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# The Impact of Pre-graduation Experience on the Longevity of Initial Full-time Employment

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While it is common for universities to track employment rates for recent graduates, it is not as common for universities to track the longevity of the initial job placement. Previous studies have demonstrated the benefits of experiential learning for construction management students, but there is less information available about whether and how industry experience prior to graduation may impact the longevity of the initial full-time job. This study involved a survey of alumni about their industry experience prior to graduation and the longevity of their initial full-time position. Descriptive statistics indicate that students who had prior experience with their full-time employer were more likely to still be working for that full-time employer than those who had no prior experience with the company prior to graduation. The results also indicate that those with multiple internship experiences, as well as experiences with multiple companies, are more likely to still be working for their full-time employer than those who did not. The results of this study can be useful to those who advise students about internships and full-time job placement, as well as companies who are seeking to improve retention.

**Key Words:** Co-op, Experiential learning, Intern, Retention

## Introduction

The National Association of Colleges and Employers (NACE) reported that more than 80% of schools conduct annual first-destination surveys to track graduates (Gray, 2022). While it is common practice for universities to report job placement rates, the methodologies vary and make it difficult to compare the results (Rogers, 2013). According to NACE, some universities collect data internally, while nearly 30% of universities use a third-party to collect data (Gray, 2022). Universities typically collect data in the form of surveys, often with a six-month post-graduation window for completion of the survey. (Rogers, 2013). Some universities may define job placement as either full-time employment or full-time enrollment in graduate school, while other universities may define job placement as including part-time work (Rogers, 2013). Whether the surveys inquire if the graduate is employed in their field of study also varies from one institution to another (Rogers, 2013).

At Mississippi State University (MSU) employment data is collected based on the standards outlined by NACE. Data is collected through First Destination Surveys. NACE uses the terminology successful career outcome, rather than placement rate. A successful career outcome is defined as being employed full or part-time, continuing education, participating in a volunteer or service program, or serving in the military (NACE, 2019). The survey is distributed by the MSU Career Center for six months after graduation. Data is collected via survey responses, email, staff phone calls or texts, and websites such as LinkedIn and Facebook. Results are reported as a knowledge rate rather than a response rate. This is a NACE standard intended to reflect that data is collected by means beyond just the survey responses (NACE, 2019). Within the university, results are tracked by college and unit, for comparison to overall university results.

In addition to university career fairs held in the fall and spring, the Department of Building Construction Science hosts a departmental career fair each fall and spring. In recent years, the number of companies recruiting at each departmental career fair has not only grown but has exceeded the number of students in the graduating class. In the most recent survey, the departmental knowledge rate was 100% (Mississippi State University (MSU) Career Center, 2022) which was above the 65% target rate established by NACE (NACE, 2019). The successful career outcome rate was also 100% (MSU Career Center, 2022). While the results are notable and a source of departmental pride, the current state of the economy in the construction sector does play a role in this outcome because opportunities abound.

Although efforts are made to track the first destination of graduates, less is done to assess the longevity of the first destination of graduates. In the short-term and in a strong economy, doing so would be helpful in advising students through their job search and acceptance decision. This could help students not only identify their first destination, but to also find longevity and job satisfaction. Conversely and in the event of an economic downturn, it is important to proactively look beyond the initial job placement within six months of graduation. In a tighter job market, understanding more about the relationship between experience prior to graduation and first destination after graduation would be helpful in advising students how to strategically position themselves in a competitive market.

## **Literature Review**

In the current economy, it is common for graduates from construction management programs to have multiple offers because of high demand in the industry. While those in academia hope that trend continues for students, an economic downturn could quickly change the employment prospects for current and future students. As noted by Yates, prior to the 2008 economic downturn the Construction Management Technology Program at Oklahoma State University had a more than 20-year history of 100 percent job placement rate with most students who graduate in May having a full-time job committed six months prior to graduation (Yates, 2010). When the economic downturn of 2008 began, the 2009 graduating class faced a vastly different job market, with 40 percent of the May 2009 graduates still seeking employment three months prior to graduation, and five percent still seeking employment four months after graduation (Yates, 2010). Many other programs were likely similarly situated.

From the employer point of view, the hiring process in the current economic market is incredibly competitive. Because of the time and resources companies invest in recruiting talent – through career

fairs, internships, and other means – it is also important for companies to invest in prospective employees who will provide longevity and a return on the company investment.

The benefits of experiential learning – whether that experience is paid or unpaid, completed for credit or not – can be mutually beneficial for all parties. A 2006 study by Moore and Plugge identified perceived benefits of internship programs for employers. The five most strongly reported benefits were that “internship programs can be used as a recruitment device for students upon graduation,” “employees within your company strongly support hiring of students,” “internship programs provide a linking relationship for industry with colleges,” “internship programs are a cost-effective mechanism for recruiting,” and “hiring an individual upon graduation who was previously an intern within your company increases employee retention” (Moore & Plugge, 2006). The top five ranked perceived benefits to students reported in the Moore and Plugge study were “students gain marketable skills from participating in an internship,” “internship experiences reinforce the knowledge students gain in the classroom,” “internship experiences assist students’ career development,” “internship experiences enhance students’ changes of post-graduation employment,” and “internship experiences provide students with relevant work references” (Moore & Plugge, 2006). A later study by Plugge found that among internship students surveyed, more than half of respondents agreed, or strongly agreed that an internship helped them secure an offer with that same company (Plugge, 2018).

Additional studies have established similar benefits of experiential learning for students (Adcox Jr., 2000, and Wasserman, 2008). Other studies have explored what percentage of American Council for Construction Education (ACCE) accredited construction management programs require experiential learning as a degree requirement, along with suggestions for how to structure curriculum and develop internship programs (Chapin et al., 1997, Miers, 2006, and Panthi et al., 2017). Those studies provide valuable findings that establish the benefits of pre-graduation work experience and identify the skills and knowledge employers expect of entry-level employees. However, those studies focus on the point in time while students are still enrolled in undergraduate programs, how the experience impacts the remainder of their education, and/or how that experience impacts their preparedness for entering the job market upon completion of their degree program. The focus of those studies is more on the relationship between pre-graduation experience and obtaining the initial full-time job. The goal of this study is to focus on whether pre-graduation experience influences the longevity of the initial full-time job and what factors that may contribute to that longevity from the employee point of view.

## Methodology

After receiving Institutional Review Board (IRB) approval on IRB Protocol Number 23-378, a link to the Qualtrics survey was distributed via email and LinkedIn to alumni of the Building Construction Science Department at Mississippi State University. The anonymous survey remained open for two weeks in early fall 2023. During that time, 60 responses were recorded. Four incomplete surveys were invalidated for a final sample size of 56 responses. Because the department is still relatively new this sample size represents approximately 20% of the departmental alumni. The survey used skip logic based on whether respondents had pre-graduation experience or not, and whether they were still working for their initial employer or not. Due to the limited sample size overall and within several subsets, the results are reported as descriptive statistics.

Based on a few unique features of the curriculum, for the purpose of this study internships and co-op experience are defined as follows. An internship is paid or unpaid work experience for which no academic credit is earned. That experience can take place during the summer or other breaks in the

academic year and is not monitored by the department. A co-op is paid or unpaid work experience for which academic credit is earned. A co-op must be approved and monitored by the department, can only be completed one time, can occur at one of two specific points in the curriculum, and takes place during an academic semester.

## Results

### *Pre-Graduation Experience*

#### *Respondents with no pre-graduation experience*

Out of the 56 responses received, only three respondents (five percent) reported not having any experience prior to graduation. For those with no pre-graduation experience, the skip logic of the survey then progressed to questions about the nature of their initial full-time employment. Among the three respondents with no pre-graduation experience, two of the three reported still being employed by their initial employer – one for one to three years and the other for four to five years. Both received their first promotion within two years of employment. Additionally, both have been approached by other companies but primarily chose to remain with their initial employer primarily due to the uncertainty of whether the other job would be better. The third respondent with no pre-graduation experience changed employers within one to three years, prior to being promoted, and primarily to be in a preferred location. Because the focus of the study is to explore the relationship between pre-graduation experience and the longevity of the initial full-time position, the three respondents with no pre-graduation experience are excluded from the results that follow.

#### *Respondents with pre-graduation experience*

Respondents who reported having pre-graduation experience were asked a series of questions about the nature of that experience. Among the 95% of overall respondents who reported completing one or more internships prior to graduation, 9% first interned prior to college, 26% first interned after their freshman year, 53% obtained their first internship after their sophomore year, and the remaining 11% first interned after their junior year. Once respondents completed their first internship, they continued to intern each subsequent summer prior to graduation. Therefore, those who interned during high school or after their freshman year reported having completed three or more internships, respondents who obtained their first internship after their sophomore year reported completing two internships, and those who obtained their first internship after their junior year completed one internship prior to graduation.

While only 27% percent of all respondents reporting having completed a co-op, it is worth noting that the co-op experience was not initially offered in the curriculum and was therefore not available to all alumni of the department. Additionally, the co-op is optional and may not be feasible for all students depending on whether they enter the program with transfer and/or accelerated placement credit. All respondents who completed a co-op also completed one or more internships.

Respondents with pre-graduation experience were then asked how many different companies they worked for as an intern or co-op. Thirty-four percent worked for only one company, 42% worked for two different companies, 23% worked for three different companies, and one percent worked for more than three companies prior to graduation.

### *Initial Full-Time Position*

The focus of the survey then shifted to questions related to the respondents' initial full-time position after graduation. Thirty-six percent of respondents indicated they accepted a full-time position with a company they had no prior work experience with. The remaining 64% of respondents accepted a full-time position with a company they had prior experience with. Within the subset of respondents with prior experience with their initial full-time employer, 79% had worked as an intern only, three percent as a co-op only, and 18% as both an intern and co-op.

Among the respondents who had interned for their full-time employer prior to graduation, 52% had worked for that company for only one summer, 33% worked for that company for two summers, nine percent had interned with that company for three summers, while the remaining six percent reported having worked for that company for more than three summers. Those who completed two internships with their employer were most likely to receive a full-time offer prior to the start of their senior year, with 82% of that subset receiving a full-time offer prior to the start of their senior year, as opposed to receiving the offer at some point during their senior year. For those who interned with their full-time employer for one summer, 59% received the full-time offer prior to the start of their senior year, as opposed to some point during their senior year.

As for the nature of their first full-time position, many respondents (64%) indicated their initial job title was Project Engineer / Assistant Project Manager, followed by Field Engineer / Assistant Superintendent at 25%. The remaining 11% of respondents began as an Estimator, Assistant VDC Manager, or Assistant Preconstruction Manager. Workloads varied slightly with 42% reportedly working between 40-49 hours per week, 45% between 50-59 hours per week, and 13% working 60 or more hours per week. The degree of travel or relocation also varied. Fifty-nine percent reported their initial full-time job requiring little to no travel, which was defined for the survey as primarily working in one location with travel usually limited to same-day travel in the same city and being able to remain in the same location when one project finishes and another begins. Fourteen percent reported having to do a moderate amount of travel, defined in the survey as spending up to two weeks per month on overnight travel to job sites in other cities. The remaining 27% reported having a heavy travel requirement, defined in the survey as spending more than half of their time on overnight travel to other cities or having to relocate for each project.

Regarding how soon after beginning full-time employment respondents received their first promotion, 21% were promoted within one year, 36% within two years, seven percent within three years, and four percent within more than three years. The remaining respondents either have not been promoted yet (20%) or changed companies prior to being promoted by their initial employer (13%).

### *Prior Experience vs Longevity of Initial Employment*

Among the respondents who still work for their initial employer, 29% graduated less than one year ago, 29% graduated one to three years ago, 26% graduated four to five years ago, 13% graduated six to ten years ago, and three percent graduated more than 10 years ago. It is worth noting that due to the department being relatively new, very few alumni graduated more than 10 years ago. Overall, 90% of respondents who still work for their initial employer have been approached by other companies, including 78% of the respondents who have been out of school for less than one year.

Of the respondents who no longer work for their initial employer, 19% changed companies less than one year after beginning full-time employment, 48% changed in one to three years, 29% changed in four to five years, and five percent changed in six to ten years.

Among all respondents who had pre-graduation experience, Table 1 shows the overall rate at which respondents are still employed by their initial full-time employer based on the number of pre-graduation experiences (internships and co-ops), along with the number of different companies they worked for prior to graduation. Categories for which there were no respondents are marked as non-applicable to distinguish them from categories for which zero percent of respondents are still working for their initial full-time employer.

Table 1

*Percentage of respondents employed with initial full-time employer, based on number of pre-graduation experiences with number of different companies*

Number of experiences	Number of companies			
	1	2	3	>3
1	33%	50%	N/A	N/A
2	67%	62%	100%	0%
3	67%	75%	71%	N/A
>3	N/A	33%	0%	N/A

The results in Table 1 show that in general, completing more than one internship prior to graduation can contribute to longevity in the initial full-time position, whether those experiences are all with the same company or multiple companies. Additionally, working for more than one company prior to graduation can also generally contribute to longevity in the initial full-time position.

A comparison of the number of pre-graduation internships to the rate at which respondents are still employed by their initial full-time employer is shown in Table 2. These results show the overall rate at which respondents are still employed, as well as a breakdown based on different post-graduation ranges of time.

Table 2

*Percentage of respondents employed with initial full-time employer based on pre-graduation number of internships*

Post-graduation time range	Number of internships			
	1	2	3	>3
Overall	38%	64%	71%	40%
< 1 year	0%	100%	67%	50%
1 – 3 years	33%	45%	75%	0%
4 – 5 years	0%	67%	60%	50%
6 – 10 years	100%	50%	100%	N/A
>10 years	N/A	N/A	100%	N/A

The results in Table 2 indicate that overall, respondents with more than one internship were more likely to still be working for their initial full-time employer than those with only one internship. Within all but one relevant post-graduation time-period, completing more than one internship also resulted in a higher percentage of respondents will being employed with their initial employer.

A comparison of the number of pre-graduation companies worked for to the rate at which respondents are still employed by their initial full-time employer is shown in Table 3. These results show the

overall rate at which respondents are still employed, as well as a breakdown based on different post-graduation ranges of time.

Table 3

*Percentage of respondents employed with initial full-time employer based on pre-graduation number of companies*

Post-graduation time range	Number of companies			
	1	2	3	>3
Overall	53%	59%	75%	0%
< 1 year	0%	86%	75%	N/A
1 – 3 years	40%	44%	75%	0%
4 – 5 years	57%	50%	67%	N/A
6 – 10 years	100%	50%	N/A	N/A
> 10 years	N/A	N/A	100%	N/A

The results in Table 3 indicate that overall, respondents who worked for more than one company prior to graduation were more likely to still be with their initial employer than those who only worked for one company. This trend continued in the time periods of less than one year and one to three years post-graduation as well.

Having pre-graduation experience with the initial full-time employer does appear to impact longevity overall, and within each relevant post-graduation range of time. A comparison of the rate at which respondents with prior experience with their initial full-time employer vs those who accepted a full-time position with a company they had no prior experience with are shown in Table 4.

Table 4

*Percentage of respondents employed with initial full-time employer based on prior experience with that company*

Post-graduation time range	Prior experience with initial full-time employer	
	Yes	No
Overall	71%	45%
< 1 year	86%	50%
1 – 3 years	58%	33%
4 – 5 years	64%	50%
6 – 10 years	100%	67%
>10 years	100%	N/A

### *Reported Reasons for Staying with vs Leaving Initial Employer*

Among the respondents who still work for their initial employer, 90% reported having been approached by other companies with job offers. The two most common responses to the primary reason they chose to remain with their initial employer were being happy with their company culture and better opportunities for advancement with their current employer, with each receiving 23% of the responses. Among the other primary reasons for remaining with their initial employer, 16% of respondents indicated the uncertainty of whether the other job would be better as their reason for not changing employers, 13% indicated they stayed for financial reasons, 10% indicated they stayed primarily for being happy with their workload / work-life balance, six percent selected a sense of loyalty to their current employer, six percent selected “other” as their reason or staying, and the

remaining three percent indicated the primary reason for not changing jobs was that it would require a relocation.

Among the respondents who have changed employers, the most prevalently reported primary reason for their decision to change companies was to be in a preferred location (27%). Financial reasons and a change in personal life unrelated to work were the next most prevalently reported primary reason for changing companies, each representing 23% of the responses. The remaining respondents who have changed companies reported that their primary reason for doing so was for a better company culture.

All respondents were given the option of providing open-ended feedback at the end of the survey. Common themes among the responses were in several veins. First, the importance of experience to both academic performance and securing a job at or prior to graduation, with comments such as – “What I learned in my intern/co-op rotations made me a better student and a better employee when I started full time...” and “My career would not be the same without my internship.”

The second theme related to the nature and type of experience that can be helpful, with comments such as – “Interning gives you the opportunity to really feel out a company...,” “I would advise students to intern at multiple companies...,” “My two internships greatly influenced the location of my initial employer after graduation,” and “Looking back, I would probably suggest interning with different companies freshman and sophomore year, then using the summer before senior year to really impress your future employer.”

## Conclusions

The benefits of multiple pre-graduation experiences and experiences with multiple companies can be beneficial to the longevity of full-time employment. As shown in Table 1, respondents who only had one internship with one company were less likely to still be with their initial employer than those with multiple experiences with multiple companies. This is further supported by Tables 2 and 3 which each indicate that multiple experiences and experiences with multiple companies, respectively, result in higher percentages of respondents still being employed with their initial employer, overall and over time. While it is expected that multiple pre-graduation experiences would be beneficial, it is helpful for both students, those who advise students, and companies that hire students realize that it can be mutually beneficial to encourage students to intern for multiple companies. More importantly, the results in Table 4 indicate that prior experience with the initial full-time employer to make a notable difference in whether an employee remains with the initial full-time employer.

While there were no clear patterns in the responses, when it comes to retaining employees, the results indicate that respondents were most likely to leave their company to be in a preferred location, with additional reasons being financial and changes in their personal lives. Conversely, respondents who are still with their initial employer reported their primary reasons for staying were being happy with their company culture and having better opportunities for advancement, with additional reasons being a sense of loyalty and financial.

Additionally, the open-ended comments support that early and varied internship experiences are beneficial to students. Those benefits can be seen during their education, as they see more context for and value in coursework required for the degree. The benefits also then extend to their careers because they have a better sense of what will be expected of them and can refine their career goals. The results



of this study can be useful to faculty who advise students on internship and job selection, as well as companies who may be looking to improve employee retention.

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