

Development of a Competency Framework for Site Administrative Officers in a Sri Lankan Construction Company

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Abstract: This case study research was conducted to address the prevalence of ineffective performance management tools and practices that negatively impact individual work performance (IWP) of site administrative officers in one of the highest-graded construction companies in Sri Lanka by developing a competency framework. A set of 30 competencies were empirically tested based on the opinion of both administrative officers and project managers using two questionnaires to ascertain desired, actual, and competency gaps which were further analyzed based on their degree of ‘contribution for successful performance’ and ‘difficulty to improve’ to come up with a simplified four grid competency model uncovering key, supportive, threshold-trainable and threshold-hardly-trainable competencies providing important insights for effective hiring, performance management, training, and career development.

The ability to create trust-building relationships was found the key competency that differentiates best performers along with initiative, stress-tolerance, responsibility, and achievement-orientation as the other key competencies useful as evaluative criteria for IWP. Emotional awareness, commitment, and optimism were found as threshold-hardly-trainable competencies that any administrative officer should embody making them a predictive criterion in recruitment and selection. The study effectively addressed both empirical gap of an evidence-based competency framework for the target job and a methodological gap in developing the same incorporating a Weighted Proficiency Rating which sets a reference for utility and future research. The development of a competency profile, competency framework, and a simplified competency model of construction administrative officers providing evaluative and predictive criteria for several HRM functions are the major contributions of the study.

Keywords: *Competency Framework, Competency Model, Administrative Officer, Construction, Weighted Proficiency Rating*

Introduction

Why some people behave better than others or what makes the difference in people’s performance is one of the most explored and fundamental questions for all mankind (Liikamaa, 2015). Although there is no one simple answer, many scholars have given a plethora of explanations leading to many complex constructs and theoretical frameworks. Competencies could be the most widely accepted answer to the aforesaid question

which was once described by Woodruffe back in 1991 (as cited by Serpell & Ferrada, 2007) as the common language of human resource systems in the future that will form the necessary framework for organizations to develop its personnel, which has by far become a reality in most of the best organizations around the world.

Competency could be defined as an area of personal capability that enables employees to perform their work successfully (Noe et al., 2016, p.113). Behavior is mostly regarded as the observable interface of a competency which is a product of many cognitive and affective elements such as logic, reasoning, values, beliefs, assumptions, feelings, and emotions, etc. Authors opined that competency and competency framework could best be understood by the analogy of a cooked meal. Competencies could be regarded as different ingredients that are used to cook different dishes which corresponds to different jobs. They demand a set of ingredients in different qualities and quantities just as jobs require a set of competencies in different proficiency levels and different frequencies which could also be thought of as the degree of expertise and degree of importance. The ingredients like salt are used in almost all dishes like competencies such as communication, commitment, etc. demanded by almost all the jobs in an organization which is termed core competencies. As some ingredients are commonly used only to cook a particular set of dishes, some competencies could be limited to a certain group of jobs while some are demanded only by a particular job which, according to Rao are termed role-specific competencies (2015). Therefore, according to the above interpretation of the authors, meal comprising a combination of complementary dishes is analogous to a competency framework. Bartram has also drawn a parallel of the grammar of a language as the structure of a competency framework while the content is the basic propositional meanings languages work from (2012, p.3).

A Competency Framework can be introduced as a structured and evidence-based method of understanding behavior in the workplace. (Bartram, 2021, p.3). Further, the Chartered Institute of

Personnel Development defines competency framework as a structure that defines each competency required by individual employees in performing their respective jobs, when done well, could increase clarity around performance expectations (Weeks, 2020). The presence of a competency framework allows organizations to explicitly communicate what behaviors are demanded in different jobs to accomplish results, measure performance against such standards, and both proactively and reactively nurture necessary competencies with required proficiency. (Bartram, 2012; Hayton & Kelley, 2006; Liang et al., 2018) The behavioral approach was mostly used in identifying competencies where the nature and the frequency of behaviors were studied to identify common themes. (Ali et al., 2021)

In this study, the researcher has adopted an evidence-based behavioral methodology to develop a competency framework for site administrative officers in a large-scale construction company in Sri Lanka to be used as a performance management tool as the primary objective. Identifying performance gaps in terms of competencies, developing a competency profile and a simplified competency model for the target population are the secondary objectives of this research which ultimately addresses the problem of the absence of proper performance management tools and practices in the concerned organization affecting the individual work performance.

Justification of the Problem

Many researchers such as Abrahm et al. (2001), Ali et al. (2021), Bartram (2006), Nijhuis et al. (2018), Rao (2015), Zwell (2000), etc. have established the importance of using competency frameworks in performance appraisals or in broader terms both as inputs for and outputs from performance management. In this context, an exploratory study

conducted by the first author revealed a majority of 55.8% has expressed their displeasure over the existing performance appraisal systems in a field survey conducted among 226 professionals from five industries in Sri Lanka with the construction industry recording the highest dissatisfaction rate of 62.5% (Gunathilake, 2020). Another case study research of the first author of this paper also highlighted the absence of performance management tools such as competency frameworks in the same organization focused for this research (Gunathilake, 2021). This necessitated a need to develop a competency framework for the concerned organization which would also be relevant for other similar organizations. The study was undertaken primarily as action research to fulfill the aforesaid void which would stand a guide to develop a competency framework for the entire organization and for other organizations of similar nature.

Although many research work on developing both generic and specific competency frameworks or taxonomies of competencies for diverse industries and jobs were recorded such as Ali, et. al., (2021), Moradi, Kähkönen, Klakegg, & Aaltonen, (2021), Liang, et. al., (2018), Nijhuis et. al., (2018), Rao, (2015), Lee, et. al., (2011), etc., no empirical work was found both within or outside Sri Lankan context studying competencies or developing a competency framework related to administrative officers, particularly in the construction industry. Therefore, this research could be regarded as an attempt to address an empirical gap.

As meticulously accounted by Ali et al. (2021) most of the past research work on competency frameworks failed to assign weighted proficiency ratings (WPR). Although Ali et al. (2021) in their study, have calculated weightages using Analytical Hierarchy Process (AHP) technique by ranking alternative competencies through comparison with

each other, no empirical evidence of the opinion from the target population whose competencies being reviewed, or their direct supervisors were considered. Further, they failed to incorporate the element of ‘difficulty to improve’ such competencies. Researchers who considered the degree of importance and difficulty to improve the relevant competencies such as Moradi et al. (2021) and Liikamaa (2015) have failed to capture proficiency levels rendering an incomplete composite score.

No research was found to embody all elements described above namely concern for the degree of importance (demand of frequency of displaying desired behaviors), difficulty to improve, gauging proficiency levels, calculating WPR, and incorporating empirical evidence based on the perceptions of the target population. Therefore, this research most importantly addresses the aforesaid theoretical gaps thereby contributing effectively to advance the knowledge on competency framework development. Further, it was attempted to simplify the matrix model of competencies based on contribution for successful performance and difficulty to improve by Moradi et al. (2021).

A self-evaluation questionnaire captioned “Cycloid” by Evolution Technology (Moradi et al., 2021) and the categorization of the same by Liikamaa (2015) were used in this research with some modifications. The utility of the aforesaid along with the framework development model of Ali et al. (2021) and the competency measuring & categorization model of Moradi et al. (2021) could also be viewed as attempts to validate such models in Sri Lankan context. Lastly, this research re-established the models and scales used in the study in the current context of the new normal as the validity of the same developed and tested before the COVID-19 pandemic became questionable.

Literature Review

According to Liikamaa (2015) competencies explain why some people perform better than others and accounted volumes of work by many scholars to expand the knowledge and application of competency and competency frameworks. According to Ali et al. (2021) the concept of competency has been known for over 3000 years by many ancient civilizations yet received scholarly recognition since 1970s (2021, as cited in McClelland, 1973). A review of the literature shows a variety of definitions for the concept of competency as illustrated in Table 01.

Rao made a distinction between competence and competency, which are mostly used interchangeably, where competence was referred to as the ability to perform a job, present in the form of knowledge or skill of a person whereas competency was identified as the behavior that leads to the former (2015, p.144). Competence relates to performance or outcome while competency relates to behaviors contributing to successful performance (Hayton & Kelley, 2006). It can also be noted that competence describes what people can do which is mostly concerned with the effect or the output whereas competency focuses on how they do what they are capable of doing where the concern lies with the nature of the effort or the input. Also, it is wise to claim that competency is the display observable to the world outside while competence makes the hardware that lies behind a computer that works its magic. Based on the past literature, competency has been used in identifying, studying, and measuring competence and competency frameworks are the instruments or the structured means of achieving the aforesaid.

Many scholars have identified different types of competencies such as the ones outlined in Table 02. The basis of

categorizing competencies is mostly governed by competency models which have their focus on studying specific elements such as high performers in high *performer model*, unique organizational abilities and technologies in the *core competency model*, and processes for executing a specific business function in *process competency model*, etc. Lee et al. (2011) have identified five models including *generic and specific job models* in addition to the aforementioned three competency models.

According to Aguinis (2014), competencies are used in measuring performance in the behavioral approach assuming competencies can have multiple behavioral indicators for each competency and measuring of which would provide a fair account of whether the relevant competency is present or not. He has illustrated five behavioral indicators for the leadership competency of 'Consideration' namely; supporting the projects of the subordinates, questioning their wellbeing beyond their work-life, encouraging them to reach their goals, know them personally and respect for both their work and home lives (Aguinis, 2014, p.116). According to Hay Group (2009), an outline of competency should comprise competency title, definition, a statement of why it is important, levels of competency, and behavioral indicators exemplifying intended behaviors.

Table 1: Collection of Definitions of the Concept of “Competency”

Author (Years of publication)	Definition of Competency
Moradi et al. (2021)	The underlying characteristics (motives, traits, self-image, skills, and knowledge) which cause different kinds of action while being combined with an intent, which is situation oriented. (The resultant action in a given situation)
Ali et al. (2021)	Description of requirements for work performance at the necessary levels of proficiency and a concept that encompasses many aspects of the performance of human resources including knowledge, experience, technical and soft skills, motives, emotions, and behaviors.
Moradi et al. (2019)	The capability of utilizing skills, knowledge, and personal characteristics, which improve one’s effectiveness and efficiency in their job performance and subsequently increase the likelihood of the organization/project success.
Liikamaa (2015)	They reveal what a person is capable of doing and why he/she acts in a certain way. It can predict behavior in a wide variety of situations & job tasks, and they always include intent or motives.
Rao, (2015,p145)	Dimensions of behavior that lie behind the competent performance. Behavioral indicators of performance that have been identified as relevant in a particular context.
Lee, (2010) & (2003)	Consistently observed characteristics and inner quality of an individual performer. An ability to do work or the degree of the ability. A behavior that produces results through the combination of knowledge, skills, attitudes, and values.
Hay Group, (2009)	The underlying personal characteristics and behaviors of an individual that are important contributors to predicting outstanding performance in a job within a particular organization that differentiates outstanding against average job performance. Competencies in a specific model get aligned with the organization’s strategy and culture while enabling top performers to demonstrate critical behaviors more often, in more situations with better results.
Abraham (2001)	Traits, behaviors, and characteristics which cause successful performance.
Zwell (2000)	Traits and behaviors that differentiate superior from average performers which are significantly more predictive of performance than aptitude, skills, or experience.
Lucia & Lepsinger (1999)	A cluster of related knowledge, skills, and attitudes that affect a major part of one’s job correlating with performance on the job which can be measured against well-accepted standards with the ability to improve via training and development.
Perrenoud (1997)	An individual’s ability to use and connect acquired knowledge and experience in complex, varied, and unpredictable situations.
Spencer & Spencer (1993)	Characteristic of an individual that is causally related to criterion-referenced effective performance in a job or situation.
McClelland (1973, 1985)	Capability, comprised of related but different sets of behavior emanating from and demonstrating an underlying construct called the intent, which is context oriented. Competencies are fundamental personal attributes that drive effective job performance.

Source: compiled by the author

Table 2: Widely used Types of Competencies

Types of competencies	Source	Brief description
Differentiating Competencies	Aguinis (2014)	Distinguishes between average and superior performers.
Threshold Competencies	Aguinis (2014)	Expected from all employees to perform their jobs to a bare minimum standard.
Core Competencies	Rao(2015)	Applicable for the entire organization.
Generic Competencies	Rao, (2015)	Shared by a group of employees doing similar jobs.
Role-specific Competencies	Rao, (2015)	Unique to a particular job.
Task competencies	Opatha, (2016)	Abilities needed to do the tasks and activities on a job.
Results Competencies	Opatha, (2016)	Abilities needed to achieve some specific results on a job.
Output Competencies	Opatha, (2016)	Abilities needed to produce some specific output.
Knowledge, Skills, and Attitude Competencies	Opatha, (2016)	Subject matter knowledge, process abilities, attitudes, values, orientations, or commitments needed to be effective.
Superior Performance Differentiators	Opatha, (2016)	Abilities rooted in a person's intelligence and personality that are possessed by superior performers but not by other employees.
Attribute Bundles	Opatha, (2016)	A collection of knowledge, skills, attitude, tasks, outputs, and results needed for effective performance.

Source: compiled by the author

Contrary to measuring results, measurement of competencies is mostly qualitative, involving subjectivity and intrinsic judgment. It is based on observations and highly subjective to perceptual biases. Aguinis (2014) suggested two methods for evaluating competencies namely comparative systems such as ranking order, paired comparison, relative percentile & forced distribution, and secondly absolute behavioral measurement systems where employees are compared against a predefined performance standard using graphic rating scales and behavioral checklists.

According to Bartram (2012), a competency framework is a method of understanding behaviors in the workplace

using an evidence-based and structured approach. Hayton and Kelley (2006) argued competency frameworks as inherently open-ended acknowledging the discretionary and self-managing nature of work.

There are multiple benefits of using competency frameworks in organizations. It simply clarifies and communicates desired behaviors contributing to successful performance. Further, some researchers such as Moradi et al. (2021) have considered the degree of difficulty in developing such behaviors. They identified key competencies as embodiments of best performers that differentiate best from the average while threshold competencies as the bare minimum required to fulfill performance

requirements and supportive competencies as fairly trainable attributes. Such frameworks also help to establish competency gaps so the employees could remain motivated to bridge those gaps while organizations could positively pitch in their training interventions accurately.

Some notable contributions in this area could be cited as competency framework developed by Liang et al. (2018) for health service management, Al-Haqan et al. (2021) for Pharmacists, Gruden and Stare (2018), Nijhuis, (2018) and Liikamaa (2015) for project managers, Serpell and Ferrada, (2007) for construction supervisors and Lee et al. (2011) for project construction and project control teams which could be regarded as the closest corresponding study to administrative officers being considered as the target population although there is no any mention of such relevance in that particular research.

Many convincing taxonomies of competencies could be found in the literature and ones developed for project managers could be regarded as the most closely corresponding job role for construction site administrative officers. Individual Competency Baseline (ICB.4) with 28 competencies under 3 categories namely people, practice and perspectives, Project Manager Competency Development (PMCD) framework with 16 competencies under 2 groups namely performance and personal, Association for Project Management (APM) with 11 competencies under 2 categories namely interpersonal and professionalism and Project Management Body of Knowledge (PMBOK) with 3 broader skills namely technical, leadership and business management are some of the widely used competency taxonomies for project managers (Moradi et al., 2021). The Cycloid, a classification of project managers' behavioral competencies (Liikamaa, 2015) was used in this research with certain modifications.

Researchers have adopted different processes in developing competency frameworks where some have used weightages and proficiency levels for competencies using different methods. Some were confined to a thematic analysis by only studying jobs, job descriptions, work schedules, etc. while others relied on empirical data through opinion surveys. Processes with both thematic and empirical approaches were found more compelling such as the works of Ali et al. (2021) and Lee et al. (2011) a modified version of the former was based in this research.

Methodology

Research Design

The study was primarily undertaken as applied research to develop a competency framework for site administrative officers in one of the highest-graded construction companies in Sri Lanka. Identifying competency gaps, developing a competency profile with weighted proficiency ratings and a simplified model specifying competencies for hiring, performance management, training and career development constitute secondary objectives of this research.

An inductive approach was used in this study as authors attempted to identify a regularity in the competencies demanded from the target population and develop a competency model and a framework unique for the aforesaid context. Further, the research was based on pragmatic research philosophy using mix method as suggested by Saunders et al. (2015) and case study strategy. Both quantitative and qualitative techniques such as administering two survey questionnaires, observations, interviews, and focus group discussions, were employed in sourcing primary data in this cross-sectional study. Secondary data were sourced from internal documents such as job

descriptions, job specifications etc. The process of developing the competency framework in this study was primarily inspired by the works of Ali et al. (2021). In their attempt to develop a generic competency framework for effective human resource management, they have employed the analytical hierarchy process (AHP) to identify the most important 12 competencies with weighted proficiency ratings. On the contrary, a much broader method was used in this research to single out the most impactful competencies emphasizing the contribution on successful performance and difficulty to improve. As outlined by figure 01, core functions, job descriptions and standard operating procedures of administrative

officers were studied in detail along with two focus group discussions and five interviews to come up with a comprehensive task list highlighting 15 core functions. Competency requirements demanded by each task were identified jointly with a panel of experts mostly comprising HR and Construction fields. Thirty competencies were identified using a standard scale of a competency taxonomy captioned “cycloid” and the opinion of both administrative officers and project managers on administrative officers’ behavioral competencies were sourced through two online questionnaires. Figure 01 outlines the framework development process which is further described in later stages in the text.

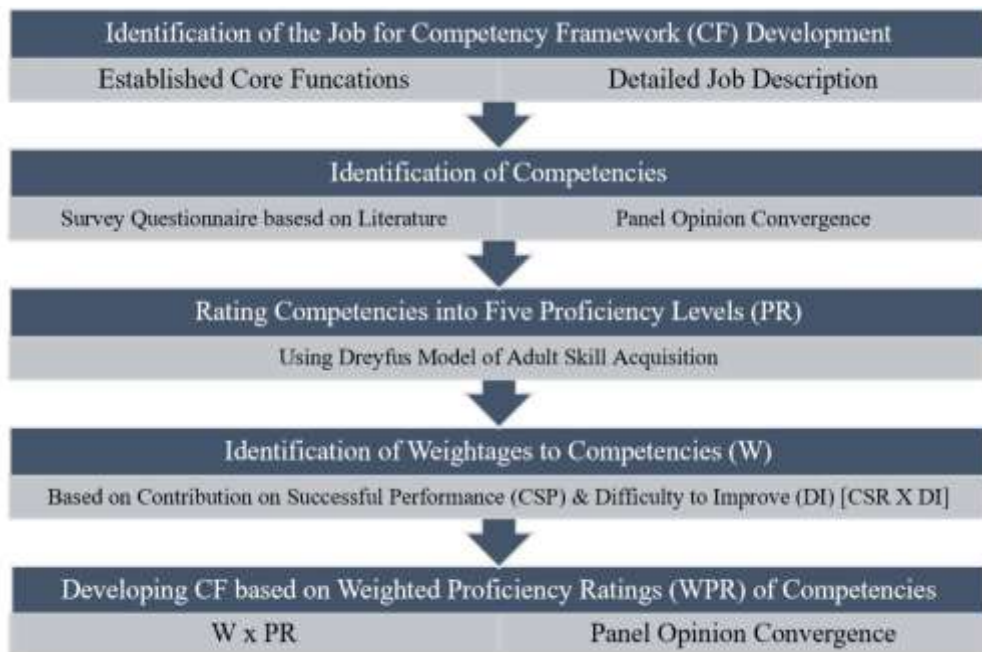


Figure 1: Competency Framework Development Process

Source: developed by the author based on the works of Ali et al. (2021), Moradi et al. (2021), Lee et al. (2011)

Theoretical Framework of the Scale used as a Survey Technique

Out of the available taxonomies of project managers' competencies in the literature, which is the closest corresponding job role with substantial research to the role of site administrative officer, a survey tool captioned "cycloid" was found mostly corresponding to the identified list of competencies of construction administrative officers. This self-evaluation questionnaire originally developed by evolution technology and adopted from Moradi et al. (2021) was used in this research with few modifications to seek the opinion of administrative officers on thirty behavioral competencies. Few not-so-relevant competencies such as 'developing others' as administrative officers do not generally have a sizable team reporting to them, 'production

efficiency' as no production is involved with administrative officers and 'management' which is too broader to be considered as a competency for administrative staff were replaced by few additional more-relevant competencies such as cost, quality, and time consciousness since those three elements are considered the most important factors in project management (Gruden & Stare, 2018; Rathnayake & Ranasinghe, 2020), 'attention to details' & 'leveraging technology', which were widely regarded competencies relevant for administrative officers (Garrett, 2015). Theory of emotional intelligence was based in designing the survey instrument a conceptual framework of which is illustrated in Figure 02 based on the works of Liikamaa (2015). The same questionnaire was reworded to seek the opinion of project managers on the behavior of administrative officers.

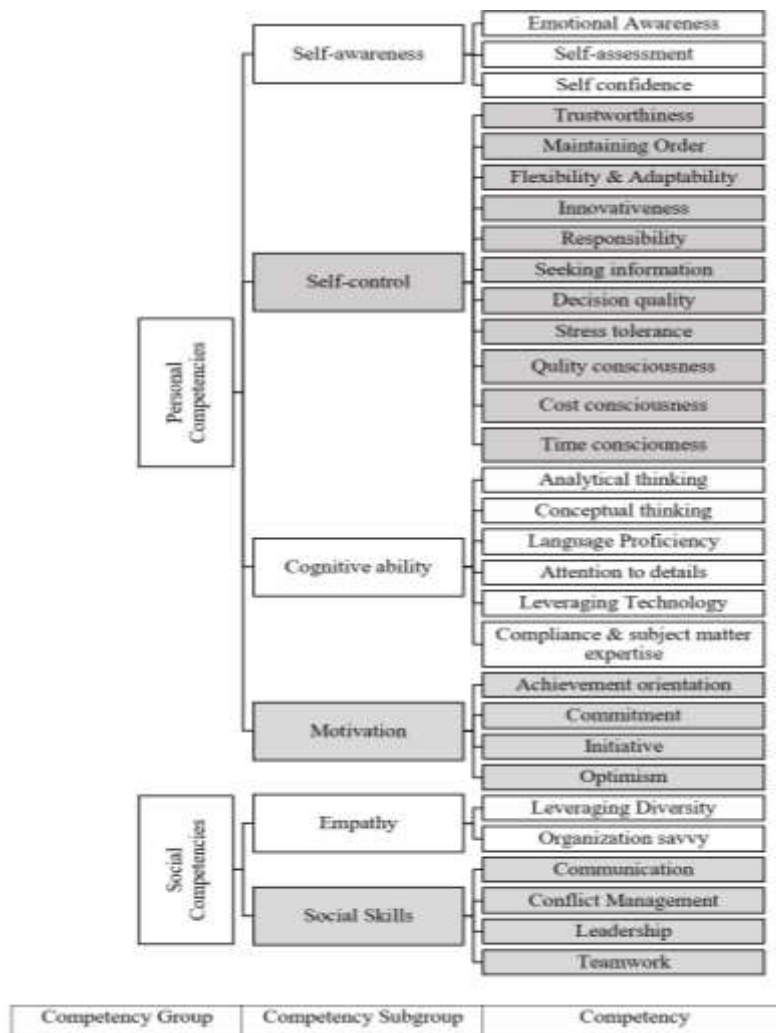


Figure 2: Conceptual Framework of the Survey Instrument

Source: developed by the author based on the works of Moradi et al. (2021, p.7)

Thirty behavioral competencies were expressed in their descriptive behavioral indicators as one statement for each competency contrary to the original questionnaire which comprised two behavioral statements for each competency. This was changed to reduce the length and time to complete which could potentially reduce the response rate. Behaviors described in each statement were asked to rate on 1 – 5 Likert's scale in terms of both current and the desired behaviors.

Data Collection

The study was done targeting the entire population of 19 administrative officers in the target organization who were given an online questionnaire during an online forum where respondents were educated on the intent of this research and provided with all necessary information. This along with making the questionnaire anonymous could have helped in successfully securing a response rate as high as 90%. The same was adopted to seek the opinion of project managers on the competency requirement

of administrative officers using non-probability sampling by conveniently selecting a sample of 10 project managers out of 20 in the concerned organization where a 60% response rate was recorded. Therefore, the unit of analysis was the individual employees.

Data Analysis

Demographic information such as age, gender, and years of experience, sector, and qualifications were sourced. Based on the mean values of each competency rated by both administrative officers and project managers, all competencies were ranked, and further rating was done to finally calculate WPR in three-step criteria as given below.

- Step 01 – Identifying the degree of importance.
- Step 02 – Identifying the degree of proficiency.
- Step 03 – Calculate WPR for each competency.

Step 01 – Identifying the degree of importance: comprised of the following three sub-steps.

- Assign scores to competencies based on contribution for successful performance (CSP)
- Assign scores based on the difficulty to improve (DI) competencies.
- Calculate a composite score (CSP X DI) as the degree of importance of each competency.

The highest-ranked 15 competencies in terms of desired (most wanted), actual (currently available) and gap (difference) by both admins and PMs were established and out of those competencies the ones common in both lists of desired competencies were considered the highest demanded (assigned 3 marks). Those competencies were ranked as the most desired. Competencies present in both lists

of actual and the gap or the ones present in all desired, actual, and gap in either of the groups were assigned 2 marks considering them as moderate contributors. Those competencies present in either desired or gap in both or specific respondent groups were considered less demanded (1) and the rest were disregarded for further analysis. The above classification and ratings were influenced by the model of Moradi et al. (2021).

As the second tier of classification, all competencies were assigned a 1-3 rating based on their difficulty-to-improve through expert panel opinion convergence. This classification was based on the works of Moradi et al. (2021), Spencer & Spencer, (1993) and Zwell, (2000). For instance, Zwell (2000) has drawn parallels of competencies related to traits and motives such as trustworthiness, responsibility, etc. as more difficult to improve (3) while ones related to self-concept such as organization savvy, conflict management, etc. as moderately difficult (2) and the competencies such as subject-matter-expertise, teamwork, etc. related to knowledge and skills as not-so-difficult-to-improve (1). The product of both CSP and DI could be regarded as the overall significance or the weightage of each competency. The highest significant 15 competencies with the aforementioned three values are given in Table 04.

Step 02 – Identifying the degree of proficiency: comprises assigning proficiency ratings for each competency. This was based on the five-stage adult skills acquisition model of Dreyfus (2004) and accordingly, employees are going through five stages of proficiency in terms of acquiring any competency. This dichotomy has been used extensively by many researchers in rating competencies (Ali et al., 2021; Honken, 2013; Mohedas et al. 2016). Five levels namely novice, advanced learner, competent, proficient, and expert were ranked 1 to 5 respectively

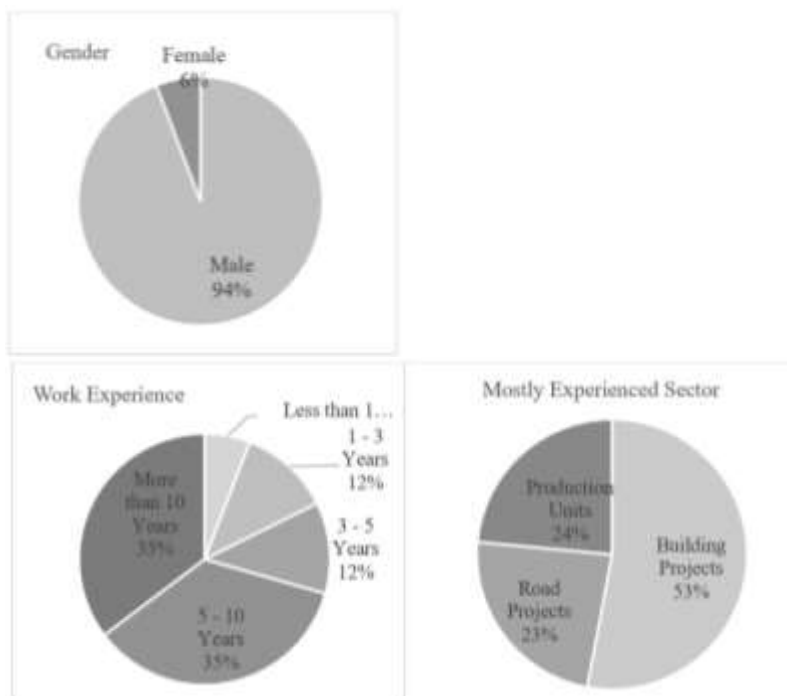
through the insights gained from qualitative inquiry and panel opinion convergence.

Step 03 – Calculate WPR for each competency: Ratings of significance (weighates) were multiplied by the proficiency to calculate Weighted Proficiency Ratings (WPR) for all competencies. Although the maximum number of competencies to be considered for any trade is generally not more than 12 (Lee et al., 2011), the highest 15

competencies were taken in this study due to the significance of the last three competencies based on the comments of the expert panel.

Findings & Discussion

Descriptive summary of demographic information is given in Figure 03 and accordingly, the majority comprises males in mid-age with relatively lesser paper qualifications and higher experience.



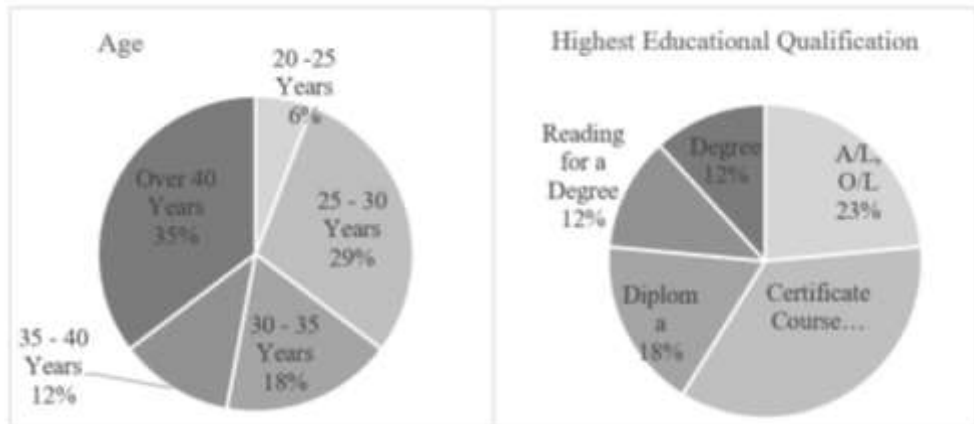


Figure 3: Demographic Information of the Population

Source: developed by the author

Table 03 outlines the summary of the most significant 15 competencies in terms of the most desired, most frequently displayed, and the ones with the highest gap between what is demanded by a superior performer and what is embodied from the point of view of both admins and PMs. Accordingly, trustworthiness was ranked the highest demanded competency by both groups of respondents along with several other competencies such as initiative, stress tolerance, responsibility, teamwork, communication, leadership, etc. These competencies complement the tasks demanded by their role mainly the involvement of admin staff in handling site cash, payments, employee attendance, salary, and personal details which certainly demand a high level of trustworthiness. Ability to tolerate diverse and intense work demands, need to communicate, lead at work and the higher responsibility due to higher dependency of technical staff and the project manager on the administrative officers for most of the major non-technical and support services could be the justification for the highest rated competencies.

It was noteworthy that some of the highly demanded competencies such as trustworthiness, leadership, initiative, responsibility, etc. were found lacking.

Competencies such as attention to detail, quality consciousness & subject matter expertise were also found with a higher gap.

As explained under data analysis, WPR was calculated and the summary for all competencies is given under annexure 03 and the same along with percentage competency demand for highest impact competencies were tabulated in Table 04. Accordingly, trustworthiness, initiative, stress tolerance, responsibility, and achievement orientation were ranked the highest demanded competencies of site administrative officers with a composite WPR of 240 and an average proficiency rating of 3.3 corresponding to a proficient level (more than being competent) in overall proficiency of the job role as an administrative officer. These figures could be useful when comparing overall performance between different job roles in a competency framework for the entire organization.

Table 03: Summary of the most significant 15 competencies

Rank	Admin Desired	PM Desired	Admin Actual	PM Actual	Admin Gap	PM Gap
1	Trustworthiness	Trustworthiness	Communication	Trustworthiness	Maintaining Order	Conflict management
2	Maintaining Order	Organizational Savvy	Compliance & SME	Organizational Savvy	Trustworthiness	Conceptual Thinking
3	Compliance & Subject matter expertise	Leadership	Leveraging Technology	Commitment	Emotional Awareness	Language proficiency
4	Leadership	Conflict management	Time consciousness	Teamwork	Leadership	Leadership
5	Initiative	Commitment	Teamwork	Leveraging diversity	Attention to detail	Responsibility
6	Time consciousness	Initiative	Initiative	Leveraging Technology	Quality Consciousness	Stress Tolerance
7	Teamwork	Communication	Leadership	Flexibility & Adaptability	Compliance & SME	Achievement orientation
8	Stress Tolerance	Self-assessment	Self-assessment	Leadership	Initiative	Analytical Thinking
9	Attention to detail	Responsibility	Trustworthiness	Initiative	Responsibility	Trustworthiness
10	Responsibility	Stress Tolerance	Innovativeness	Communication	Stress Tolerance	Organizational Savvy
11	Achievement orientation	Language proficiency	Achievement orientation	Self-assessment	Decision quality	Optimism
12	Communication	Teamwork	Conflict management	Seeking Information	Time consciousness	Attention to detail
13	Self-assessment	Leveraging diversity	Stress Tolerance	Cost consciousness	Teamwork	Quality Consciousness

14	Cost consciousness	Leveraging Technology	Leveraging diversity	Responsibility	Conceptual Thinking	Time consciousness
15	Leveraging Technology	Seeking Information	Cost consciousness	Stress Tolerance	Language proficiency	Compliance & SME

Source: developed by the author

Table 4: Numerical Values of WPR and Percentage Contributions of the Highest Demanded Competencies of Administrative Officers. (CSP – Contribution for Successful Performance, DI- Difficulty to Improve, WPR-Weighted Proficiency Ratings)

Rank	Competency	CSP	DI	CSP X DI	Proficiency Level	WPR Score	% Competency Demand
1	Trustworthiness	3	3	9	4	36	15%
2	Initiative	3	3	9	3	27	11%
3	Stress Tolerance	3	3	9	3	27	11%
4	Responsibility	3	3	9	3	27	11%
5	Achievement orientation	2	3	6	3	18	8%
6	Communication	3	1	3	4	12	5%
7	Teamwork	3	1	3	4	12	5%
8	Commitment	1	3	3	4	12	5%
9	Conflict management	2	2	4	3	12	5%
10	Organizational Savvy	2	2	4	3	12	5%
11	Time consciousness	2	2	4	3	12	5%
12	Leadership	3	1	3	3	9	4%
13	Leveraging Technology	3	1	3	3	9	4%
14	Optimism	1	3	3	3	9	4%

Rank	Competency	CSP	DI	CSP X DI	Proficiency Level	WPR Score	% Competency Demand
15	Compliance & Subject matter expertise	2	1	2	3	6	3%
					3.31	240	100%

Source: developed by the author

As illustrated in Table 03 admins perceive ‘maintaining order’ as the most lacking competency while trustworthiness, emotional awareness, leadership, attention to details and quality consciousness as the next big five competency gaps. Conflict management was ranked as the highest gap in project managers' point of view while conceptual thinking, language proficiency, leadership, responsibility, and stress-tolerance marked the next big five competency gaps. It is noteworthy that leadership was identified by both admins and PMs as one of the top five competency gaps.

Identified competencies were categorized into a 9-grid model as illustrated in Figure 04 based on their contribution-to-successful-performance and the difficulty-to-improve as summarized in Annexure 02. This model was originally developed by Moradi et al. (2021) for project managers of collaborative construction projects.

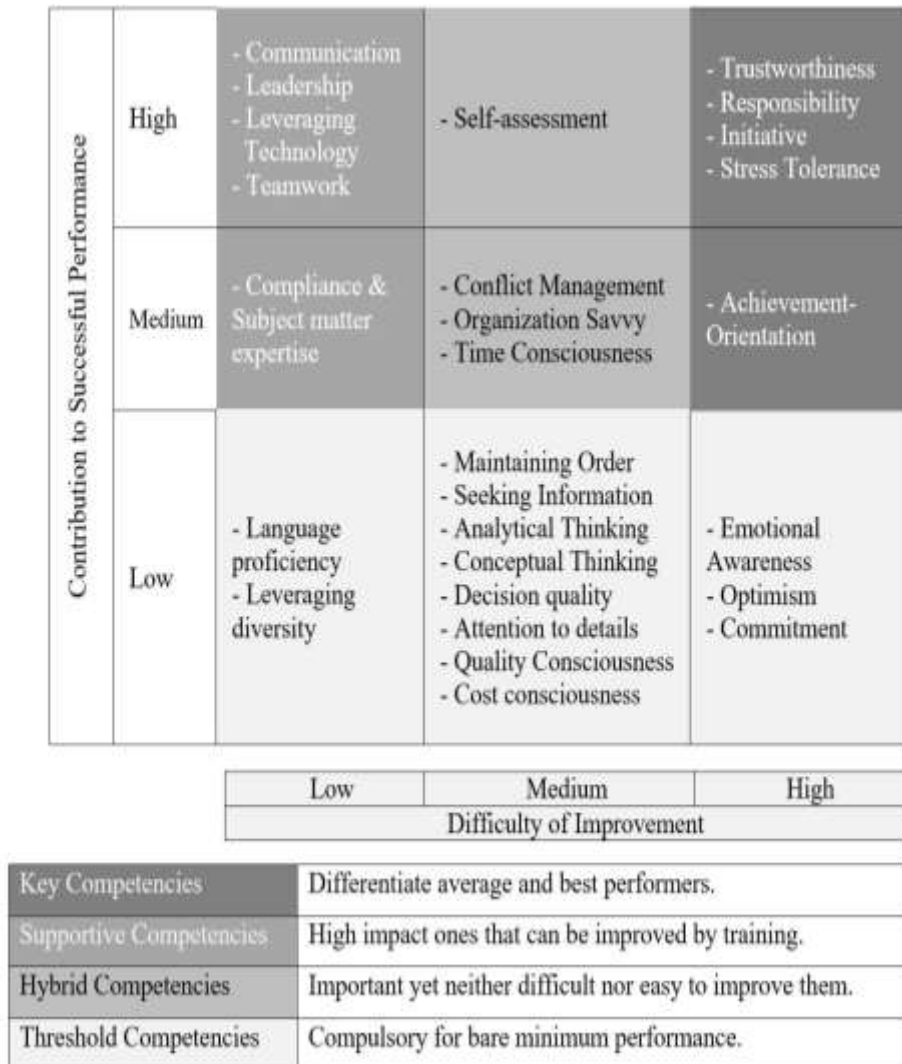


Figure 4: 9-Grid Competency Model for Construction Site Administrative Officers of the concerned Organization

Source: developed by the author based on the model of Moradi, et al. (2021)

With the advancement of training interventions and the interest of organizations to develop their employees, it could be assumed ones categorized as hybrid competencies could be absorbed into supportive and threshold competencies. Further, the competencies with medium-scale contributions for performance could also be assumed as high impact ones since their relevance become increasingly important as

highlighted by many researchers (ADB Competency Framework for Administrative Staff Levels AS4, AS5, 2021; Moradi et al., 2021; Lee et al., 2011).

With the aforementioned two assumptions, the author proposed a modified version of the previous model as illustrated in figure 05. Based on the percentage contributions of competencies

as given in Annexure 02, key competencies contribute to around 40%, while both supportive and threshold competencies contribute 30% each. Around two third of threshold competencies are trainable (20%) while the balance one third (10%) are hardly trainable which could be considered the compulsory competencies. This proposed

model presents a much simpler and concise view with practical insights for decision-making and self-development. Based on the above findings, a graphically illustrated competency framework for admin officers of the concerned organization was developed as given under Annexure 03.

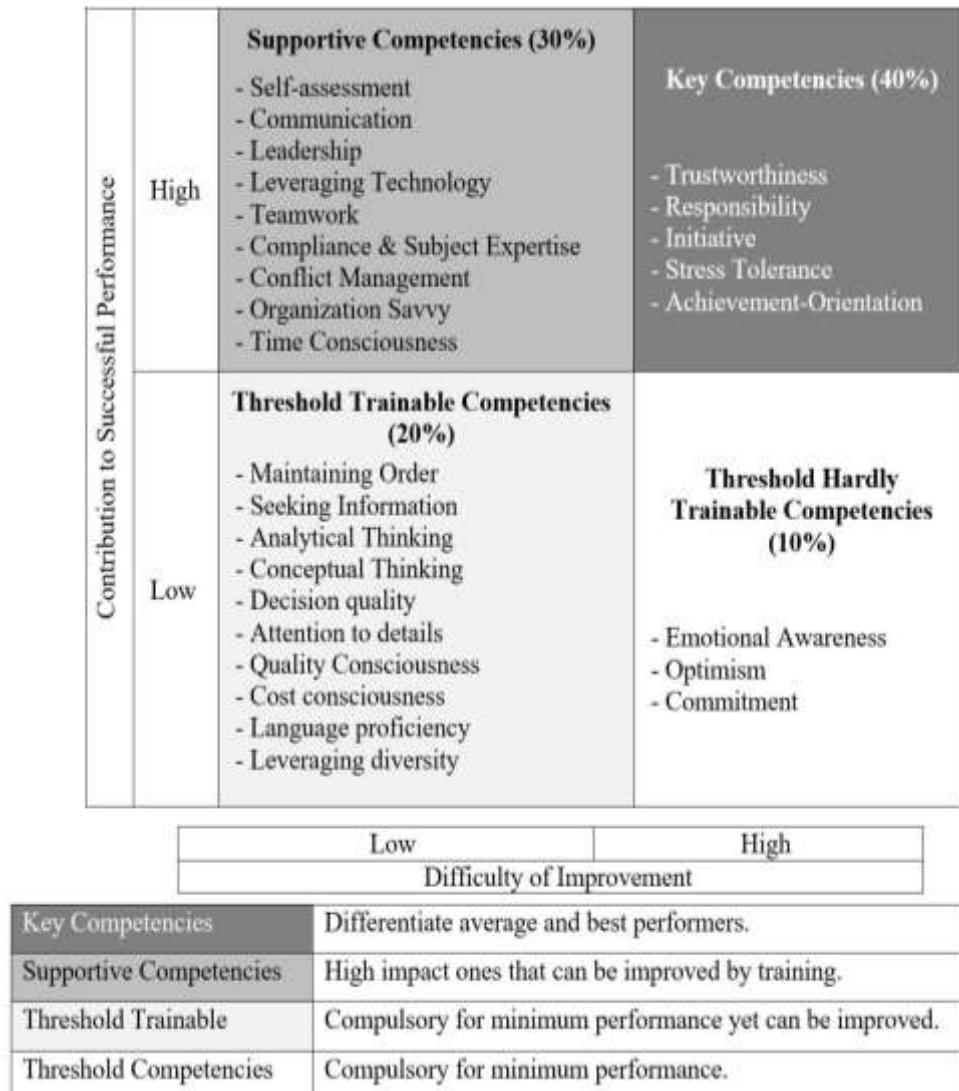


Figure 5: 4-Grid Competency Model for Admin Officers of the Concerned Organization

Source: Originated by the author as a modified version of Moradi, et al. (2021)

Conclusion

The primary objective of this research was achieved by developing a competency framework for construction site administrative officers of the concerned organization as illustrated in Annexure 03, based on their own opinion and the project managers. This framework could also be regarded as a reference for the entire Sri Lankan construction industry with a special reference to the highest-graded companies.

Findings and the discussion of this research also led to the identification of the most important competencies for site admin officers based on their contribution to successful performance and difficulty to improve. According to the simplified 4 grid competency model trustworthiness, initiative, stress-tolerance, responsibility, and achievement-orientation were considered the key competencies as predictors of superior performance. Therefore, companies should ideally look for personnel with such competencies in their recruitment and selection efforts as they are hard to develop yet immensely determinant of superior performance. Competencies such as leadership, teamwork, communication, ability to leverage technology, conflict management, time consciousness, etc. being equally important yet fairly trainable, could be considered for designing training interventions while decision quality, attention to details, quality and cost-consciousness, etc. remained essential for minimum performance yet trainable. Personnel absence with optimism, commitment, and emotional-awareness should not be considered for construction site administrative positions as such competencies form the foundation of this job which are hard to develop. The study also shed light on competency deficiencies among administrative officers in terms of the gap between the

desired and actual where key competencies were also found in short supply.

Therefore, the findings presented many insights for designing effective selection criteria, performance management and career planning. Since local construction companies mostly rely on competency-based performance appraisal systems (Gunathilake, 2020 & 2021a, 2021b), findings would be useful in gauging their ratings based on the proposed weightages, proficiency levels, and weighted proficiency ratings and selecting the most appropriate competencies for such appraisal systems. The process adopted in designing this competency framework could also be replicated for other job roles and organizations in different industries.

These findings endorse construction project culture characterized by output maximization, competitive work environment, emphasis on goal achievement and deadlines (Rameezdeen, 2003) as such work demands could only be met with competencies like achievement orientation, responsibility, initiatives, stress-tolerance, time & quality-consciousness and attention-to-details, etc. It is also highlighted the importance of trust-building relationships through trustworthiness, communication, leadership, and teamwork as administrative officers are compelled to work with a diverse group of professionals and workers.

This research most importantly portrays the role of contemporary construction site administrative officers in terms of the required behaviors, competencies with their relative importance, proficiency levels, trainability, and the desired superior performance standards in the absence of research-based literature. The role of the site administrative officer has clearly been transitioned from an

administrative clerk's role to a broader managerial role as the findings closely correspond to the competency demands of a manager according to Moradi et al. (2021) and Abrahm et al. (2001). Furthermore, it could also be concluded that the current competency profile of site administrative officers would not be sufficient to meet future demands and the presence of needs to address the competency gaps evidenced in this study by developing supportive and threshold-trainable competencies while attracting more personnel with key and threshold-hardly-trainable competencies. It is also questionable the rewards, recognition, and working conditions are sufficient to attract competent personnel for this challenging job.

Inherent perceptual bias in self-evaluative responses, lesser response rate from project managers, and the absence of measurement of reliability and validity of the measuring instrument due to smaller sample size and number of responses could be regarded as major limitations of the study. Further, the limited scope of the research hinders the generalizability of the findings to a broader population. Adopting the same competency framework development procedure and 4 grille competency model in different job roles, organizations, and industries, sourcing opinions from diverse stakeholders, and conducting an exclusive study with superior performers could be noted as insights for future research.

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Annexure 01: Thirty competencies with a description of behavioral indicators used in the study

S#	Competency	Behavioral Indicator
1	Emotional Awareness	I recognize the factors that cause certain emotional reactions & how my feelings affect my thoughts, words, and actions.
2	Self-confidence	I prefer to act on my own point of view than on external influences and I'm good at defending my own opinion when others disagree.
3	Trustworthiness	I act honestly and ethically. Instead of covering up my mistakes, I admit them and deliver promises & complete my work on time.
4	Maintaining Order	I like orderliness, working systematically, and check my work once more before handing it in.
5	Innovativeness	I'm open to new ideas, attitudes & information and try to do things/ solve problems differently than sticking to established ways.
6	Responsibility	I feel responsible for my work and complete my tasks even if no one there to supervise me.
7	Seeking Information	I'm curious and if what I know and am given is not enough to do my job, I seek information from external sources.
8	Analytical Thinking	I break down problems into small segments, use logic and systematic reasoning to solve them.
9	Conceptual Thinking	I can identify patterns in complex situations and see the big picture using models, theories, and frameworks in interpreting them.
10	Language proficiency	I use both English and Sinhala language skills in my work effectively. (verbally, writing emails/letters)
11	Achievement orientation	I set challenging goals, work hard to achieve them, and always try to improve & drive towards high standards of excellence.
12	Initiative	I act quickly without waiting for others to remind/instruct me & seize opportunities & minimize problems.
13	Optimism	I believe in myself achieving my goals despite obstacles & believe that people do the right thing if they are given the opportunity.
14	Communication	I'm good at listening to others, reading non-verbal cues, and openly & clearly express my ideas, opinions & feelings.

15	Conflict management	I like to face disagreements openly & negotiate for a win-win solution.
16	Leadership	I inspire & lead others so they enthusiastically committed to group tasks & treat my group members fairly and impartially.
17	Self-assessment	I'm familiar with my own strengths & weaknesses and I analyze my actions and learn from experience.
18	Flexibility & Adaptability	I can manage multiple demands, ambiguities without losing focus and can be open to new ideas, approaches & adapt to changes in the working environment.
19	Stress Tolerance	I can handle unpleasant and stressful situations without weakening my performance when working under pressure.
20	Commitment	I act according to the demands of my work environment respecting organizational norms by putting group objectives over and above my own objectives.
21	Decision quality	I make decisions based on principles, purposes & values considering the implications of different options.
22	Leveraging diversity	I respect and like to work with people from diverse backgrounds, hierarchies and I'm not bias based on such differences.
23	Organizational Savvy	I understand and utilize organizational dynamics (org. culture & politics) to achieve objectives by using formal and informal communication channels.
24	Attention to detail	I take work seriously paying attention to details and getting down to the bottom of the tasks.
25	Quality Consciousness	I know my goals clearly and worry about delivering results with minimum deviations complying with relevant standards.
26	Cost consciousness	I worry about the cost and aware of the expenses associated with my work and deliver outcomes within given budgets by optimizing expenditure.
27	Time consciousness	I worry about time and deliver results on time and consider being delaying as a weakness.
28	Leveraging Technology	I'm good at effectively using technology at work (ERP, HRIS, Mobile & Internet, Fingerprint machines, etc.) on my own without the support of IT div./ or others.
29	Teamwork	I'm a team player and capable of working cooperatively with others creating friendships and team spirit.
30	Compliance & Subject matter expertise	30. I'm aware of company rules, regulations, job-related practices & standards and adhere to them accordingly.

Source: developed by the author as a modified version of Cycloid sourced from Moradi et al. (2021)

Annexure 02: Numerical Values of WPR and Percentage Contributions of Competencies of Administrative Officers. (CSP – Contribution for Successful Performance, DI- Difficulty to Improve, WPR-Weighted Proficiency Ratings)

Rank	Competency	CSP	DI	CSP X DI	Proficiency Level	WPR Score	% Competency Demand
1	Trustworthiness	3	3	9	4	36	11%
2	Initiative	3	3	9	3	27	9%
3	Stress Tolerance	3	3	9	3	27	9%
4	Responsibility	3	3	9	3	27	9%
5	Achievement orientation	2	3	6	3	18	6%
6	Communication	3	1	3	4	12	4%
7	Teamwork	3	1	3	4	12	4%
8	Commitment	1	3	3	4	12	4%
9	Conflict management	2	2	4	3	12	4%
10	Organizational Savvy	2	2	4	3	12	4%
11	Time consciousness	2	2	4	3	12	4%
12	Leadership	3	1	3	3	9	3%
13	Leveraging Technology	3	1	3	3	9	3%
14	Optimism	1	3	3	3	9	3%
15	Compliance & Subject matter expertise	2	1	2	3	6	2%
16	Self-assessment	3	2	6	2	12	4%
17	Emotional Awareness	1	3	3	4	12	4%
18	Attention to detail	1	2	2	4	8	3%
19	Maintaining Order	1	2	2	3	6	2%
20	Seeking Information	1	2	2	3	6	2%
21	Analytical Thinking	1	2	2	2	4	1%
22	Conceptual Thinking	1	2	2	2	4	1%
23	Decision quality	1	2	2	3	6	2%
24	Quality Consciousness	1	2	2	3	6	2%
25	Cost consciousness	1	2	2	4	8	3%
26	Language proficiency	1	1	1	2	2	1%
27	Leveraging diversity	1	1	1	3	3	1%

Source: developed by the author

Annexure 03: Competency Framework for Construction Site Administrative Officers

Proficiency Level →		Novice	Advanced Beginner	Competent	Proficient	Expert	
Competency Group							
Personal Competencies	Self-awareness	Emotional awareness					
		Self-assessment					
	Trustworthiness						
	Stress tolerance						
	Responsibility						
	Maintaining order						
	Seeking information						
	Decision quality						
	Cost consciousness						
	Quality consciousness						
	Time consciousness						
	Self-control	Analytical thinking					
		Conceptual thinking					
		Language proficiency					
		Attention to details					
		Leveraging technology					
	Cognitive ability	Achievement orientation					
		Commitment					
		Initiative					
		Optimism					
		Leveraging diversity					
	Motivation	Organizational Savvy					
		Communication					
		Conflict management					
		Leadership					
		Teamwork					
	Social Competencies		Social Skills				
	Empathy						
	Social Skills						
Absolutely Essential		Important		Slightly Important			
Very Important		Moderately Important		Not important			

Source: developed by the author