

## **Management of Human Resource in Construction Industry**

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### **Abstract**

Workforce is the most valuable asset for an efficient outcome of any organization and this is especially true in case of labour-intensive industries such as construction. However it has been observed since long that human workforce in an organization also represent the most complex resource to manage compared to any other resources that are required for satisfactory completion of a project. In general construction industry often experiences complexities in meeting project completion schedule and finance due to non-availability of sufficient number of skilled labors and staff to carry out the planned work. This kind of intricacy can be managed and it efficiently possible to handle such issues with proper utilization of human resource management techniques to avoid shortage of labor. It has been observed that concern of human resources management (HRM) in construction is increasing day by day along with greater emphasis on human resource and human relation in construction is reported in the literature. However construction industry is generally criticized due to lack of appropriate approach towards HRM policies and many researchers are suggesting formal methods of managing human resources in construction field. It was observed from literature review that that the kind of HRM structure applicable in the construction field is not reported satisfactory. Therefore this paper mainly focuses on how to identify the different components of human resources management in the construction. A detailed survey has been conducted to identify HRM related issues within the construction company and result were analyzed keeping main focus on the human resource practices that are generally pursued in the Indian construction industry, availability of skilled labour and formal or informal method or forms commonly adopted for the management of the human resource.

## **Introduction**

The capability to attract, develop and retain competent employees is a key feature of any successful business. Human in an organization is the most valuable asset and this is especially true in relatively labour-intensive industry such as construction. However work group also represents the most difficult resource of the organizations to manage. Unlike physical resources, human beings have their own personal needs those must be fulfilled and habit those must be managed by an employer provided they are contributing to organizational growth and development. People being individuals have their own perspectives, values and attributes in the organizational set up and if these are managed effectively human personality can bring considerable benefits to organizations Mullins, 1999 [1]. However if managed poorly they have the potential to severely limit the organizational growth and threaten the viability of a business. There are innumerable examples of conglomerate and project crises in the construction sector that occurs as a result of human behavior and it appears that practices of human resources management (HRM) has the potential to eliminate more risks in the construction than any other management approach Loosemore, 2000 [2]. This paper has mainly focused on human resources management in the construction industry.

## **Literature Review**

There has been growing interest in human resources management (HRM) in construction industry over the last few decades. Detailed research literature published is reviewed along with text books on the HRM and some of them are mentioned in this section are Langford et al. 1995 [3], Druker and White 1996 [4] and more recently Loosemore et al. 2003 [5]. However there are more number of academic publication on this subject area but the uptake of HRM practices in industry still delayed Dainty et al., 2000 [6]. They have suggested that the dearth of humanity of the industry and the widespread use of casuals self-employed labour Winch, 1998 [7] resulted in the lack of formal employment of HRM in construction Debrah and Ofori, 1997[8]. Haas et al. 2001 [9] reported that formalized HRM systems tend to be under-utilized in a sector that entrust HRM practices to line managers Renwick, 2003 [10] based on the project site. The construction industry is mainly of small and medium-sized enterprises (SME) which often do not have HRM unit. Dainty et al. 2000 [6] have reported that construction companies have a tendency to rely on less formal structures in terms of managing the employment relationship. Recently Raidén and Dainty 2006 [11] indicated that construction organizations tend to display the qualities of a balance between the chaotic and the orderly organization. Chan and Kaka 2007 [12] also observed that compassionate paternalistic relationship between site managers and their human resources tend to strengthen the employment relationship in the construction project environment. Although the dominant communication suggests that construction organizations are short in engaging the strategic HRM (SHRM) Raidén and Dainty, 2006 [11] the existing literature remains relatively opaque in terms of explaining how HRM actually works in construction industry. These issues resulted in a research opportunity to evaluate the effectiveness

of HRM in construction sector and some of the most important issues are discussed in this paper in the next sections i.e. solutions that reduce the need for labor, prefabrication, standardization and modularization, redesign of construction processes, re-training existing labor, developing multi-skilled labor, motivation through reward management and mechanization.

### **Some issues related to workforce and construction process**

The major problem construction industry is facing today due to expansion in infrastructural growth is the shortage of skilled labours. Construction companies periodically experiences difficulty in meeting project completion dates because of non-availability of sufficient skilled labors and staff to carry out the work efficiently. This tight spot may be the basis of an analysis for an industry in general shortage of labor. An expansion of construction activities and/or unforeseen political situations can quickly result in a shortage of labor in all trades and at all levels including supervisors, foremen, engineers and managers including workers. There are two complementary approaches as a solution for the shortage of workers. The first approach is through that might reduce the need for labor such as: prefabrication, standardization and modularization and redesign of construction processes. The second approach is increasing the available supply by retraining existing laborers, developing multi-skilled labor, and through motivation and mechanization.

### **Reducing the Need for Labor**

This can be considered as the most important aspect in efficient utilization of work force. Many construction activities in today's scenario that are traditionally done on site can be completed in factories using automated machinery with lesser skilled operators. Instead of using rough materials and then finishing, use of standard prefabricated parts or modules reduces the need for skilled labor on site. In modular construction activities entire sections of a structure can be built in a factory and later assembled at the construction site i.e. prefabrication. Langford *et al.* 2000 [13]. Therefore it is possible to reduce the overall construction costs since producing standard structural elements will charge less and even training for standard activities might be economical and simpler Handy 1999 [14]. Redesign of construction methods can be achieved by the introduction of new technologies and by customizing the job to fit the available workforce. It may result in significant changes to systems and processes since the need for different skills is required. This would increase the use of knowledge workers and technicians and reduce the need for supporting staff or machine operators. However, a considerable threat to employees is represented since it results in de-skilling and downsizing the number of required jobs Armstrong, 2001 [15]. Langford *et al.* 2000 suggested that employees those are affected due to changing technology require re-training procedures and it might reshape and upgrade the skills of the existing workforce. In order to redeploy employees from one area or activity to another and hence increasing the available supply, retraining becomes an essential requirement so that employees won't be lost. Investments in retraining and

education will be the outcome of such strategies Langford *et al.* 2000.

### **Objectives and research methodology adopted**

The main objective of this paper is to evaluate the effectiveness of human resource management in the Indian construction industry. The main queries that are addressed and evaluated in this study are:

- Human resource practices followed in the Indian construction industry.
- Availability of skilled labour.
- Method or form (formal/informal) commonly adopted for HR management.

Research methodologies adopted in this study to collect the appropriate information is the formal method and basically most convenient method adopted includes questionnaires, interviews and visiting personally to the companies.

### **Data collection**

The primary data in this study is collected through questionnaires and those were answered by various personnel ex. contractors, consultants, construction developers, client and construction company functioning both as developer and contractor involved in managing construction projects. The questionnaire examines the aspects for various personnel in the construction industry. The primary structured questionnaire in this study includes:

- Questionnaire for the HR: it mainly consist questions regarding HRM policy and recruitment, selection and training methods adopted.
- Questionnaire for the site manager: it mainly consist questions regarding training, labour type (skilled or unskilled) and their consequences.
- Questionnaire to selected respondents from contractor, consultant, and developer, with various ages group, level of experience, organizations, working nature and responsibilities as their involved in managing construction project and understand the ideas in tackling Project Human Resource issue.

Secondary data was collected based upon the primary questionnaires as well as personal interviews and data is obtained from reviewed literature as applicable to the construction industry. The most important and relevant secondary data set is chosen and included for developing further correlation between primary and secondary data sets.

### **Results and Discussion**

The data collected through questionnaire, personal interview and through other sources were analyzed and the findings of the questionnaire are discussed as under:

### Human resource department

Based on the experience shared and observations by various workforces in the construction industry, it was observed that as to how HR works in the construction field some of the queries for example were regarding availability of separate department for managing their human resource, head of the department and function of this department. It was found that six out of eight companies' (i.e.75%) have separate department for management of their human resource and the department is designated as human resource department. The main function of this department is recruitment, selection, attendance, salary fixation, rewards etc. It was also found that in most of the company human resource manager is in charge of managing entire human resource.

### Human resource policy

It was also noted whether the companies have HR policy in place or not, its type and their formality level. Figure 1 shows the type of HR policy preferred by the construction companies. It was found that almost all the seven companies (100%) have human resource policy but the average rating for formal procedure followed was only three. Out of the seven company's having human resource policy, three company's were identified with combination of implicit and explicit policy, two had implicit policy in place and only two companies had explicit policy in place.

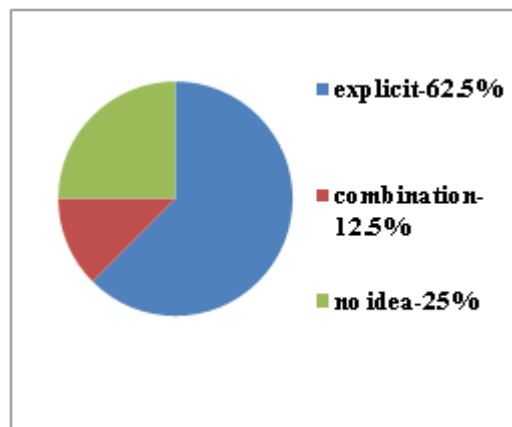


FIGURE 1: hr policy preferred in construction company

### Recruitment and selection practice

In this case sources that company uses as a medium of selection and recruitment of new employees were studied. From the survey it was found that newspaper and institution were the most preferred source for the recruitment. While some company preferred recruiting through walk-ins interviews, job-portals were also used as a source by two companies for recruitment of new employee. The decision for selection of new employee was taken by managing director in most of the company's.

### Critical issues in HR management

Following issues 1 to 6 mentioned below of human resources management in the organizations are discussed in accordance to the criticality of the individual issue in the respective companies. Table 1 shows how these issues are critical based on importance identified and given by the companies. Some of the major issues of discussion are:

- Hiring the right people.
- Developing the right process.
- Helping employee develop right skill.
- Motivating and retaining the workforce.
- Creating culture of innovation.
- Succession planning.

**Table 1:** critical issues of human resources management

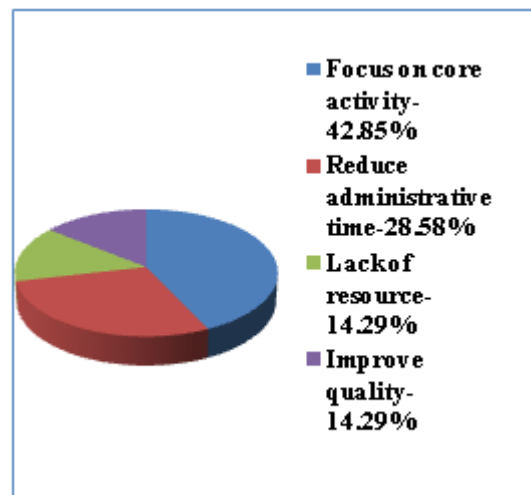
Issues	Company (A)	Company (B)	Company (D)	Company (E)	Company (F)	Avg rating	Overall rank
Hiring the right people							
A	3	2	1	2	3	2.2	2
Developing the right process							
B	2	3	4	5	2	3.2	3
Helping employee develop right skill							
C	4	4	3	6	4	4.2	4
Motivating and retaining the workforce							
D	1	1	2	3	1	1.6	1
Creating culture of innovation							
E	5	5	6	1	5	4.4	5
Succession planning							
F	6	6	5	4	6	5.4	6
<i>Importance of issues in company: Rank 1= highest priority and 6 = lowest priority.</i>							

According to the importance identified by the company it was observed that the most critical issue in management of human resource is motivating and retaining the workforce and hence our study indicates that keeping human force motivated throughout the service span has to be given the highest priority. This issue is followed by hiring the right employee, developing the right process of recruitment, helping employee develop right skill, creating culture of innovation and the last priority observed was succession planning.

### Outsourcing of workforce

Outsourcing is “the process of transferring responsibility for an area of service and its objectives to an external provider” Mondy and Noe 2005 [16]. Outsourcing is usually

called “subcontracting of activities”. The recruitment of labour through mediators is a long established practice in the construction industry. The mediators brings labour to the construction site when it is needed and take it away when it is no longer required after completion of the work. Thus they constitute a bridge between the laborers seeking work and contractors or subcontractors who can offer work Vaid, 1999 [17]. It was asked to our participants in this study those include contractor or site managers about the source from which they got their site labour? Six out of nine of them given feedback that they rely mostly on outsourcing i.e. labour subcontracting. It indicates that outsourcing of labour employment is the easiest task for efficient outcomes. The various reasons for outsourcing of labour are shown in Figure 2 and it was observed that outsourcing helps most of the contractor (42.85%) to focus on core activities and around 28.58 % indicated that outsourcing reduces the administrative time.



**FIGURE 2:** reasons for outsourcing

### **Training to the employee**

Training for up gradation of skills and knowledge is the major issue in current scenario due to faster development in the technology. It was observed that many companies do not have specific training module and program for the workforce. It was also discussed about the barrier they are facing in order to have an integrated training program for skill up gradation. Some of the basic barriers in integrated training program for staff are as follows:

- Higher expenses of construction training courses.
- Short term contract of worker.
- Larger number of various type of learning point.
- Little attention of client on the importance of skilled labour in the project.
- Time consuming process.
- Lack of initiative among the workers.

### **Shortage of labour**

In construction industry workers are the major backbone of the activities and they are to be given highest priorities. This study also discusses the issues regarding availability of skilled labour at site and consequences on project work if unskilled labors are used. Seven out of nine site managers reported that availability of skilled labour are not in sufficient numbers and all of them agreed that they have to face damages at some point of the time during project due to the use of unskilled labour. The two main consequences faced in using unskilled labour are delay in the work completion and extra cost on the project. There are two possible complementary approaches for the labor shortages. The first approach is the reducing the need of number of labor by adopting prefabrication, standardization and modularization, and redesign of construction processes and the second approach would be to increase the available supply by retraining the existing laborers, developing multi-skilled labor, and through motivation and mechanization. Respondent were asked which solution they would prefer for the following two approaches. Most of the respondent agreed that reduction in the need of labour and preferably developing multi-skill workers and motivating through reward management to increase the availability in supply of labour

### **Human Resources Management practices**

The HRM practices commonly adopted by various companies were either formal method or informal method or both and some of the issues are regarding the HR functions, employee hiring rules, firing rules, finding sources of new employees, HR plans, training, job description and performance appraisal. It was observed that though most of the companies have a separate department for managing their human resource only few companies follow the formal practices completely. On the other hand, in most company formal HRM systems tend to be under-utilized.

As indicated by the author Raidén and Dainty (2006), the construction organizations tend to display the traits of a “chaordic” (a balance between the chaotic and the orderly) organization. The respondent were also asked about the state of HRM, the answer to this question was mostly poor and need to be improved. This also clearly gives an indication that the management of resources was not completely formal. It was also observed that the site based operative were carried out in less formalized method as compared to the office based operative, with most contractor resorting to outsourcing of labors.

### **Conclusions**

A survey was conducted in various construction companies and site by preparing a questionnaire for the accomplishment of the research objective. The most common observations are tabulated in Table 2 and based on this study some of the recommendation are:

- Keeping the available workforce efficient by giving bonuses, overtime opportunities, loyalty rewards, and promotions as incentives to encourage



- workers commitment and increasing wage levels.
- Sharing the available workforce with other contractors or employers if possible.
- New workers may work on part time basis during their free time to develop a hands-on experience.
- Skill development training institutes can be developed.
- Friendly environment should be made through which managers, staffs and workers can discuss and learn from each other and such work environment should be created to motivate employee’s innovative and personal commitment.

**TABLE 2:** summary of the most common feedbacks

Sr. No.	Description of issues in HR management	Most common feedback
1	Critical Issues that matter HR Departments	Motivating and retaining the workforce
2	HR Decisions Taken	Recruitment/Selection Processes
3	Methods used for Recruitment	News paper, influence and colleges
4	Reasons to Outsource	Focus on core activity
5	Are skilled labour sufficient	No
6	Solutions to reduce the need of labor	Standardization
7	Solutions to Increase the available supply of labor	Developing multi-skill workers and motivation through reward management
8	Does your company have specific training course and program	No
9	Barrier to having integrated training course	Time consuming and high expenses on construction training course
10	Have you faced any damage in using unskilled labour?.	Yes
11	Consequences face in using unskilled labour	Delay and extra cost on project

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