Effective Recruitment and Selection Strategies for Skilled Laborers in Heavy Highway Construction

Syed Ahmed¹ and Katelyn Briggs²

Abstract

Organizations that desire to provide a quality product and remain competitive in their respective industries must have a skilled workforce in order to achieve their goal. Recently. the United States government has increased spending on infrastructure, including highway construction, to help spur economic growth. The need for skilled labor that is capable of performing tasks on highway construction projects has increased due to this recent investment. Since performing tasks normally found on highway construction projects, such as concrete, asphalt and steel installation, requires proficiency and experience, a standard job application is not sufficient to predict the likelihood that a job applicant has the knowledge, skills, and abilities to perform the specialized work. Organizations in the construction industry must have the capability to predict the future job performance of applicants in order to select a competent workforce. In order to determine what selection strategies are currently used by heavy highway contactors in the United States, a survey will be provided to five heavy highway construction firms in the southeast to determine how the organizations selected skilled laborers to perform tasks on their construction projects. Selection strategies of other organizations outside the construction industry will be researched using recent articles, journals and scholarly papers regarding the matter. If a structured selection strategy is used in the hiring of new employees for highway construction similar to organizations who have selection practices that have been proven effective, the organization should have an enhanced ability to predict the future job performance of the applicants. In order to more accurately predict the job performance of applicants for skilled positions in the highway construction field, organizations must be able to identify selection measures for each specific position, establish a method to measure the performance from these selections measures, and then be able to use the results from the selection measures to hire the best applicant for the position. This research aims to address the recruitment and selection practices in heavy highway construction organizations in order to enhance the recruitment and selection strategies for skilled laborers in heavy highway construction because ineffective recruitment and selection strategies cause high employee retention rates, increase advertising and recruitment costs, and stagnant construction productivity due to lack of skilled workforces.

Keywords: highway construction, human factors, organizational decisions, selection.

Introduction

The Congressional Research Service determined decaying roadways and other infrastructure throughout the United States requires an investment by the United States government so the country can maintain its infrastructure and this investment can also increase economic recovery after a recession (Copeland 2011). Since the construction industry experienced a

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¹ Department of Construction Management, College of Engineering & Technology, East Carolina University (ECU), 346 Rawl Building, Mail Stop 307, Greenville, NC 27858 USA, Email: ahmeds@ecu.edu

² Department of Construction Management, College of Engineering & Technology, East Carolina University (ECU), 346 Rawl Building, Mail Stop 307, Greenville, NC 27858 USA, Email: briggsk13@students.ecu.edu

decline in overall growth after the recession in 2008, contractors shifted their focus to the sectors of the industry where investments were still being made (Lasky, 2010). The investment the United States government made into infrastructure projects created a demand for skilled labor to work on these infrastructure projects.

The problem with the increased focus of investment in infrastructure by the US government was that there was an increased demand for skilled labor to construct the projects but there were not enough candidates qualified for these skilled positions in the labor market ("Skilled labor shortage," 2008). There has been a growing perception in the United States that construction labor positions are undesirable positions. Organizations had difficulty locating and hiring skilled laborers to fill the positions needed to construct the projects they were awarded.

While construction organizations often invest a great amount of time and resources when recruiting and selecting candidates for office positions, the same emphasis is not found when an organization hires candidates for skilled labor positions. The lack of effort to recruit and select the best candidates for skilled labor positions by construction organizations compounded with a shortage in skilled labor caused many organizations to find out after they selected an employee they were not qualified for the position. Not selecting the most qualified candidate for a skilled labor position by a heavy highway contractor causes lower new hire retention rates, increased advertising and recruitment costs, and loss of production due to the need to restart the search for a qualified candidate to fill a vacant position within the organization. Since the skilled labor positions within an organization have some importance, the first question posed by the research is, does the construction industry utilize the most effective recruiting and selection methods when locating and selecting skilled laborers?

The second question that the research posits is what selection practices does the construction organization currently utilize when hiring candidates for skilled labor positions? It must be determined how the organization is locating the candidates within the job seeking pool to insure they are locating the most qualified candidates to take further into the selection process. This involves researching what recruitment methods an organization utilizes and how much do they invest into recruitment. The final and most important question to the research is, what recruitment and selection practices can a construction organization utilize to better predict the future job performance of qualified candidates for a skilled labor position? The major benefit of this research will be to determine how the construction industry can improve their recruiting and selection practices.

Literature Review

There has been an abundance of research performed into the proven recruitment strategies and effective selection measures used by different types of organizations around the world. There has been research performed analyzing the recruitment and selection practices used by organizations to hire employees for professions such as doctors, nurses, professors, lawyers and executives. This research provides a glimpse into practices used for other professions outside of the construction industry. While there is a wealth of literature to review regarding the recruitment and selection practices of other industries; there is a lack of information regarding the topic when it relates to the construction industry and more specifically, skilled labor positions in construction.

Recruitment can be defined as the method an organization utilizes to advertise available job openings (Gatewood, 2011). Recruitment is the first step of the hiring process and seeks to publicize the availability of job openings to qualified applicants and to assemble modest information about a pool of eligible persons (Marsden, 1994). There are three major factors that must be considered when developing the methods of recruitment for an organization.

These factors are formality, subtlety, and cost (Marsden, 1994). Another factor that must not be overlooked is Federal, State, and Local regulations regarding the recruitment practices used by an organization and making sure the selected recruitment practices comply with the applicable laws. Many organizations use an informal approach to recruiting potential candidates for open positions. An example of an informal approach would be using inside or outside referrals to develop a list of qualified candidates. The cost of using referrals is very low and also adds the benefits of interpersonal links between the potential and current employees which could mean the potential candidate is a better fit for the organization (Marsden, 1994). Using referrals however does have its drawbacks, most notably that it may limit the amount of qualified candidates in the applicant pool because you drawing from information provided by current employees. This also could be disadvantageous to the organization because often when an organization hires new employees, they are looking for a change in the attitudes and practices that their current employees hold. A company desiring to change the culture within the organization should not use referrals because more than likely they are drawing from a candidate pool that is not different than the current employees who work for the organization.

Another approach used by organizations for recruitment of candidates for vacant positions within the organization is a formal approach. A formal approach can be best defined as using an intermediary medium between the candidate and the employer (Marsden, 1994). There is an abundance of formal approaches that an organization can use in the recruitment of candidates for open positions. Formal approaches include print advertisement, online advertisement, the use a recruitment services, the use of the state unemployment office, and the use of social media. While using a formal approach will provide a larger pool of candidates than an informal approach, there are drawbacks of using a formal approach. The most significant drawback for organizations is the cost involved. The cost of some of the formal recruiting practices can be very high and sometimes organizations are reluctant to make that investment to fill what they deem a non-critical vacant position. Another major drawback directly relates to the increased amount of candidates found by the formal approach. This will require the organization to invest more resources into screening the applicants to decide which candidates should move forward in the selection process (Marsden, 1994).

The next step is the selection process and can be best defined as the process an organization utilizes to select the most qualified candidate for a vacant position within an organization from a pool of applicants (Gatewood, 2011). Finding the right pool of candidates for the vacant position is crucial, and that is why recruitment is so important to make sure the organization finds qualified candidates. The selection process involves measuring the knowledge, skills, and abilities of a candidate and using those measurements to predict the future job performance of the candidate (Gatewood, 2011). Since the selection process is based on measurement, the means of measurement must be clearly defined and a method of analyzing the measurements obtained must be established (Deems, 1999). The first step in developing an effective selection process is identifying the selection measures to use for a specific position.

Selection measures vary from position to position and from organization to organization, but they are typically some similarities that can be found between the positions or organizations. Some of the most common selection methods found in organizations today are the interview and reference check (Ryan, 2004). These are two of the most basic selection measures found, but are utilized by countless organizations. The interview involves developing a list of questions to ask a potential candidate and determining the performance of the candidate based on whether the interviewer found the answers and demeanor of the candidate to be acceptable during the interview process (Gatewood, 2011). The major

drawback of an interview is that the performance of the candidate is not objective and is based solely on the opinion of the interviewer. The major advantage of using an interview is that you can gauge the candidates interpersonal and communication skills and an interview should be used in conjunction with other selection measures (Goleman, 1998). Another type of selection measure commonly used is a reference check. This involves having the candidate provide a list of contacts that can support the information provided by the candidate on the resume or application (Andler, 2003). This provides the organization an outside opinion of the past performance of a candidate and also whether the candidate was truthful and honest on their application. While a reference check is useful, it is not the only selection measure a company should use. There are also legal implications a construction organization must be aware of when using a reference check as a selection method (Andler, 2003). While the interview and reference check are common selection measures used by organizations, they also have the lowest cost, which plays a role in why those are the two most common selection measures utilized (Andler, 2003).

There are several other types of selection measures available, but usually the cost involved with the other measures is higher than an interview or reference check (Gatewood, 2011). One type of selection measure used is a knowledge test. This involves a written or oral test of the candidates knowledge required to be successful in the open position (Osborne, 1996). The knowledge test often will include facts, but also may include potential situations faced on the job that the candidate must provide a response to how they would handle that specific situation (Kuncel & Hezlett, 2010). This gives the organization greater insight into the decision making skills of the candidate and will provide the organization with a better idea of what to expect if they hire that candidate (Osborne, 1996). While a knowledge test won't guarantee that a candidate is qualified for a vacant position, it will help the organization predict the future job performance of candidate more accurately (Gatewood, 2011). The cost involved with performing a knowledge test is higher than other selection measures and also the test must not discriminate against any candidates and comply with Federal, State and Local hiring guidelines (Gatewood, 2011).

Another type of selection measure an organization can utilize is a performance test. A performance test will measure the skills and abilities of candidate to determine if they hold the required information to perform their job to the standard that is expected (Gatewood, 2011). This selection measure is beneficial when predicting the future quality of work of candidate on a construction project. The organization can use the performance test to measure the candidates level of understanding of the specific skill required for the position. As with a knowledge test, the cost of using this selection measure is more substantial than others, but will provide the organization with an accurate method of determining future job performance of the candidate (Gatewood, 2011).

There are some qualities that seem to be universally desired for new hires. The first quality should be to insure that the candidate's values align with the values of the organization (Hoag, 2006). If candidate's values do not align with the organizations, then the employee will not be in sync with the organization and the employee may be destined for failure (Gatewood, 2011). Another important quality is decision making. The organization must confirm that the employee will make decisions in accordance with organizational decision making process.

On top of the values and decision making of potential the candidate, the organization must measure and confirm that the candidate has the required knowledge, skills, and abilities required to be successful in the vacant position (Goleman, 1998). These are the most common sense requirements that an organization should look for when hiring a new employee. The organization must clearly identify and list what knowledge, skills, and abilities they believe are required to be successful in a certain position (Gatewood, 2011).

Leadership is a key ability in the construction industry because the organizational structure of the construction industry usually involves several leaders within one project. The leaders often include the project manager, the superintendent and the foreman involved with the project. Each position must lead a group of subordinates in order to build a successful project. Without leadership, conflict and confusion are more likely to arise during a construction project (Dulaimi & Langford, 1999). Construction professionals should also have an acceptable level of emotional intelligence since the majority of their time will be spent working with others. The ability to effectively communicate and get along with others is critical to insuring that a construction project operates efficiently.

Method

The method utilized for this research involved gathering recruitment and selection data from the construction industry in order to determine the methods utilized and to analyze whether the methods are effective. Since the construction industry includes multiple different types of construction specialties, from residential construction to industrial construction, one sector was picked to narrow the focus of the data collection. The sector that was selected was the heavy highway sector of the construction industry. The heavy highway sector was utilized because they contain the recent investment by the US government in highway construction which created an abundance of contracting opportunities, the shortage of skilled labor found for heavy highway construction projects, and the need for a large workforce to construct these projects, which in turn increases the amount of hiring by the heavy highway construction organizations.

The first set of data required from the survey is grouping data for the different construction organizations who participated in the survey. A list of questions was developed in order to provide data that could be used to differentiate between the different construction organizations. These questions included the organizations length of operation, the organizations total revenue per year, the organizations total number of employees, and how many of those employees are either skilled laborers or office employees, as defined by the classifications discussed earlier. Once the grouping questions were developed to sort the organizations for comparison, the next information needed for the research was retention data. The retention data would be based on the amount of new hires in the year of 2012. Once the amount of new hires was established for each organization, the data regarding the amount of employees still employed by the organization at the time of survey was requested.

The next set of data that was generated from the survey is recruitment data. The recruitment data provided information regarding recruitment methods used and the costs associated with those methods. A list of the common recruitment methods used was provided in the survey. The methods for each type of position, skilled labor and office, were requested so once the data was gathered, it could be determined if the organization was putting the same amount of emphasis in finding candidates for office positions as they were for field positions within the organization.

The final set of data that was generated by the survey was the selection measures used by the organization and the cost of those selection measures. As with the other data sets, the questions were divided between skilled labor and office positions. Lists of common selection measures were provided to the organizations and they could also list other measures that they utilized but were not listed on the survey form. The cost for the selection measures was for each candidate so a comparison could be made between the costs of selecting office candidates versus the cost of selecting field candidates.

The survey was created using the aforementioned information to distribute to the participating heavy highway contractors. The survey was created electronically using Adobe form creator. Since some employment data is confidential and the organizations originally

were hesitant to participate in the survey for fear of breaking employment laws, no identifying information besides total revenue and number of employees was gathered from the participating organizations. The survey was provided to five heavy highway construction organizations. The organizations varied in size and revenue, but all companies surveyed had a labor force that was directly responsible for installing a specific item on a heavy highway construction project. Organizations that only manage construction projects and do not install any items on their projects were not surveyed since they do not have a need to hire skilled laborers.

Once the survey was received back from the five participating heavy highway construction companies, the data was grouped and analyzed using charts and tables. A follow up interview was conducted with the human resources departments of these organizations to gather a better understanding of how the organizations arrived at the cost data they entered into the survey. These interviews helped validate the data provided by confirming all organizations were being compared using the same data that was generated using the same methods. After the follow up interviews, it was determined that the organizations were using reasonably comparable methods in generating the cost data for the recruitment and selection methods used.

Results

The data results generated by the survey were grouped and analyzed to determine the advertising methods used the advertising costs, the selection measures used, the selection measures cost, the total cost of recruiting and selecting new employees, and the retention rates within the organization. Next, the results were grouped and analyzed to investigate retention rate of new hires found in the surveyed organizations. The retention rate data was further analyzed to determine if the heavy highway construction organization was retaining office or field employees at a higher rate than the other positions. The new hire information was broken down between field new hires and office new hires. The retention percentage was calculated to determine if there was difference between the retention rate of field employees and office employees.

The next set of results generated by the survey was the recruitment methods utilized by the heavy highway construction organizations. The data was separated into three data sets that included recruitment methods for vacant office position, recruitment methods for vacant filed skilled labor positions, and recruitment methods used for skilled labor and office positions combined. The recruitment methods listed in the survey for the organizations to choose from included print advertising, online websites, paid recruitment services, free recruitment services, the state unemployment office, social media, trade publications, and references from within and outside the organization. A field was also provided for other methods that were utilized but were not listed. The results were separated by organization.

After the recruitment methods utilized by each individual organization were established, the costs of using each recruitment method could be determined. Each organization was requested to provide a cost for each recruitment method used. The costs were separated by each different recruitment method used for each vacant position and then a total cost was developed in order to determine the investment made by each organization in recruiting candidates for a vacant position in the office or as a skilled laborer in their heavy highway construction organization.

Once the results of the recruitment methods and costs were established, the next results generated from the survey related to the selection methods and associated costs of those selection methods. The selection methods were grouped using the items listed in the survey, which included common selection methods such as an interview, reference check, knowledge test, performance test. A field was also provided for the organization to enter any

other selection methods used but not listed on the survey. The results were divided between office positions and skilled labor positions within the heavy highway construction organization.

After the selection methods used by each heavy construction organization were established, then the cost results could be generated from the survey. The selection methods costs were grouped using the items listed in the survey. A field was also provided for the organization to enter the cost of other selection methods utilized but not listed in the survey.

Discussion

The first result generated by the survey was the size of the organizations who participated in the survey. All five of the organizations who participated in the survey were a part of the heavy highway sector of the construction industry. That is where the majority of the similarities between the organizations ended. The organizations varied in length of operation, total revenue, total number of employees, and total number of office and skilled labor positions. The organizations varied in the length of operation from 10-23 years. A trend that appeared when analyzing the data is the correlation between the length of operation and total revenue generated by the company in the year 2012. The longer the heavy highway construction organization was in operation, the more revenue the organization generated per year. There was also a correlation between length of operation and number of employees, but this correlation was not a strong as the revenue correlation. Overall, the length of operation of the companies seemed to provide a broad spectrum of different types of heavy highway construction organizations.

The total revenue per year for each firm who participated in the survey also varied greatly between organizations. Some of the organizations could be consider small to medium sized businesses, while some of the other participants where large organizations whose revenue per year would classify them a top construction company in the heavy highway construction sector based on revenue. The lowest total revenue reported in the survey was \$12 million US dollars and the highest revenue reported was \$140 million US dollars. The average revenue for the 5 organizations who participated in the survey was \$60 million USD, so the range between the data values was high. As with the length of operation of each organization; the total revenue results provide a variety of different types of heavy highway construction organizations

As with the other grouping data discussed earlier, the number of employees in each organization also varied greatly. The relationship between total revenue and number of employees also became apparent when analyzing the data. As with many organizations, the number of employees needed to produce a product depends on the demand and complexity of the product the organization is creating. Heavy highway construction organization's demand for their product can be defined as total revenue since any service the company provides should produce revenue. The higher total revenue a firm reported in the survey led to a larger amount of employees. While this held true for most of the organizations surveyed, organization B reported a dramatically higher amount of skilled labor employees over the two other organizations whose revenue varied slightly from Organization B. This can most likely be attributed to Organization B installing a product on a heavy highway construction project that requires a large labor workforce, such as asphalt. Some trades found on heavy highway construction require more employees to install a product than others. A typical paving crew requires 15-20 employees while a typical concrete curb crew requires 5-10 employees. The variance between the number of employees and total revenue can most likely be attributed to the difference in trades between the heavy highway construction organizations

The final result from the organizational data was the number of office employees and

skilled labor employees found in each organization. All five of the organizations surveyed reported a far less amount of office employees versus skilled labor employees. Since heavy highway construction organization's product is typically created on the jobsite, the results are expected in regards to the amount of office and skilled labor employees found within each organization.

Overall, the grouping results seemed consistent with what one would expect from a construction organization. The longer the company operated, the larger their workforce was and the more revenue they generated. This statement can more than likely be applied to other industries. Also, the heavy highway construction organizations who participated in the survey employed more skilled labor employees than office employees. This result can be expected from most heavy highway construction companies unless they organization provides solely construction management services.

The results from the retention section of the survey provided a glimpse into whether the heavy highway construction organizations were recruiting and selecting the right candidates for office and skilled labor positions. Every single organization who participated in the survey hired new employees in the year 2012. In the follow up surveys, most of the organizations attributed the new hires to increase in the amount of heavy highway projects available. The amount of total new hires in each organization varied from the lowest of 20 to the largest amount of new hires at 188. Once again, a correlation appeared between the revenue and employee size of the organization and how many new hires they made in the year 2012. The larger the company, the more people they hired. The amount of new hires for skilled labor positions far outweighed the amount of new hires for office positions in each heavy highway construction organizations. The biggest surprise when analyzing the retention results from the survey was the difference in the retention percentage rate for skilled labor and office positions. Some of the organizations posted a 100% percent retention rates for new hires in the office. The two organizations also varied greatly in size with one of the organization only making 5 new office hires and the other making 13 new office hires, which was the largest amount of office positions filled by any of the organizations who participated in the survey.

The lowest retention rate found in any organization was 50% of new hires retained for office positions hired in the year 2012. This result was produced by one of the smaller heavy highway construction organizations. This organization only hired 2 office employees in 2012 and retained one. The remainder of the low retention rates can be found for skilled labor positions. Only one of the organizations surveyed reported retaining over 75% of the new hires for skilled labor positions. Some of the organizations with the lowest retention rates when it comes to skilled labors conversely have the highest retention rates for office positions. Overall, the results vary between organizations, but a lower retention rate for skilled labor positions versus office positions does become apparent when analyzing the results.

The requirement methods used by each organization are the next set of results to discuss. The requirement methods utilized by the different organizations contained some similarities, but there were also some aspects that were different. The recruitment methods used to recruit office candidates varied from the methods used to recruit candidates for skilled labor positions. Three of the five organizations utilized both print advertisement and an online websites to recruit candidates for open office positions. In addition to the print and online recruitment methods used, organizations also used paid recruitment services, the state unemployment office and references from inside and outside the organization to recruit candidates for vacant office positions. There was a heavy reliance on references from within the company to recruit candidates for office positions surveyed reported using referrals from within the company to recruit candidates for office

positions within the heavy highway construction organizations.

When reviewing the recruitment methods used by the organizations who participated in the survey, it becomes apparent that the organizations put more resources and effort into recruiting candidates for office positions than skilled labor positions. This is puzzling due to the fact the organizations workforce is primarily composed of skilled laborers, so one would assume as much emphasis, if not more, would be placed on finding the right candidates for skilled labor positions. None of the organizations surveyed reported using a paid recruitment services for locating skilled labor candidates, but some of the organizations used this service to locate office candidates and at a very high expense compared to the other recruitment methods. Once the cost results are discussed, it may shed more light as to why the organizations are not putting the same effort into finding skilled labor candidates as they are for locating office candidates. The cost results for the recruitment services utilized paints a clear picture of the money the organizations are investing in locating qualified candidates for open positions within their organization. The amount each company invested per position to locate office candidates varied from \$0.00 to \$1,390.00. Two of the companies reported no cost in recruiting candidates for office positions. Both of these organizations were smaller in workforce size and revenue than the other three. The recruitment services they utilized for open office positions were references from within and outside the organization. While the organizations reported using these methods, they also reported no associated cost with using the methods. In the follow up interviews, these organizations reported there is no cost associated with references since no time or resources are dedicated to finding references. These two organizations utilized the subtle approach to recruiting candidates. .

The final set of results from the survey is the measurement methods and associated costs utilized by the heavy highway construction organizations. Based on the results, all five the organizations utilize more selection methods when hiring an employee for an office position than they do when hiring an employee for a skilled labor position. All five of the organizations reported using an interview and reference check when hiring office employees. Three of the organizations reported only using those selection measures. The two larger organizations also reported using a knowledge test for office employees in addition to the interview and reference check. The other three organizations would benefit from utilizing a knowledge test because they will be able to verify that the candidate actually possesses the knowledge the claim to hold during the application and interview process.

The more surprising results were found when reviewing the data regarding the selection methods used to hire skilled laborers for the heavy highway construction organizations. All five of the organizations reported using a reference check as a selection method for skilled labor positions. In addition to the reference check, three of the five organizations reported using an interview as selection method. Out of the five organizations, an interview and reference check were the only two selection measures utilized. The two larger heavy highway construction organizations reported only using a reference check as the selection method for skilled labor positions

Overall, the results show that these organizations do not place the same emphasis or importance on hiring skilled laborers as they do office employees. At a minimum, the organizations should invest the same amount of money and resources in hiring office employees as they do skilled laborers. The larger organizations spent large sums of money recruiting and selecting candidates for office positions, but spent pennies on the dollar when it came to recruiting and selecting candidates for skilled labor positions.

There are some limitations to the results gathered from the research. The major limitation is the research did not state why the employees were not retained. This information could not be provided because of confidentially laws, but for the purpose of the research, it was assumed that employees were not retained because they could not perform their job in a

satisfactory manner. In addition, there were large variances in some of the data reported. This can be attributed to the different sizes of the organizations who participated in the survey. While it would have been preferred to find heavy highway contractors that were similar in revenue generated and number of employees; that was not possible for the research because of the limited amount of willing participants found.

Conclusions

The research performed regarding the recruitment and selection methods utilized by heavy highway construction companies exposed areas that can be approved upon by the heavy highway sector of the construction industry and the overall industry in general. Recruitment methods can be improved upon and the organizations should be able to receive more return on their recruitment investment. The same applies for the selection methods utilized by the contractors who participated in the survey. If the selection methods are improved upon, then the organization could potentially see a higher return in their investment in the form of retaining more employees that they hire. Finally, heavy highway construction companies need to change their overall culture and perspectives to realize that skilled labor positions are just as important, if not more important, than office positions within the organization.

The large variance in the amount invested for recruitment of office candidates versus skilled laborers is also something that needs to be addressed within the organizations. While some organizations believe that office employees are more important than field employees, it may take a cultural change within the organization to change that perspective. The research does show the organizations are not retaining their skilled labor employees at the same rate as office positions; and combined with the fact the organizations are expending more resources to recruit office candidates, it should be obvious to these organizations that an initial investment up front in recruiting a qualified candidate pool may reduce costs of repeat recruiting and selecting of candidates for skilled labor positions.

As with the recruitment methods used by the heavy highway construction organizations who participated in the survey, there is room for improvement regarding the selection methods utilized by these organizations. Since none of the organizations utilized any selection measures for skilled labors besides an interview and/or reference check, these organizations must implement a performance and knowledge test for skilled laborers in order to improve their workforce and new hire retention rates. The organizations who participated in the survey are relying on the candidate to prove they are qualified rather than verifying they are qualified. The construction organizations not only should have the candidates prove they are qualified by requiring a resume, reference check and interview, but they should also verify they are qualified by using testing.

As with any organization, the goal of a heavy highway construction organization is to remain profitable and provide a quality product. In construction, the profits of the organization and quality of the product are more related to the labor that performs the work rather than the management. While management in construction is definitely important, at the end of the day the skilled laborers are the employees who generate the revenue for the company by installing the product. With this is mind, construction organizations need to place more emphasis and resources in recruiting and selecting skilled laborers for positions within heavy highway construction organizations.

References

Andler, E. C. (2003). The complete reference checking handbook. New York: AMACOM. Copeland, C. United States Congress, (2011). The Role of Public Works Infrastructure in Economic Recovery (R42018). Retrieved from Congressional Research Service website: http://www.fas.org/sgp/crs/misc/R42018.pdf

- Deems, R. S. (1999). Hiring: How to Find and Keep the Best People. Franklin Lakes, N.J.: Career Press.
- Gatewood, R., Feild, H., & Barrick, M. (2011). Human Resource Selection. (7th ed.). Mason, OH: Cengage Learning.
- Goleman, D. (1998). Working with Emotional Intelligence. New York, NY: Bantam Books.
- Hoag, B., & Cooper, C. L. (2006). Managing Value-based Organizations: It's Not What You Think. Cheltenham, UK: Edward Elgar.
- Kuncel, N. R., & Hezlett, S. A. (2010). Fact and fiction in cognitive ability testing for admissions and hiring decisions. Current Directions in Psychological Science, 2010(19), 339.
- Lasky, K., & Parker, J. (2010). Construction battles back from recession. American Agent & Broker, 82(7), 38-40. Retrieved from http://search.proquest.com.jproxy.lib.ecu.edu/docview/614037837?accountid=10639
- Marsden, P. (1994). The hiring process: recruitment methods. American Behavioral Scientist, 37(7), 979-991. Retrieved from http://abs.sagepub.com.jproxy.lib.ecu.edu/content/37/7/979
- Nadler, R. S. (2011). Leading with Emotional Intelligence: Hands-on Strategies for Building Confident and Collaborative Star Performers. New York: McGraw-Hill.
- Osborne, J. E. (1996). Improving hiring decisions: Employee testing of candidates. Getting Results ...for the Hands on Manager, 41(12), 6-7. Retrieved from http://search.proquest.com.jproxy.lib.ecu.edu/docview/214232266?accountid=10639
- Dulaimi, M. F., & Langford, D. (1999). Job behavior of construction project managers: Determinants and assessment. *Journal of Construction Engineering and Management July/August*(1999), 256-264.
- Ryan, A. M., & Tippins, N. T. (2004). Attracting and selecting: What psychological research tells us. Human Resource Management, 43(4), 305-318. Retrieved from http://search.proquest.com.jproxy.lib.ecu.edu/docview/222129432?accountid=10639
- Skilled labor shortage puts new demands on connecticut construction contractors. (2008, Dec 08).
- New England Construction, 72, 67. Retrieved from http://search.proquest.com.jproxy.lib.ecu.edu/docview/195564365?accountid=10639