

PERCEPTIONS OF THE CONSTRUCTION INDUSTRY

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Despite the recent recession, the construction industry remains a vital part of the nation's economy. As the current generation of workers grows older, the industry is beginning to face a lack of skilled workers. In addition to the growing need for workers, the industry has traditionally had a difficult time attracting younger workers to enlist in its trades due to stereotypes such as low wages and opportunities and the work taking place in a dirty and dangerous environment. The aim of this study was to determine and document the attitudes of post-high school adults about the construction industry. Understanding these attitudes could help construction companies and trade schools develop recruitment and training programs that attract younger workers to the industry. A survey was conducted and the respondents' answers were analyzed statistically in order to determine general attitudes, differences in attitudes within the population, and differences between their attitudes and opinions and those of high school students. The results of the study show that many of the traditional stereotypes connected with construction, such as a dirty work environment, still exist. However, post-high school adults are increasingly aware of the opportunities and competitive wages available in construction-related jobs. Significant differences in responses were also found within the populations when looking at gender, age, and education level. Lastly, post-high school adults were found to have more favorable opinions of the construction industry than students in high school.

Keywords: Construction, Image, Perceptions, Shortage, Career.

1 INTRODUCTION

The construction industry touches every aspect of a person's life, from the home they live in to the roads they drive on to the utilities that fuel daily life. The construction industry employs around nine million people directly (salaried, waged and self-employed), about 6% of the total workforce of the U.S. Most people are not aware of the breadth of the industry and its importance to the country's economic development and health.

Skilled labor and craft professionals are the backbone of the industry. These jobs are vital to every construction project completed and ensure that critical components of infrastructure are completed safely and successfully. Management positions, at both the project and office level, also greatly influence the industry. Their expertise and supervision are key to ensuring that a project meets all its objectives, including those of cost, time, quality and safety performance. Recently, however, as the baby boomer generation begins to retire, a substantial shortage of workers is developing that threatens to put an ever-increasing strain on the industry.

1.1 Statement of the Problem

The oncoming shortage of workers in the construction industry has the potential to not only harm the construction industry long-term, but also to severely cripple the current economic recovery. The potential for this shortage of workers was noted by the industry as far back as the 1980s (Whyte and Green 2006). However, the recession of 2008 has made the problem worse. Construction unemployment has been as high as 15.8% (Goldman 2009) since the beginning of the recession. As the economy rebuilds, it may be difficult to fill the number of jobs that will hopefully be created.

High school students are an ideal demographic to target for new workers, but young adults a few years removed from high school can also be vital to filling the expected void. Many young adults that choose not to attend college or a trade school would be ideal for entering the industry as trained construction workers. Moreover, many students currently in college are not aware of opportunities in the field available to those with a degree. It is important to determine how the job market may appear to people as the country pulls out of the recession and industry recovers, as well as how to attract and retain workers in a rebound period.

In recent years, the industry has had a difficult time attracting and retaining new workers. Much of this problem is caused by the negative image of the construction industry. Construction jobs are often considered low paying, dangerous, and low in prestige. It will be important to develop recruitment and retention programs that address these issues as the need for workers increases.

1.2 Aim of Study

The purpose of this study is to discover and document young people's opinions of the construction industry. The study focuses on their knowledge and perception of the industry as they are about to enter the work force. These insights will be helpful in developing potential training and/or recruitment programs that attract more young people to enter the industry.

1.3 Hypotheses

This study aims to analyze several hypotheses and a general observation. The first hypothesis is that the image of the construction industry is still viewed negatively by post-high school adults. The second is that there are significant differences in the attitudes of males and females toward the construction industry. The third hypothesis is that there are differences in attitudes of different age groups. The fourth is that there are differences in the attitudes of those with different education levels, and the fifth is that there are differences in the attitudes of those with different employment statuses. These will be tested by statistically comparing the responses of survey participants. The last focus of the research was to observe and measure the differences in perceptions of the construction industry among post-high school adults and high school students. It is believed that post-high school adults will have a more favorable opinion of the industry. This is discussed as an observation because of lower raw high school response data than is needed to make a statistical comparison.

2 LITERATURE REVIEW

The construction industry is an integral part of the US economy. The industry accounted for about 4.8% of the national \$14 trillion Gross Domestic Product (GDP) in 2007, according to the US Department of Commerce's Bureau of Economic Analysis. However, construction also helps fuel other industries such as manufacturing, finance and insurance, and transportation. The US Census Bureau reported that the industry provided 7.2 million jobs (not including the self-employed) ranging from day laborers to skilled labor and construction management, and had about 730,000 employers in 2007. The largest group of these workers, 1.76 million, is laborers followed by metalworkers, carpenters, supervisors, electricians, painters, and plumbers (Caulfield 2008).

The future lack of workers first became apparent in the construction industry in the 1980s (Whyte and Greene 2006). According to Whyte and Green, one of the large problems contributing to the worker shortage is the aging population. It was estimated that over half of the US population is now over the age of 50 and the youth population has a lower growth rate than the elderly (Whyte and Greene 2006). Up to 73% of workers in the construction industry within craft trades plan to leave the industry after the age of 46 (Rowings *et al.* 1996). This older population increase will lead to retirees outnumbering workers entering the workforce. Competition from other industries will also increase this problem, as the entire country will be searching for workers in a smaller worker population. In 2006, it was predicted that the industry would need to bring in and retain up to 275,000 workers a year over 10 years in order to keep up with growth projections at the time (Whyte and Greene 2006).

Working in the construction industry is often seen as an inferior job choice. As more students begin to enroll and complete college, this stigma may hurt efforts to recruit young people into the industry. In a 2002 list of job rankings, bricklayer, carpenter, and ironworker were ranked in the bottom ten of the 250 vocations listed (Kantz 2000). A 2006 survey of Alachua County (Florida) high school students showed that the majority believed the industry is dangerous and involves physical labor. The survey also showed that 50% of the students with a friend or family member in the industry would not choose to pursue a construction career, and almost 80% without such a connection would not work in the industry (Diavolistis 2006).

Despite the fact that the recession lowered the number of construction jobs, the job opportunities that exist in construction today are extremely promising. The 2012-2018 jobs outlook found in Occupational Outlook Quarterly released by the Bureau of Labor Statistics examines the trends of jobs for over 300 occupations and determines growth potential (Occupational Outlook Quarterly 2010).

3 DATA GATHERING

After completion of the literature review, a survey was developed based on a previous survey that focused on high school students, in order to facilitate comparison of the responses. All of the questions/statements in the original survey that were applicable to post high school adults were used in this survey. The survey was administered to consenting participants on the University of Florida campus. The results of the survey were analyzed arithmetically and statistically.

3.1 Survey Information

The survey as administered contained two sections. The first section gathered demographic information about each participant. The information on gender, age, race, education, and employment status allowed for the development of statistical differences between groups. The second section was a list of 20 statements which the participant judged using a 7 point Likert Scale labeled as follows: 1-Strongly Disagree, 2-Disagree, 3- Tend to Disagree, 4-Average, 5- Tend to Agree, 6- Agree, 7-Strongly Agree. In order to have similar data for an adult-to-high school comparison, the statements were taken from the previous study on the attitudes of high school students. Some statements on the high school student survey were not used on the adult survey because they were developed to examine the motivations of students or relations to the construction industry, which were beyond the scope of this study.

The survey was conducted over three days at the University of Florida. People passing by two locations were given an information sheet and asked to take the survey. At both locations, surveys were administered to those willing to participate between the hours of 10 am to 2 pm.

4 ANALYSIS

4.1 Demographics

The demographics collected in the survey were analyzed to gain a perspective of the survey participants and to examine differences between demographic groups. The total number of survey participants was 52. All participants chose to fully answer the demographic information.

The first demographic recorded was the gender of the participant. Of the 52 responses, 36 (69%) were male while 16 (31%) were female. Comparing these two populations was done to identify any differences in the perceptions of males and females when considering construction as a career.

The age of the participant was asked, as well as how many years post high school they were. The longer someone has been out of high school, the more experience in the workforce they should have and therefore, theoretically, the more knowledge they'd have about any industry. For analysis, the ages were broken down into five ranges: 18-20, 21-23, 24-26, 27-28, and Above 28. The number of participants for each group was 18 (34%), 12 (23%), five (10%), four (8%), and 13 (25%) respectively. Because of the disparity in number of participants in each range, two groups were used for comparison tests: "18-23" and "24 and above".

Participants were also asked to indicate their race. This information could be useful in seeing what groups of people are knowledgeable about the industry and which could be targeted for recruitment programs. The racial demographics of the survey takers was 41 Caucasian (78%), two African American (4%), four Hispanic (8%), four Asian (8%), and one Other (2%). Because of the low numbers of races other than Caucasian, this demographic was not used further.

The level of education was also examined in order to determine trends within different education levels. Of the survey population, one (2%) had some high school education, two (4%) had completed high school, 29 (56%) had some college education, and 20 (38%) had at least a bachelor's degree.

The last demographic examined was employment. The survey participants were comprised of 41 (79%) employed people and 11 (21%) unemployed. A full-time student was considered employed.

4.2 Statistical Analysis

The population was next analyzed using the Mann-Whitney Rank Sum Test to determine significant differences between groups. The groups analyzed were as listed earlier. The statements were classified as statistically significant if the p-value was 0.05 or less.

Four statements showed significant differences in the attitudes and perceptions of male and female respondents (all p-values were 0.026 or less). In three of these four statements, women rated the construction industry more favorably than men. The statement to which females answered less favorably than males was in thinking the occupation was dangerous. These results indicate that women may be open to careers in construction more so than in the past when the career field had been more male dominant.

Five statements were found to yield significant differences when the results of the population by people aged 18-23 and Above 23 were compared, and the older group answered them all more favorably (all p-values were 0.047 or less). Statements dealt with opportunities in the field, opportunities for women and the belief that construction is a dirty job. These results show that more education may be needed for younger people outside of high school in order for them to understand the opportunities available and to also help shed the negative reputation that the industry may still hold.

The responses to three statements were found to have significant differences when analyzing the population as people who had completed college and those who had not (all p-values were 0.046 or less). College graduates answered significantly more positively on the statement dealing with construction being a dirty job. The other statements are about the training and education necessary for a job in construction and the opportunities available therein. College graduates were more inclined to agree with these statements also.

No significant differences were found between the answers of employed and unemployed participants. All p-values were well over 0.05.

4.4 High School vs. Post-High School

The last analysis compared the responses of high school students to those of post-high school adults. Since the individual response data of the high schoolers were not available, the means were compared between the two groups.

Post-high school students had mean responses more favorable to the construction industry than did the high school students for all twenty statements. The more favorable answers indicate that construction seems a more attractive opportunity to post-high school respondents than to high school students.

Results show that after high school, construction industry opportunities may become more evident than in high school. Job training and recruitment programs would be much more effective at targeting these people if the targeted people knew that there are career opportunities requiring college degrees available in construction and that the industry pays well.

5 CONCLUSIONS

The survey has shown that the industry is viewed more favorably than the research team originally anticipated based on the earlier study involving high school students. An important result was that the sampled population showed an understanding of the opportunities available. As people begin to see construction as a well-paying and respectable career, more people may be willing to take jobs as both management and craft professionals. However, a glance at the means showed that the traditional belief that construction is a dirty and dangerous job still exists.

It was originally believed that differences would exist in many of the statement responses because of the cultural and knowledge differences in the groups created. When looking at the population split up by gender, significant differences were found. When looking at the population divided into people aged 18-23 versus Above 23, significant differences were found when scrutinizing based on education level; and no significant differences were found when comparing the responses of employed participants and non-employed participants.

Outside of seeing construction as an outdoors job, the post-high school population had favorable responses to all the statements dealing with traditional construction stereotypes. The post-high school population also had higher rankings for the opportunities in construction, particularly in regard to education and earnings.

In fact, post-high school adults answered more favorably to the construction industry on all 20 questions in the survey. While this strongly suggests that “post-high school adults view the industry more favorably than high school students,” the low volume of raw high school response data makes a meaningful statistical analysis impossible. Therefore this statement cannot be supported statistically.

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