

1           **Academic satisfaction and career preparedness: An**  
2           **Exploratory Study on the Perceptions of Construction**  
3           **Management Graduates**

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9           **Abstract.** When students graduate from higher education, their objective is to  
10           gain employment in a field of study where they can utilize the skills they have  
11           obtained. Many Construction Management programs are designed to encompass  
12           within four years, as much academic knowledge and training pertaining to the  
13           construction industry the program is designed around. However, there is often a  
14           disconnect between what is taught in the curriculum and the skills that is valued  
15           in the workplace. Many higher education programs want to know whether their  
16           program provides the necessary skills for their students' success. Students'  
17           satisfaction is one major indicator of their success and by conducting a survey of  
18           the students' satisfaction level in relation to their education and job, programs  
19           often define areas that need improvement so they can create the best possible  
20           learning environment for the students. The objective of this research is to  
21           discover whether the Construction Management program is meeting the needs of  
22           its students. With this knowledge, the Construction Management program can  
23           address the areas that may require further development, making the program  
24           more satisfying for current and future students.

25           **Keywords:** Construction Management, Job Satisfaction, Academic Satisfaction

26           **1 Introduction**

27           When students graduate, they want to be satisfied with their major, and they want that  
28           satisfaction to transition over from their major to their perspective career. "The closer  
29           the fit between an individual's major and subsequent job field, the more satisfied they  
30           should feel with their work experience" [1]. However, "the evidence on the effects of  
31           education on job satisfaction is rather limited," as stated by Vila and Garcia-Mora [2].  
32           Academia satisfaction is researched using such factors as GPA, time to finish a major,  
33           or academic performance. Graunke and Woosley wrote, "For research and practice with  
34           college students, major satisfaction represents an important construct in its own right,  
35           as it is associated with academic performance" [3]. Job satisfaction, like academic  
36           satisfaction, has a set of recurring factors seen throughout research, such as hours

37 worked, pay, and benefits—but rarely is academia satisfaction included. “It is not  
38 clearly understood how specific college experiences affect the acquisition of better,  
39 more intrinsically rewarding work experiences” [4].

40 Satisfaction is important in both academics and career, and it is something most  
41 individuals seek on a personal level. Students want satisfaction of their major and from  
42 their universities; likewise institutions make goals to provide satisfaction; thus, one can  
43 find abundant research and information on satisfaction. “The subject of job satisfaction  
44 and dissatisfaction has attracted a considerable amount of research. It is by far one of  
45 the most studied work attitudes by organizational behavior researchers” [5]. Research  
46 on satisfaction is conducted not only to know whether the employees are satisfied but  
47 also to correct the causes of dissatisfaction. “The purpose of employee satisfaction  
48 surveys are not only to discover employee satisfaction levels, but also to determine  
49 necessary improvements via the results of employee satisfaction surveys” [6]. With  
50 these determinations, employers can seek to improve their employees’ satisfaction,  
51 which will hopefully translate to benefits on the job, such as employee productivity.  
52 This is highlighted in Vila and Garcia’s [2] first of two main approaches, using job  
53 satisfaction as an economic variable. “Analyses here focus on the impact of job  
54 satisfaction on diverse aspects of workers’ labour market behaviour, such as  
55 productivity, absenteeism, turnover, quits and punctuality” [2 p. 411]. Like businesses,  
56 universities and program facilitators seek knowledge from satisfaction surveys. The  
57 objective of these surveys is to improve the program, benefitting school, major, or  
58 program of study.

## 59 **2 Research Purpose**

60 Four-year degree programs are designed and implemented to prepare students for their  
61 future careers in the workplace; therefore job satisfaction is crucial for graduates upon  
62 obtaining a position in their area of study. This research seeks to assess academic and  
63 career satisfaction, with a focus on construction management students who have  
64 graduated from a university located in the Southeastern part of the United States. The  
65 objective is to determine whether the students were satisfied with their academic  
66 studies; and how well the knowledge they obtained transferred over to their first job in  
67 the construction industry. Did they gain job satisfaction because they were well-  
68 prepared through their higher education or were they dissatisfied because what they  
69 learned was insufficient or unrelated, perhaps leading to frustration within their  
70 working career? Regardless of the reason for satisfaction or dissatisfaction, the aim of  
71 this research is to discover whether the Construction Management program is  
72 effectively preparing its students for their career. With the findings from this study, the  
73 Construction Management program can address the areas that may require further  
74 development in an effort to improve the capacity of the program to satisfy current and  
75 future students.

### 76 3 Literature Review

77 With the advancement of construction management technology and practices, it is in  
78 the best interest of the Construction Management (CM) program to align student's  
79 knowledge with industry learning outcomes. As McDermott notes, "Change is a force  
80 constantly shaping the economy, society, and construction. In order to be successful, it  
81 is important for organizations involved with the construction industry to stay abreast of  
82 the current state of affairs, both locally and globally" [7].

83 According to McDermott [7] it is significant that the construction industry foresees  
84 and prepare for the future while operating in the market conditions of the present.  
85 Likewise, the Construction Management (CM) programs must be mindful of the current  
86 and future conditions because as the industry changes and adapts, so must their CM  
87 program. This follow-up study allows the Construction Management program to  
88 address issues that former students perceive would improve the program through their  
89 experiences in the workplace.

90 In McDermott's study [7], the research focused on the future of the construction  
91 industry and the implications of project management and education. The researchers  
92 addressed four key drivers that would affect the construction industry, such as  
93 workforce issues, "increasing environmental considerations, global growth and  
94 interconnectedness, and productivity and efficiency improvements" [7 p. 101]. These  
95 changing trends and key drivers increased the level of difficulty to obtain knowledge  
96 within the construction industry. Therefore, it can be a challenge to ensure that the CM  
97 program generates satisfaction among their students and meet the employee  
98 expectations. Again, CM programs must prepare students for successful careers.

99 The Construction Management industry is driven by several factors; therefore,  
100 graduates must implement both soft skills and hard skills. Also, graduates must have a  
101 desire to advance and improve the industry, by utilizing practical knowledge gained in  
102 their program of study. It can be a challenge for many graduates to be successful from  
103 the academic to the workforce without practical on the job experiences through intern  
104 and co-ops build in the program. Rojas & Dossick, [8] specified that "one of the major  
105 challenges in Construction Engineering and Management education is incorporating  
106 practical knowledge from the field and practice of construction into classroom  
107 environments" [8 p. 67].

108 The review of literature cited and discussed above provides background on the  
109 relevance of follow-up studies and on how program facilitators and others can take  
110 advantage of them. Such knowledge provides a foundation for this current study, the  
111 objective is to determine whether the students of the Construction Management  
112 program at a particular University in the South East USA (name concealed) were  
113 satisfied with the program and with the effects, if any, that it had on their career within  
114 the construction industry.

## 115 **4 Methodology**

116 This research on academic and job satisfaction was conducted using a questionnaire  
117 developed by the research team. The survey questionnaire focused on three areas:  
118 demographics, academic satisfaction, and job satisfaction. The survey was developed  
119 using Survey Monkey and sent via Facebook and emails to students who graduated  
120 between 2002 and 2011 from a Construction Management program at a higher  
121 institution in the Southeast region of the United States. The data indicated that the recent  
122 students provided the most valuable information because they shared current insight  
123 about the latest program of study and practices based on their job evaluations and  
124 success on the job site.

125 The survey results were collected and analyzed regarding the graduates perceptions  
126 of the Construction Management program. By gaining insight from former students,  
127 the program facilitators and professors can implement strategies which can improve  
128 their program. The findings can provide CM programs and other disciplines with the  
129 information necessary to meet the needs of CM students and the demands of the CM  
130 industry.

131 The survey consisted of two parts: Part 1—Biographic information and Part 2—  
132 Education and Job satisfaction. The research provides feedback about the following  
133 areas:

- 134 1. The students' satisfaction about the CM program.
- 135 2. The students' satisfaction about their preparation for entry into the field of  
136 construction.

137 The responses from former students regarding their satisfaction within these areas  
138 provided data to assist the Construction Management department in evaluating the  
139 department.

140 Data was collected using a 5-point Likert scale, ranging from 5 (strongly agree) to 0  
141 (no opinion). Partial agreement with the question received a value of 3 from that  
142 respondent. After all the responses were collected and averaged, a mean score was  
143 given to each question. The mean score represented the feelings of the group as a whole  
144 to the particular question; thus, for example, a mean value of 4 meant that the majority  
145 of the respondents agreed with the statement.

## 146 **5 Results**

### 147 **5.1 Demographic Characteristics**

148 This survey was intended for all graduates from the Construction Management  
149 program. The survey instrument was sent to 65 participants; however, only 36  
150 responded to the survey, and 3 of those who responded did not complete the survey.  
151 Where N appears in the responses, it represents the number of respondents who  
152 responded to the statement. A total of 91.7% of the respondents were employed, and  
153 78.8% were employed within the construction industry. Six of the respondents had  
154 obtained advanced degrees, also six of the respondents were currently seeking an

155 advanced degree, most obtaining or had obtained a degree in Construction  
156 Management.

## 157 5.2 Education Satisfaction

158 The education satisfaction section of the survey consisted of 18 questions relating to  
159 various aspects of the Construction Management curriculum. These questions were  
160 presented using the Likert scale and were placed in the order of their average in table  
161 1, focusing primarily on what the students agreed with most through least. The averages  
162 ranged from 5 to 0; with 5 = strongly agree, 4 = agree, 3 = partially agree, 2 = disagree,  
163 1 = strongly disagree, and 0 = no opinion.

164 **Table 1.** Graduates' Satisfaction With Education

Question	N	Avg.	Rank
Most of my classes included sufficient group interaction.	33	3.88	1 <sup>st</sup>
Overall I am extremely satisfied with the experience I had at the University	34	3.71	2 <sup>nd</sup>
I feel the teaching within my major was effective.	34	3.65	3 <sup>rd</sup>
Resources and information for my major were easily obtainable.	34	3.68	4 <sup>th</sup>
My degree in Construction Management contributed to my fulfillment in my job.	34	3.62	5 <sup>th</sup>
The group interaction within my major was productive and effective.	34	3.59	6 <sup>th</sup>
The class lectures within the major were effective in meeting my learning needs.	34	3.56	7 <sup>th</sup>
My major provided resources to help me find employment after graduation.	34	3.53	8 <sup>th</sup>
The professors in my major taught current practices.	34	3.56	9 <sup>th</sup>
My construction management degree prepared/positioned me for future advancement.	34	3.44	10 <sup>th</sup>
Career advice I received from my advisor and professors was satisfactory.	34	3.35	11 <sup>th</sup>
My education in construction management contributed greatly to my overall satisfaction within the construction industry.	33	3.33	12 <sup>th</sup>
My professors were current in practices applicable to technology and techniques within the construction industry.	34	3.32	13 <sup>th</sup>
Help I received from my academic advisor was satisfactory.	34	3.32	14 <sup>th</sup>
I was effectively prepared to interact and communicate within the field of construction management.	34	3.32	15 <sup>th</sup>
The teaching I received within my major prepared me to work within the construction industry.	34	3.32	16 <sup>th</sup>
My major prepared me for the challenges of the work environment of the construction industry.	34	3.09	17 <sup>th</sup>
Services provided by the on-campus career center were very effective and helpful.	34	3.09	18 <sup>th</sup>

### 165 5.3 Employment Satisfaction

166 The employment satisfaction section of the survey contained 11 questions. In their jobs  
 167 or career, respondents were for the most part satisfied with their work. The responses  
 168 in table 2 show that the averages ranged from 4.15 (agree) to 1.61 (completely  
 169 disagree).

170 **Table 2.** Graduates' Satisfaction in Employment

Question	N	Avg.	Rank
I find my job pretty interesting.	33	4.15	1 <sup>st</sup>
Most days I am enthusiastic about my work.	33	3.97	2 <sup>nd</sup>
I find real enjoyment in my work.	33	3.88	3 <sup>rd</sup>
I am satisfied with my job for the time being.	33	3.76	4 <sup>th</sup>
I look forward to going to work most days.	33	3.76	5 <sup>th</sup>
I feel satisfied with my present job.	33	3.55	6 <sup>th</sup>
My job is like a hobby to me.	33	3.12	7 <sup>th</sup>
I would rather have another job.	33	1.94	8 <sup>th</sup>
I consider my job rather unpleasant.	31	1.77	9 <sup>th</sup>
I definitely dislike my work.	33	1.61	10 <sup>th</sup>
Most of the time, I have to force myself to go to work.	33	1.58	11 <sup>th</sup>

## 171 6 Discussion & Conclusion

172 The education section of the survey addressed multiple concepts that provide a holistic  
 173 view of the respondents' opinion about their education. To obtain this holistic view, the  
 174 questions were grouped into three categories for analysis: preparedness, services/help,  
 175 and effectiveness/satisfaction. The three categories address what students and the  
 176 department consider in determining the quality of their program. Preparedness relates  
 177 to how well the respondents felt that the program developed their skills for the  
 178 construction industry. Services and help relates to how well the school and department  
 179 provided needed assistance and resources for students to ensure that they succeeded  
 180 within the program. Finally, effectiveness entails how well the respondents felt that  
 181 they were taught. The program might have taught the students the expectations of  
 182 construction companies, but if the teaching or learning was not effective, it can hinder  
 183 students progress in their careers.

184 **Preparedness:** The overall average of the responses to each question was "partially  
 185 agree"; thus, one may conclude that the respondents thought some omitted details  
 186 would have been significant to their preparedness to work in the construction industry.  
 187 Interaction and communication are factors of preparedness to work within the  
 188 construction industry or any industry; individuals must be able to communicate well in  
 189 aspects such as terminology, correspondence, and so forth.

190 **Education Services/Help:** Higher education is a time not just for learning but also  
 191 for asking questions and making connections. As students progress through their  
 192 academic career, they will require help, guidance, and access to resources outside the

193 class. Without such resources and help from professors and advisors, an academic  
194 curriculum can become frustrating; with that frustration, students may develop a dislike  
195 for the program.

196 The participants responded to five questions that related to the area of services and  
197 help. The responses indicated that the respondents felt they did not completely receive  
198 the help they should have had and did not have access to the resources needed, required,  
199 or wanted. The questions relating to services and help ranked from 4<sup>th</sup> to 18<sup>th</sup> as shown  
200 in Table 1. The average response to each question was “partially agree,” with the  
201 exception of the statement that “Services provided by the on-campus career center were  
202 very effective and helpful”; this one was ranked last, with an average response from the  
203 respondents of “disagree,” at 2.91. The statement that “Resources and information for  
204 my major were easily obtainable” received an average score of 3.68, ranking 4<sup>th</sup>. “My  
205 major provided resources to help me find employment after graduation” averaged 3.53,  
206 ranking 8<sup>th</sup>. “Career advice I received from my advisor and professors was satisfactory”  
207 averaged 3.35, ranking 11<sup>th</sup>. Finally, “Help I received from my academic advisor was  
208 satisfactory” averaged 3.32, ranking 14<sup>th</sup>.

209 Respondents deemed the inclusion of group interaction the best item in the  
210 construction management program. “Most of my classes included sufficient group  
211 interaction” was the highest-ranked question, with an average of 3.88, but respondents  
212 did not rank the efficiency and productivity of these group interactions as well. “The  
213 group interaction within my major was productive and effective” received an average  
214 score of 3.59, ranking in 6<sup>th</sup> position in table 1. Because group interaction is a valuable  
215 skill to students in Construction Management, the respondents’ positive ranking of it is  
216 a positive sign; however, overall, the respondents only partially agreed with that  
217 statement. They also partially agreed that the group interaction was efficient and  
218 productive, revealing that although there is group activity, professors should make sure  
219 that students are using the time in an appropriate and beneficial way. They also need to  
220 ensure that the group activities they assign or incorporate meet the needs of the  
221 curriculum.

222 **Employment Satisfaction:** For most people, working is a lifelong process, and a  
223 career is a major part of most individuals’ life; hence, people have feelings of some  
224 kind about their career. As individuals progress throughout their career, those who have  
225 been in their particular career for a good amount of time probably have strong, positive  
226 feelings about it. Some individuals know from the beginning what they want in a career,  
227 while others stumble into their career by chance. Regardless, those who are satisfied  
228 with their career will stay with it and do well within their career.

229 According to the survey responses, respondents were (on average) satisfied with  
230 their career within the construction industry. The two highest-rated responses within  
231 the employment satisfaction were “I find my job pretty interesting” and “Most days I  
232 am enthusiastic about my work.” Many areas of one’s job may yield satisfaction, but  
233 those two statements probably have the most influence. As individuals, we have a  
234 natural interest in whatever we do, and with that interest, enthusiasm is created. The  
235 respondents agreed that they find their jobs interesting and that most days they are  
236 enthusiastic about their work; the average response was 3.97, only .03 away from  
237 “agree.” When they are interested, individuals tend to want to go back to learn,

238 participate, or support whatever the interest is. With the respondents having such a  
 239 strong interest, it is likely that they will continue to want to learn and participate within  
 240 their career; clearly, the majority of the respondents want to be involved in their work  
 241 and participate because they want to, not because they have to.

242 Job satisfaction has many aspects and levels; only some aspects relate to the  
 243 program, but knowledge of these aspects can help the program prepare students for  
 244 work environments. Allen states: “for students, major satisfaction is analogous to job  
 245 satisfaction because, like work environments, academic environments vary with respect  
 246 to reinforcer patterns, opportunities to use various skills and interest, and opportunities  
 247 to implement one’s self-concept” [3 p. 447].

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