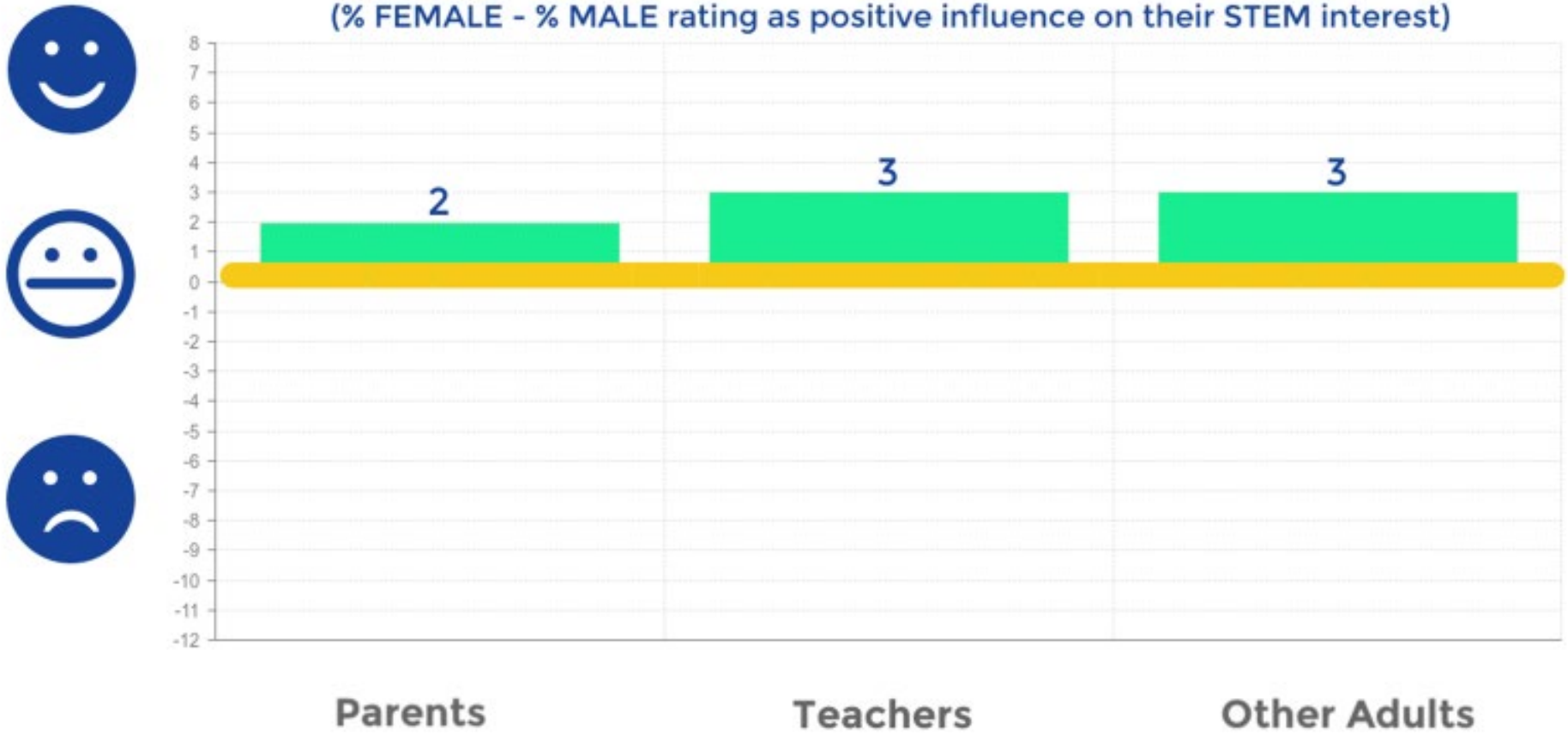


Do New Pathways to Computing Require **New Interventions**?

Gender Gap in Positive Influence on STEM Interest

Computing Aspirants



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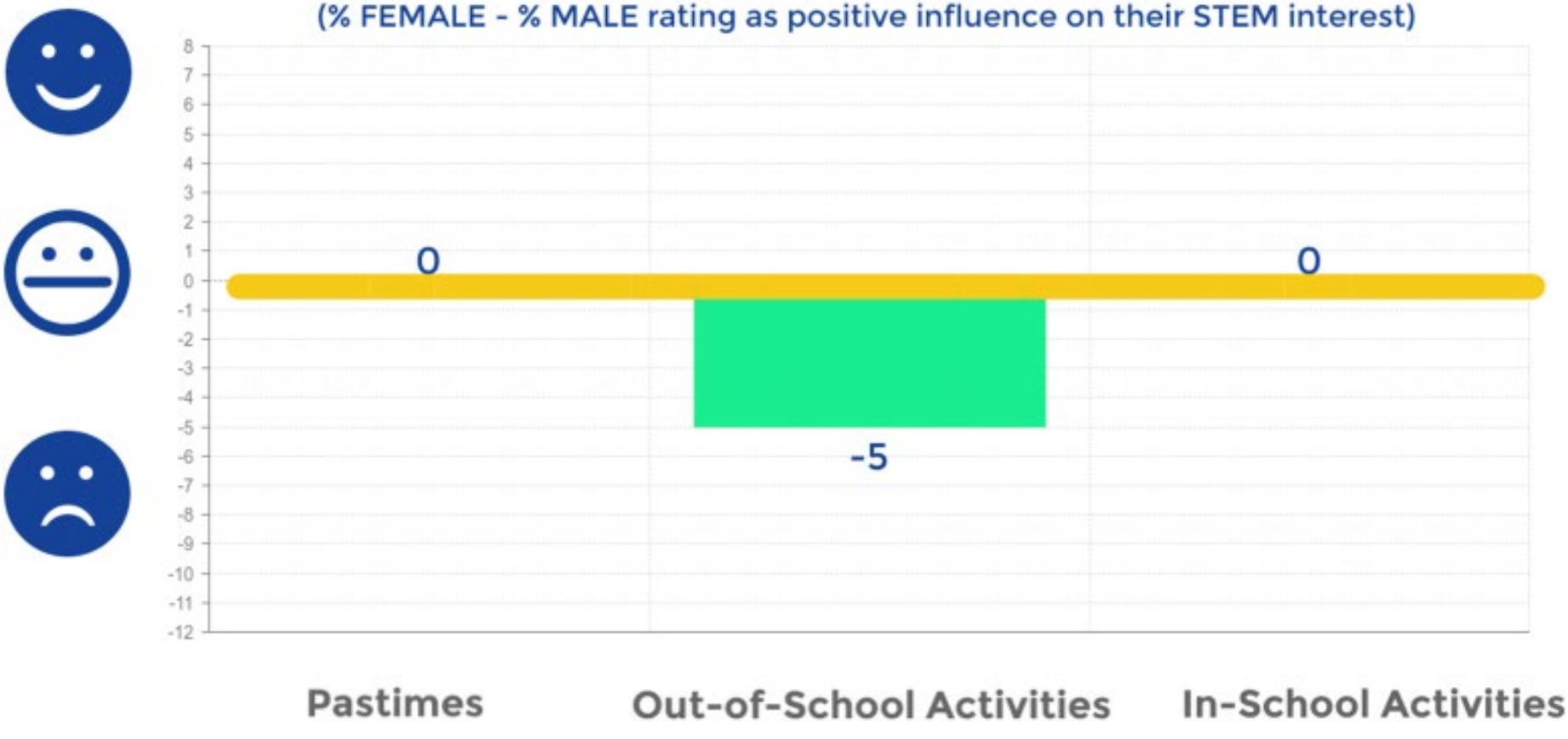
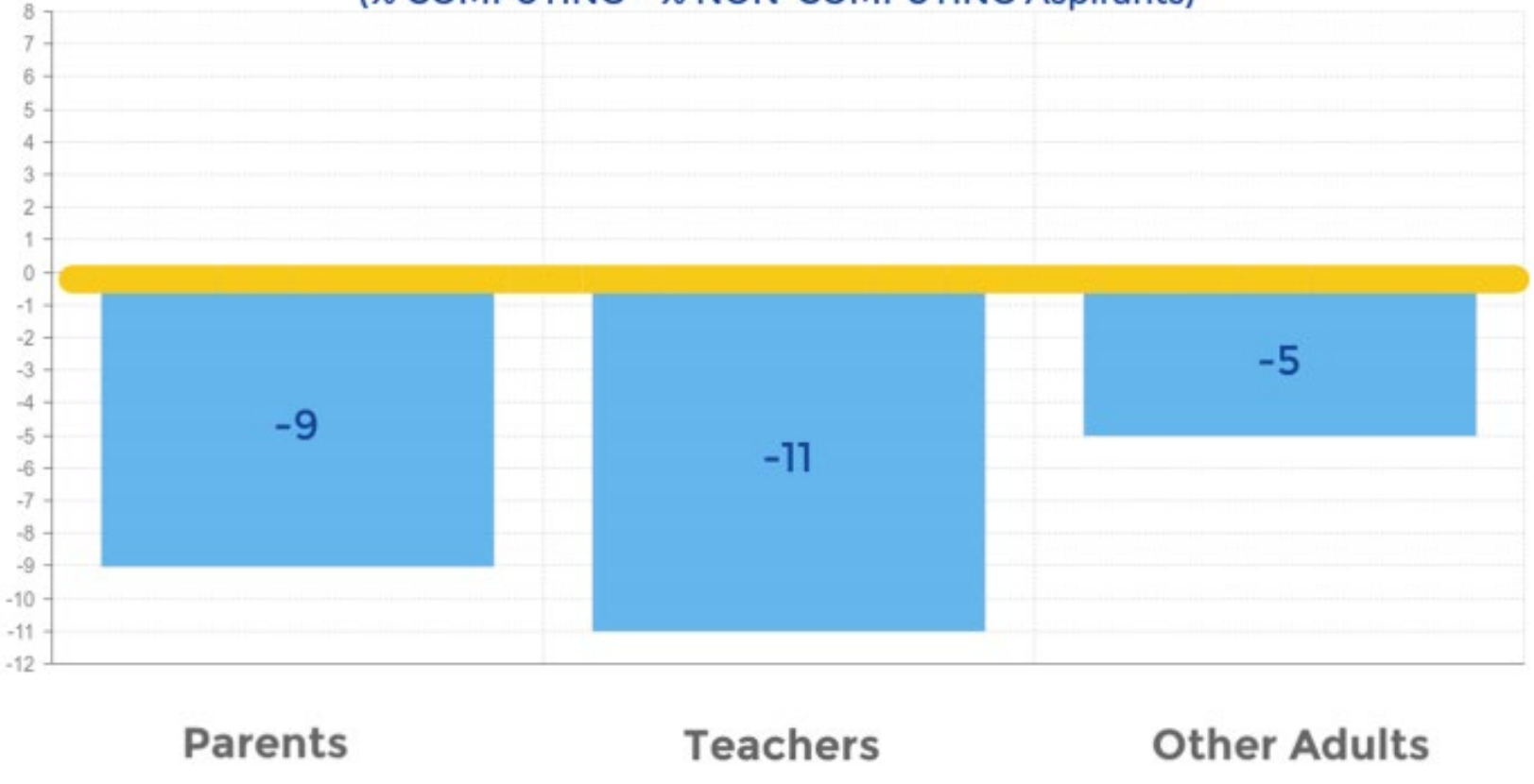


Gap in Positive Influence on STEM Interest

Female STEM Aspirants

(% COMPUTING - % NON-COMPUTING Aspirants)



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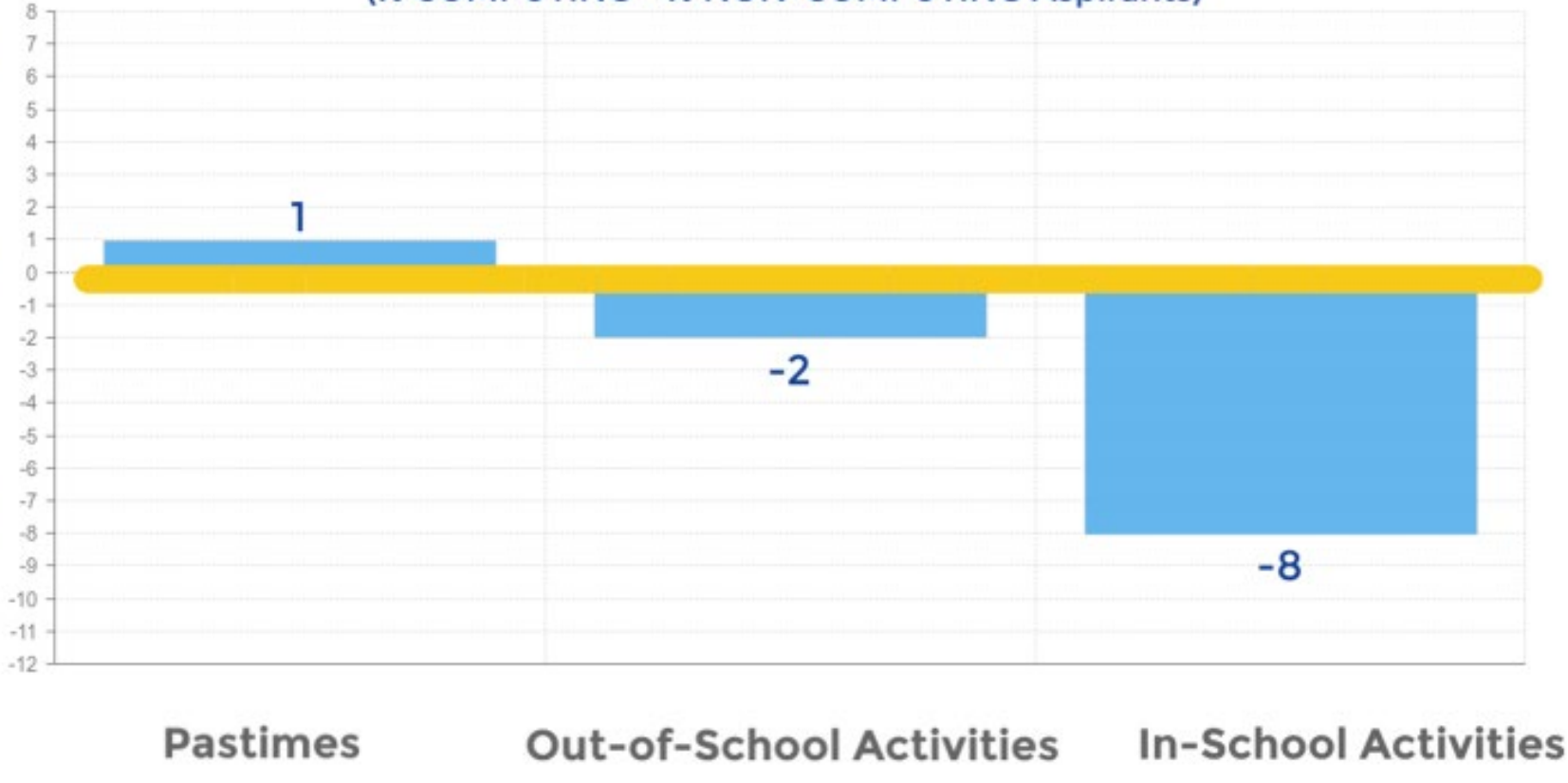
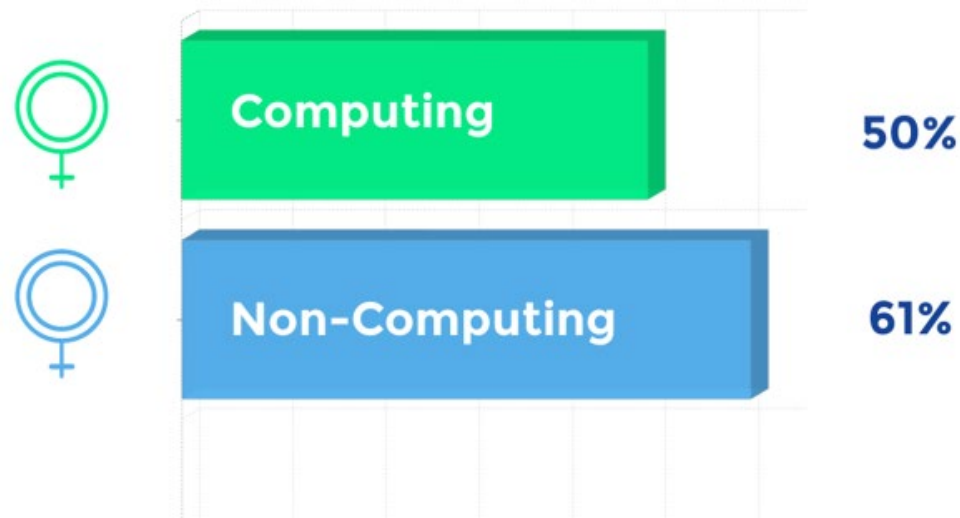


Teachers Rated Positive Influence on STEM Interest

STEM Aspirants

(% rate as positive influence)



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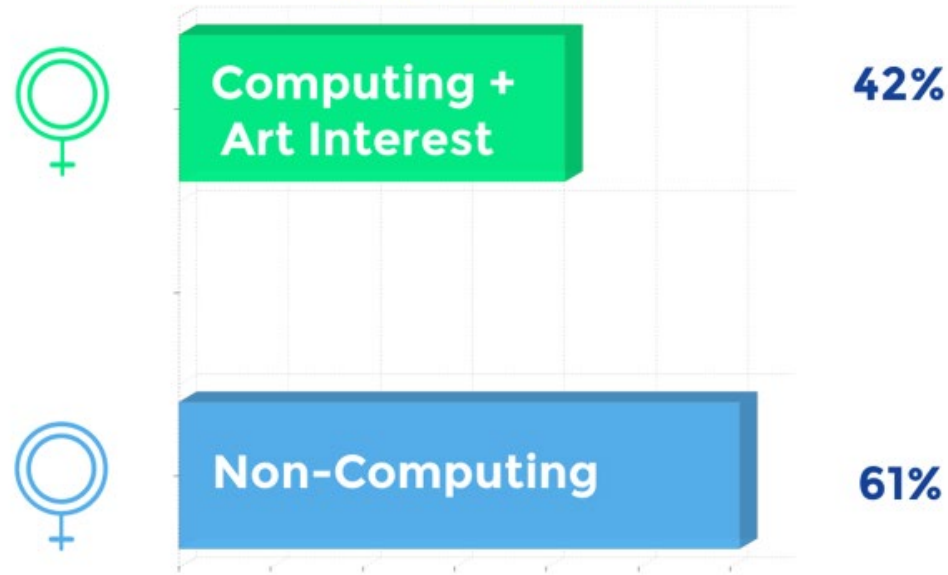

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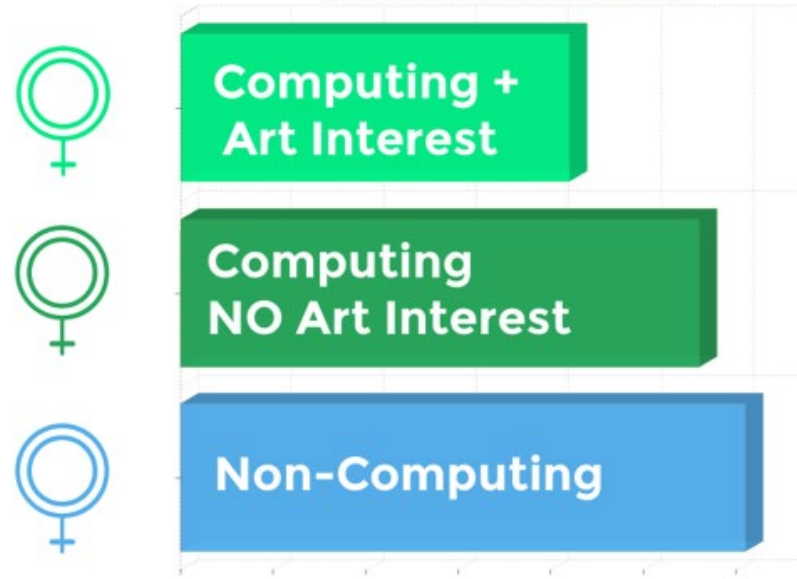
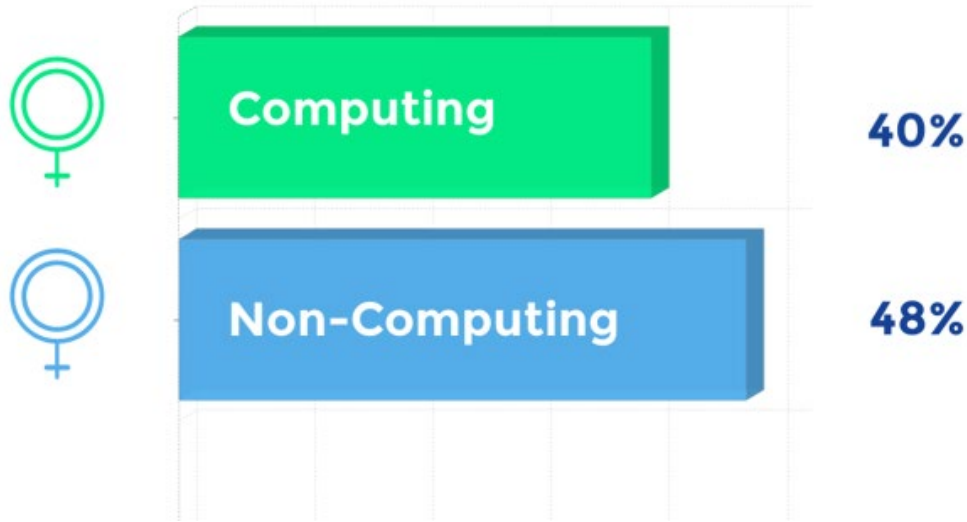


Parents Rated Positive Influence on STEM Interest

STEM Aspirants

(% rate as positive influence)



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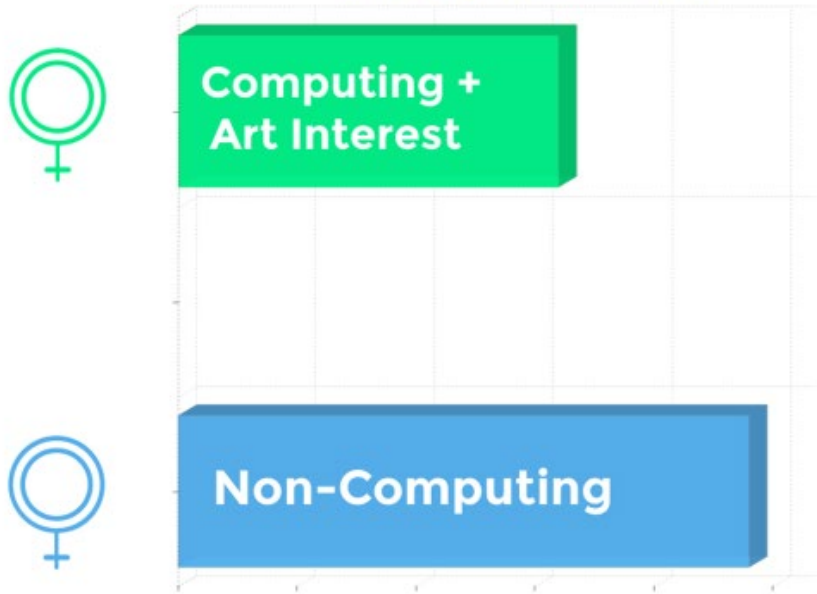

Parents Rated Positive Influence on STEM Interest

STEM Aspirants

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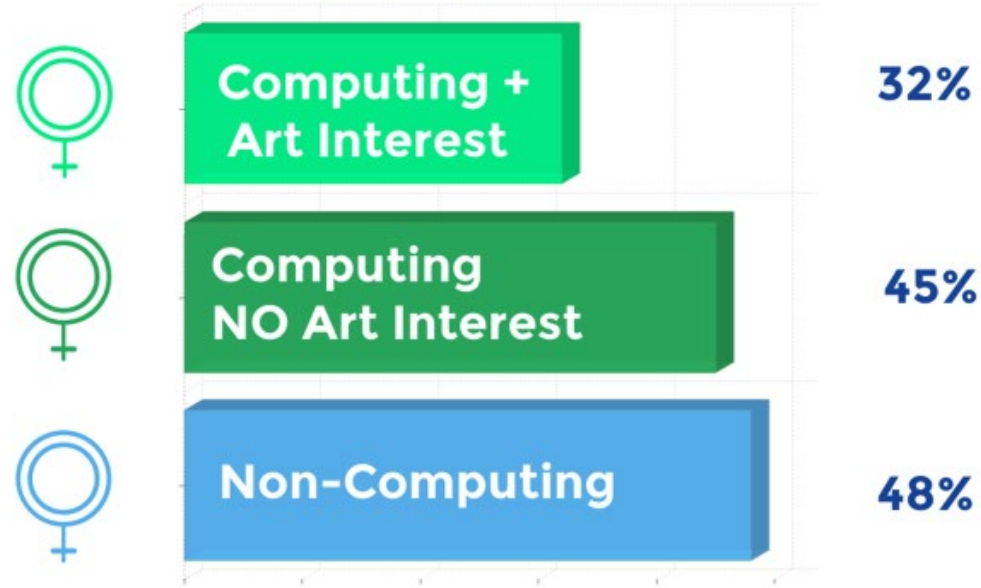
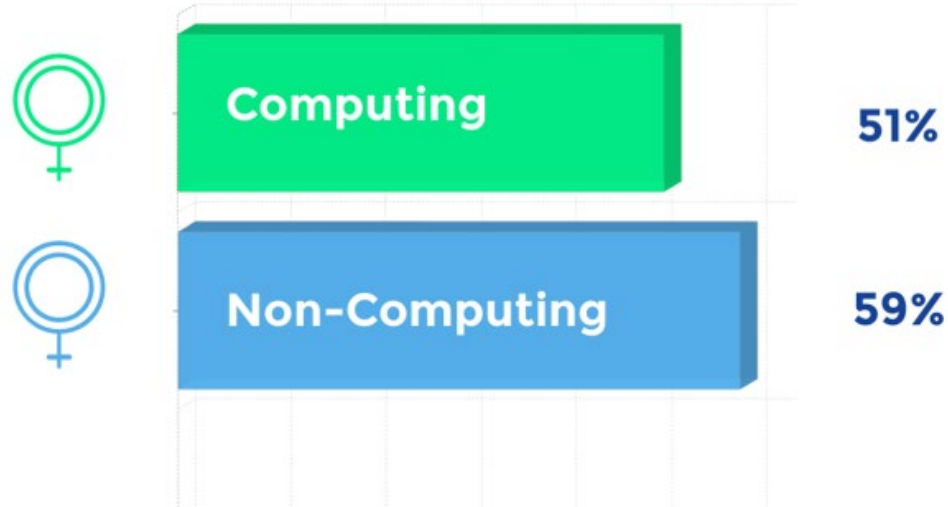


School Activities Positive Influence on STEM Interest

STEM Aspirants

(% rate as positive influence)



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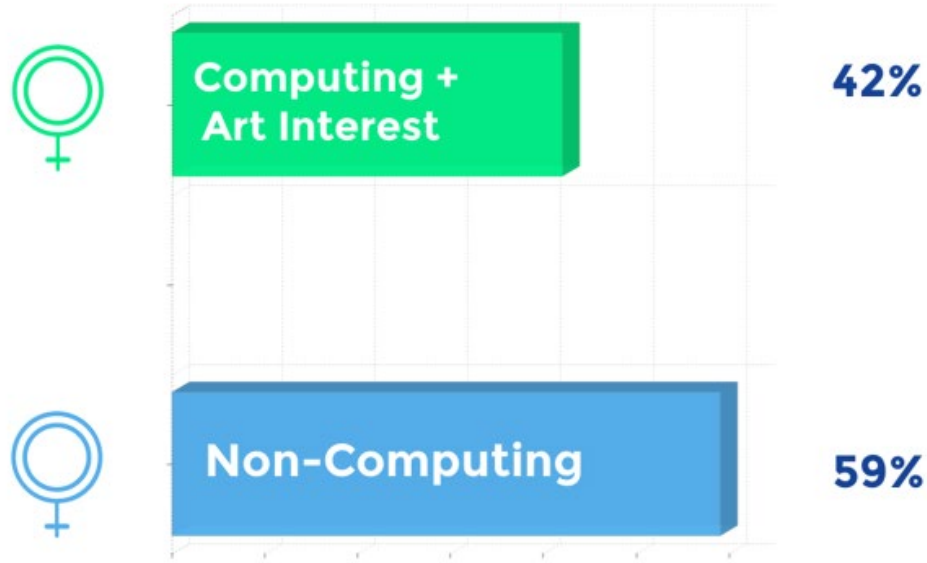

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STEM Aspirants

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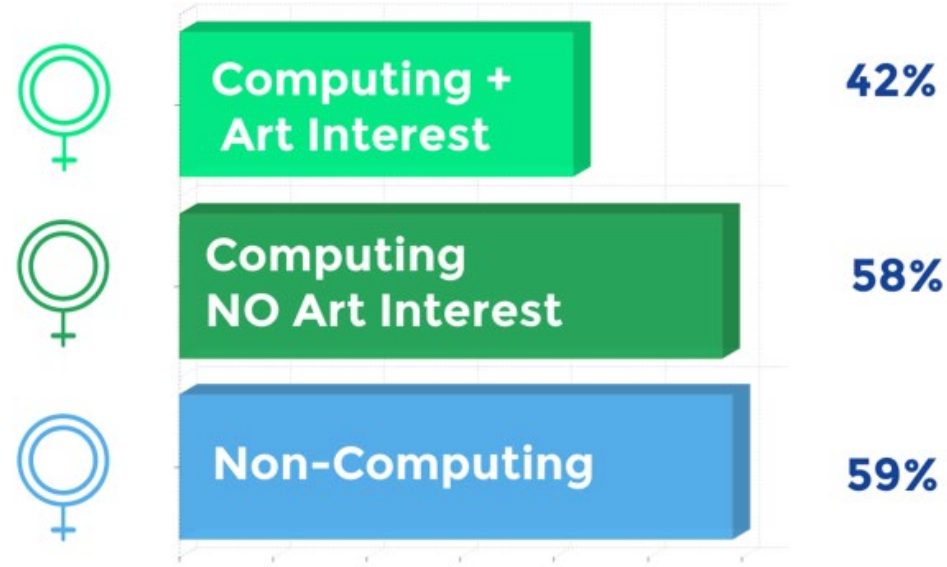
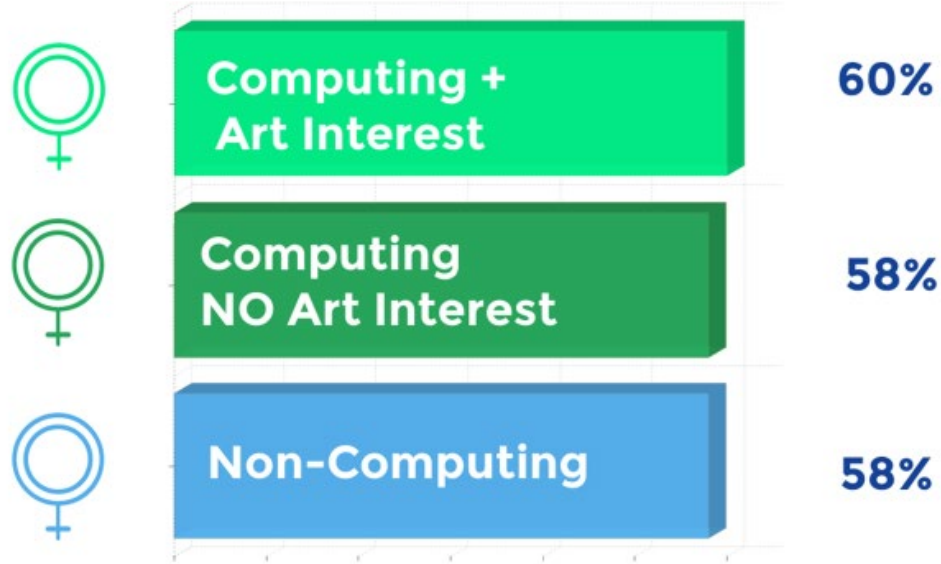


Pastimes Rated a Positive Influence on STEM Interest: Female STEM Aspirants

(% rate as positive influence)



Pastimes Rated a Positive Influence on STEM Interest: STEM Aspirants

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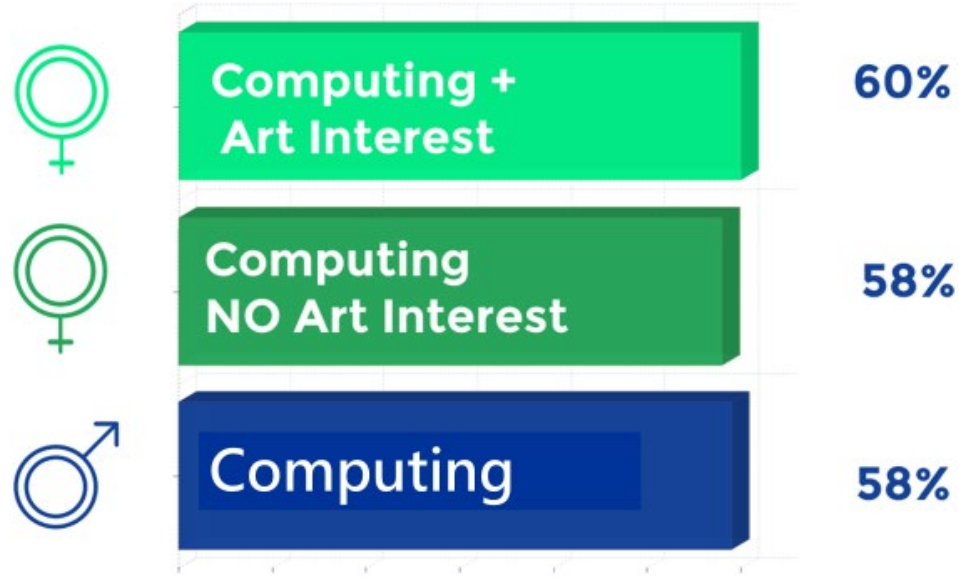
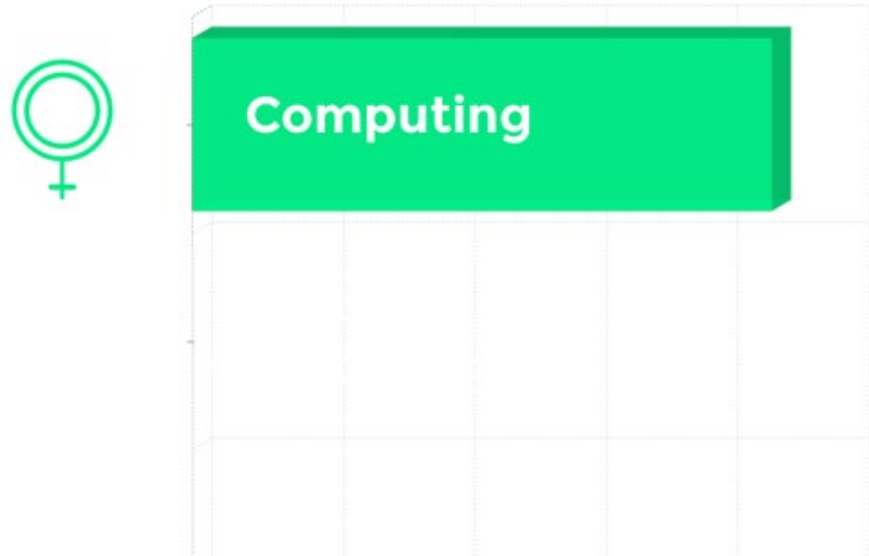


Postsecondary Education Plans Uncertain

STEM Aspirants

(% Uncertain)



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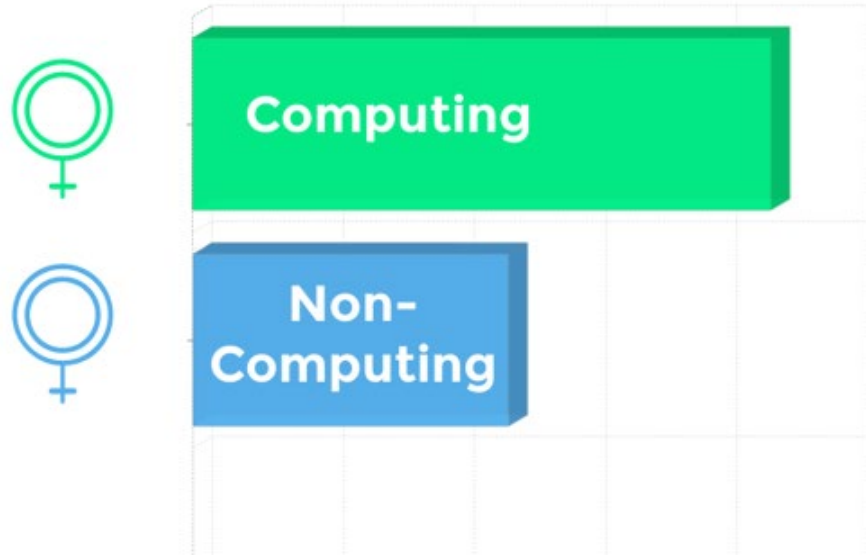

Postsecondary Education Plans Uncertain

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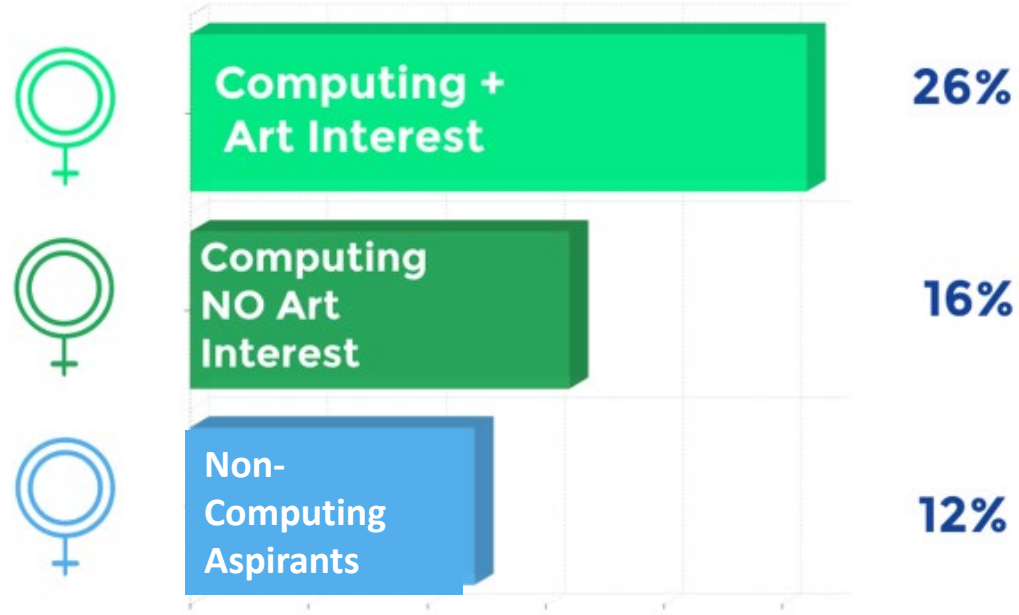

Strategies Fueled by SRF Results

- Low confidence among computing aspirants
  - Argue for more diverse: role models, career examples, pathway discussions
  - Incentivize culture change w data on lack of confidence in career success and fair treatment
- High interest in art and social good
  - Elevate “CS+X” and integrated strategies; frame computing as a powerful tool
- Supportive adults and OST experiences
  - Focus on interventions within these flexible systems
  - Ensure an intersectional lens with respect to adult/family support structures
- Post-secondary uncertainty
  - Reduce uncertainty through exploration; resist the urge to narrow options in order to reduce uncertainty
- Remember: Computing engagement advocacy is relatively new compared to STEM more broadly (aka life sciences and engineering)

Questions?

Discussion

THANK YOU

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