



Black Men in Tech: Increasing Interest from High School to Careers



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Introduction

- The computer and information field is expected to grow 13% by 2026, faster than the average growth of all occupations; however there is little progress in the number of Black men represented in computing and technology majors and fields.
- African American high school men are underrepresented in computing and technology majors across the nation. One reason is the lack of exposure to these major paths in high school.
- Black Men in Tech aims to work with schools to pilot the use of multimedia (game design, web design, and videography) at Information Hubs (iHubs) in Title I or high-minority schools. A collaboration of STEM teachers, university instructors, industry mentors, college computing/technology majors, and parents is expected to increase student interest and engagement in technology and computing majors and fields.

Main Research Objective

To understand whether various forms of multimedia increases African American high school men's opinion and overall interest in technology majors and fields.

Materials & Methods

- This is a quantitative study with 2 surveys (one for students and one for parents). The student surveys are administered at 4 periods.
- We obtained permission to use the SITS survey and modify it to understand students' interest in technology.
- Responses include 15 out of 19 participants. UROP provided additional funds to provide gift cards to survey participants.
- Surveys are electronically distributed via Qualtrics.
- Descriptive statistics are provided on the preliminary data, and inferential statistics will be provided to analyze changes in interest once all data is collected.

NAME (your pseudonym): _____

Survey of Ideas about Technology and Science

For each of the items on the following pages, you will be asked to indicate the extent to which you agree or disagree with a statement. Your choices will always be one of the following four options:

- SD = Strongly Disagree
- D = Disagree
- A = Agree
- SA = Strongly Agree

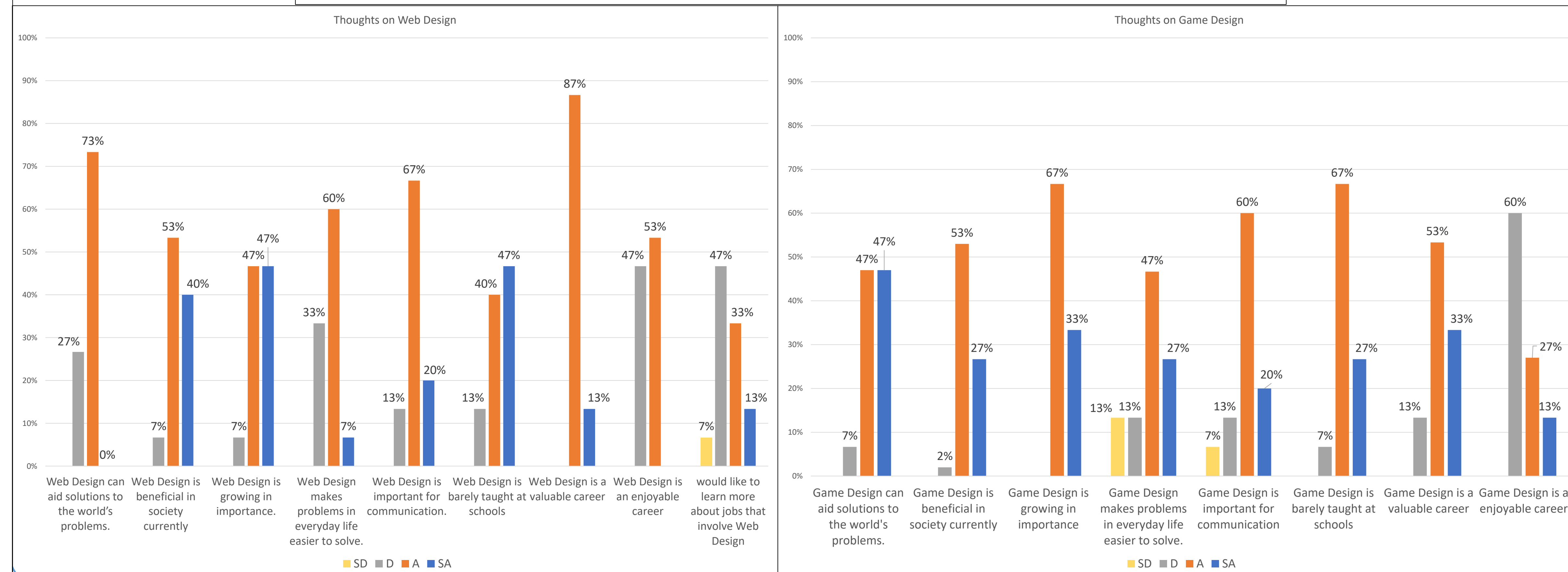
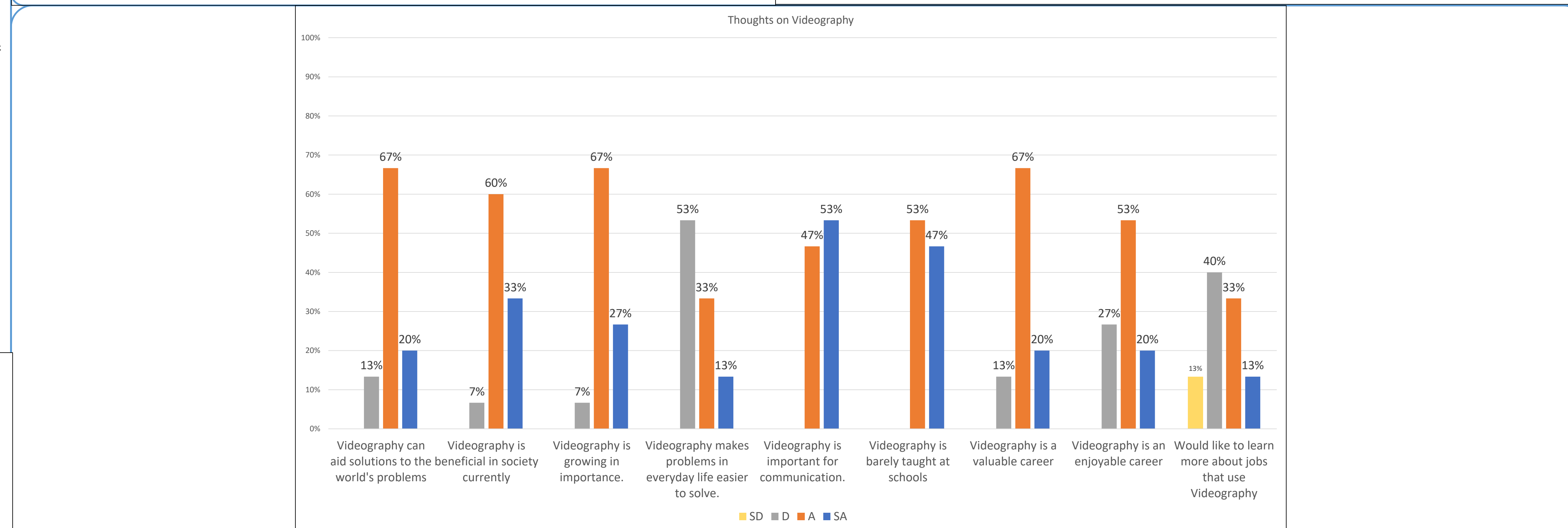
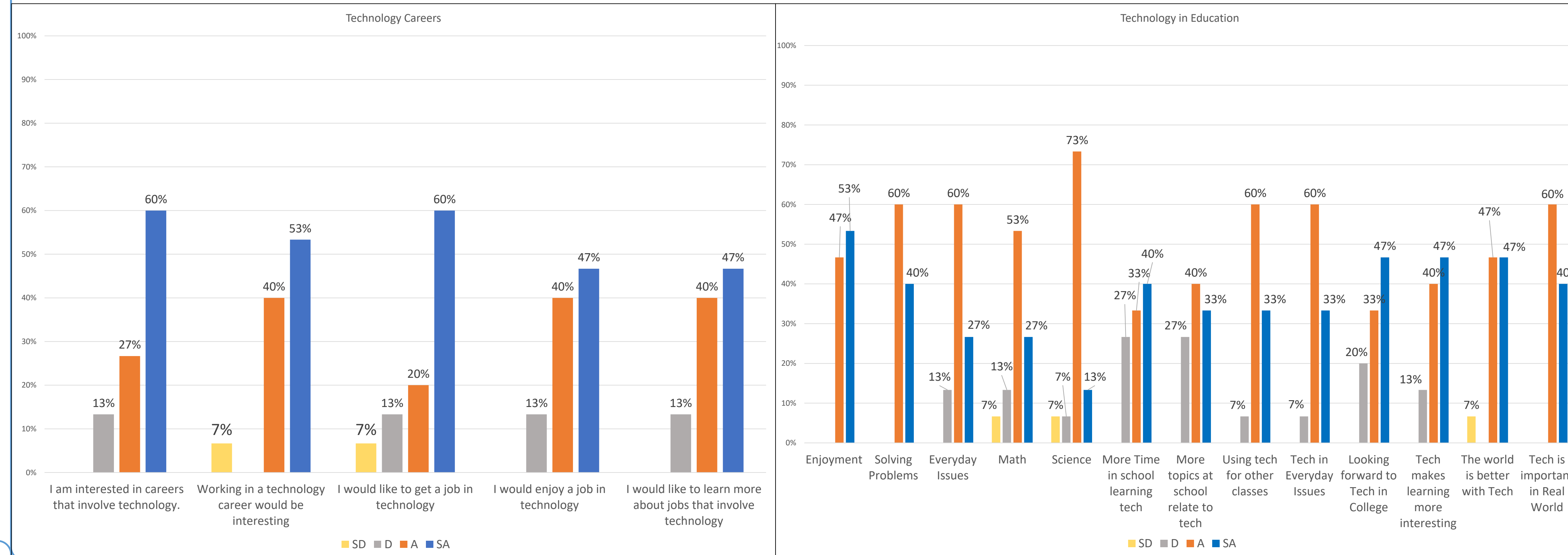
Please circle one response for each statement.

Section I: Questions in this section present ideas related to learning and your experiences in school. Indicate the extent to which you agree or disagree with the following statements. Please circle ONE response for EACH item.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	SD	D	A	SA
1. I enjoy learning science				
2. School science has improved my decision making				
3. I enjoy using technology to solve science problems				
4. I like learning about everyday issues that relate to science				
5. Technology helps me learn science				
6. More time in the school day should be devoted to science				
7. We should spend more time in science classes learning about everyday issues that relate to science				
8. I enjoy using technology to learn science				
9. I enjoy learning science when it relates to everyday issues				
10. Learning science is interesting				
11. I look forward to taking science classes in high school				
12. Computers make learning science more interesting				
13. Science discoveries make the world a better place to live				
14. What I learn in science class is important in the real world				
15. My science class is fun				
16. We do interesting activities in science class				
17. I look forward to going to my science class				

Results

For the charts below, each bar represents an opinion. Blue means Strongly Agree(SA), Orange is Agree (A), Gray is Disagree(D), and Yellow is Strongly Disagree(SD).



Analysis/Discussion

Chart 1 (Technology Careers)

Participants expressed that they were interested in technology careers, would enjoy a job in technology, and would like to know more about technology-related jobs.

Chart 2 (Technology in Education)

Participants greatly enjoy technology in the classrooms and most believed that technology helps in solving problems, with classroom work, and in everyday issues.

Chart 3 (Thoughts on Videography)

When exposed to the specific topic of Videography, the participants enthusiasm decreased. Compared to Graph 1 and 2, a lot more participants disagreed with statements. When asked about wanting to explore this career more, a majority disagreed.

Chart 4 (Thoughts on Web Design)

When exposed to Video Design, participants seemed to have mixed feeling about the certain topic. Compared to Chart 3, their agreeability increased, but there are still participants disagreeing when asked if they want to pursue a career in this field.

Chart 5 (Thoughts On Game Design)

Finally, in the Game Design chart, the agreeability tendency maintained from Chart 4, as well as the trend of a majority not wanting to pursue this topic as a major.

Conclusions/Future Work

- Preliminary findings suggest that young Black high school students in this study recognize the increased effects of technology on our society and want to see changes in their classrooms, but there is little evidence that they know about jobs in these fields.
- Next steps include 3 additional surveys to identify whether interests in technology change after participants are exposed to multimedia in game design, web design, and videography. It is expected that interactions with multimedia will increase student interest in technology and also allow researchers to understand the use of multimedia to engage more young Black men in high school.
- A survey will also be administered to parents to compare whether there is a relationship between parents' initial perceptions about technology and their students'.

References

Romine, William, et al. "Student Interest in Technology and Science (SITS) Survey: Development, Validation, and Use of a New Instrument." *International Journal of Science and Mathematics Education*, Springer Nature, 3 Oct. 2021, https://www.academia.edu/26191685/Student_Interest_in_Technology_and_Science_Sits_Survey_Development_Validation_and_Use_of_a_New_Instrument?email_work_card=view-paper