

# CS Research: Knowledge is Power



San Pasqual  
High School

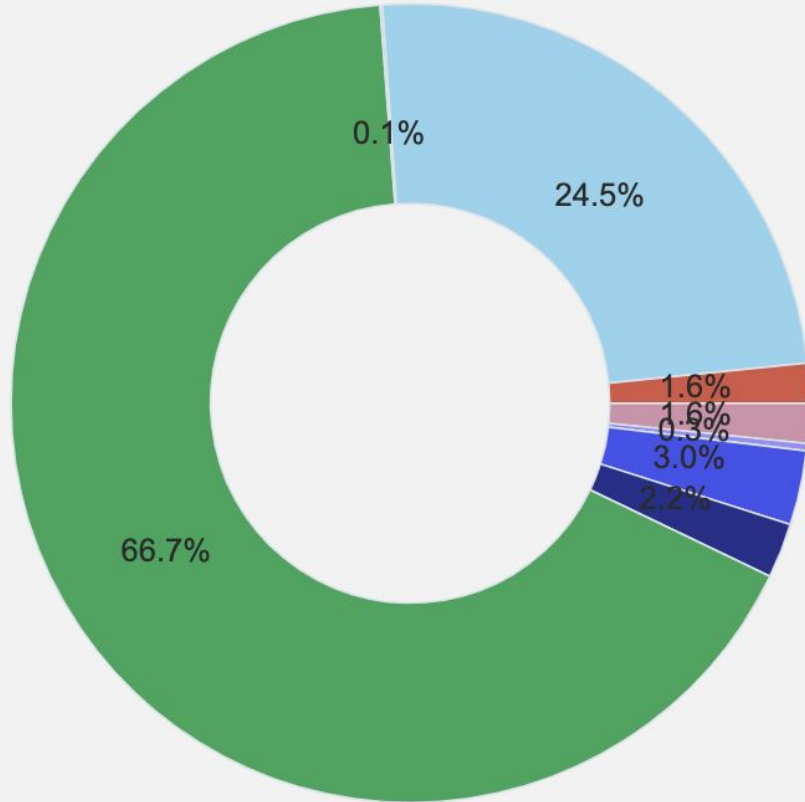
**CS LISTEN UP  
Conference  
November 18, 2020**



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# Demographics

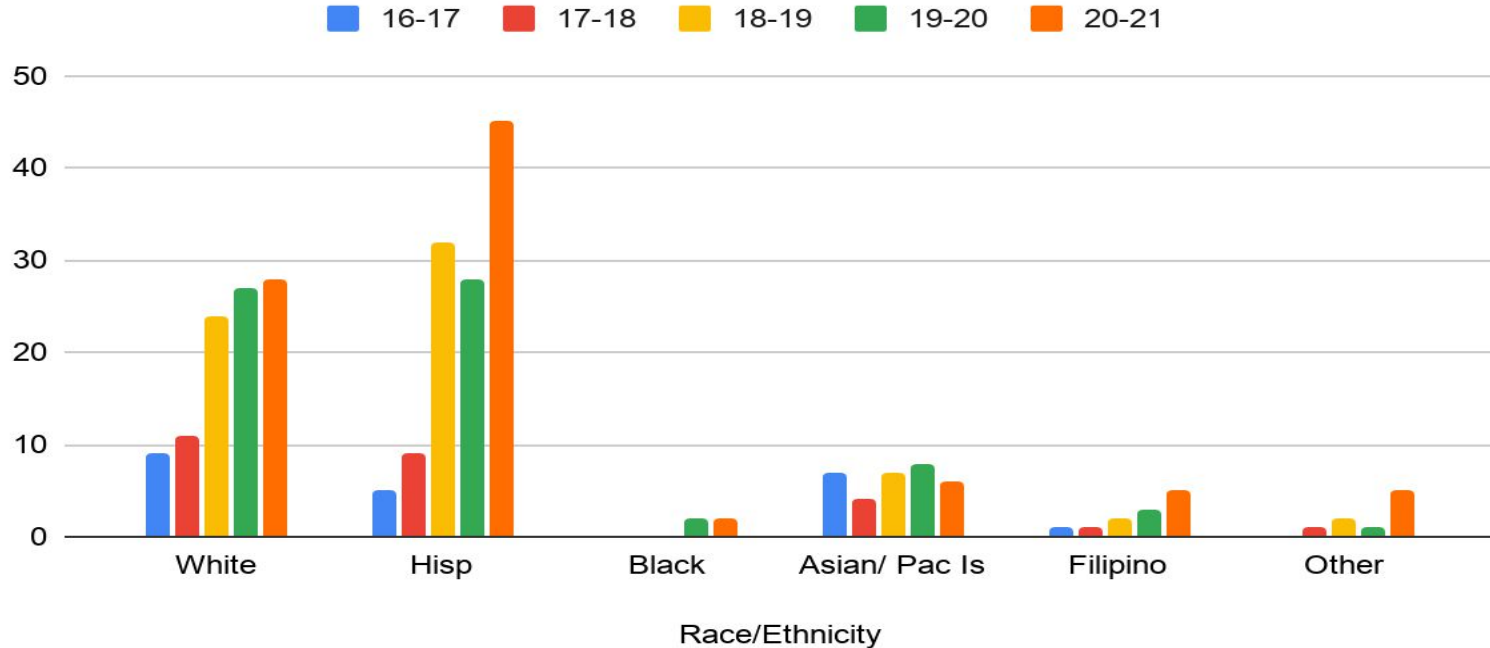


2019-20 SY Total students: 2,202

African American	1.6%
American Indian or Alaskan Native	0.3%
Asian	3.0%
Filipinx	2.2%
Hispanic or Latinx	66.7%
Pacific Islander	0.1%
White	24.5%
Two or more races	1.6%

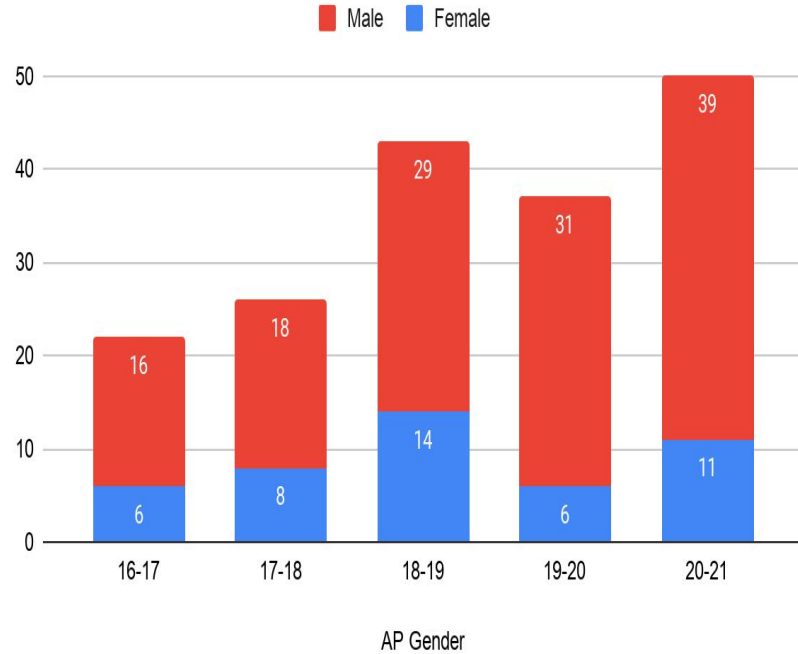
# Background Information in Computer Science at San Pasqual HS

## 16-17, 17-18, 18-19, 19-20 and 20-21 in CS

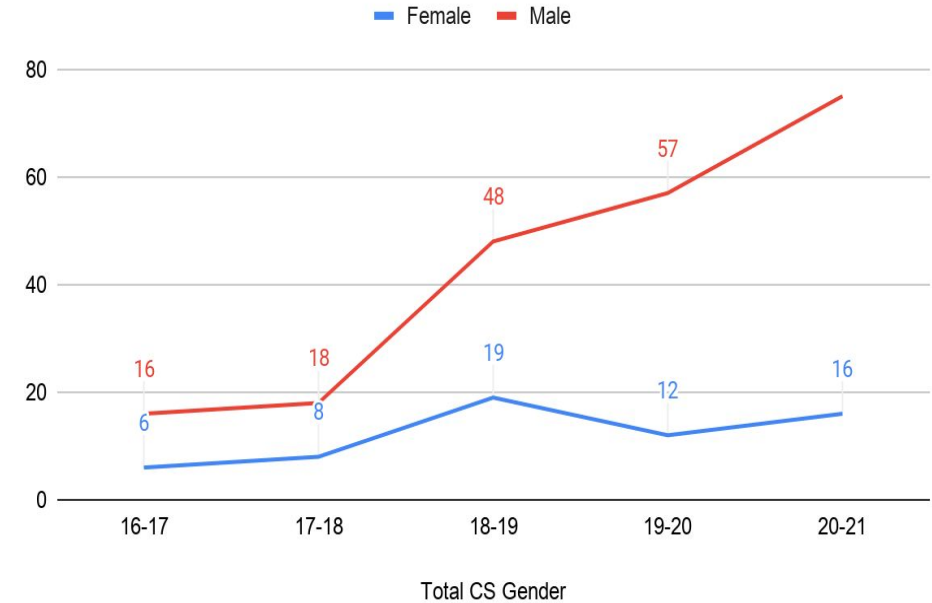


# Background Information in Computer Science at San Pasqual HS

## Female and Male

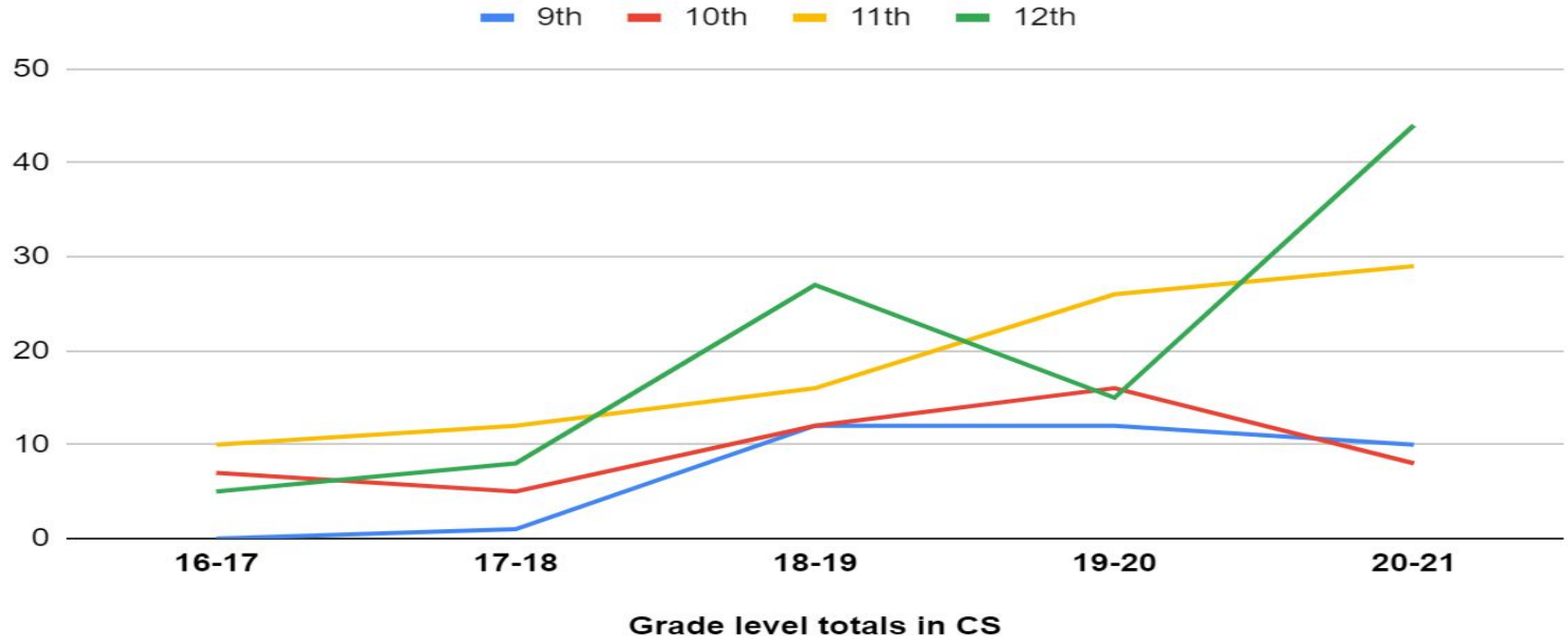


## Female and Male



# Background Information in Computer Science at San Pasqual HS

## 9th, 10th, 11th and 12th CS Grade Levels



## Research Question(s)

**How does the spread of accurate information about Computer Science lead to a more diverse class?**

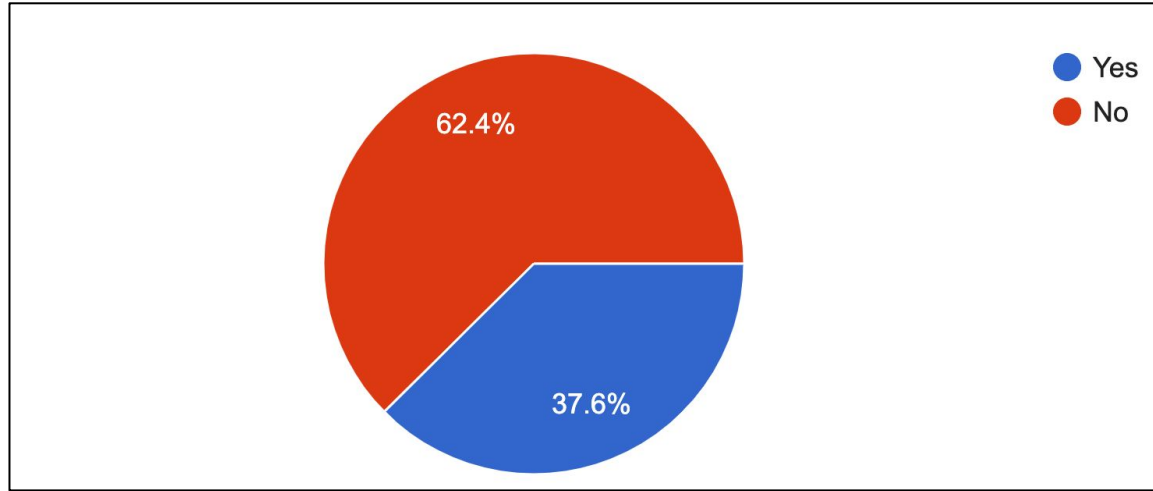
# Methodology

- Total Questions
  - 24
- Types of Questions
  - Multiple choice
  - Short answer
  - Likert scale
- Topics
  - Demographics
  - Knowledge
  - Attitude
  - Past and Future Involvement
  - Personal Beliefs
- Students Surveyed
  - 298
  - Specific classrooms
- Times Surveyed
  - 1



## Findings: Do you know which A-G credit(s) Computer Science classes count for?

- 62% of the students do not know which A-G credit(s) Computer Science classes count for.
- 41% seniors total; 42% said no
- 16% juniors total; 70% said no
- 26% sophomores total; 69% said no
- 16% freshmen total ; 96% said no



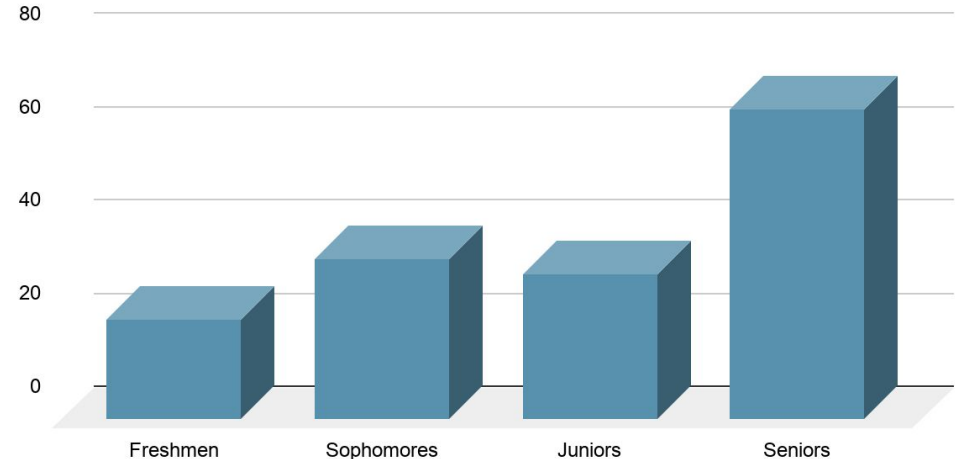
For each grade level except seniors, more than half of the students reported a lack of knowledge on credit earned by taking a computer science class. Freshmen are the group of students with the least knowledge on this topic.

# Findings

## Do you know what Computer Science opportunities are offered at this school?

- ~46.2% students answered “yes”
- ~53.7% answered “no”
- ~43.5% of the “yes” answers came from peers
- ~75.5% of the “yes” answers came from teachers
- ~22.1% of the “yes” answers received information from counselors
- ~22.1% of the “yes” answers received information from other sources such as family, administrators, clubs, or finding opportunities themselves.

**Percentage of students who know which Computer Science opportunities are offered as SP**



# Findings

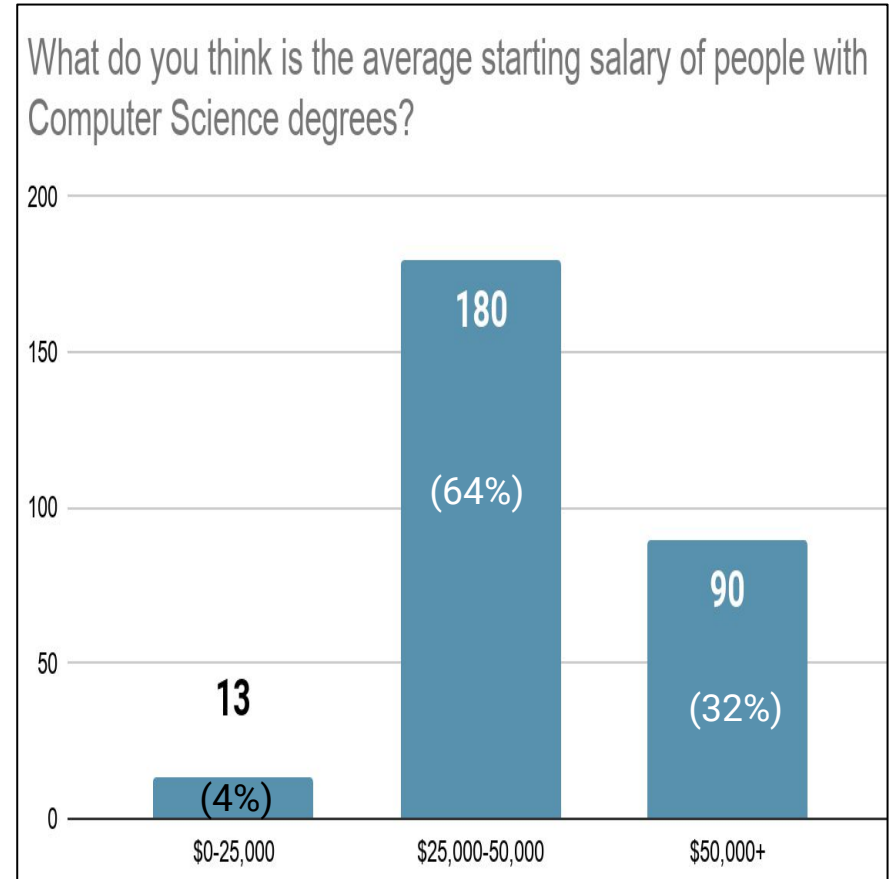
## What do you think is the average starting salary of people with Computer Science Degrees?

Of those who answered \$25k-50k:

- ~50% said “Yes” when asked if they’ve ever done a coding activity.
- ~20% said “Yes” when asked if they’d take CS if more opportunities were offered at SPHS.
- ~38% said “No” when asked if they felt capable of learning CS.

Of those who answered \$50k+:

- ~78% said “Yes” when asked if they’ve ever done a coding activity.
- ~80% said “Yes” when asked if they’d take CS if more opportunities were there
- ~ 18% said “No” is they felt capable of learning CS



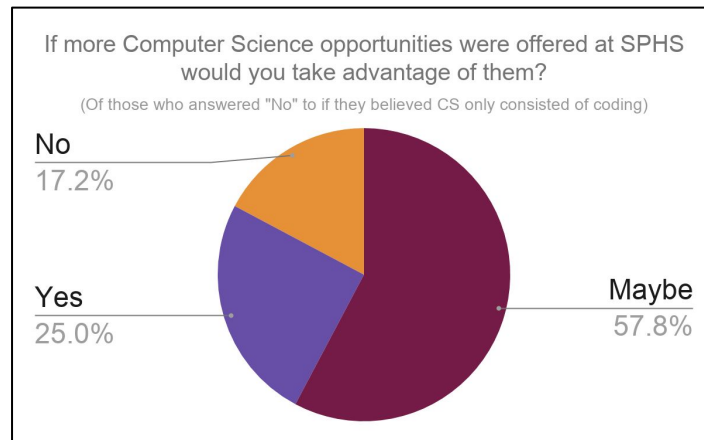
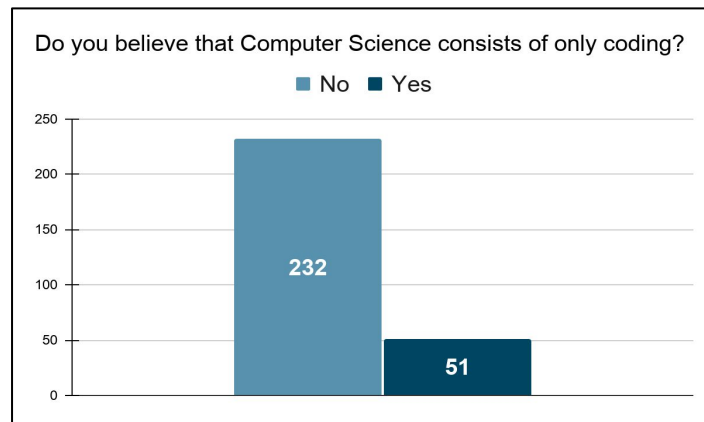
# Findings Do you believe that Computer Science consists of only coding?

Info about the people who answered Yes:

- 76% also believed that CS workers began with Medium Salary(\$25k-\$50k).
- 48% answered No when asked if they felt capable of learning CS.

Info about the people who answered No:

- 83% answered Maybe or Yes when asked if they would participate in CS activities at SPHS if more were offered
- 73% answered Yes when asked if they felt capable of learning CS.



# Findings

## If not involved already, what prevents you from being involved in Computer Science courses?

Many students reported a lack of interest in the subject as one of their reasons for not taking CS. Other reasons include:

Not necessary for intended career path: **16%**

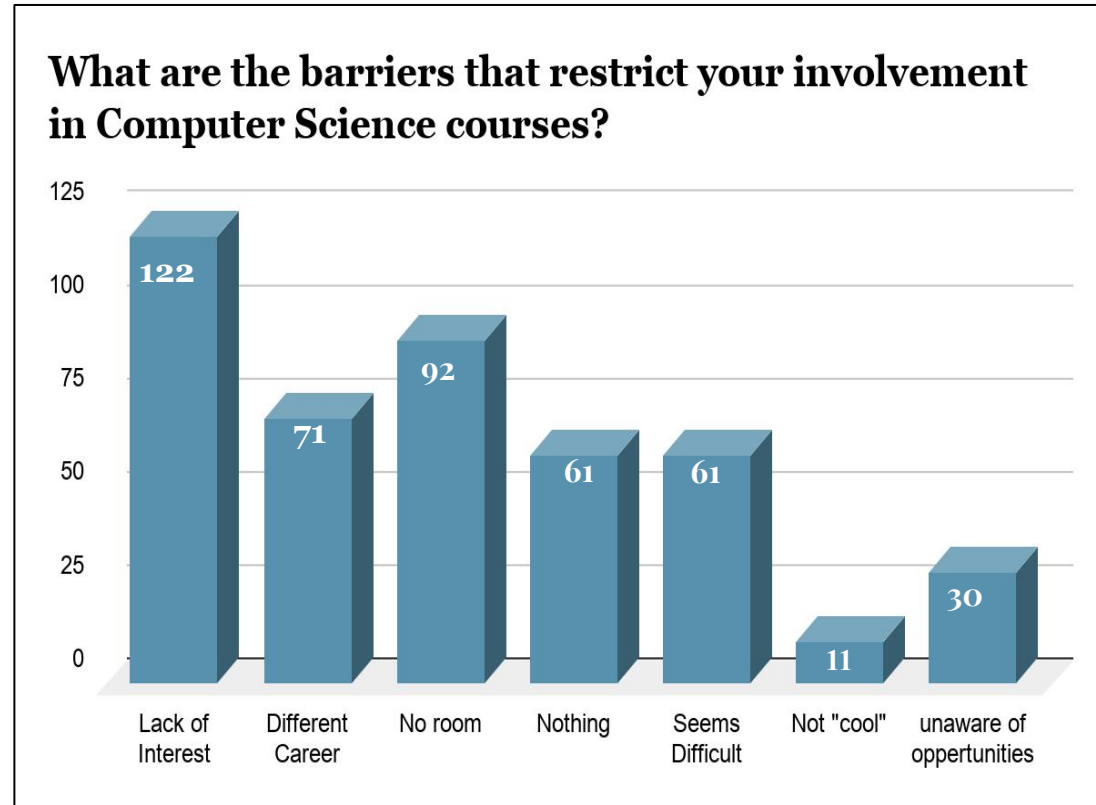
No room in schedule: **21%**

Nothing: **14%**

Seems difficult: **14%**

Not seen as “cool” or “popular”: **2.5%**

Didn't know of opportunities: **7%**



# Overall Conclusions

- Students are not aware of opportunities
- Students do not consistently receive enough information about  
Computer Science classes
- Less participation stems from lack of interest or information
- Women are affected the most

# Recommendations for Action Cycles

- Computer Science Honor Society- encourage to participate all 4 years
- More opportunities for freshmen to enroll in CS courses for CS Pathway success
- Engage parents in the CS Pathway course registration
- High school counselors should be trained about CS course options and new A-G credits
- Middle school counselors collaborate with high school counselors to encourage students to take CS in high school and explain the benefits of taking computer science related classes
- Clubs for coding (Code Queens and SOAR Coding) to start outreach in different classrooms to explain their programs/clubs
- Collaborate with English and AVID for CS career research opportunities, career speakers, and CS related field trips

**Thank you for your interest and attention !!!**