The Learning Partnership

DeSports Summer Academy 2023

Report to the College of Computing and Digital Media

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ABOUT THE DESPORTS SUMMER ACADEMY

Hosted at the DePaul Center from June 19th to June 23rd, the DeSports Academy brought together Chicago high school students for a week of competitive skill building with the videogame *Valorant*. These skills aligned with academic and life competencies. The program was led by two educators experienced in computer science instruction and gaming.

ACADEMY GOALS

During the academy, campers participate in a range of enriching activities where they:

- Take charge of their learning journey by embracing esports as an avenue for **exploration and personal growth**.
- Acquire and master **global professional skills** (GPS) that universities and employers value.
- Engage with professionals from various industries, broadening understanding of **career pathways**.
- Expand their knowledge of **computer science opportunities**
- Develop effective **goal-setting techniques** to enhance their performance not only in gaming but also in academics and career trajectories.

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EXECUTIVE FINDINGS

Data analyzed by the evaluation team revealed computer science and skill-related changes after the Academy. Key findings included:

1. Campers joined from diverse backgrounds and most possessed previous computer science experience.
2. Campers' perceptions of how costly pursuing CS would be decreased by 3.13%
3. 77% of campers increased their interest in taking computer science courses
4. All campers reported increased their communication and strategic gaming skills following the academy
5. Campers desired more gaming options and more organization with the *Blender* software activities

CONCLUSIONS

The Academy increases campers' interest in computer science by connecting them with experienced faculty, speakers, and likeminded students. Campers enjoyed having role models in computer science who made them reconsider the field as a realistic pathway to continued interaction with gaming. DeSports can address camper feedback to make the camp even more successful moving forward.

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METHOLDOLOGY

THE EVALUATION SET OUT TO UNDERSTAND THE ACADEMY FROM A VARIETY OF PERSPECTIVES

The Evaluation Team Collected data from a variety of sources for this report, including:

1. **Online Surveys** – Campers completed surveys on both the first day and last day of the Academy to help measure changes to their gaming skills and interest in computer science.

2. **Independent Observation** – An evaluator observed campers and leadership and collected notes on the first day of the Academy. Observations helped to contextualize findings of online surveys and guide later interviews.

3. **Open Responses** – At the end of the final survey, campers were given a chance to provide feedback in text form regarding what aspects of the program they enjoyed, what aspects did not work well, and any suggestions they had for improvement.

Quantitative data was analyzed in Excel and visualizations were generated in Excel and Flourish. Open responses were imported to Word and quotes were selected by the evaluator to support survey data and conclusions.

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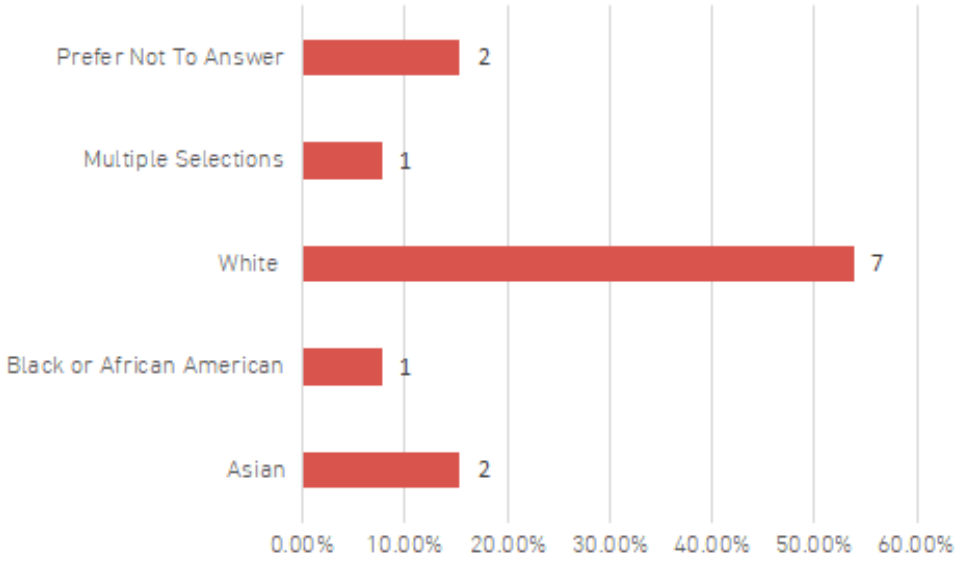
PARTICIPANT DESCRIPTION

This year, **13 Chicago high school students** took part in the Desports Summer Academy.

A **majority of these campers identified as Male** (92.3%) with one student identifying as 'Other'. As depicted in *Figure 1*, **a majority of campers identified their race as White**, with lesser representation from Asian, Multiple Race, and Black identities. Three students (23.1%) identified their ethnicity as Hispanic.

Campers were entering grades 9 to 12 in the fall. However, **a majority of campers (84.6%) were upperclassmen**, or entering grades 11-12.

RACE OF CAMPERS



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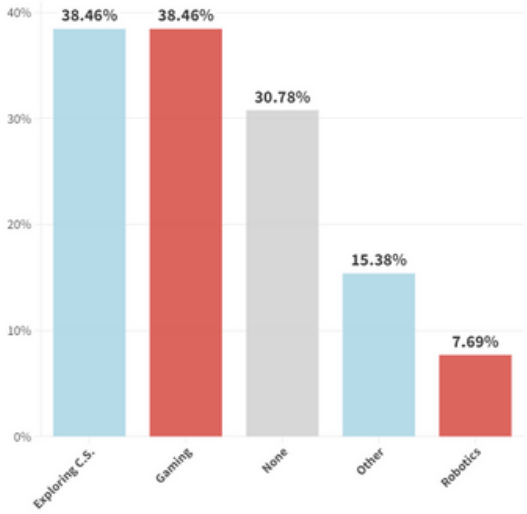
PRE-ACADEMY RESULTS

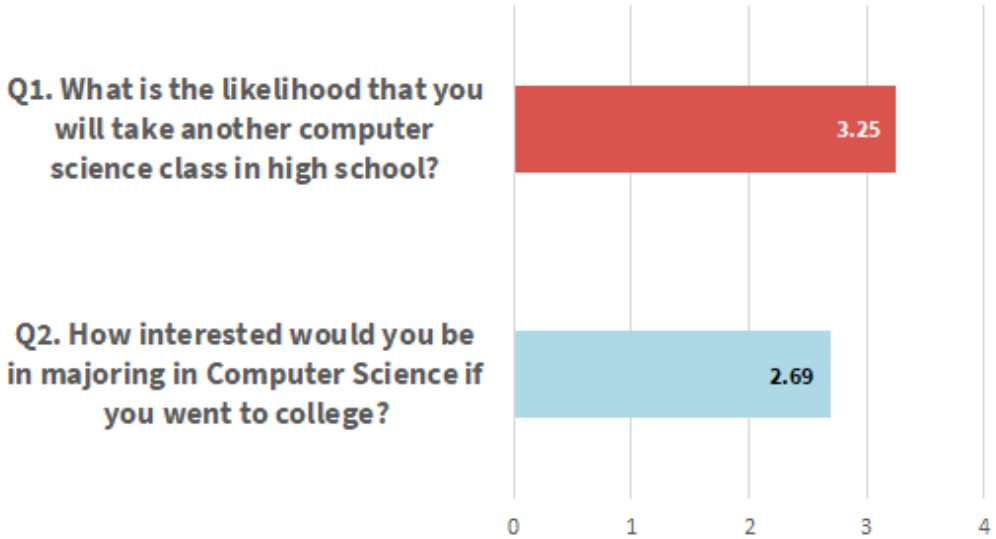
Education Experience



Most campers had attended a computer science (CS) class prior to the academy (61.5%). Popular courses included *Exploring CS*, *Robotics*, and *Gaming*. **Nearly a third had never taken a CS class** despite a majority (85%) being upperclassmen, highlighting the need for programs like DeSports to increase exposure and interest in the subject.

Baseline Interest in Computer Science

Campers rated two items on a scale of 1-4 to measure their baseline interest in CS (See below). Campers seemed to possess a **high to moderate interest in and likelihood to pursue a CS education.**



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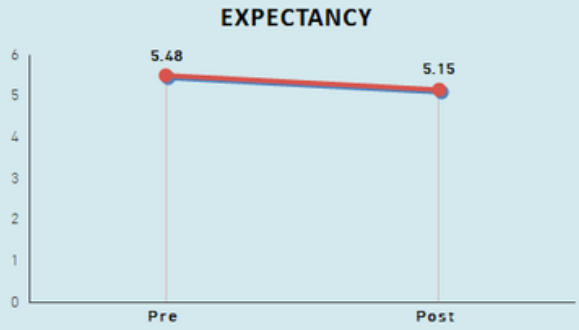
THE ACADEMY'S EFFECT

HOW DID CAMPERS' ATTITUDES CHANGE TOWARDS COMPUTER SCIENCE?

> *"Allen inspired me to give the game design pathway **another chance**"*
>
> *— Student Feedback*

The Expectancy-Cost-Value (EVC) Scale

The EVC was completed before and after the Academy. The EVC is based on a premise that a choice of major is dependent on **expected success** in the field, how much **value** is put in the field, and how much **cost** is associated with pursuing that major.

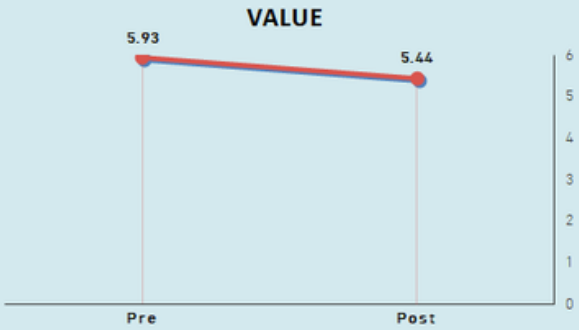


CS Expected Success

Average **expectancy of success decreased by 6.02%** following the Academy. However, this may be attributable to a ***'ceiling effect'*** as baseline scores were close to the highest possible value (6).

CS Perceived Value

Average **perceived value decreased by 7.25%** following the Academy. Once again, a ceiling effect may be at play, where baseline scores were already high relative to the range of the scale.



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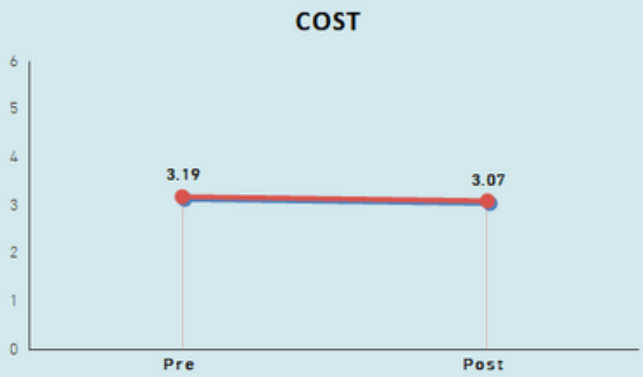
THE ACADEMY'S EFFECT

PERCEPTIONS OF COMPUTER SCIENCE AFTER THE ACADEMY

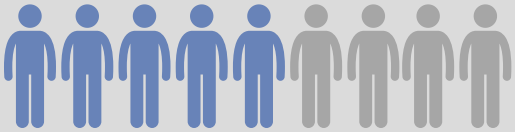


CS Perceived Cost

Average **perceptions of how costly pursuing CS would be decreased by 3.13%.** According to scores, campers **perceived less obstacles towards investing in a CS education** following the Academy. .

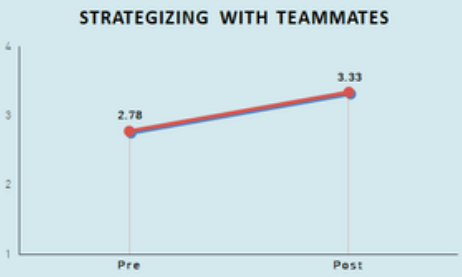
77% of campers increased their interest in taking computer science courses

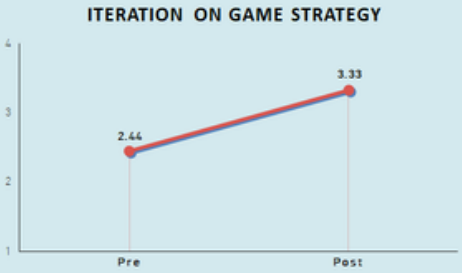
55% of campers increased their interest in seeking a computer science major



THE ACADEMY'S EFFECT

HOW DID CAMPERS' GAMING SKILLS CHANGE DURING THE PROGRAM?



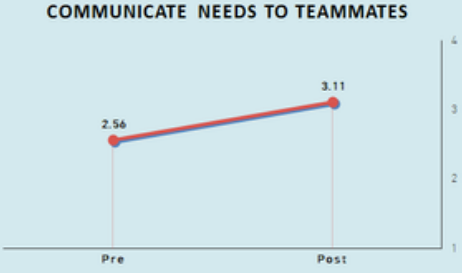


Strategic Skills

Campers rated their **strategic gaming skills** on a 4 point Likert Scale (1 = No and 4 = Always). The frequency that campers created strategies with their teammates **increased for all campers following the program**. The frequency campers iterated on their gaming strategy also **increased following the program.**

Communication Skills

Campers rated their **team communication skills** on a 4 point Likert Scale (1 = No and 4 = Always). The frequency campers used effective communication with their teammates **increased for all campers following the program**. The frequency campers communicated needs to teammates also **increased following the program.**



CONCLUSIONS

INCREASING COMPUTER SCIENCE INTEREST WITH GAMING

Overall, the Academy seemed to improve campers' interest in computer science, **as evidenced by their commitment to a CS education**. While campers' expectancy, value, and cost perceptions of CS did not significantly improve, students reported enjoyment in meeting faculty and speakers with experience in the field. As one camper put it, their favorite part was "meeting the faculty and hearing about their experiences and advice." **Connecting with other campers was also a source of inspiration**. Several students stated they enjoyed editing videos with others and sharing their interest in gaming.

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CONCLUSIONS

IMPROVING THE DESPORTS ACADEMY

Recommendations for improvement from campers could be divided into two themes:

1. **Better Video Editing Preparation**
   Two students felt they were unprepared for demonstrations and activities involving the video editing software *Blender:* "We didn't have enough time and preparation for the video."

2. **Increasing Gaming Options**
   Several students indicated a desire for activities centered around games besides *Valorant*, or other options during free play such as *Rainbow Six Siege* and *Overwatch*.

ACKNOWLEDGEMENTS

Thank you to the entire DeSports Academy staff, including Betty Shanahan, John McCarthy, Allen Turner, and Luccia Dettori, for their insight, leadership, and assistance in the evaluation.

Thank you to all the wonderful campers for their enthusiasm and feedback.

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