Our Research Findings!

THE Presentation you have been waiting for!

Escondido High School

CS-LISTEN

CReaTe

EDS DEPARTMENT OF EDUCATION STUDIES

National Science Foundation   UC San Diego

NSF

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In this slideshow, we will be showcasing our study findings that we generated as a team! We will inform you about our school and the CS classes we offer, our technique and methodology, our findings, and graphs illustrating our conclusions.

Background Information EHS

- A school within a residential area.
  (1535 N Broadway, Escondido, CA 92026)

- Demographics: Hispanic/Latino: 80% (1787), White: 11.6% (258) , Asian: 4.4% (97), Black: 2% (49), Two or more races: .6% (13), American Indian/Alaska Native: .5% (11)

- Number of students: 2,215

- Percentage of males: 53% (1,173), Percentage of females: 47% (1,042)

Background Information on Computer Science at EHS

Clubs we offer:

- CSHS
- CS-Listen
- Cyberstart Club

Classes we offer:

- ECS
- AP CSP
- Data Science (*NEXT YEAR*)
- AP CSA (*NEXT YEAR*)

FUN FACT

FOUR YEARS AGO THERE WAS

ONLY 1 CS CLASS. NEXT YEAR

THERE IS GOING TO BE 6 CS

CLASSES!

Research Question

What are the perceptions and factors that contribute to students participating in Computer Science at Escondido High School?

Research Question Brainstorm

- How do people perceive CS?
- What are stereotypes about CS classes?
- Who is willing to learn CS/take classes?
- What factors affect students choosing to take CS?
- What is the representation of CS in the media (TV/film)?
- Does advertisement of CS affect attendance in classes/clubOs?

Methodology

Methods of Acquiring Data

We used **surveys** and **interviews** to acquire data. The survey was given out in the form of a Google Form and interviews were held in-person.

The **Google form** consisted of:

- Likert Scale
- Short Answer Questions
- Multiple Choice Questions

Data Collected

We collected data from a total of **276** students through our survey and close to **50** for our interviews which included **10th, 11th, and 12th graders.**
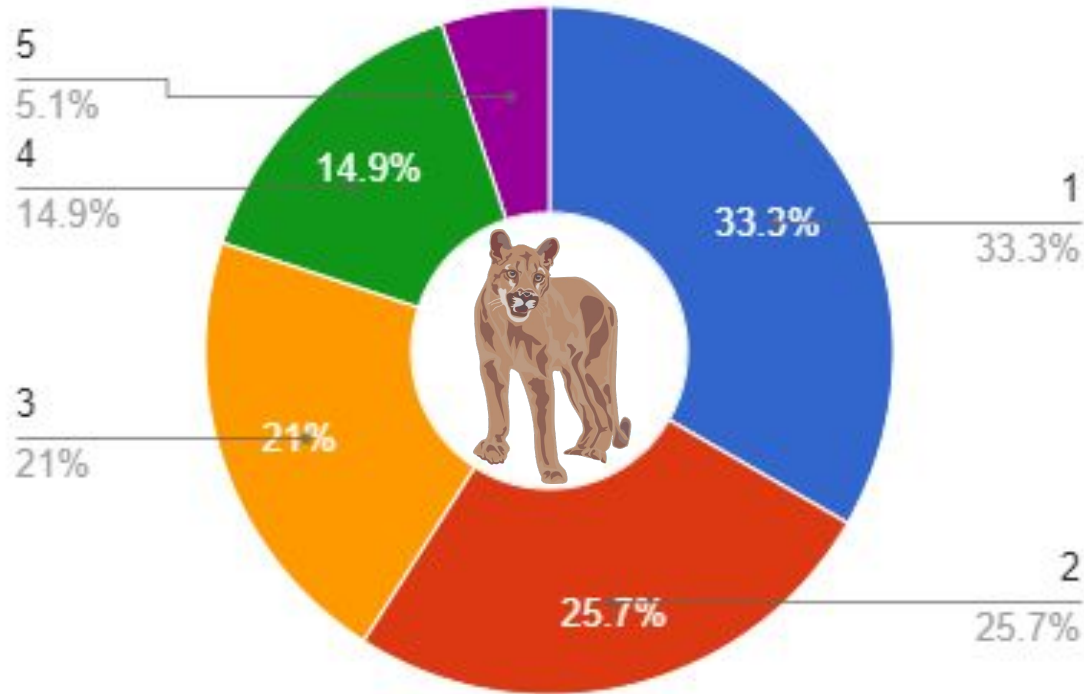
The **topics** that our data consisted of were:

- Student experience with CS
- Student perceptions of CS
- People who have recommended CS

From 1-5, how much do you know about Computer Science? *

	1	2	3	4	5	
Not much	○	○	○	○	○	A lot

On a Scale of 1-5, 1 Being the Lowest; How Familiar Are You With Computer Science?

Findings

Stereotypes students have about CS:

- view Computer Science is only for "nerds"
- Involves math
- It's a hard/complicated course

- need to be "smart" to take class
- have to be good with technology

Our findings show most students' knowledge about computer science to consist of:

- Coding/programming languages
- Creating apps/games
- Future job industry growth/demand = opportunities for money and career paths
- Cyber Security

More Findings

- The highest amount of students that know of CS is in the order of Juniors (11th), Seniors (12th), and Sophomores (10th).
- Counselors played a big role in helping kids find out about CS
- Some reasons that students took CS consisted of recommendations from friends, family, and teachers.
- Students who took CS found the course easy, while others that didn't take the course found the course intimidating which discouraged them from trying it out.
- Some common reasons for lack of enrollment in CS is not enough space in schedule and CS not being a part of peoples Career path.
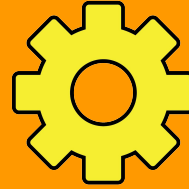
Do Students Know About CS at EHS?
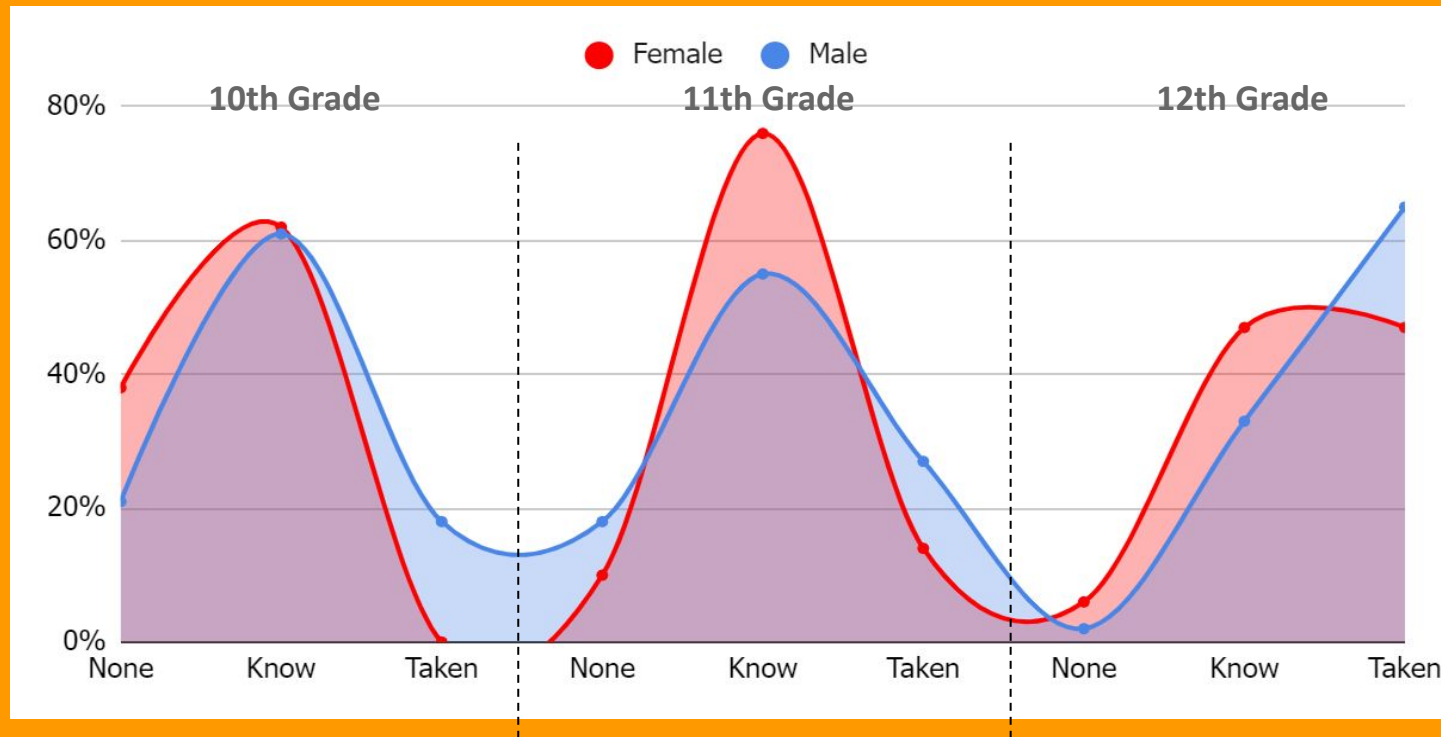
Most students are aware that CS classes are available. However, only a **small percentage of students actually take a CS class**.

Why <u>Do</u> Students Take CS?

Positive Perceptions about CS such as…

- Future **opportunities** in **college/career**
- **Like the idea** of coding
- Like **working with computers**/technology

Factors Influencing Participation such as…
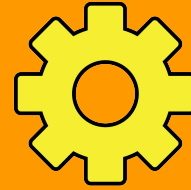
- **Personal recommendation** by a counselor, friend, or teacher
- **Knowledge** of CS classes available at our school

Why <u>Don't</u> Students Take CS?

Negative Perceptions about CS such as…

- Considered a **male-dominated** field
- Assumptions that CS is "**only for smart people**" or that it is **too difficult**

Factors Influencing Participation such as…

- **No personal recommendations** to take CS
- Lack **room in their schedule** to fit a CS class.

Overall Conclusion

- Overall we can conclude that students that take CS primarily have a interest in coding beforehand or have been recommended it by friends, family, teachers, etc.

- Students that don't take CS haven't considered taking it because they are either misinformed or don't have space in their schedules.

Recommendations for Action Cycles

Our findings lead us to recommend:

- ★   Signs & Flyers to advertise about CS
- ★   More T-shirts, Stickers, & special merch
- ★   Advertise to Sophomore & Junior classes
- ★   Hold an Hour of Code before choosing new schedule
- ★   Better seating (pair tables for coding!)
- ★   More promoting of classes and CS club

- ★   Create/improve social media
- ★   Middle school outreach
- ★   Snacks in club meetings
- ★   Girls do majority of CS promoting
- ★   Infographic posters for hanging in math & AVID classes

We can begin to tackle the issue that we researched with these recommendations by having more equipment in class and to be able to better promote computer science.

THANK YOU ALL!!!