

A Survey on Employee Satisfaction and Productivity in the A/E/C Industries

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Abstract

This study utilizes a survey that portrays the variety of issues that may cause employee dissatisfaction and productivity loss. The survey included architecture, engineering, general contracting, and subcontracting companies that are engaged in construction projects in Miami, Florida. A total of 80 surveys were distributed, with a return number of 62. The study suggests that the major causes of productivity loss in the job place are poor communication and management. Employees expressed that they would be more productive if their responsibilities were increased or if their tasks were more challenging. Employees want to be trusted and relied on. They also want the opportunity to grow with their companies. The study also suggests that although better pay may get employees to work more productively, routine (repetitious) work and lack of responsibilities will drive them back to a cycle of unproductive work.

Keywords

Employee Productivity, Employee Satisfaction, Work Performance

1. Introduction

Loss of productivity in the construction industry is the result of a variety of factors that are not only complex but also difficult to measure. Some of these factors may include the uniqueness of each task, the lack of coordination among trades, poor management, poor planning and utilization of labor, worker's lack of motivation, and lack of education among others. Ineffective management, however, has been cited as the primary cause of poor productivity rather than an unmotivated and unskilled workforce (Allmon *et al.* 2000). This project is aimed at studying and understanding the relationship between managerial elements and employee productivity on construction - related trades. The objective of this study is to:

- Identify and report the variety of factors that cause poor productivity in construction - related trades in Miami, Florida.
- Understand the major areas that cause loss in productivity, and how they vary from the designer's end to the builder's end, and discover if there are common factors.
- Recommend improvements to different trades based on their specific problem areas, if they are found to be different.

In our discussion the terms employees, workers, people, and workforce are used interchangeably.

2. Design and Methodology

The questionnaire used in this study was designed to survey the concerns of all the major players in a typical construction project, namely, architects, engineers, general contractors and subcontractors. All the companies surveyed are currently engaged in construction projects in Miami, Florida. The questionnaire is a compilation of the existing productivity surveys, which are, for the most part, general surveys designed to be used on any type of business organization. Examples of surveys studied are: Craftsmen's Questionnaire (Oglesby *et al.* 1989), "2 Minute Productivity Survey" (www.6seconds.org), and Employee Productivity, Ethics and Safety surveys (www.busreslab.com). During the brainstorming process in which a selected group of professionals was included, three major groups of questions were identified and categorized as: general, positive (favorable) and negative (unfavorable). A fourth category named "Other" was created for those questions that did not correspond with the first three categories.

The first category, General, incorporates questions that establish parameters of classification in terms of trade, age, and gender among others. The Positive classification group includes questions addressing various factors that would most likely result in increased productivity. On the contrary, the Negative group includes questions addressing various factors that may adversely influence the productivity of individuals at their job site. Within the category of Other, questions that request comments and recommendations from the individuals participating in the study were included. This gave the survey participants the opportunity to express their opinions, emotions, and to explain their answers. Under this category, subjects participating in the study would provide inside information on their current needs and expectations. In addition to developing a theory of what may improve productivity based on the survey results, this section would aid in uncovering other issues, concerns and needs that employees have.

A first version of the questionnaire was drafted and reviewed to eliminate redundancies and to reduce its length, resulting in a final 7-page survey containing over 40 questions. The English version only was released to designers, offices of architects, and engineers. Given that a high number of labor personnel working in construction sites in south Florida do not speak English, both English and Spanish versions of surveys were released to construction job sites in order to target general contractor's personnel as well as subcontractors and the labor force. Subject participation was voluntary and anonymous.

At the first stage several individuals were randomly selected from the firm that one of the authors worked for to participate in survey. All of these participants had a professional degree in architecture. They were also asked to distribute copies of surveys to other architects and engineers that they personally knew from outside of their company. On the construction side, a liaison representing a major national construction company involved in a major project was used to randomly distribute survey to employees of his own company as well as to a number of subcontractors and vendors that were involved in that project. A total of 80 surveys were distributed, with a return number of 62. Two surveys were discarded because of a non-response to the key classification question "What type of trade do you work for?" resulting in an overall response rate of 75 percent.

3. Survey Findings

In the following sections, some of the survey findings will be presented. For the complete list of findings and a copy of the questionnaire readers are encouraged to contact either one of the authors.

From the 62 completed surveys, 48% of the participants worked in the field on projects that are currently under construction (contractors/subcontractors). Architects or people working with architecture firms comprised 35% of the participants, while the engineering sector accounted for 17% of all the survey subjects. As expected, the majority of study participants were males, overall 72%.

Participants were asked whether they thought they were getting paid well in comparison to other companies of equal size and trade, according to their current level of work and responsibility. Overall, only 57% responded they were getting paid according to the market price. Individually, 52% of the architects, 60% of the engineers, and 59% of the field labor force were satisfied with their pay. Despite the fact that 43% of respondents did not think that they were fairly paid, the majority of them (89%) said that they either “like” or “love” working for their current employer (69% and 20% respectively).

Participants were asked to compare the management and work ethics of their current company with other companies they had worked for in the past. Overall, 86% rated their current employer as being either “good” (45%) or “excellent” (41%). Seventy-eight percent of the respondents from the engineering group rated its current management as “excellent” with the remaining 22% rating them as “good”. When asked to rate ethics, all participants were equally consistent in giving good reviews to their immediate supervisors.

Participants were also asked if they felt they were rewarded appropriately for their job performance. Overall, 61% either stated “strongly agree” or “somewhat agree” (34% and 27% respectively). Individually, 50% of the architects noted “strongly agree” and 35% “somewhat agree”. Among the engineers, 60% answered that they “strongly agree” and 30% responded that they “somewhat agree”. The least satisfied group was field labor with 55% of answers being “neutral” and 20% of “somewhat agree”.

With regard to non-productive time, three major causes were studied: socializing, waiting for instructions and/or materials, and re-work. The third category was further subdivided into three main causes of re-work: changes in drawings, specification, and/or design; the work was damaged by others; and the tasks were initially done incorrectly. When asked about how much time each participant spent walking around and talking to co-workers about non-work related issues, overall 53% answered they spend between 1 to 2 hours per week, and 18% spend between 2 to 3 hours per week. This left us with a 29% of employees consuming more than 3 hours per week on non-work related activities. Individually, 85% of architects spend between 1 to 2 hours each week and 10% spend between 2 to 3 hours. One hundred percent (100%) of engineers reported that they spend between 1 to 2 hours on non-work related issues, while 26% of labor force said they spend between 1 to 2 hours, 30% between 2 to 3 hours, 19% between 3 to 4 hours, and 22% admitted to having spent between 4 to 5 hours on non-work related issues.

When asked about how much time they spent waiting for instructions and or materials, 76% of the participants responded they spend between 1 to 2 hours a week and 19% said that they spend between 2 to 3 hours per week. Individually, 95% of the architects responded they spend between 1 to 2 hours a week while 100% of participating engineers claimed to have spent between 1 to 2 hours only. The field workers responded that 55% of them had spent between 1 to 2 hours per week and 34% claimed to have spent between 2 to 3 hours per week just waiting.

With regard to re-work, 69% of all participants claimed the main cause is due to changes in drawings, specifications, and/or design. These findings are consistent with all the individual groups. Architects responded that 79% of all their re-work is caused by changes in drawings, specifications, or design, while engineers responded that these items were 88% responsible for all their re-work. Craftsmen and field personnel responded that 61% of all their re-work was due to changes in design or plans.

The second main cause of all re-work was due to the job being damaged by others with an overall score of 19%, while the third cause of re-work was due to the job being originally done incorrectly with 14% of the answers. On the individual level, architects’ second cause of re-work was that the job was done incorrectly with a 14% of all re-work falling in this category. Engineers stated that all re-work was caused by both the work being damaged by others, and the work done incorrectly with 13% for both answers. The craftsmen seemed to be the most affected by damaged work, typically caused by other trades, with 25% of all their re-work falling in that category.

The survey results suggest that people do not believe that there is enough cooperation between different departments. They equally feel that their managers do not make it easy for them to do their work. They feel they are not provided with the necessary tools they need to perform their job. There seems to be immense room for improvement as far as training goes. For the most part, people feel they do not get enough training. The survey also consistently revealed that there is a problem in communication and information flow throughout the trades.

When participants were asked to provide suggestions on how they would improve productivity, most recommended similar solutions. The most popular recommendations given were to improve communication, give better and clearer instructions, and to facilitate information sharing. People seem to perform better when they have detailed work descriptions. If you let them know what you expect of them they can better determine if their performance is up to standards.

These recommendations were followed by the need for increased responsibility, allowing people to do their job, and to give them more challenging tasks along with continuing education, training and potential for growth. Employees want to be provided with all the necessary training they need to do their job. Once they have been trained, they want to be allowed to perform their work, they want assistance, and they want to be trusted and relied on their knowledge. Maintaining open communication with employees is key element to efficient performance.

People also recommended salary increases, bonuses, and recommended that management show more appreciation for their efforts. They want to be provided with incentives to keep them motivated, they want to be treated fairly, and they want promotion opportunities based on merits. Employers cannot let the unproductive and unmotivated employees affect others, or as recommended by one of the survey participants “drop all the deadwood” .

Keeping an open door policy, maintaining high ethical standards and being an example for everyone makes supervisor and employee relationships more efficient. Listening to employees’ concerns and remembering they are humans and not machines helps employees feel cared for thus increasing work performance. Employers must learn that their relationship with their employees is one of continuous learning. A project manager may have the best technique to coordinate a job but may not have the most productive method for laying re-bar or installing piping applies to project architects or project engineers. They may be the best at managing their projects but cannot tell which is the best and most efficient way to coordinate drawing files in a computer program unless they listen to those who are in charge of putting the drawings together.

4. Conclusion

The findings of this study suggest that although better pay may get employees to work more productively, routine (repetitious) work and lack of responsibilities will drive them back to a cycle of unproductive work. The majority of participants in this survey suggested the use of complaint boxes and stated that more responsibilities would better motivate them to improve their productivity. It is important for managers to realize they can achieve productivity gains that go beyond pay incentives by providing employees with all the necessary tools they need to perform their job efficiently, by improving their quality work life and by motivating them with benefits to meet their specific needs. In return, employees would care more for their work, would have a greater desire to cooperate with each other, would be happier, would be more productive, would produce better quality work, and would increase company loyalty.

5. References

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