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## Does High School Experience with Project Based Learning Relate to Intended Major in College?

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## Does High School Experience with Project Based Learning Relate to Intended Major in College?

Hillary Plumb '20 & Izzie Bleyer '20 (Sponsor: Professor Nancy Budwig) '



## Introduction

Recently, there has been a shift in higher education to incorporate experiential applied learning into the undergraduate curriculum. Schneider (2018) argues that teaching students this skill of real-world application of learning will build their inquisitive learning skills, collaborative problem solving, and agency, thus better preparing them for the priorities of the 21<sup>st</sup> century workforce. This project is part of a larger study which looks at how much experience with applied learning first-year college students bring into higher education.

## Specific Focus of Study

Prior work has suggested that although seniors in LEAP Challenge schools are more likely than others to participate in engaged learning there was some variation by major (Andersson, 2019). We examined whether high school student came in with this experience and whether it differed by intended major.

## **Methods**



## **Participants:**

 First semester college students from four colleges that work with the AAC&U on engaged learning



## **Survey Tools:**

- Two question from the larger survey of 23 questions were the focus of this study (Q2 & Q15). These questions included
- High School students' experience with project-based learning before they go to college
- High School students' intended major (e.g. Science, Social Science, Humanities, Arts, I Don't Know, Double Major)

## **Procedure:**

- Each participant filled out an online survey
- The survey was conducted using Qualtrics
- Students received the link to the anonymous survey from a school administrator from each of the four schools

# Percentage of Students That Reported Experience With Significant Project-Based Learning in High School 50 40 30 20 School 1 School 2 School 3 School 4 Total of all schools School No such experience Half a semester or less of experience More than half a semester of experience

## Figure 1

- Across all 4 schools, we found that most students (84%) reported
  having experience with significant project-based learning in high school.
   We found some subtle differences between the different schools.
- School I had more than twice the percentage (22%) of students that reported "no such experience" with project-based learning, compared to School IV (10%).
- Students at School I and School IV were more likely to have participated in project-based learning for less than half a semester, and students at School II and School III were more likely to participate in project-based learning for more than half a semester.

## **Results**

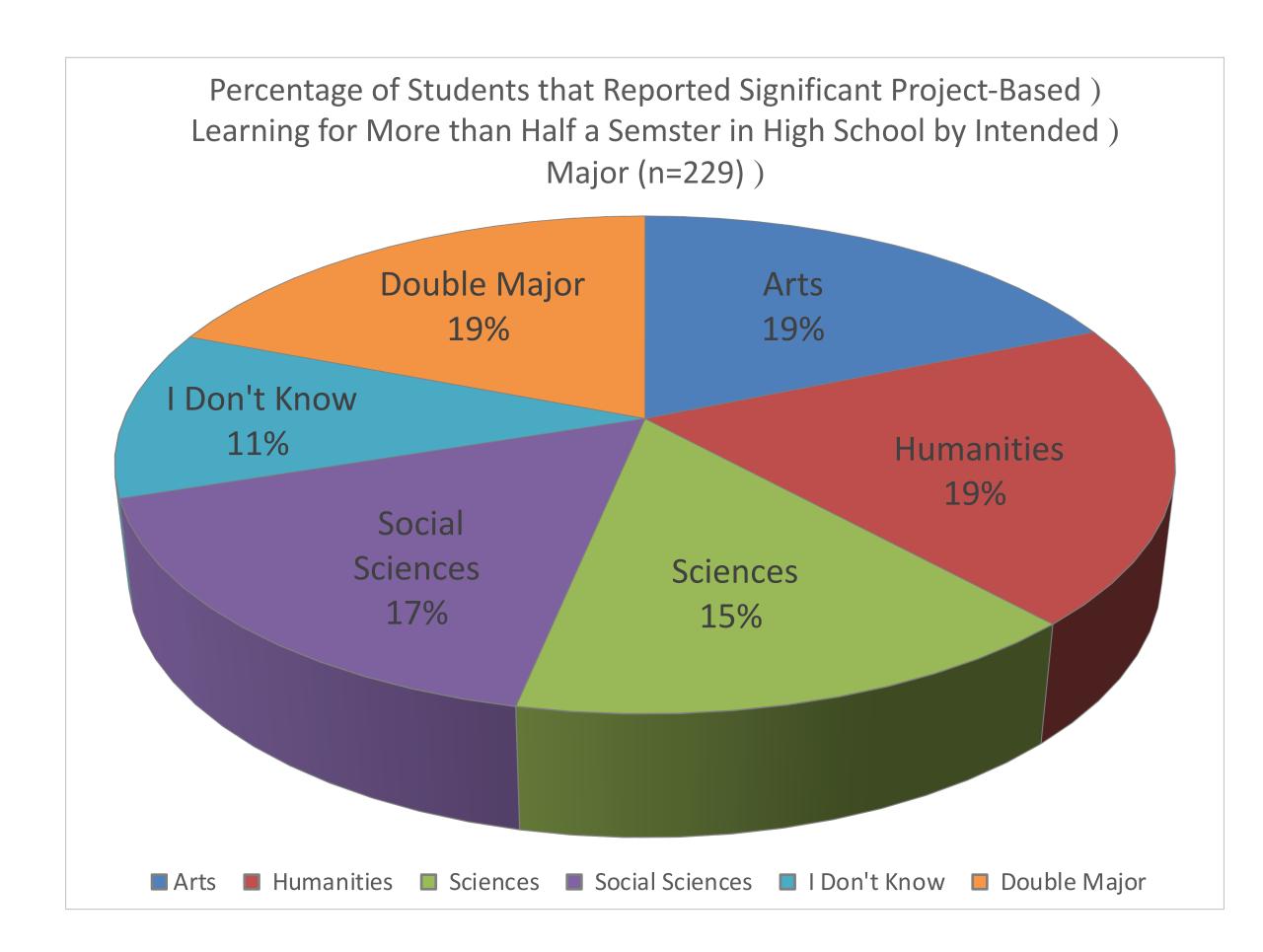


Figure 2

- The portion of students that report having more than half a semester of ) project-based learning did not correlate with a specific intended major. )
- Students who did not know their intended major were less likely to report having project-based learning in high school.



## PHYSICS BIOLOGY ECONOMICS MEDICAL ENGINEERING MATHEMATICS CHEMING LITERATURE MANAGEMENT MUSIC ART & DESIGN LAW COMPUTER SCIENCE ARCHITECTURE

## Summary:

- First semester college students report experience with project-based learning in high school.
- Those who had an intended major did not differ significantly from one another based on the intended major, though those with undecided major reported less project-based learning.

## **Discussion**

## Future Directions:

- Ideally there would be a longitudinal continuation of this study that allows students report in their senior year of college.
- A look into the qualitative data about what project-based experience in high school entailed.

## Implications:

• In designing new curricula for college, in is imperative to understand the range of experience students arrive with in college.

## **References**

Andersson, S., Giammasi, B., Lyons, O., & Carpenter, L. (2019). College Student Participation in Integrative Signature Work by Major. Poster presented at Academic Spree Day

Schneider, C. G. (2018). From cloistered to connected: The practical turn in American liberal Education. Change: The Magazine of Higher Learning, 50(3-4), 46-51. doi: 10.1080/00091383.2018.1509589