An In-Depth Look at Career Paths

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Construction Management students are faced with a decision once they graduate college and start moving up in the work force. They must decide what career path they want to pursue, and they typically have very little information about each position to make their decision. Their information on the career paths typically comes from professor’s experiences, internships, and family experiences. The goal of this Senior Project was to allow for an unbiased look at each different career path, breaking it up into Project Managers, Superintendents, and Estimating/BIM Managers. The survey was focused on work-life balance, hours per week, and time spent in office versus the field. The results of the survey showed that there was not much difference between the three different positions. The biggest difference between positions was the amount of time spent in the office versus the field. As expected, Superintendents spend the majority of their time in the field, while Project Managers and Estimating/BIM Managers spend the majority of their time in the office. Due to there being little difference in these categories, the biggest factor a student should consider when deciding what career path to follow should be the responsibilities that each position is responsible for.

Key Words: Career Paths, Superintendent, Project Manager, Estimating/BIM Manager, Work-Life Balance

Introduction

All Construction Management students at some point choose a career path to follow. The most common career paths are the office route or field route. Students are expected to make this decision often with little information about the differences between the career paths. Most often the sources of information for these jobs come from internships, professor’s experiences, and family experiences.

The office route is typically a path to become a Project Manager or Lead Estimator. The Project Manager typically takes on the role of managing the different parties of a Construction Project. Cheng, Dainty, and Moore (2005) state, “Disparate groups of individuals from different organizations are brought together for short periods to work collaboratively toward project goals. The unpredictability that this creates, relative to static production industries, places extreme demands on managers to respond flexibly to rapidly changing project circumstances” (P. 1). Project Managers must possess both technical and social skills. The Field route is typically characterized with a goal of becoming a Superintendent. “Superintendents often come up through the trades and have many years of experience. Their primary function is to coordinate the field work and supervise the trade foremen” (p. 73). (Gould and Joyce 2002, as cited in Barlow, Gunderson, Hauck, 2007). Superintendents of the past have mostly been skilled tradespeople who learned the management skills, but now there is a switch happening where there are more and more college graduates who are skilled in the management part of the job but must learn the trades. This is leading to a predicted shortage of Superintendents in the future.
Due to this predicted shortage of Superintendents, there is a greater need for Construction Management students to fill these positions. Past research done by Jesse D. Longchamps shows that, “59% of respondents were looking to receive an office position upon graduation… [compared to] about one third of respondents were looking to receive a field position upon graduation.” (P. 4). This was a past senior project that surveyed Cal Poly graduates about their preferred career paths. Using this data, it is obvious that there is a preference of Construction Management Alumni to choose the office route. The goal of the research done for this project is to allow students to learn more about both positions and letting them make a more informed decision on what position will suit them best.

**Literature Review**

This research will be broken down into three main career paths leading to Superintendents, Project Managers, and Estimators/BIM Managers. These three roles are vital to the success of a construction project and are all important roles that can be filled by graduates. Before discussing the benefits of each career path, it is important to understand what each career path consists of. Project Managers are typically in charge of the business side of a project. They focus on managing the Project Team and communications with other contractors. Superintendents are mainly focused on field management and keeping the field operations running smoothly and on time. Estimating/BIM Managers are typically involved in the preconstruction phases and help in estimating and modeling future projects.

Another avenue of research done before this survey was the career interest among Cal Poly Construction Management students. In research done by Travis J. Tollstrup, “21 students responded with interest in the Office route, while 11 students had interest in the Field route.” (2018). This survey was sent out to Junior and Senior CM Students of Cal Poly and shows that there is a strong preference among current students to pursue office positions.

In a paper written by Barlow, Gunderson, and Hauck, “This preliminary research indicated there is a place in colleges and universities to educate young people about the skill sets required to be a superintendent.” (2007). In this paper, the authors conducted interviews and observations of Superintendents, Project Managers, and Operations Managers. This paper also pointed out the transition within the Construction Industry of more college graduates taking field positions. This leads to preparing current college students for all these career paths and giving them the information needed to make informed decisions.

**Methodology**

The research was conducted through a survey forwarded to industry professionals. The survey was targeted towards Professionals that have already reached a certain point in their career, where their career path is more defined. This was done so that the data for each category of career choice would accurately fit the career paths. The questions used in the survey were as follows:

1. What year did you graduate Cal Poly?
2. What is your current job title?
3. How long have you been under your current job title?
4. What was the entry level position that you held?
   a. Project Engineer
   b. Field Engineer
   c. Estimating Engineer
What type of company do you work for?
   a. General Contractor
   b. Subcontractor
   c. Construction Management Firm
   d. Other

What type of work does your company perform?
   a. Residential
   b. Commercial
   c. Heavy Civil
   d. Specialty (MEPS)
   e. Other

Are you typically based out of a Jobsite Trailer or Main Company Office (pre-COVID)?
   a. Jobsite Trailer
   b. Main Company Office
   c. Other

On Average, how many hours do you work per week?
   a. 30-40 hours
   b. 41-45 hours
   c. 46-50 hours
   d. 51-55 hours
   e. 56+ hours

How much time do you spend in the office versus the field?

How would you rate your work-life balance? (1 being very unsatisfied – 5 being very satisfied)

Have you seen an increase or decrease in work-life balance in the past 3 years?
   a. Increase
   b. Decrease
   c. Stayed the Same

Following the previous question, do you contribute this increase/decrease in work-life balance to COVID or something else?
   a. Yes, my increase/decrease is due to COVID
   b. No, my increase/decrease is not due to COVID
   c. Stayed the same
   d. Other

Results

The survey was forwarded to industry professionals and received responses from 49 people, the results for the survey are as follows:

1. The Graduation years of the respondents ranges from 1991-2019. The chart below shows the spread of graduation years. The average year of respondents was 2009, which shows that most of the survey respondents have been in the industry for at least 10 years.
2. Of the 49 respondents, there were 23 Superintendents, 11 Estimating/BIM Managers, and 15 Project Managers. The survey was sent out twice, and the second time it was asked that Superintendents specifically fill it out. This is due to the low number of responses from Superintendents on the first round of surveying.

3. The average time spent at current position was 6.1 years. This ties into the average graduation year being 2009. This allowed for alumni in higher positions to be surveyed, giving a more accurate representation of each career path.

4. The most common entry level position held was Project Engineer at 47% of Respondents. This was to be expected as most companies don’t have these other roles and group new hires under the “Project Engineer” title.
5. The respondents worked for mostly General Contractors with some saying they worked for subcontractors. There were no respondents from a Construction Management Firm and this could be due to different job titles for that type of company.

![Figure 3. Question 5 Results.](image)

6. Most of the respondents worked for Commercial companies which is expected as that is the main sector of work that Construction Management students choose to pursue. The next most popular sector was Residential followed by Heavy Civil and MEPS.

![Figure 4. Question 6 Results.](image)
7. More than half of the respondents were based out of a Jobsite Trailer with about 40% based out of the Main Company Office. This was expected because most Project Managers & Superintendents are assigned to a specific job, while Estimating/BIM Managers may have multiple jobs at once.

![Figure 5. Question 7 Results.](image)

8. For hours per week, the results were broken down into each career path. See Figure 6 for the data. The Superintendents had the highest average hours per week at 52.5 hours with the Project Managers at 51.2 hours per week. The Estimating/BIM Managers had the lowest average hours per week at 48. This could be due to Project Managers & Superintendents being tied to a specific job and that projects timeline may have them work overtime to finish on schedule.

![Figure 6. Question 8 Results.](image)
9. The results were also broken down into the three main career paths. Figure 7 shows the amount of time spent in the office. The other percentage of time would be spent in the field. (i.e. If 60% of time spent in the office, then 40% of the time is spent in the field) The Project Managers & Estimating/BIM Managers spent most of their time in the office, while the Superintendents spent most of their time in the field. This was to be expected as Superintendents deal with field operations more than Project Managers & Estimating/BIM Managers. This is an important distinction between the positions, depending on a student’s interests in field work or more of the business side.

10. The work-life balance results are shown in Figure 8. The range was 1-5 with 5 being very satisfied and 1 being very unsatisfied. The average score for Superintendents was 3.78, the average score for Estimators was 3.82, and the average score for Project Managers was 3.67. These averages are all around the same, which leads to their not being a huge difference between the positions when it comes to work-life balance. A decision on career paths should not be based on expected work-life balance.
For the question 11 results, Question 12’s responses were taken into consideration to counteract the effect that COVID had on work-life balance. In Figure 9, the results are shown for respondents who said that their increase/decrease was not due to COVID. Very few respondents said that their work-life balance decreased in the past 5 years and most said that it had increased or stayed about the same.

Conclusions

There are very little differences between the career paths based on the main questions in this survey. The major differences between the career paths are the average hours per week and the amount of time spent in the office versus the field. The Estimators had the lowest average hours per week at 48, with the Superintendents and Project Managers at 52.5 and 51.2, respectively. As expected, Superintendents spend most of their time in the field and Project Managers and Estimating/BIM
Managers spend most of their time in the office. The work-life balance was around the same for all the career paths at around 3.7-3.8. For the most part, the work-life balance stayed the same or increased over the past 5 years which is to be expected as the respondents are advancing in positions. The main conclusion from this survey is that there are not as many differences between the career paths as expected.

Students should be able to use this survey as one of their resources in choosing what career path to follow. Students should also investigate each position more and understand what each position deals with and what their common responsibilities are. Positions will also vary depending on the company, so it is also important to gain hands-on internship experience to really decide what career path fits the best. The results of this survey have shown that there is not much difference in the lifestyles of each career path and emphasizes the need to be interested in what one chooses.

Further Research

Some ideas for further research are conducting case studies on individuals within each position and comparing their views on their roles and career choices. This could provide more insight into why an individual chose a certain position and what they like or dislike about their position. Another survey could also be sent out to Industry professionals to gauge what their typical responsibilities may be on a project. This research has shown that there are not many of differences between the positions other than what each position would be responsible for, so that should be what students focus their research on in the future.
References


