LIME

Low Income Minorities in Education

About Us
AND
Our Project

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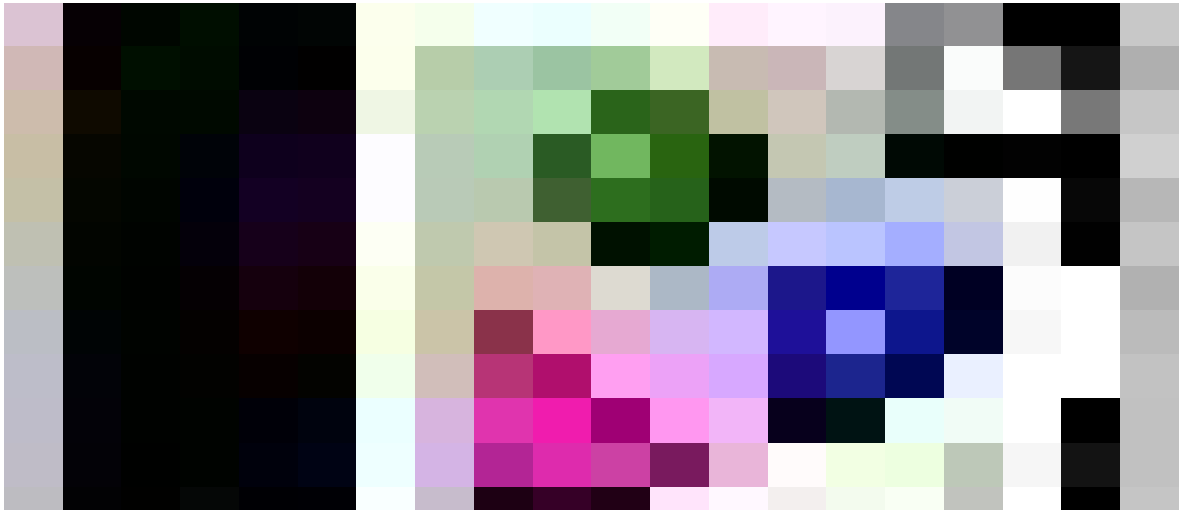


How to expose low-income minority students to STEM education

Needfinding Methodology

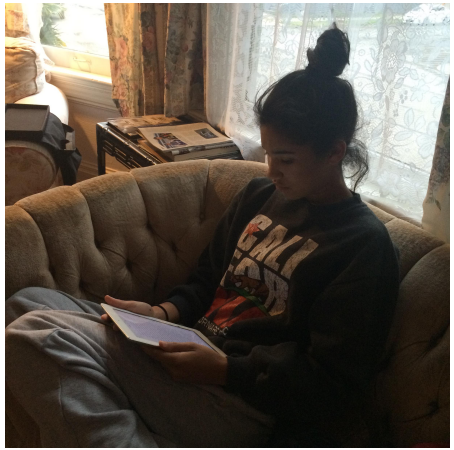
WHO AND WHY?

- High school students
- Pre-K teacher
- Street Code Leaders

How and Where?

- Street Code information session
- Reaching out to a black high school junior attending The Bay School in the Precidia
- Phoning César Chavez Elementary School Teacher
- Google Hangout with high school sophomore at Saint Mary’s College High School

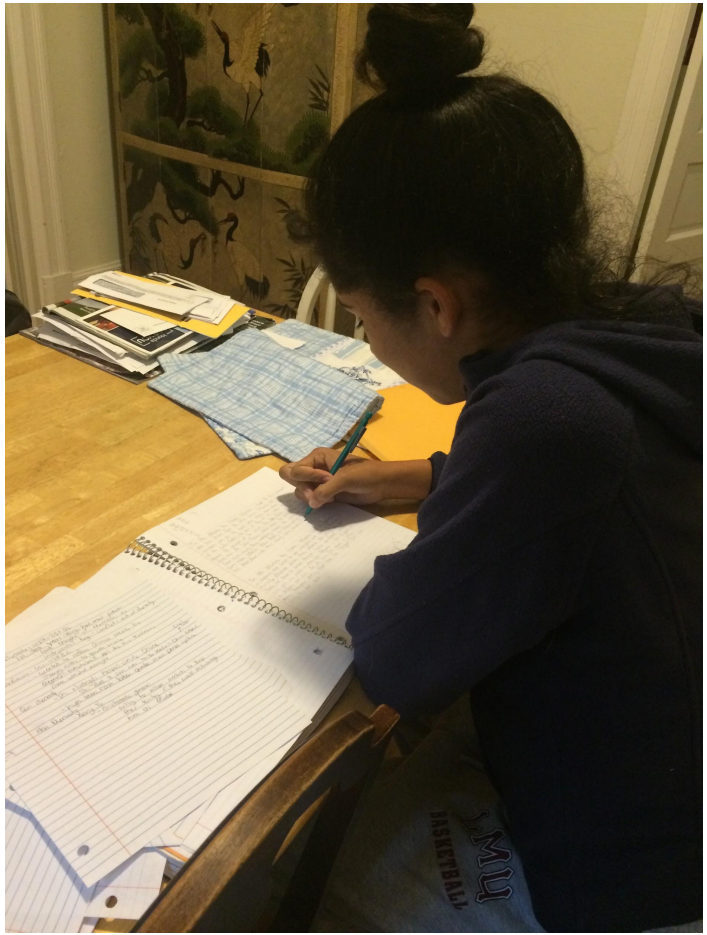
What?



- Process of being in school
- Impact of technology on classroom
- Needs of minority low-income students
- What is the benefit of enrichment programs
- Are students’ needs being met in STEM classes/programs

Interview Results

"Popular things are sports, art, and drama, but not so much technology."



"I like science when I understand what's going on."

"Teachers need to know how to use tech. If teachers don't know, then students won't know."

"The best way to keep kids with different levels of proficiency motivated is to have well prepared lectures."

Analysis

Analysis

- EdTech may enhance education but also increase social divide
- Students excited by STEM if they understand
- Students sometimes distracted while working in groups and/or with mobile devices
- Combat distraction with tailored curriculum
- Students are not familiar with STEM careers

Empathy Map - student

Say:

- “I like science when I understand it” -C
- “Gender is a bigger obstacle than race or class” -C
- “I hate online classes” - C
- “No one pays attention in class because they’re on their iPads” - C
- “Engineering is not advertised as a source of income” -K

Think:

- Minorities are less interested in STEM -C
- You work harder in a class you understand -C
- Engineering classes should be mandatory and applicable -K
- STEM subjects underemphasized in US-K
- Engineering is a “new” field -K

Do:

- C lit up with joy when talking about subjects she understood
- When studying: C more on her phone than actually studying
- C’s iPad is old so she spends a lot of time troubleshooting it
- K responded quickly about being interviewed

Feel:

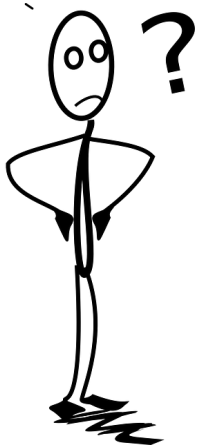
- C- Happy when with friends in class
- C- Intimidated when she doesn’t understand something in class
- K is disappointed by the lack of diversity at his private school
- K thankful teacher in Malaysia inspired him to code
- K- enthusiastic about learning about his career options in STEM

Say

Think

Do

Feel



Empathy Map - Teacher

Say:
- “iPads encourage little wait time, but in the classroom they won’t get everything immediately” - L
- “Tech brings more info into the classroom” - L
- “Tech widens the social gap” - L
- “Kids work well by themselves but get distracted in a group” - M

Think:
- have high faculty to kids ratio! - M
- kids focus with good content - M
- teachers need to know how to use tech - L
- ed tech is for rich students - L
- Tech can enhance classrooms but also widens the gap between those who have/don’t have - L

Do:
- Insisted on integrating tech with classroom’s curriculum - Lesley
- Talked more about Lumosity than other ed tech products - L
- Prepared curriculum designed for different levels of coding proficiency - M

Feel:
- enthusiasm to help kids through Streetcode - M
- excitement about Lumosity because of the mind games - L
- nervous about the gap tech creates - L

SAY

THINK

DO

FEEL

NEEDS

- Kids need to focus in class
- Students need to be able to understand materials
- Students need to know their career options

INSIGHTS

- Engineering is not seen as “cool”
- Web classes are not enjoyable
- Technology is distracting and useful
- Technology can further increase the social divide
- Students only get interested in STEM once exposed

Summary

A Multifaceted Problem

One Solution Cannot Fix Everything

APPENDIX

Detailed Empathy Maps