

Essential Competencies for the Human Resource Managers and Professionals in Construction Industries

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ABSTRACT

Nowadays, the role of Human Resource (HR) managers in construction projects is very vital. Although construction is one of the most labour-intensive industries, Human Resource Management (HRM) issues are given inadequate attention in this industry. Hiring competent HR professionals in construction firms can promote the quantity and quality of products, as well as they increase the possibility of successful achievement in strategic goals. To assess the importance of HR managers' roles in construction industries, this study has employed Delphi method based on experts' opinions to identify essential competencies. In this study, 12 essential competencies for HR managers of construction companies have been identified, which contribute to a better performance of companies' missions and achievements in strategic goals.

KEYWORDS: Human Resource; manager; Competency; Construction industries

1. INTRODUCTION

The lack of competent and experienced workmen and managers has appeared since the 1980s and has jumped to a high level nowadays. The construction industry is one of the fields suffering the main challenges. The challenges caused the ways of controlling and providing the needs by either recruiting or training in the industry in order to national interests. Since labor productivity and a harmonious working environment are necessary factors of successful project, control over Human Resources comes to be important, more so than ever these days where shortages of both skilled workers and experienced managers exist [1]. The changes due to internal or external forces in a construction organization can affect the main strategies. Human resource is not an exception, and its process can be impacted parallel [2]. A manager must be able to take the right and the best strategy to handle the challenges resulted from the changes and the necessities. Therefore, the changes and the necessities on the human-resource part make the role of HR manager significantly. As a result of that, every company must take a competent HR manager to achieve up to date affairs well done to handle organizations effectively [3]. Pinto and Prescott found remarkable results in a relatively recent research. The authors conclude that the Personnel factor, even if designated in theoretical literature as a key factor in project efficiency [4].

Although construction is one of the most labour-intensive industries, Human Resource Management (HRM) issues are given inadequate attention in this industry. Furthermore, the focus of attention with regards to HRM has been as a centralized head-office function yet most problem and operational issues arise on projects. HRM is of strategic importance to all organizations, contributing to the success of the organization, (Pfeffer, 1998; Huselid, 1995), and helping to create competitive advantage [5, 6, 7]. The conditions under which HRM emerges in the construction organization may differ from those associated with mainstream HRM, which is shaped by the typically large, classically managed organizations [8]. According to the Mabna Company's report based on the untimely construction projects, Poor human resource management in mine planning and providing human resources were performed as the reasons for early failures and delays of projects [9]. According to this report, inefficient human resource managers reduce the efficiency of project manpower requirements. Lack of coordination between HRM and project managers do not provide qualified and skilled HRs. in the time required for different phases. This imbalance causes time operating phases to be delayed in a project. In other words the duration lasts longer than the scheduled time. Thus, competent managers can be affective in successful transition to conducting construction projects to be a completed.

1.1 HR managers' roles in construction projects

Construction organizations will require both additional and different HRM practices and processes than those suggested by the traditional approaches. HR managers will require extra processes particular to the project and programs. They adopt to undertake their work. Projects and programs are temporary organizations, and so HRM

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practices and processes will be specific, unavoidably to those organizations [7]. HR managers and professionals in Construction firms will require different practices to deal with the dynamic nature of the working environment in the project-oriented organization [7].

The purpose of project Human Resource Management is to ensure that the project has sufficient human resources, with the correct skill sets and experience, for the project to be successfully completed. In a construction project a HR manager develop a plan that describes the end-to-end processes that a project will use to meet its human resource requirements and explains that, which resources with what skills and experiences are required, how resources will be acquired. A project HR manager must be able to know when resources will be needed and recognize how resources will be transitioned into and out of the project following the completion of their project assignments [10]. HRM processes in Construction Project include courses of actions such as developing Human Resource Plan, Acquiring Project Team, Developing Project Team and Managing Project Team. HR managers of construction projects have to be able Identify and document project roles, responsibilities, and reporting relationships, as well as create the staffing management plan. They must obtain the human resources needed to complete the project on time. HR project managers must have the skills to develop the staffing plan. The staffing plan is an output document of the HR Management Plan. It captures details of the project's resource requirements. Construction project HR managers have to be able develop project team is the process of improving the competencies, team interaction, and the overall team environment to enhance project performance. They have to track team member performance, provide feedback, resolve issues, and coordinate changes to enhance project performance [10].

Nowadays, many companies and organizations put efforts in performing competency based systems. In order to ensure the successful future, the process of understanding of real situation, learning from challenges and failures need to be conducted [11]. Identifying the great and vital competency for the jobs allows an organization to, become constant in purpose of hiring people, train and develop their skills, measure their performance, and develop leadership potential. It identifies competency gaps in mission-critical occupations [11]. Performance management is another process that can be improved by competency model through setting the constant metrics to measure and appreciate the employee based on the quality and the way they do. Competency model also gives impact to the employee's self- development by recognizing the potential skills that need to be polished, and can increase the overall "skill health" of the organization by eliminating skill gaps. This development also links with the career management, that help laborers learn and increase the competencies needed to let the move up or around the organization [12]. Although, HRM in construction industries can be a dissimilar professional skill and ability, standards and training have been significantly ignored in that most clinicians have not had formal training in it [13]. In competency-based approaches, the employee is evaluated based on a particular standard but not in comparison with others [14].

2. Objective of study

This research has been undertaken to explore essential competencies for the HR managers in construction industries. Therefore the aim of current research is to answer this research question: Which HR competencies are necessary for the HR administrators of construction companies?

3. METHODOLOGY

The purposes of this study are to recognize the essential competencies for the HR managers in construction companies. Various methods have been shown to be relevant in constructing a competency model [12]. These methods include common data collection methods such as direct observation, review of job descriptions, job analysis interview questionnaire, focus groups and Delphi methods [12]. In current study, the Delphi method was performed to identify and prioritize the essential competencies which are required for HR managers in construction industries.

3.1 Delphi method

Delphi is a method used in order to perform a systematic judgment and making decision about a particular topic. A group of expert people called Delphi panels participate in Delphi study. They should have enough knowledge and experience about the subject. Furthermore, they must be ready and have enough time to participate in the research [12]. Panelists of present research included eighteen people who are HR managers and also have more than ten years job experience in HR affairs in construction industries. Two rounds of Delphi surveys were conducted to identify HR competencies. At the first round, Delphi panels were asked to present important competencies needed for construction Project HR managers and write them in a form. After gathering the forms in order to analyze the responses and rewording common responses to avoid duplication, a list of competencies based

on responses of first round was made to be used as an instrument in the second round of Delphi. In the questionnaire of second round panels were asked to rate the importance of each competency, using a 7-point scale: from 1 rated as least important to 7 meanings very important. The data gathered from second round were analyzed through statistical methods. Based on the results of second round performing the third round of Delphi was not needed for this research because researchers obtained a consensus and no dissenting statement was issued [15].

3.1.1 Defining consensus

One of the most critical stages in Delphi study is defining consensus [12]. Likert scale is the most commonly used technique to analyze data in Delphi survey [15]. Some researchers have used standard deviation (SD) to assess the consensus. Stronger consensus is shown with smaller SD, and scores will cluster more closely around the mean [20]. A commonly used method to determine consensus is Kendall's coefficient of concordance (W) which is calculated after second and other rounds of Delphi to evaluate the level of consensus among the Delphi panelists. A significant W (close to 1) and a low P-value (less than 0.05) implies the panelists are in consensus and used the same standards in determining the importance of factors [15].

4. FINDINGS

Based on the results of experts' opinion 15 essential competencies were identified in the first round of Delphi study. The results of the first round were used to conduct second and third rounds. In order to measure the level of consensus among the experts for the factors proposed, the Kendall's Coefficient of Concordance (W) was measured based on the completion for second and third rounds of the Delphi survey. Table 1 presents that for the second round of Delphi study, the Kendall's Coefficients of Concordance and p-value for scored ranking were calculated at 0.048 and 0.570 respectively. Since the p-value was more than 0.05, the findings are deemed to be insignificant implying that the ranking of the 18 experts are not consistent.

Table1. The results of Second Round in Delphi study

Competencies	Experts																		Mean	Group Rank
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R		
Communication	5	5	5	3	6	5	4	4	4	5	2	4	4	5	4	4	3	3	4.17	10
Results orientation	2	5	5	2	7	4	7	3	4	4	3	2	5	6	4	3	5	3	4.11	9
Empowerment	4	4	3	2	4	3	4	3	7	4	3	4	4	5	4	5	7	3	4.06	8
Team building and Team working	3	4	4	3	4	5	4	3	5	3	2	3	4	6	4	5	6	4	4.00	7
Leadership	3	5	5	3	5	4	4	3	4	4	2	2	4	5	4	3	6	4	3.89	6
Stress management	3	3	3	3	3	5	3	4	4	4	3	5	5	7	4	4	4	3	3.89	6
Creativity and innovation	3	3	4	2	5	5	4	4	4	3	2	2	5	6	3	5	6	3	3.83	5
Change management	5	3	4	3	4	4	5	3	5	4	2	2	5	5	4	4	4	3	3.83	5
Time management	4	4	4	2	4	4	5	5	3	2	3	4	4	5	4	4	3	4	3.78	4
HR Professional skills and knowledge	5	3	3	2	4	4	3	2	6	4	3	3	3	7	4	5	5	1	3.72	3
Risk management	4	2	2	2	2	4	5	2	5	4	2	4	3	6	3	5	5	3	3.50	2
Crisis management	4	2	3	3	3	5	5	3	5	2	2	3	3	4	3	5	4	3	3.44	1
Kendall's W = 0.048, p-value = 0.570																				

In the third round, a separate survey was constructed for the 18 panels of the Delphi study by boldfacing factors that differed from the consensus opinion based on the mean rank scores of each factors. Each expert had opportunity to change his/her responses or to present an argument for disagreement. These arguments were incorporated as comments in subsequent sections allowing the experts to look beyond the calculated data. The Kendall's Coefficients of Concordance for the third round and p-value for scored ranking was 0.612 and 0.000

respectively (Table 2). Therefore, the study was found to be statistically significant ($p\text{-value} < 0.05$) and consistent at the third round. Based on the results of 3 rounds Delphi study, in order to identify essential competencies for the HR managers In Construction firms 12 important competencies were identified as the follows: Achievement orientation, Team building and Team working, Leadership, Communication, Motivation and Empowering others, Time management, Stress management, “Flexibility and adaptability”, “Creativity and Innovation”, Change management, Crisis management and Risk management.

Table2. The results of third Round in Delphi study

Competencies	Experts																		Mean	Group Rank
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R		
Achievement orientation	5	5	5	4	7	6	7	5	6	6	6	5	5	6	4	5	5	5	5.39	12
Team building and Team working	3	4	5	5	4	5	4	5	5	3	5	3	5	6	5	5	6	5	4.61	11
Leadership	5	5	5	5	6	5	4	4	4	5	4	4	4	5	4	4	4	4	4.50	10
Communication	4	5	5	4	5	4	4	3	4	4	4	4	4	5	4	5	5	5	4.33	9
HR Professional skills and knowledge	5	4	4	4	4	4	3	2	6	4	3	4	4	5	4	5	5	4	4.11	8
Empowerment	4	4	3	4	4	3	4	3	4	4	4	4	4	5	4	5	4	4	3.94	7
Time management	4	4	4	2	4	4	5	5	3	4	3	4	4	5	4	4	3	4	3.89	6
Stress management	3	3	3	3	3	3	3	4	4	4	3	3	3	4	4	4	4	3	3.39	5
Creativity and Innovation	4	3	3	3	4	3	3	3	3	3	3	4	4	4	3	3	4	3	3.33	4
Change management	3	3	3	2	4	3	4	4	4	3	2	2	4	4	3	4	4	3	3.28	3
Crisis management	3	2	3	3	3	4	4	3	3	2	2	3	3	4	3	4	4	3	3.11	2
Risk management	3	2	2	2	2	3	3	2	3	3	2	3	3	4	3	3	3	3	2.72	1
Kendall's W = 0.612, p-value = 0.000																				

5. Conclusion

Twelve essential competencies were detected based on the results of Delphi study. These competencies are needed for the successful HR managers In construction companies in order to perform organizational mission and achieve success in the construction projects (refer Table 3).

Table 3: List of competencies

No.	Competencies		Ranking
1	Achievement orientation	Knowing what results are important, and focusing resources to achieve them effectively.	12
2	Team building and Team working	The ability to identify and motivate individual employees to form a team that stays together, works together, and achieves together. Actively participating as a member of a team to move the team toward the completion of goals [16].	11
3	Leadership	The ability to influence people so that they strive willingly and enthusiastically to help accomplish individual and institutional goals.	10
4	Communication	Clearing conveying and receiving information and ideas through a variety of media to individuals or groups in a manner that engages the audience. The ability to make effective relationship with other people [17].	9
5	HR Professional skills and knowledge	Having achieved a satisfactory level of Professionals skills or Knowledge in HR related areas [18].	8
6	Empowerment	Making a systematic and sustained effort to give others more information, knowledge, support, and opportunities to exercise their power for mutual benefit [19].	7
7	Time management	Ability to maintain the appropriate allocation of time to the overall conduct of your job responsibilities in such a way that your performance is efficient and productive [20].	6
8	Stress management	Various efforts to control and reduce the tension that occurs in stressful situations [21].	
9	Creativity and innovation	Generating innovative solutions in work situations; trying different and novel ways to deal with work problems and opportunities [22].	4
10	Change management	Able to facilitate change processes and adapt learning about change to new change initiatives; utilize change tools and processes with a focus on speed [23].	3
11	Crisis management	The ability to predicting for and responding to an unpredictable negative events to prevent it from escalating into an even bigger problem or worse.	2
12	Risk management	The ability to understand the overall process of identifying, controlling, and minimizing the impact of uncertain events in the classroom, in the dorms, and/or on campus as a whole [24, 25].	1

Considering that the construction industry is one of the largest global employment sectors, providing work for a significant proportion of the labor market, Having competent HR managers is one of the most principal to achieve success in doing projects [3]. Since one of the main defined objectives in construction firms is completing determined projects successfully and efficiently, achieving the objectives is vital for these firms to survive in competition environment. Based on the results of this study Achievement orientation is the most important competencies for HR managers in construction firms. Attempt to perform tasks completely and effectively can support project managers in order to perform strategic missions of company. HR managers in construction companies should be able to develop effective teams.

In construction industry because of the most risky, complex and dynamic environment, the HR managers' competencies to create effective teams in responding to accelerated changes in HR demands, social attitudes, and technologies [26]. HR managers have to be able to choose the best people as the team members. They must think what kinds of specialists are needed exactly for the projects. In addition HR managers must contribute as a member of teams with other managers to move the teams toward the completion of goals [18]. Another competency which was found in this study is the ability to make effective Communication. In Construction industry HR managers are faced with people from many different personalities, cultures, experts and education levels. Team members' contributions are varied and a lot of information has to pass among them [27]. HR managers send and receive ideas, instruction, progress reports, and many other kinds of information. Communication as a competency may involve a broad array of abilities and skills, from writing to speech making to body language as well as using electronic technology such as Computers, networks, Web and video conferences [28]. HR managers of construction firms have to make effective communication with project managers. Proficiency in communication is critical to create coordination between different members of construction projects. Individuals as the employees are the most significant members that form construction industry and having expert HR managers with an acceptable level of HR proficient skills and knowledge can lead personals as the Human assets effectively. The Human Resource managers are responsible for providing support in the various human resource functions. HR proficient knowledge and skills including skills of recruitment, staffing, training and development, performance monitoring and employee counseling are prominent for effective HR management in construction firms. Empowerment is the sixth HR competencies in construction industry, which were ranked by the experts in this study. Organizations are more effective when an empowered work force exists [28]. Empowerment means giving up control and letting others employees to participate in making decision, setting goals, accomplishing results and receiving rewards. Regarding to complexity of construction industry, a competent HR managers must be interested in empowering human resources. HR managers must be support other project managers in empowering and delegating by identifying training needs and developing HRs.

One of the most effective ways to monitor project progress is time management. Time management plays a major role in developing the cost estimates for construction projects of varying construction methods. Effective HR managers in construction projects must be able in determining the amount of man hours and employees needed to reach completion. Time management as an essential competency of HR, helps them to provide on time HR needed in various phases of completing projects. Construction industry is stressful for managers and workers [29]. Not only do the results of stress negatively affect employees in the workplace, but they also drastically impede effective management behaviors such as listening, solving problems effectively, making good decision, innovation, and planning [28]. Construction projects' HR managers have to take account of stress and manage it, because excessive stress can reduce employee effectiveness and therefore performance [27]. Along with improving the technology HR managers should be competent in innovation and creativity. They must have courage to try different and novel ways to deal with HR problems and use opportunities. The ability to manage change, crisis and risk are the other essential competencies for the HR managers in construction industry which can help companies to achieve their strategic goals effectively. HR managers must work with the project management team and other key individuals to ensure that decision are made quickly to ensure that the right changes happen quickly.

HR manages must be able to make change happen through the development of implement programs, policies, and other activities [30]. Construction industry is full of unpredictable events. The uncertainty associated with producing unique outputs implies that each day can bring new experiences [31]. In construction projects crisis seem inevitable. Consequently, Project HR managers accompanied by other managers that deal in projects on an ongoing basis thus must learn to deal with crises on a regular basis. Construction industry is highly risk prone, with complex and dynamic project environments creating an atmosphere of high uncertainty and risk. This industry is vulnerable to various technical, sociopolitical and business risks [32]. It can be said that HR managers be competent to participate in developing an effective system of risk assessment and management for construction industry. Risk management as an essential HR competency can support project companies to achieve the most common goals of risk management including environmental protection, health and safety, loss prevention, product recalls, customer satisfaction, business continuity, and effective selection of projects and investments. HR departments operate like a

business within a business [30]. Essential HR managers become service providers for those inside or outside the company. Applying the competent HR managers can lead construction firms to achieve success in business world.

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