

A Survey of the Succession Planning Practices for Superintendents in the Industrial Construction Sector

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Replacing superintendents is becoming more important as the current superintendents are aging and nearing retirement. Most current superintendents belong to the baby boomer generation that has already begun to leave the work force. This research study was performed to determine if industrial construction companies view the aging superintendent fleet with concern and if they are using succession plans to prepare for this. The attributes and development programs associated with these plans are also investigated. A survey of 34 industrial construction companies was conducted for this research. The results show that a majority of the companies are utilizing succession plans and it is resulting in companies preferring to replace superintendents by promoting from within. The practice of training and mentoring to promote from within is helping to make sure that the competent knowledge each superintendent has is being transferred to the next generation. The research shows that industrial construction companies that do not have a succession plan need to develop one now in order to maintain a competitive advantage in the future.

Key Words: Superintendent, Succession Plan, Competent Knowledge, Industrial Construction

Introduction

Irondale Industrial Contractors (IIC) is no different than most industrial contractors in the United States today in that the superintendent pool is aging and preparing for retirement. IIC currently has seven superintendents under employment. Five of the seven superintendents or 71% have indicated that they would likely retire in the next five years. This comes as no surprise as they are all from the baby boomer generation and this generation has already begun to leave the work force and will continue to do so over the next few years.

As the superintendents leave the work force there are five main options for the replacement of the superintendents. The first is to promote from within from the rank of foreman, general foreman, or assistant superintendent. The second option is to promote from within with a college graduate who has a degree in a construction related discipline. The third is to hire from college someone who has a degree in a construction related discipline. The fourth is to hire a superintendent from a trade school. The final option is to hire an experienced superintendent from outside the company.

The superintendents that currently work for the organization have years of experience and a wealth of knowledge of their current trades. This knowledge is not something that can be replaced easily. The knowledge and skills that superintendents possess is known as competent knowledge. In order to maintain a company's competitive advantage this competent knowledge must be replaced in a systematic and organized manner.

Definition of Succession Plans

Succession planning is outlined by Wolfe (1996) as a defined program that an organization systemizes to ensure leadership continuity for all key positions by developing activities that will build personnel talent from within. In other words a succession plan builds the future leadership and management ranks from within, and defines exactly how an organization will systematically replace employees as they retire or leave.

Rothwell (2005) gives three main reasons why companies should be interested in succession plans. The first is that strategic success is, in large measure, a function of having the right leadership. Leaving the development of those leaders to chance, and hoping for the best, may have worked at one time. Ignoring the development of leaders and depending on headhunters to find replacements for key people may also have worked at one time. But these

approaches are not working now. Some effort must be made to ensure that the organization is systematically identifying and preparing high-potential candidates for key positions. The second is continuing downsizing and other cost containment efforts have led to reductions in the middle management ranks – a traditional training ground and source of top management talent – there are simply fewer people available to advance to the top ranks from within. That means that great care must be taken to identify promising candidates early and actively cultivate their development. The third reason given is that when succession planning is left informal and thus unplanned, job incumbents tend to identify and groom successors who are remarkably like themselves in appearance, background, and values. They establish a “bureaucratic kinship system” that is based on “homosocial reproduction”. This presents problems of discrimination and quells diversity and multiculturalism within the organization.

Purpose of the Study

The first objective of this study was to determine if industrial construction companies view the aging superintendent fleet as an upcoming issue and if they are developing plans for this. The second objective was to determine if industrial construction companies are implementing succession plans for superintendents and if so what are the major attributes of their systems. The third objective was to determine which of the five possible replacement methods for superintendents were the most preferred within the industrial construction industry. The final objective was to determine if competent knowledge transfer was considered an upcoming issue or what steps industrial construction companies are utilizing to stay on top of their competitive advantage.

Literature Search

A literature review revealed that very little research has been performed in determining how construction firms implement succession plans for superintendents. Succession planning can be defined as any effort to ensure the continued effective performance of an organization, division, department, or work group by making provision for the development, replacement, and strategic application of key people over time (Rothwell, 2005). Succession planning is not a new idea but it is a relatively new concept as defined in the construction industry. Original research conducted for the SMPS Foundation shows that firms are losing knowledge gained from experience on each project as older employees leave and experienced staffers change jobs. Few firms are addressing the problem and those that do are mostly a handful of larger firms (Schriener, 2007).

While there has not been a study specifically addressing how construction firms are going to replace their aging superintendents, there have been numerous articles written detailing that this will be a serious issue facing the construction industry in the near future (Staff, 2007). This research will help shed light on how industrial construction firms are dealing with this issue in order to remain competitive in the future.

Methodology

The procedure for this study involved finding out the key attributes of a succession plan, developing a survey instrument, conducting the survey, analyzing the results, and issuing conclusions and recommendations. The literature search was used to determine the key attributes of a succession plan. The search also revealed the key development programs utilized in successful succession plans. The attributes and development programs were used in developing the survey instrument.

The survey instrument was designed to accomplish the goals of the study and was developed into 5 sections. The first section consisted of 5 questions related to the size of the respondents company in terms of volume and employees and also questioned the respondents view on what percentage of their superintendents were likely to retire in the next 10 years. The second part of the survey asked 3 questions relating to how the respondents company replaced superintendents. The third part of the survey consisted of 4 questions relating to the respondents level of concern over replacing superintendents and their competent knowledge. The fourth part of the survey consisted of 3 questions relating to the contents of the succession plan of the respondent's company. The final part of the survey consisted of a free response question asking if the respondents had any further comments.

The list of potential respondents was compiled using construction companies that had done business with, bid against, subcontracted to or for work with IIC over the last ten (10) years. A list of 34 potential respondents was

generated. Each potential respondent was contacted via phone or email to gauge interest in participating in the research study. Respondents were geographically located throughout the United States and did not represent only one geographic area as most industrial construction companies work throughout the country. They are representative of the industrial sector of the construction industry because they were compared with Engineering News Records Top 400 Contractors to make sure all major industrial contractors were chosen and then several smaller contractors located throughout the country were chosen to balance out the scale in terms of revenue generated to develop conclusions based on the size of the companies.

The survey was pilot tested and the results used to modify the survey. The final version of the survey instrument was input into Survey Monkey (www.surveymonkey.com) a web based survey collection instrument. A letter was written to email to each potential respondent with the purpose of the study, web address for the survey, and instructions for completing the survey. The survey letter was emailed to all 34 potential respondents. The survey yielded results from 31 of the 34 potential respondents or a 91% response rate.

Findings and Analysis

Part I of the survey corresponded with the size of the participant's construction company and their fleet of superintendents. Thirty of the 31 respondents answered these questions. The first question was related to the annual volume of the participant's company. The results were divided into 6 categories: \$0-\$12.5 Million (23%), \$12.56-\$50 Million (23%), \$51-\$150 Million (17%), \$151-\$250 Million (7%), \$251-\$500 Million (13%), and greater than \$500 Million (17%). The mean of the 30 respondents was \$798 Million, the median was \$59 Million, and the mode was \$500 Million.

Question 2 was related to how many employees the participant's company had. The results of the 30 responses were divided into 8 different number of employee categories: 0-50 (26.6%), 51-150 (20%), 151-250 (3.3%), 251-400 (20%), 401-600 (6.7%), 601-800 (0%), 801-1000 (6.7%), and greater than 1000 employees (16.7%). The mean of the 30 respondents was 2,703 employees, with a median of 227.5, and a mode of 400 employees.

Question 3 asked participants how many superintendents their companies currently employed. The results were divided into 5 categories: 0-5 (13.3%), 6-10 (33.3%), 11-15 (13.3%), 16-20 (3.3%), and greater than 20 (36.8%). The mean was 51 superintendents, with a median of 12, and a mode of 10.

Question 4 asked participants what the average number of years of experience their superintendents had in the position of superintendent. The results were broken down into 5 categories: 0-5 years (0%), 6-10 years (26.7%), 11-15 years (20%), 16-20 years (40%), and greater than 20 years (13.3%). The mean was 16 years, with a median of 18 years, and a mode of 20 years experience. This shows that most superintendents have between 11 and 20 years of experience.

Question 5 asked the respondents what percentage of their superintendents was likely to retire in the next ten (10) years. The results were broken down into 7 categories: 0%-10% (30%), 11%-20% (6.7%), 21%-30% (20%), 31%-40% (10%), 41%-50% (26.7%), 51%-60% (3.3%), and greater than 60% (3.3%). The mean of the participants was 30%, with a median of 25%, and a mode of 50%. This shows that most respondents expect between 30% and 50% of their superintendents to retire in the next ten (10) years.

Question 6 asked the participants what method of replacing superintendents were preferred by their company. The question was asked as a multiple choice multiple response. The results can be seen in Table 1. All 31 respondents answered this question. The top response was promoting from within from the level of foreman, general foreman, or assistant superintendent with 90% of respondents choosing this option. The second response was hiring from outside the company with 42% of participants choosing this option. The option of other was selected by one participant and the specification given by the participant was to hire from a union trade school. A Chi Square test was performed on the results using a null hypothesis that the results would be equally distributed across all the answer choices. The results of the test were that the null hypothesis was rejected and that the difference among the choices are significant. The results show that the overwhelming choice of industrial contractors surveyed is to promote from within from the level of foreman, general foreman, or assistant superintendent.

Table 1

Preferred method of replacing superintendents

Method	No. of Responses	% of Total
Promote from within from Foreman/General Foreman/ Assistant Superintendent	28	90.3
Hire from outside company	13	41.9
Promote from within college graduate	7	22.6
Hire from college	1	3.2
Other	1	3.2
Hire from trade school	0	0

Question 7 asked respondents how long they train foreman, general foreman, or assistant superintendents to become superintendents. The results can be seen in Table 2. Twenty six (26) of the respondents indicated that they train their foreman to become superintendents. The participants indicated a training duration of between 2 months and 120 months. The mean was 36 months, with a median of 33 months, and a mode of 36 months. This shows that most industrial contractors need at least 36 months to train foremen to become superintendents.

Question 8 asked participants how many months they train college graduates to be promoted from within to become superintendents. The results can be seen in Table 2. Seventeen (17) participants or 55% indicated that they train college graduates to be promoted to superintendent. The respondents average training time was 27 months, with a median of 16.5 months, and a mode of 12 months. This shows that the contractors that do train college graduates to be promoted to superintendent do it in less time than with foreman.

Table 2

Months of training required for promoting from foreman and college graduate levels to superintendent

Months of Training	<u>From Foreman Level</u>		<u>From College Graduate Level</u>	
	No. of Responses	Percentage of Total	No. of Responses	Percentage of Total
> 48	7	26.9%	3	17.6%
37-48	1	3.8%	0	0.0%
31-36	5	19.2%	3	17.6%
25-30	1	3.8%	0	0.0%
19-24	3	11.5%	2	11.8%
13-18	0	0.0%	2	11.8%
7-12	3	11.5%	4	23.5%
2-6	6	23.1%	3	17.6%
Total	26	100%	17	100%

Question 9 asked participants if their company had considered the issue of replacing superintendents over the next 10 years. The results show that 84% or 26 of the respondents' companies have considered this issue.

Question 10 asked the participants their level of agreement with the statement: "I am confident that we will be able to retain or replace our superintendents over the next ten (10) years". The results can be seen in Table 3. The results were weighted using a 1 for Strongly Agree to a 5 for Strongly Disagree. The average was a 1.71 since 94% of the respondents replied with Agree or Strongly Agree. A two-tailed t-test was performed using a null hypothesis that the average would be a 3.0. Using an confidence level of 95% the results showed that the null hypothesis was rejected and the results are significant. This shows that 94% of the participants are confident they will be able to retain their superintendents over the next ten years.

Question 11 asked the participants their level of agreement with the statement: “The loss of specialized knowledge and skills as each superintendent retires or resigns over the next 10 years will have a negative impact on the ability of the company to successfully complete projects”. The results can be seen in Table 3. The results were weighted using a 1 for Strongly Agree to a 5 for Strongly Disagree. The average was a 2.94 since the results are fairly even across the given choices. A two-tailed t-test was performed using a null hypothesis that the average would be a 3.0. Using an confidence level of 95% the test failed to reject the null hypothesis. The test most likely failed because the sample average of 2.94 and is very close to 3.0. This shows that the results of this question are that the respondents neither agree nor disagree with the statement.

Question 12 asked the participants their level of agreement with this statement: “I am confident that we will be able to retain the specialized knowledge of each of our superintendents even as they retire or resign over the next ten (10) years”. The results can be seen in Table 3. The results were weighted using a 1 for Strongly Agree to a 5 for Strongly Disagree. The average was a 2.16 since 74% of the respondents replied with Agree or Strongly Agree. A two-tailed t-test was performed using a null hypothesis that the average would be a 3.0. Using a confidence level of 95% the test rejected the null hypothesis. This shows that 74% of the participants are confident they will be able to retain their competent knowledge and keep their competitive advantage over the next ten (10) years.

Table 3

Percent and (number) of participants level of agreement with the statements listed below

Statement	SA	A	N	D	SD
I am confident that we will able to retain our superintendents over the next ten years	38.7% (12)	54.8% (17)	3.2% (1)	3.2% (1)	0% (0)
The loss of specialized knowledge & skills as each superintendent retires over the next 10 years will have a negative impact on the ability of the company to successfully complete projects	9.7% (3)	35.5% (11)	16.1% (5)	29.0% (9)	9.7% (3)
I am confident that we will be able to retain the specialized knowledge of each of our superintendents even as they retire or resign over the next 10 years	25.8% (8)	48.4% (15)	9.7% (3)	16.1% (5)	0% (0)

Note: SA=Strongly Agree, A=Agree, N=Neither Agree nor Disagree, D=Disagree, and SD=Strongly Disagree

Question 13 asked respondents if their company has a succession plan for field supervision. The results showed that 74% of the respondents have succession plans that include superintendents.

Eight participants or 26% indicated that their company does not have a succession plan and 7 participants answered Question 14 which asked why they do not have a succession plan. The responses were as follows: we have young superintendents; we train motivated individuals; we have low turnover and constantly train replacements; we have no problem replacing superintendents; we are subcontracting out most services now; the owners are aware of the situation; and I think we should.

Question 15 asked each participant how they developed their succession plan within their organization. The results were: 19 (57.7%) respondents developed their succession plan in-house; 5 (15.1%) used another company’s model; 4 (12.1%) used outside consultants to develop their plan; and 5 (15.1%) said they do not have a succession plan. A Chi Square test was performed using a null hypothesis that the results would be evenly distributed across the choices. The results of the test were that that null hypothesis was rejected and the results are significant. The results show that 19 participants or 57.7% developed their succession plan in house.

Question 16 asked respondents what attributes of a succession plan were present in their respective plan. The results can be seen in Figure 1. A Chi Square test was performed and the test showed the results are significant. The results show that the participants’ plans are most frequently supported by top management and supported by senior leadership. The next most prevalent attribute is that it establishes a talent pool within the company followed by

support of the employees and addressing present and future needs. About 50% of the respondents indicated that their plan is designed to attract and retain employees.

Question 17 asked the respondents what employee development programs their company use. The results can be seen in Figure 2. A Chi Square test was performed and the test showed the results are significant. The results show that the most popular development program with an 84% approval is the identification of the skills and knowledge to be promoted. This was followed by using employee evaluations to assist employees in obtaining their career goals. Mentoring and Training programs were also chosen by more than 50% of the participants as present in their system.

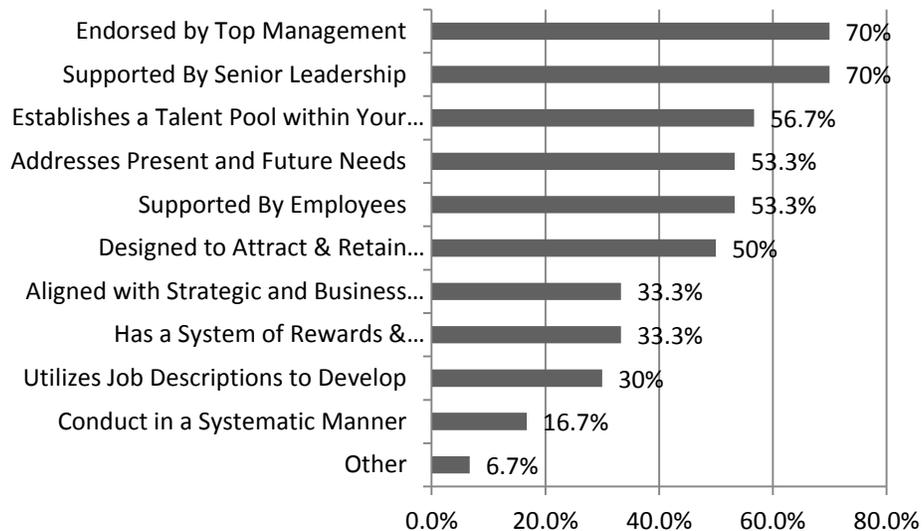


Figure 1: Attributes present in Succession Plan.

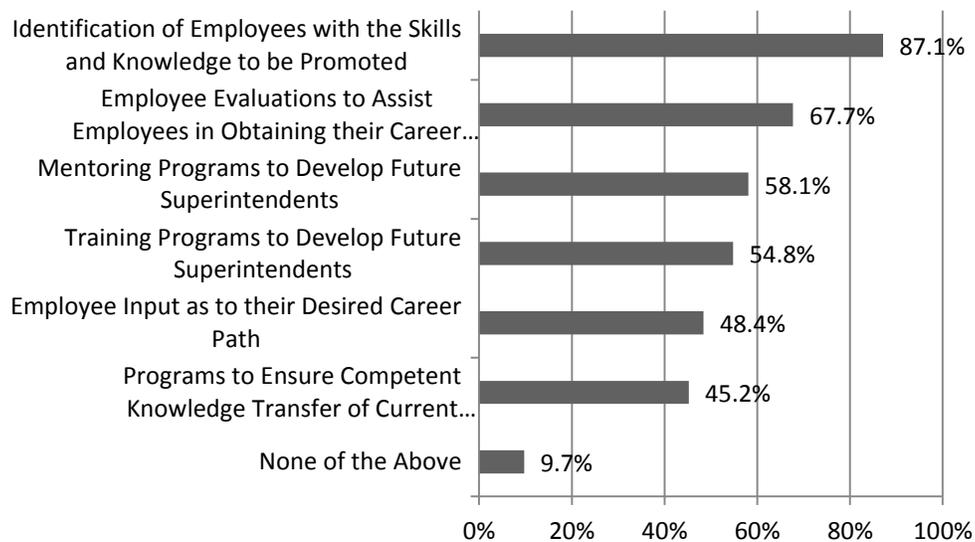


Figure 2: Employee development programs used.

The final question in the survey, an open-ended question, asked respondents if they had any additional comments on the replacement of superintendents. The comments provided were: emphasis must be placed on hiring trainable employees; hire craftsmen, train them, and promote the talented ones; there is a shortage of young foremen, we involve motivated foremen early; promoting from within is preferred but hiring externally has benefits; it is important to recognize skilled employees and mentor them; and it is difficult to attract talented employees and keeping superintendents is a challenge. The results given in this question support the answers given in the rest of the survey. The emphasis is on hiring trainable employees, training them, and promoting the talented ones. It is a good point given that an emphasis needs to be placed on hiring trainable employees. One interesting response is that promoting from within is preferred but hiring from outside the company has benefits such as a fresh set of ideas and ways of doing things.

Conclusions and Recommendations

The first objective of the study was to determine if construction companies viewed the aging superintendent fleet with concern. The results show that this is not the case. The majority of the participants (94%) indicated that they are confident they will be able to retain or replace their superintendents over the next ten years. Eighty four percent (84%) of respondents indicated that their companies have considered this issue and 74% indicated that their company has a succession plan. The results show that the majority of companies do not view this as an issue because they are taking steps to mitigate the issue with identification, training, and succession planning.

The results show that 74% of the companies do have succession plans. The majority of companies that had a succession plan (23 respondents) indicated that they developed the plans in house (19 respondents) or 83%. This shows that industrial construction companies are taking the time to develop their programs to meet their specific needs.

The major attributes present in the participants respective succession plans are: endorsed by top management, supported by senior leadership, establishes a talent pool, supported by employees, and addresses present and future needs. These are very important aspects in that their plans are supported and given priority by upper management as well as support and involvement by employees. The final aspect is that the plans establish a pipe line of talent to continue the development and replacement of employees.

The results show that construction companies are utilizing programs to develop their employees for promotion. The major attribute of the respondents development program was that they have a system to identify employees with the skills and knowledge to be promoted. Respondents indicated that most of them (65%) utilized employee evaluations to assist their employees in obtaining their career goals. Mentoring and training programs were also highly regarded as being utilized by the participants companies with responses of 58% and 55% respectively. This shows that these companies are investing in their employees and making sure their companies maintain their competitive advantage in the future.

Most participants (90%) indicated that the preferred method of replacing superintendents was to promote from within from the position of foreman, general foreman, or assistant superintendent. This shows that the industrial construction companies develop their internal talent and promote them. There were some additional comments as to there being some advantages such as a fresh set of eyes to hiring from outside the company. However, there were also several additional comments that indicated that identifying and training highly skilled individuals was preferred. The results come as no surprise given that most companies have a succession plan for their field supervision.

The results show that the participants indicated that they neither agree nor disagree with the statement that the loss of competent knowledge among their field superintendents would have a negative impact on their ability to successfully complete projects. The results also show that respondents agree with the statement that they are confident they will be able to replace the loss of specialized skills and knowledge in the future. Forty five percent (45%) of participants indicated that they have programs to ensure the transfer of competent knowledge within their organization. The conclusion is that companies do not feel this will be an issue and many have programs to ensure the transfer of competent knowledge within their organization.

Recommendations

The results have shown that industrial construction companies that do not have succession plans need to develop them in order to maintain a competitive advantage in the market place in the future. The succession plan should be developed in house. The results show that this is the preferred way to develop the plan and allows industrial construction companies to customize their programs based on their size.

The succession plans should contain all of the major aspects of a succession plan which include: endorsed by top management, supported by senior leadership, supported by employees, establishes a talent pool, addresses present and future needs, designed to attract and retain employees, aligned with strategic and business plans, has a system of rewards and incentives, utilizes job descriptions to develop training programs, and be conducted in a systematic manner.

Succession plans in order to maximize their effectiveness need to have programs to develop the employees. This should include the following: identification of employees with skills and knowledge to be promoted, training and mentoring programs, use of employee evaluations to assist employees in obtaining their career goals, employee input as to their desired career path, and programs to ensure competent knowledge transfer.

Replacing superintendents is going to be a reality throughout the future and companies need to use succession plans to develop their talent and promote from within. The results show that this is the preferred method and several participants provided comments that identifying and developing talented foremen is a priority within their organization. A properly designed succession plan will promote this practice.

Training and mentoring programs will allow companies to ensure the transfer of competent knowledge to their future superintendents. The results show that the average training time to promote a foreman is 36 months, so companies need to prepare for superintendents to retire or resign at least 3 years in advance.

References

Cooper, D.R. and Schindler, P.S. (2008). *Business Research Methods*. 10th ed. Boston: McGraw-Hill Irwin.

Rothwell, W. J. (2010, January 23). *Effective Succession Planning: Ensuring Leadership Continuity and Building Talent from within*. New York: AMACOM, American Management Association, 2005. URL <http://www.safari.com>.

Schriener, J. (2007). Firms must adjust strategy to attract and retain staff. *Engineering News-Record*, 259(10), 16.

Staff (2007). Baby Boomer Exodus Requires Planning Now. *Engineering News-Record*, 259(12), 56.

Wolfe, R.L. (2010, January 23). *Systematic Succession Planning Building Leadership from within*. Menlo Park, Calif.: Crisp. Publications, 1996. URL <http://www.safari.com>.