

Case Study: Uplifting the Interest of Santa Maria High School Students into the Construction Industry

Juan Zacarias

California Polytechnic State University, San Luis Obispo
San Luis Obispo, California

The central coast of California, has not been a historically proclaimed region that produces large construction projects. The area is well known for other industries, such as the agriculture industry. It is an area that continues to grow interest and persuade these high school students into. Over the years, construction has been growing in the area and can be perceived through the development projects happening in the Central Coast region. Various general contractors have made a move into the central coast looking into expanding their company. This can potentially generate various employment opportunities. This qualitative case study aims to examine the interest Santa Maria High School students have in the construction industry. A structured interview was used to collect data from the eight guidance counselors at the high school. The data reflects the socio-economic structure of this particular school zone and how it impacts the knowledge gap negatively. With less education/knowledge about the construction industry, the demand to incorporate this industry into school curriculums, clubs, funding, internship opportunities etc. will be minimal. Thus, creating an ongoing cycle that is reflected within the students in Santa Maria High School according to the observations of the qualitative data gathered.

Key Words: Student, Construction, Education, Knowledge, High-School

Introduction/Background/Purpose

The purpose for this study is to understand the reasoning on why Santa Maria High School students are not pursuing a higher education in Construction or getting involved with a trade school. The main objective is to understand and identify a potential pattern based on the counselor's response to my questions, and further understand the root of the problem, if one is presented. My overall goal for this study is to attract these high school students into the Construction Management program, give them resources, and promote the benefits of pursuing a career in the construction industry.

As an alumnus from Santa Maria High School, we are exposed and given the opportunity to pursue a higher education or seek a vocational school after high school. We are given many tools by the faculty

to research and investigate different programs. However, there is a lack of exposure in terms of construction careers for the average student in this high school. I personally was not aware of the Construction Management program the CSU system can offer on their various campuses.

The case study will also help me identify what career opportunities these students are being exposed to the most. This is a great indicator to show how much they know about the different career paths that are in the construction industry.

Literature Review

Escamilla, Ostadalimakhmalbaf, and Bigelow conducted a research study to find factors that impacted Hispanic High School students and their decision to pursue careers in the Construction Industry. Their data collection consisted of surveying 11th grade high school students attending public high schools in five different cities in the state of Texas. The key takeaway from this article were the perceptions gathered by the team. One of the perceptions included students who associated the construction industry with low wages, dangerous and dirty conditions, and overall family unit disapproval of the industry (Escamillo, Ostadalimakhmalbaf, Bigelow, 2016). All which are potential factors that prevent Hispanic students from entering a construction related job. The article also emphasizes proposed efforts to alleviate these perceived obstacles and reduce this negative perception of the construction industry throughout these students.

Another study was done in Australia to career counselors at secondary schools in which they were asked about their thoughts of working conditions between blue collars and white collars in the construction industry. The answers given by the counselors were reasonably accurate and realistic, nonetheless there were some discrepancies in some of the answers provided. The inconsistent answers came in areas such as job security, safety, work hours, and having a good work ethic (Francis, Prosser, 2012).

A big takeaway from this study is that the younger generations are not pursuing construction careers due to its male dominated work culture, and its difficult work-life balance. The construction industry tends to follow a very traditional career path. This is explained by the authors, as people go into schools or apprenticeship programs, they subsequently enter the industry for a full-time job, and finally retire. Young people associate this with an unhealthy work-life balance as previously mentioned. This then becomes a discouragement when trying to recruit for the industry. This ultimately leads to the existing skill shortages that currently exist in the construction industry in the country of Australia. The information gathered in this study associates with some industry problems happening today in the U.S. It is notable that industrialized countries around the world are having similar problems in the construction industry.

This qualitative research done in Nigeria identifies the factors and the ultimate decisions an apprentice makes when participating in apprenticeship programs in this country. It is notable to mention the shortage in skilled laborers in this country and the aging workforce problem that can be seen throughout many countries in the world. The data was gathered through forty semi-structured interviews to gain insight into the reasoning behind why these young people decided to participate in a construction craftsperson apprenticeship program in this county. The results varied throughout the interviews, but it was found that these young students were passionate and showed interest in the skill. The interviewees also related these programs with a spirit of entrepreneurship and that their family socioeconomic status were huge factors that intrigued them into entering the program (Osuizugbo, Kukoyi, Abisuga, Ibrahim, 2022).

Methodology

The methodology used for this study was a qualitative approach. This study was based on the perceptions of the counselors and their views and opinions in their responses. Eight structured interviews were conducted to gather data and address potential factors. The eight interviewees consisted of the eight guidance counselors at Santa Maria High School, located in Santa Maria, California. The interviews were conducted in a controlled environment, one after the other to confine answers given by the counselors. This ensured answers were given ethically and there were no similar responses that could skew the data. There were a total of 7 questions in the interview with no time limit for the responses.

The objectives of the interview were to:

- Gain insight into the current level of interest students had on the construction industry.
- Get familiarized with the level of exposure the high school has to the industry.
- The resources and support students get when they are interested in the construction industry.
- What ideas or resources are the counselors giving out to the school to promote the construction industry

Interview Questionnaire

The structured interview utilized seven in depth questions about the proposed topic. Each interview was performed in the counselor's individual office space, and they received no time limit for their answers to the questions. There are a total of two counselors per grade year at the high school, and the questionnaire started off with the graduating senior class. The seven questions were formatted to first get an insight on how demanding the construction industry is at the high school. Then it quickly transitioned into more exposure and resource questions for the participants. The final question was wrapped by gaining information from the counselors on how to expand the construction career growth at the high school. It is important to mention that no preview of the questions was given to the interviewees, as this study aimed to receive genuine answers.

The interview questions and format were as followed:

- How would you describe the current level of interest among high school students in the construction industry?
- Have you noticed any particular trends or patterns regarding student interest in the construction industry over the last 5 years? If so, what are they?
- What kind of exposure do students have to the construction industry through school curriculum, extracurricular activities, or partnerships with industry professionals?
- Are there any trade unions or programs visiting the school during the career day event?
- What resources or support does the school provide students who express interest in the construction industry?

- From your experience being at the high school, what industries or majors are these students most interested in?
- What steps/ideas/resources do you believe are needed that can be implemented to promote careers in the construction industry?

Interview Results

The results from all eight interviews were recorded at the time of the interview. Every participant was asked before starting and every counselor agreed to participate in the recording of their interview. The recording was done to go back and further analyze the answers to grasp a better understanding of the answers. For the most part, each interview had its unique answers and different ideologies. Although in some cases, a few questions were given the exact answer for all the interviews. This helped the study surface the potential patterns. To correctly analyze the data, this study has broken down the data into the most concurring answers and placed them into a category. The categories include the seven different questions asked in the interview.

Question 1.

- Lack of education on different job titles, students were only accustomed with physical labor job duties
- Lack of exposure from school faculty
- Knowledge gap on different job titles in construction industry
- Counselor Lopez states that “10 out of her 400 students spark interest in the construction industry.”
- Students when they hear construction they don't associate with “college going culture” which the counselors are very influential about.
- Students associate construction with entry level jobs.

Question 2.

- Demand fluctuates over the years.
- Students associate construction as a better paying side job, than working in retail or fast-food jobs
- They don't see the construction industry as a white-collar career.
- Students see no room for career growth in construction.
- Higher demand as they see new construction being completed on their campus.

Question 3.

- CTE center (Residential & Construction course) added after COVID, sparked interest in students.
- No extracurricular activities, no construction club on campus.
- SMHS offers an engineering course that covers a section about construction.
- School administration is set on the electives they offer and are not very lenient to change or add any new elective courses, unless there was a big demand from students or parents to add more technical electives.

Question 4.

- Career fair stopped happening after pandemic of COVID-19
- Little exposure of construction companies or trade unions attending in the past years before COVID-19
- Developing a new college career event for next school year

Question 5.

- Add the Residential & Commercial course that is offered in the CTE center into their flowchart.
- Encourage students to take machinery classes at the local Community College

Question 6.

- Agriculture
- Business
- Nursing
- Engineering

Question 7.

- More exploration days, trades coming into the school talking about their craft and their job duties.
- Getting the counselors more educated and faster access to information about different career paths in the construction industry.

Analysis

Question one was used to understand the level of knowledge current students had on the construction industry. It was clear that there was a significant stereotype attached to construction and the jobs the industry offers. The stigma students associated construction with were with only physical labor jobs. Jobs like pouring concrete, framing, or landscaping. Most of the counselors seemed unaware of the different management routes students could receive from the construction industry. This makes it more difficult for students to associate construction as a college going industry. The lack of education between the faculty and its students about the construction industry makes it a very unpopular industry for students at this specific high school.

Many of the counselors answered the second question similarly as they didn't see or perceived any trends or patterns at the school that were related to students being interested in the construction industry. It was pointed out that the demand and popularity of the industry varied throughout the years. A new building is being constructed on campus and that has sparked interest in some lower-class students, but nothing too big. They mentioned that students make patterns and associate construction with high paying jobs compared to working in a retail store or in the fast-food market. One of the counselors mentioned that their students see it as a way of making good side money, but with no room for career growth. This is based on intensive physical labor jobs, which these students are more familiar with because they have family doing these types of jobs.

The only real exposure students get in the school curriculum is a new course Santa Maria High School District has added to their schools. This course is called Residential and Commercial Construction and it is being taught in an education center outside of the campus. Students are transported to the center by school buses and spend two class periods in this course. This new course has been gaining popularity with the students because of the various projects they build throughout the year. The guidance counselors in charge of the freshman and sophomore have been getting more questions about the course from their students, and they believe this course can be a successful course that can lead more students into the industry. It is a great foundation to start off, but there is room for improvement they mentioned. They agreed that the school curriculum is very hard to change, and that the district is very strict on the courses they offer. As for any partnerships with industry professionals, companies, or trades there are none.

Question five was given very similar answers from the counselors. They all mentioned that there has been no career day at the high school ever since the pandemic. Before the pandemic there was no trace of any construction companies or trades coming in for the event. They were unaware that there were trades nearby and basically, they did not really focus on the industry. Majority of them also mentioned that there is work being done to bring the career day back on campus, and that they will try to incorporate some of the local trades and reach out to the schools that have the Construction Management program to send some representatives over.

The study also analyzed and acknowledged which majors students were more interested in when graduating. The repetitive answers were engineering, nursing, agriculture, and business. These were the majors students were applying to this school year and is the major of choice for the under class students. Agriculture is an industry that is well known on this campus and is an industry that is heavily rooted into this high school. Many agriculture courses are offered, and student competitions are offered to the students to participate in. One of the biggest factors that agriculture is so popular within this campus is the location of the school. Santa Maria is an agricultural city and depends very heavily on this industry economically. The high school is in a low-income class region, where most of the parents of the students are designated farm laborers. Students are very exposed and are well aware of the agricultural industry because they are heavily involved.

The last question in the interview was to identify or clarify any potential ideas the counselors had to grow interest in the construction industry to their students. Many of the answers that were given mentioned that they would like to have industry professionals educate them more in the industry. They found it beneficial to have professionals come in and give a presentation to the students that were interested.

Conclusion/Future Research

There is a visible cycle that undergoes at this high school considering three key factors. A knowledge gap that creates uncertainty within the students on what the different opportunities the construction industry could offer. Therefore, there is not a demand from parents or students to incorporate more construction technical courses into the school's curriculum. The socio-economic structure of this school zone impacts the knowledge gap negatively. With less education/knowledge about the construction industry, the demand to incorporate this industry into school curriculums, clubs, funding, internship opportunities etc. will be minimal. Thus, creating an ongoing cycle that is reflected within the students at Santa Maria high school according to the observations of the qualitative data gathered.

In the near future we can see some research being done in creating a plan to bring Cal Poly construction management clubs to Santa Maria High school. Research and develop ways to fully interact and educate students and faculty about the construction management program and the construction industry in general.

References & Appendix

- Escamilla, E., Ostadalimakhmalbaf, M., & Bigelow, B. F. (2016). Factors Impacting Hispanic High School Students and How to Best Reach Them for the Careers in the Construction Industry. *International Journal of Construction Education and Research*, 12(2), 82–98.
<https://doi.org/10.1080/15578771.2015.1077296>
- Francis, V., & Prosser, A. (2013). Career Counselors' Perceptions of Construction as an Occupational Choice. *Journal of Professional Issues in Engineering Education and Practice*, 139(1), 59–71.
[https://doi.org/10.1061/\(asce\)ei.1943-5541.0000125](https://doi.org/10.1061/(asce)ei.1943-5541.0000125)
- Frugé, Maria. Interview. 26 May 2023. Personal.
- Gaeta, Terzino. Interview. 26 May 2023. Personal.
- Grimaldo, Cecilia. Interview. 26 May 2023. Personal.
- Guillen-Franco, Margarita. Interview. 26 May 2023. Personal.
- Lopez, Ben. Interview. 26 May 2023. Personal.
- Lopez, Victoria. Interview. 26 May 2023. Personal.
- Mendoza-Martinez, Rosa. Interview. 26 May 2023. Personal.
- Reasner, Christy. Interview. 26 May 2023. Personal.
- Osuizugbo, I.C., Kukoyi, P.O., Abisuga, A.O. and Ibrahim, K. (2023), "Choosing to be a craftsperson: factors influencing career decision-making among apprentices", *Engineering, Construction and Architectural Management*, Vol. 30 No. 5, pp. 2026-2047.
<https://doi.org/10.1108/ECAM-03-2021-0198>