

**A FRAMEWORK TOWARDS IMPROVING RECRUITMENT
AND SELECTION PROCESS OF SKILLED LABOURERS IN
BUILDING CONSTRUCTION PROJECTS IN TANZANIA**

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**MSc. (Construction Economics and Management) Dissertation
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AND SELECTION PROCESS OF SKILLED LABOURERS IN
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By

Christina Yati Evarist

**A Dissertation Submitted in Partial Fulfillment of the requirements for the
award of Masters of Science in Construction Economics and Management of
Ardhi University**

**Ardhi University
August, 2022**

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Ardhi University a dissertation entitled “*A Framework Towards Improving Recruitment and Selection Process of Skilled Labourers in Building Construction Projects in Tanzania*” in fulfillment of the requirements for degree of Master of Science.(**Construction Economics and Management**) of Ardhi University.

Dr. Valentine G.M. Luvara

(Dissertation Supervisor)

Date.....

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I, **Christina Yati Evarist**, declare that this thesis is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

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DEDICATION

To my Lord Jesus Christ

My beautiful, adorable and most caring mother Ester Machage

My dear late father Evarist Christian Muhoza

My magnificent beloved and lovely Husband Obed Marobhe

My Terrific son Timothy Marobhe

My wonderful brother Christian and My fantastic young sister Gaudensia

ABSTRACT

Most of skilled labourers acquire their knowledge informally. Unfortunately, there is no any skills testing and certification system in Tanzania. As a result contractors facing some challenges in recruiting and selecting skilled labourers, as it is very difficult for the contractor to determine the ones with skills required. This study aimed at exploring the practice of recruiting and selecting skilled labourers in building projects with a view of developing a framework that would enhance the recruitment and selection process among building contractors in Tanzania.

With the use of mixed methods, research was conducted to the identified building projects to address the following objectives; to examine criteria for selecting skilled labourers in building construction projects, to assess the methods of recruiting and selecting skilled labourers in building construction projects, to determine the challenges facing construction firms during recruiting and selecting skilled labourers in building construction projects and lastly to develop and validate a framework for assisting recruitment and selection process of skilled labourer in building construction project.

The study findings revealed that “experience and past performance on similar nature of works”, “familiarity with construction methods, material and health and safety issues” and “relevant knowledge in handling and use of tools and equipment” are the mostly considered selection criteria. Regarding methods used “recall former labourers”, “employee referrals” and “walk in labourers are the mostly used recruitment methods while the mostly used selection methods are short interviews with the skilled labourers”, “performance testing to the main work” and “performance testing to the temporary structure”.

Also challenges that stress contractors are “location of the site”, “lack of experienced labourers”, “lack of the policy that govern the process of recruitment and selection” and “payment differences between one company and another”. The study was also able to develop and validate a framework for assisting the entire process of recruitment and selection. The study recommends that training, skills recognition and impartment, early preparation of recruitment plan, development of recruiting and selection policy, motivation, and skill test and certification system to be done.

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LIST OF ABBREVIATIONS

BMI	-	Business Monitor International
BOT	-	Bank of Tanzania
CIDB	-	Construction Industry Development Board
CRB	-	Contractors Registration Board
CRDB	-	Centenary Rural Development Bank
CSP	-	Country Strategy Paper
GDP	-	Gross Domestic Product
HR	-	Human Resource
HRM	-	Human Resource Management
ILO	-	International Labour Organization
ISCO	-	International Standard Classification of Occupations
METL	-	Mohammed Enterprises Tanzania Limited
NBS	-	National Bureau of Statistics
NBS	-	National Bureau of Statistics
NGOs	-	Non-Governmental Organizations
NMB	-	National Microfinance Bank
QGDP	-	Quarter Gross Domestic Product
SPSS	-	Statistical Package for the Social Sciences
TCI	-	Tanzania Construction Industry
TNR	-	Total Number of Respondents
TRA	-	Tanzania Revenue Authority
TZS	-	Tanzania Shillings
UK	-	United Kingdom
UNESCO	-	United National Scientific and Cultural Organization
USA	-	United States of America
USD	-	United States Dollar

CHAPTER ONE

INTRODUCTION

1.1 Background Information

In this period of globalization, as an organization needs to succeed and survive or compete effectively in the global economy, employers must be in a position to promote best practices of recruitment and selection of employees (Adu-Darkoh, 2014).

Employees are one of the most critical assets for generating proficient output of a project and can be seen in labour-intensive industries such as the construction industry (Malkani & Kambekar, 2013). Moreover, skills acquired by the employees contribute much to the success of a project (Kikwasi, 2011). Therefore, if the required skills of labour is not found by a contractor, the project will be constructed with labourers who have insufficient skills, which has a negative impact on the project productivity hence poor performance (Hussain *et al.*, 2020).

Gunduz *et al.* (2013) and Hussain *et al.* (2018) argued that labourer with insufficient skills is one among the factors which causes delays in construction project. Furthermore, Dai *et al.* (2009) classified ten groups of factors that indicate the fundamental form of productivity whereby six of them are concerning with labour skills.

In most developing countries construction skills are still mainly acquired through an informal apprenticeship system. In the Philippines, an estimated 95 per cent of construction workers acquire their skills in this way (Yuson, 2001). In Egypt 85 per cent of craftsmen are trained through traditional apprenticeships and a similar situation prevails in Brazil, India, Kenya and Mexico (ILO, 2001). Although vocational training schools do exist in most countries, but many workers and contractors see formal training as an unnecessary expense rather than an investment. They can only be persuaded to undergo training if they are paid for time lost (ILO, 2001).

Moreover, evidence from various scholars (Loosemore *et al.*, 2003; Rwelamila, 2002; Egan, 1998) indicated that construction industry is not investing in training as a result the industry depends on informal trained labourers. In Tanzania like many other developing countries, contracting firms draw most its construction labour force from informal trained group. Most contracting companies determine their labour's competence when working with them. The

approach put pressure on quality, given the country does not have a skill/qualification test and certification program (Kikwasi, 2011).

Some developed countries such as USA and UK developed skill testing and certification system so as to make sure that the labourers recruited are the ones with required skills. The system is viewed by building owners in the United States as the program that improves safety, quality, cost effectiveness, progress, productivity and growth their careers. In the UK employers regard the plan as the greatest way to deal with the crisis of skills (ILO Report, 2001). In developing countries, the program began in Singapore and was then followed by the Malaysian Construction Industry Development Board (CIDB) (ILO Report, 2001). Under the program applicants have to prove themselves competently either by submitting their certificates or performing on-site test or both.

There is no skill testing and certification system in Tanzania, contractors engage labourers who have not been certified and most of them acquired their knowledge informally, consequently both completed and ongoing projects depict poor workmanship (Kikwasi, 2011). The status of skilled labourers and absence of skills testing and certification scheme pose some difficulty to recruiters at the construction sites since they do not have the base for selecting skilled labourers such as certificates which prove the level of skills candidates possess. Henceforth, this research aims at developing a framework that will be able to enhance and facilitate the recruitment process in the building projects.

1.2 Research Gap

Different studies have been conducted regarding recruitment of labourers. Ahmed and Briggs (2011) conducted a study regarding recruiting skilled labourers in heavy high way construction. The study was carried out in United States, leaving a contextual gap in terms of location and the population. The contextual gap (in terms of location and population) also exists in the study of Adu-Darkoh (2014) and Ukeje *et al.* (2020) whose study was conducted in Ghana on construction industry and Nigeria on Public sector respectively. Also in Tanzania various studies (Ahmed *et al.*, 2018; Lushiku, 2014; Mwashu, 2013) were conducted on recruitment practices but these studies focused on other organizations such as Zanzibar public sector, Tanzania Revenue Authority (TRA) and public and private sector respectively. Hence, leaving a population and contextual gap, furthermore related studies done on recruitment practices neglected the development of frameworks as a means of

facilitating the recruitment process A summary of prior researches done on Recruitment of labourers is illustrated in a Table 1.1 below.

Table 1.1 Summary of Prior Studies Relating to Recruitment Practices

S/N	Author	Year	Title	Remarks
1	Ahmed and Briggs	2011	Effective Recruitment and Selection Strategies for Skilled Labourers in Heavy Highway Construction	The study based on heavy highway construction hence did not show the recruitment practices specifically in building works and also challenges during the process.
2	Adu-Darkoh	2014	Employee Recruitment and Selection Practices in the Construction Industry in Ashanti Region	The study show generally how the contraction workers recruited and selected but did not show specific the skilled labour
3	Mwasha	2013	An Over-view of Online Recruitment: The Case of Public and Private Sectors in Tanzania	The study based on online recruitment in public and private sector and the challenges encountered but did not show the normal/offline recruitment and selection practice in Construction Industry
4	Ahmed <i>et al.</i> ,	2018	Analysis of Recruitment Practices in Tanzania.(A case of ministry responsible for recruitment in Zanzibar public sector)	The study did not show the recruitment and selection practice in Construction Industry
5	Lushiku	2014	Assessment on the Effectiveness of Recruitment and Selection Process in Public Sectors: (A Case Of Tanzania Revenue Authority (TRA))	The study did not show the recruitment and selection practice in Construction Industry
6	Ukeje <i>et al.</i>	2020	Public Service Recruitment Practices and Implications for Sustainable Development in Ebonyi State, Nigeria.	The study established the relationship between public service recruitment practices and sustainable development. It did focus on how labourers are recruited and challenges faced during the process lastly it based on the Public sector.

1.3 Problem Statement

The recognized approach of securing labourers by contractors is through recruitment process. However, there is lack of knowledge on how building contractors in Tanzania can recruit skilled labourers with the required skills, that is, there is no mechanism to guide contractors in the course of recruitment and selection process. Besides, the recruitments and selections undertaken by contractors are faced with a number of challenges often leading to poor project delivery arising from unqualified employed labour force. There are many practices where by

a contractor can engage labourers in a construction project and therefore this require in depth analysis in order to determine the appropriate practices. A number of studies (Gunduz *et al.*, 2013; Hussain *et al.*, 2018; Love and Li, 2000; Au-Yong *et al.*, 2013) argue that one of the primary features of poor project performance is the engagement of labourers with insufficient skills. Furthermore Karimi *et al.* (2016) found that lack of employing skilled labours directly cause the decline in productivity of projects which furthermore affect the performance of the project. Moreover Hussain *et al.* (2020) explain that lack of recruiting skilled labourers and the decline in project productivity are substantially connected.

Kikwasi (2011) argued that most of the skilled labourers who are engaged in construction projects are not certified, because there is no any skill testing and certification program for skilled labourers in Tanzania, Consequently, it is very difficult for the contractor to determine the ones with skills required. If a site manager or contractor cannot engage skilled labourers with the required quality levels, the project is implemented or built by unqualified and inexperienced labourers (Hussain *et al.*, 2020). Hence projects portray poor quality, poor workmanship, and insufficient value for money (Kikwasi, 2011). Henceforth this study aims at developing the framework which will help the building contractor in recruiting skilled labourer in building construction projects in Tanzania.

1.4 Objectives of the Study

1.4.1 Main Objective

The main objective of this study is to explore the practice of recruiting and selecting skilled labourers in building projects with a view of developing a framework that would enhance the recruitment and selection process among building contractors in Tanzania.

1.4.2 Specific Objectives

- i. To examine criteria for selecting skilled labourers in building construction projects.
- ii. To assess the methods of recruiting and selecting skilled labourers in building construction projects
- iii. To determine the challenges facing building contractors during recruiting and selecting skilled labourers in building construction projects.
- iv. To develop and validate a framework for improving recruitment and selection process of skilled labourer in a construction project.

1.5 Research Questions

- i. What are the criteria for selecting skilled labourers in building construction projects?
- ii. What are the methods of recruiting and selecting skilled labourers in building construction projects?
- iii. What are the challenges facing building contractors during recruiting and selecting skilled labourers in building construction projects?
- iv. In what ways can a framework be developed and validated for improving the recruitment process of skilled labourer in a construction project?

1.6 Scope and Limitation of the Study

In Tanzania there are five types of contractors namely building contractors, civil works contractors, mechanical contractors, electrical contractors and specialist contractors which are under the control of Contractors Registration Board (CRB, 2020). The board classifies contractors into seven classes from contractors class I through contractors class VII. The classification of contractors based on the limit of value of work to be performed by a contractor, Table 1.2 shows the category and limit for each class. This study was limited to building projects registered by CRB, undertaken by contractors class I, II and III due to the reason they are projects with high value as indicated in Table 1.2 below, hence involve large number of skilled labourers to perform different trades. Consequently, the researcher was able to obtain rich information since recruiters experience repeated recruitment and selection process.

Moreover, the study was undertaken in Dar es Salaam City as it is the most growing city whereby most of the large constructions are taking place. Therefore, from this city a researcher was able to get the needed data to answer the research questions.

Table 1.2 Class Limit for any Single Contract (Value in Million TZS)

Class	Civil	Building	Mechanical	Electrical	Specialist
I	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
II	8000	5000	3000	3000	800
III	4000	3000	1500	1500	150
IV	2000	1800	900	900	-
V	1100	900	450	450	-
VI	500	400	250	250	-
VII	200	200	150	150	-

Source: CRB (2021)

1.7 Significance of the Study

Construction industry is one of the leading sectors of economic growth and development of any developing country like Tanzania. This industry considers skilled labourers as the foremost fuel for good accomplishment. To enhance construction management processes labour is a vital factor. Involvement of labourers with insufficient skills lead to major negative impact on the scheduled time, construction cost estimated and required quality of construction work.

The study intended to show how contractors can recruit and select skilled labourers in construction site through developing a framework for effective recruitment and selection process in building construction projects particularly in Tanzania. Therefore, recruiters such as general foremen, site managers etc, will understand well the whole process of attaining the required skilled labourers who give a positive impact in a project performance. Also understand more recruitment strategies which can be more advantageous related to the ones formerly in use. This expected to help organizations be able to get the best and qualified personnel. Also, the study anticipated to benefit researchers and academicians all over the world as this study contributes to the existing knowledge related to recruitment practices of skilled labourers.

1.8 Summary of the Chapter

This chapter served as the introduction to the research. It outlined the research gap, problem statement, and main and specific objectives as well as research questions. Finally, the chapter discussed the study's limitations and significance. The following chapter will discuss the literature review on recruitment and selection.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter aims at demonstrating the recruitment and selection process as well as challenges and facing the process in an organization. The literature review explains and connects different themes within the study topic. Relevant concepts linked with recruitment and selection process in human resource management will be described in this chapter. The review shows an exploration of literature that has previously been written concerning the study topic. Summarization and discussion of the core notions associated with the study topic will be done in this chapter to show different ideas and understandings from variety of literature.

2.2 Definition and Importance of Construction Industry in Tanzania

The construction industry is referred as a sector of the economy which transforms numerous resources into constructed physical economic and social infrastructure necessary for socioeconomic development. It embraces the process by which the said physical infrastructure are planned, designed, procured, constructed or produced, altered, repaired, maintained, and demolished. The constructed infrastructure according to the policy includes: buildings, transportation systems and facilities such as airports, harbours, highways, subways, bridges, railroads, transit systems, pipelines and transmission and power lines, structures for fluid containment, control and distribution such as water treatment and distribution systems, sedimentation lagoons, dams, irrigation and canal systems and underground structures, such as tunnels and mines (Construction industry policy in Tanzania, 2003).

The industry comprises of organizations, companies, firms and individuals working as consultants, main contractors and sub-contractors, material and component producers, plant and equipment suppliers, builders and merchants. The government is involved in the industry mainly as a purchaser (client), financier and regulator (Ntiyakunze, 2011).

Tanzania construction industry is under the Ministry of Works, Transport and Communication Development which responsible for the establishment and growth of the construction activities carried out in the country. The main responsibility of the ministry is to make sure that construction industry sector improves by addressing the challenges which

encounter the Tanzania construction industry in order to meet the significant requirements for the successful construction sector (Durdyev & Ismail, 2012).

According to BMI (2016) Tanzania is among the countries which have the largest construction market in Eastern Africa, it is the second ranked country behind Ethiopia. The forecast of 2015 estimated that for the next ten years the market is anticipated to be increasing persistently. Also behind the information and communication as a driver of the economy, TCI is the second largest driver of the economy with the growth rate contribution of 14% (CSP, 2016).

NBS (2010) reveals that in Tanzania, construction activities contribute 7.8% of the total country's GDP which is corresponding to USD 1.6 billion. In the year 2015 there was an increase in the GDP to 13.6% which is corresponding to almost USD 6 billion.

Construction contributed 13.6% to Tanzania's GDP during 2015, reaching almost USD6b. In 2010 the sector accounted for only 7.8% of the country's GDP or USD1.6b. In between quarter one of 2015 and Quarter one of 2016 there was a decrease in growth rate of TCI which was from 23.2% to 4.3% respectively. The slowing growth rate of TCI was due to reduction of the investment in construction sector as a result this affect the economic growth of the country.

During the third quarter of 2020, the value of QGDP in absolute terms at current prices was TZS 35.3 trillion compared to TZS 32.6 trillion in the similar quarter of 2019. Further, the value of QGDP at constant prices increased to TZS 30.3 trillion in the third quarter of 2020 from TZS 29.0 trillion in the corresponding quarter of 2019 equivalent to a growth of 4.5 percent. During the period under review, Construction activity recorded the highest growth rate of 17.4 percent, followed by other sector (NBS, 2020). This shows the significance of the construction industry to the country's economy.

Despite the growth of the construction industry and the contribution it makes to the country's economy, TCI faces some challenges which hinder the smooth operation of construction activities. UNESCO, (2018) revealed some constraints which has been facing the TCI where by one among the challenges is inadequate skill levels of the skilled labourers, this pose some ambiguities in recruiting skilled laboueres. Moreover Kikwasi and Escalante (2018)

portrayed that TCI also face problems on the matters of availability of skilled personnel, consequently it's difficult for the recruiter to engage the potential labourers.

2.3 Definition of Key Concept/Terms

2.3.1 Skills

According to ISCO-08, skill referred to the ability to carry out tasks and duties of a particular job. A skill is the learned ability to execute an action with determined outcomes with virtuous implementation regularly within a specified time, energy, or both. Skills have been categorized into two main parts which are domain-general and domain-specific skills. Domain general includes certain general skills such as leadership, time management, self-motivation, teamwork and others, while domain specific skills are mainly used just for a specific job.

2.3.2 Skilled Labour

Skilled referred to an employee who possesses the specialized ability and competence in his field of work with a superiority workmanship. A skilled worker has the ability to carry out the work in accordance to specifications and focused on the requirements of the industry. Skilled labour recognizes, decide and determine how the work goes (Manap *et al.*, 2017).

The skilled labour in the construction industry can be defined as those who were being trained within a long period and they have carried certain specialized technical industry skills in implementing the construction projects. Generally the works need the labourer who has high degree of manual skill. The labour can be considered as a skilled labour if they are able to fulfill the requirement. In the construction industry, skilled labourers include of masons, carpenters, steel fitters, plumbers, plasterers, painters (Sherekar *et al.*, 2016).

Also, according to Construction Industry Skill Standards, CIDB (1998), in construction skilled labour are labourers who follow under the following categories;

- i. Concreter
- ii. Plasterer
- iii. Painter
- iv. Bar Bender/Steel fixer
- v. Carpenter
- vi. Tiler

- vii. Bricklayer
- viii. Scalffolder
- ix. Plumber etc.

2.4 Definitions of Recruitment

Opatha (2010) explained recruitment as the process of finding and attracting appropriately competent individuals to apply for job positions in the firm. It involves a package of undertakings a firm uses in attracting job applicants who possess the required skills and attitudes. Generation of a pool of competent candidates for the purpose of filling the job vacancy in an organization is regarded as recruitment process.

As described by Ofori and Aryeetey (2011) recruitment refers to the process of generating a pool of qualified persons who need to be hired in an organization. This is also supported by Baraton and Gold (2007) who defined recruitment as a process of generating a pool of talented applicants who apply for employment in an organization. Most experienced and qualified candidates who are closely related with the job specifications are ultimately selected by the organization.

For Eze (2002), recruitment is the process of ruling and attracting job applicants who are appropriately capable for filling job vacancies excellently. The main aim is to tempt them to apply for the job position hence make the organization to have sufficient number of qualified people for them to make selection. Costello (2006) supported that recruitment is a set of doings and procedures used by an organization find sufficient number of competent candidate legally, at the correct time and place so as to enable an organization to select the best candidates at their optimal interest.

In the process of attracting the applicants the organizations must be concerned with cost of recruitment and avoiding any mistake which will result to high cost of recruitment. The main purpose of doing this is to obtain sufficient number of appropriate and competent applicants to fulfill the requirements of the organization at a minimum cost (Armstrong, 2006).

Based on the above different definitions provided by different scholars regarding recruitment process, recruitment is seen as very important aspect in field of Human Resources practices in an organization. Therefore the organization needs to involve certain techniques that will sufficiently identify the pool of candidates who possess the required skills.

2.5 Sources of Recruitment

Sources of recruitment have been categorized into two parts which are internal and external sources of recruitment (Noe *et al.*, 2013). The selection of sources to be used depends on some factors which are availability of qualified personnel to fill the job position, job title to be filled in the firm, the possibility that it will result to competent candidate, time frame that the recruitment process will take to be completed, recruitment cost (Noe *et al.*, 2013 ;Armstrong, 2009).

2.5.1 Internal Recruitment

Internal Recruitment refers to the process of seeking employees who are current employed in the organization (Turkson, 2007). The organization focus on the available employees it has. This provides a better utilization of the existing employees in the organization. The internal recruitment normally develops higher morale to labourers in the organization. Development and growth of the employee's career are highly ensured. When an organization needs to recruit employees, internal employees should be first considered. This helps the organization to save up to 70% of the recruitment cost (Rashmi, 2010). Although various organizations claim that even the internal employees should apply for the vacancies on equal basis as external candidates (Armstrong, 2009). Internal recruitment sources includes the following

2.5.1.1 Promotions

Promotion refers to advancement of the workers by assessing their job performance. Once the companies feel pleased with the worker's performance, they promote them to an upper level within the organization hence increase in salary and benefits. Generally promotion is the process of shifting an employee from a lower position to a higher position with more responsibilities, remuneration, facilities, and status. Many organizations fill the vacant positions at higher levels with the process of promotions (Kapur, 2018).

2.5.1.2 Transfer

Transfer is the process of exchanging from one job to another without any change in the job title and duties. Also it can be shifting of the workers from one unit to another unit or from one location to another. Transfers are usually grounded on the requirements of the job and the worker's competences (Keshav, 2013).

2.5.1.3 Job Posting

Job Postings is also known as Internal Advertisements. It involves the processes of posting and advertising jobs within the organization. It's an open invitation to all the workers inside the organization (Kapur, 2018). Also it creates provision of equal chances to all workers. Therefore, the recruitment will be carried out from inside the organization and minimizes the cost of recruitment (Keshav, 2013).

2.5.1.3 Recall Former Labourers

Recruitment of former employees is a process of internal sources of recruitment, in which the ex-employees are called back, depending upon the requirement of the positions. This source is very beneficial to the organization since it involves less cost and saves time as well as money. Former labourers are aware of the organization, the roles and duties of the job and permanent employees of the organization. Furthermore the companies are very familiar with their personality characteristics and methods of performing works therefore the company impose less effort on their training and development (Kapur, 2018).

2.5.2 External Sources of Recruitment

External sources of recruitment refer sources used by the organization to attract candidates from outside a specific organization in order to fill the available job positions. These sources make the organization to recruit other individuals other than the organization's employees (Sutherland and Canwell, 2008). The external recruiting methods bring broad awareness to the job seekers also provide a room for candidates that previously have no connection to the organization (Fagbemi *et al.*, 2006).

External recruiting methods have been categorized into two categories which are formal and informal recruiting methods (Fagbemi *et al.*, 2016; Ahmed and Briggs 2011). Most of the firms prefer to use informal sources, this makes them to enjoy some benefits such as reduction of recruitment cost and also most of the organization prefers to use employee referral to generate a list of potential applicants. Also the organization adds the benefits of interpersonal relations between the potential candidates and current employees. Possibly the applicant will better fit in the organization. The following are the external sources of recruitment;

2.5.2.1 Advertisement

In this method organization advertise the vacancy position in media so as to attract a large pool of applicants. It involves publicizing vacancy position to the job seekers. Traditionally advertising has been the utmost recognizable approach of attracting applicants (Armstrong, 2009). There are some factors which influence the advertisement response. Reputation of the organization is mostly considered by many job seekers. A company with the good reputation will observe highly response rate, while the company with low reputation will observe low response rate. Also market condition at the moment as well as requirement set by the organization in the advert will affect the applicants response rate (DeCenzo *et al.*, 2011).

Normally the aim of advertisement is at attracting adequate number of potential applicants while minimizing the recruitment cost; attracting attention, communicating with the potential candidates in an attractive and interesting way and conveying the message in a way that quick attraction of the potential and right qualified personnel will be attained (Armstrong, 2009).

2.5.2.2 Online Recruitment or E-Recruitment

E-recruitment involves the use of internet to post vacancies available in the organization, provide detailed information regarding jobs positions and permit communication through e-mail between organization/employers and applicants. Finally the applicants can apply for jobs online as well as performing any test online (Armstrong, 2009). Some studies conducted in Tanzania revealed that people uses internet to find jobs, its indicated that 64% of internet users in Dar es salaam (Nnafie, 2002) and 30.7% of the internet users in Morogoro are searching for jobs online (Sife, 2013).

2.5.2.3 Recruitment from Vocational Training / College

Job vacancies may be filled by persons from the college, training establishments as well as universities (Armstrong, 2009).Normally graduates are inexperienced, this situation require organization to train them before engaging them into the work (Patel & Rana 2007).

2.5.2.4 Employee Referrals

Recommendation from a current employee is one amongst the superior sources which performs effectively on the job. It's very hard for the employees to recommend somebody unless they have confidence in the individual performance. Employee referrals also may receive more accurate information about their potential jobs. Regularly the recommender

provides the candidate more accurate information regarding the job than might be provided through other sources such as newspaper advertisements or employment agencies. Additionally, most of the organizations prefer to use employee referrals for searching potential candidates in those hard-to-fill positions (DeCenzo & Robbins, 2010).

Sometimes recommenders may confuse friendship with job performance capability. For social and economic reasons, individuals usually like to work with their friends in the same organization as they may be able to share rides to and from work. Employee referrals may also lead to nepotism, that is, hiring individuals related to persons already employed by the organization. Finally, organization will not be able to add some varieties to the work place (DeCenzo & Robbins, 2010).

Various incentives are provided to current employee who recommends the best applicant since the organization gets a qualified candidate without incurring major expense of an extensive recruiting search (DeCenzo & Robbins, 2010; Rajarao, 2010).

2.5.2.5 Employment Agencies

Employment agencies referred to as labour brokers, exist to assist employers and employees to find each other (DeCenzo & Robbins, 2010). They are fast and efficient in recruiting candidates for particular positions for a fee claimed from either the employee or the employer, but commonly from the employer. These agencies do some preliminary screening for the organization and put that organization in touch with applicants. Private employment agencies differ considerably in the level of service, costs, policies, and types of applicants they provide. Organizations give the detailed information to the employment agency so as to obtain the potential candidates with the skills and ability required. This reduces the series of likely difficulties from these sources (Sims, 2002).

2.5.2.6 Labour Union

This source provides a certain types of candidates. Unions usually provide employees to employer; this is common to certain industries such as construction industry. Labor unions operate placement services for the benefit of their members (DeCenzo & Robbins, 2010). Unions also can work to an employer's benefit through supportive staffing programs; this is mostly done in the building and printing industries (Keshav, 2013).

2.5.2.7 Job fairs

Events attended by employer representatives or recruiters with the goal of reaching qualified candidates (DeCenzo & Robbins, 2010).

2.5.2.8 Company's Websites

Company's websites is the recruitment approach whereby employers attract employees through their company websites. Numerous organizations and or institutions In Tanzania have websites which are also used for recruitment. Some of the companies may recruit themselves or outsource to other specialize recruitment companies. Various macro and microfinance institutions such as banks are very familiar with website recruitment. Examples: Bank of Tanzania (BOT), CRDB Bank Limited, National Microfinance Bank (NMB) National Bank of commerce. Also Vodacom Tanzania, Zantel, Mohammed Enterprises Tanzania Limited (METL), Coca-Cola Tanzania, social institutions, universities and Non-Government Organization NGOs are among the institutions which use the website to attract potential candidates (Mwasha, 2013).

2.5.2.9 Job Boards

This refers to the boards which are regularly allocated in the recruitment agencies indicating the list of jobs available. Submission of jobs and important information in these boards is done by the employers. The job seekers find information on boards then matching the qualification stated with their qualifications. HotJobs, CareerBuilder and Monster are the most famous world boards (Noe *et al.*, 2007). Radar recruitment, Tanzania online Gateway, Zoom Tanzania and Job Tanzania are the most famous Job boards in Tanzania (Mwasha, 2013).

2.5.2.10 Social Media

Social media is an online based communication system which widely permits interaction of individuals and easily connects them (Nigel writer recruitment, 2011). It provide a room for users to create and interchange ideas, contents and values (Kaplan and Haenlein, 2010) The availability of internet for computers and mobile uses increases the use of social media which further result to the use of social media as a source in recruitment. Jamii forums, tweeter, facebook and linkedln are the most social medias used in recruiting labourers (Mwasha, 2013).

2.5.2.11 Walk-in Labourers

People walk in without having an appointment with the organization. Most labourers walk in the construction sites to find job without any advertisement made (Kikwasi, 2011).

2.6 Definition of Selection

Selection is the process of determining which candidates will best match certain position, considering job requirements and internal and external environment of the organization. Generally selection is focused on individual differences, as individual differ greatly in attributes from one individual to another. Human beings have distinctive characters and talents (Swanepoel *et al.*, 2008).

According to Mondy (2010), selection is defined as the process of picking the potential candidates from a pool of candidates in order to fit a certain job in an organization. Although alignment of the recruitment process is to attract persons to apply for employment in the organization, the selection process is to isolate and engage the competent and appropriate labourers for specific positions.

Furthermore, selection process can be well-defined as the process utilized by an organization to select the utmost competent applicant to fill the vacancy position from a large pool of candidates (Gatewood *et al.*, 2011). Obtaining the pool of best qualified applicants for the job position is very important, for that reason recruitment process is very crucial. Recruitment has to make sure that it provides potential candidates so as to make a selection process successful. The selection process comprises determining the knowledge, capabilities, and skills of the applicant and using them to forecast the forthcoming applicant's job performance (Gatewood *et al.*, 2011).

2.7 Selection Measures/Methods

Selection process is focused on measurement (determinants) of the knowledge, capabilities, and skills of the applicant, therefore there is a need of defining clearly the means of measurement and method of examining the measurements must be well-known by the organization (Deems, 1999 as cited by Ahmed and Briggs, 2011). For an effective selection process in the organization, first of all the recruiter/ selection panel has to identify the selection measures to use for a specific job position. Selection measures differ from organization to organization and also from one position to another, basically certain

resemblances may be found between the different organizations or positions (Ahmed & Briggs, 2011).

Personnel who are responsible in hiring employees are required to know the skills and capabilities which are essential in a certain job and being able to identify which applicants possess the needed abilities and skills. Awareness on the strength and weakness of the candidates should help job recruiters in making decisions regarding selection of the participants (Tjosvold & Newman, 2003).

A study conducted by Ryan and Tippins (2004) portrayed that nowadays many organizations prefer to use reference check and interview. Reference check and interview were also shown as the common selection methods used to select skilled labourers in heavy highway construction in South Africa. Moreover the study also shows that knowledge test and performance test are also used by the companies (Ahmed & Briggs 2011).

One to one interview, panel interview, written assessment and job tryouts are the most common selection methods used by managers in Sierra Leone construction industry. From the said selection methods, one to one interview was viewed as the best measure of the skills and capability of the labourers in small and medium enterprises in the Sierra Leone construction industry (Kanu, 2015).

Some of the utmost common selection methods / measures which are used to show the differences between applicants are described below;

2.7.1 Interview

The interview is the method used for selecting labourers in an organization. An organization formulates some questions specific for a certain position to ask the applicants with the aim of determine applicant's skills and abilities (Gatewood *et al.*, 2011). The use of interview adds to the organization the benefit of measuring communication and interpersonal skills, since the interviewer directly meets the applicant .Also the interviewer is able to gather more information concerning the applicant (Redman and Wilkinson, 2001).The main shortcoming of interview is that, Interview assumes the performance of the applicant is subjective and just based on views of the interviewer only. Due to that interview have to be used in combination with additional selection measures (Goleman, 1998).

2.7.2 Reference Check

In this method applicant submit a list of contacts of personnel that can be used by the organization to contact the mentioned personnel so as support the information provided by the applicant (Andler, 2003). The organization is getting the outside view from other organizations or personnel who previously worked with the applicants. From the outsiders an organization will be able to know the past performance and behavior of the applicant (Suryaprakasa *et al.*, 2002). The method is beneficial but the company is advised to combine it with other selection methods. Reference check is among the most used selection methods by different organizations also it's cheap to use (Andler, 2003).

2.7.3 Knowledge Test

In this method candidates are provided with written or oral test for the aiming of testing their knowledge. Questions in the knowledge test may base on facts or possible situations occur in the specific job. Their responses on how they could handle the situations will enable the organization to evaluate their knowledge skills (Kuncel & Hezlett, 2010). Knowledge test helps the organization to precisely forecast the future performance of the applicant but it doesn't assure the organization that the applicant is competent (Gatewood *et al.*, 2011).

2.7.4 Work Sampling / Performance Test

Work sampling produces a small job mockup (DeCenzo & Robbins, 2010). Performance/work sample test measures the applicant's skills and capabilities which help the organization to determine if the applicants possess the required skills and ability to perform the intended job the satisfactory level (Gatewood *et al.*, 2011; Greer, 2003). Candidates demonstrate that they have the essential skills and abilities by actually performing the tasks. Carefully devised work samples based on job analysis data determine the knowledge, skills, and capabilities required for each job. Then, each work sample element is matched with a corresponding job performance element. The advantages of work sampling over traditional pencil-and-paper tests should be noticeable. Because work samples are basically matching job content, work sampling should be a better forecaster of short-term performance and should minimize discrimination (DeCenzo & Robbins, 2010; Greer, 2003).

Moreover, the nature of their content and the methods used to determine content help ensure that well-constructed work sample tests easily meet job related requirements. The main disadvantage is the difficulty in developing appropriate work samples for each job.

Furthermore, work sampling is not applicable to all levels of the organization such as managerial jobs (DeCenzo & Robbins, 2010). In forecasting the forthcoming quality of work which will be produced by the applicant in construction, performance/work sample test is more reliable (Ahmed & Briggs, 2011).

2.8 Selection Criteria

A study conducted by Ahmed *et al.*, (2017) portrayed that construction organization should consider some criteria before engaging the labourer in the construction activities. Some of the criteria were explained in the study which include; therefore the study concluded that a skilled labourer should have a specialized training, working experience of not less than two years, sufficient knowledge about construction materials, ability to use equipment and knowledge on health and safety and physically fit.

Carr (2000) demonstrate that organizations should also consider personality traits or preferences due to the reason that they influence labourer job performance. This is also supported by Ismail, (2012) that personality has been seen as the utmost significant selection criteria followed by self-confidence and appearance (Ismail, 2012).

Furthermore Manap *et al.* (2017) conducted a research on recruitment criteria and attraction strategies for local trained labour in Malaysia's construction industry, revealed that the prospective employers consider the issue of gender in selecting skilled labourers .most of the time they prefer to engage male worker than female workers. Besides that they consider age, experience as well as knowledge and skills of labourers. Usually they involve young, experienced, knowledgeable and skilled labourers in performing the job.

Also, employers consider good communication skills Short *et al.* (2014) demonstrated that employer point of view, communication skills particularly soft skill is among the top selection criteria for workers. This is also supported by Manap *et al.* (2017). Selection criteria have been more explained below;

2.8.1 Marital Status

Marital status refers to the state of being single, married, divorced, widowed and married but separated. Most of the organization has the tendency of checking on the applicant's marital status and asking such question before engaging applicants to the work (Mullen *et al.*, 2017; Harcourt & Harcourt, 2002; Nadler & Kufahl, 2014).

2.8.2 Gender

In labour market, gender inequalities have obviously proven worldwide. For example work engagement in economic sectors, labour force participation, occupational distribution, decision making participation in an organization and the like (Wye & Ismail 2012).

2.8.3 Experience

Employers are based more on employee's experience particularly when job position involves skills (Walker & Zhu, 2013). Inexperienced workers contributing to poor workmanship, hence organization should consider it. More experienced employees would be chosen when considering organization's human capital buildup (Wilson *et al.*, 2007)

2.8.4 Physically up to Date

Any industry depends more on the labourers who are physically fit. Laborers are the foremost fuel in construction industry therefore they need to be physical fit so as to provide the needed manpower. Normally, unhealthy labourer works under stress and physical weakness which make likelihood of mistakes. As a result project depicts poor workmanship, delays, accidents and cost overrun (Manap *et al.*, 2017).

2.8.5 Communication Skills

Communication is the way of giving and receiving information, as well as to transfer our thoughts, ideas and opinions to persons surround us. Communication is one among the significant criteria to consider for the successful project implementation (Manap *et al.*, 2017).

2.8.6 Personality Characteristics

Personality is a mirror of what person does and says, basically personality defines person. Person's behaviour reflects his personality and informs how different a person is from others. Personality is a dynamic organisation, inside the person, of psychophysical systems that create the person's characteristic patterns of thoughts, feelings and behaviours. The continuities, consistencies and stabilities of personality traits and dispositions over time define personality development (Larsen & Buss, 2008). Personality traits affect the job performance of an employee (Carr, 2000).

2.9 Challenges Hindering the Process of Recruitment and Selection of Labourers

Different scholars identified some challenges facing the recruitment and selection process. These challenges create a tough situation to the recruiters during the process.

Mgimba (2019) identified a number of challenges facing recruiting and selection process which includes; difficult in building strong employer brand, hardship in attracting the potential applicants, challenging to attract labourers who fit the company culture, insufficient man power, difficult to involve qualified applicants, lack of the policy that govern the process of recruitment and selection and insufficient financial resource.

Furthermore a study conducted by Rawlinson (2019) pointed out that location where a vacancy is available; is one among challenges facing recruitment and selection process. He further indicated that, it is more difficult to recruit due to location being in a rural area or even from a city centre one and a half hours away for the particular job. Similarly Adu-Darkoh (2014) revealed some barriers hindering effective recruitment and selection of workers, which includes; location of the available vacancy, poor planning of human resource, ineffective job analysis, employee capability, cost of recruitment and selection of labourers, lack of department for human resource and poor working conditions of labourers. The issue of human resource planning has been supported by Kaplan and Norton (2004), besides that the authors argued that the key objective of human resource planning is getting a sufficient number of potential labourers who are skilled enough, experienced and competent at the right time and with reasonable cost.

Also, Zinyemba (2014) underlines some challenges facing the recruitment and selection process which includes; difficult in building strong employer brand, difficult to attract the potential applicants, difficult to attract labourers who appropriate fit the company culture, Deficiency man power, difficult to involve qualified applicants, lack of the policy that govern the process of recruitment and selection, insufficient financial resource

Apart from the above mentioned challenges, issues of recent technological advances, globalization, social trends and changes within organizations have brought some challenges for recruitment and selection (Hax, 2001).

2.10 Improving the Effectiveness of Recruitment and Selection

For an organization to achieve an effective recruitment and selection practice, it needs to go beyond the instant environment of the organization and consider some various factors (McCabe, 2012). This is fast becoming true of not only large organizations but also of smaller ones (Cappelli & Keller, 2014). The recruitment and selection process needs critical planning in order to attain good performance and long sustainability to an organization (McCabe, 2012). Inappropriate strategies and lack of critical planning to the organization lead to the increase in the cost of production, as the organization will engage labourers with insufficient skills hence not meeting the organization requirements.

Effective recruitment and selection process is influenced by describing and understanding the strategy of the organization and its arrangement with HRM, evaluating the organization's internal and external environments, assessing the supply situation in relation to the requirement of the organization as well as developing strategies to fill the vacancy (Lee *et al.*, 2013). Factual arrangement of human resources policies to the organizational strategy brings about more effective recruitment policies (Ciuhureana *et al.*, 2014).

Assessment of effectiveness of the recruitment and selection process in an organization are still done regarding cost incurred and time spent to fill a vacancy, quality of the recruitment and performance of selected personnel are generally ignored (Zaharie & Osoian, 2013).

A study conducted by Constantine (2013) reveals that there is a link between the effective recruitment process and the organization's recruitment and selection policy as well as the performance the organization. Moreover, the study portrays the characteristics of effective recruitment and selection policy which includes; fairness, participatory and competence based procedural fairness, transparency, impact focus, consistency, legality, and credibility and employee fitness to the job. Moreover, effective recruitment and selection is possible only if there is a dedicated and competent HR team (Kaplan & Norton, 2004).

2.11 Empirical Literature Review

A direct search for published works, such as newspapers and books that discuss similar theories and present experimental findings relevant to the subject is referred to as an empirical examination (Zikmund *et al.*, 2010). This segment reviews literatures and empirical

studies from numerous researchers concerning the recruitment and selection process of labourers.

Bogatova (2017) conducted a study regarding improving recruitment, selection and retention of employees in Finland. Questionnaire and interview surveys were conducted in order to obtain data from respective respondents. The study revealed that employee referral and internet sources such as advertisements on internet job boards, social networks, and company website are the most recruitment methods used. These results were quite similar to the data presented by DeCenzo & Robbins (2009). Regarding selection methods, interview was the most popular selection method whereby the less popular methods were reference check and work simulation tests.

Adu-Darkoh (2014) performed a survey concerning employee recruitment and selection practices in the construction industry in Ashanti region. Questionnaires were administered to 62 building and civil engineering contractors of Ghana. The study discovered that newspaper adverts, in-house (internal recruitment), labour office, employee referrals, radio advert and internet recruitment are the most commonly used method. Also the study identified that poor human resource (HR) planning, ineffective job analysis and competency level on the part of employee are the most challenges hindering effective recruitment and selection of workers.

On other side Djabatay (2012) conducted a survey concerning recruitment and selection practices of organizations, a case study of HFC bank (GH) Ltd. The survey attained information from one hundred (100) respondents through the use of questionnaires. The results showed that, advertisement and employee referrals methods are frequently used for recruiting potential employees.

Ahmed and Briggs (2011) performed a study on effective recruitment and selection strategies for skilled laborers in heavy highway construction in United States. Data were obtained from five heavy highway construction firms in the southeast. The results show that organizations put more emphasize on recruitment and selection process of office labourers than skilled labour position at the site. Print advertisement, online website and references were indicated as the recruitment methods used to recruit office labourers whereby for the skilled labourers none of the organizations used non paid recruitment services. Furthermore the study portrayed that the most used selection measures are reference check and interview.

Manap *et al.* (2017) conducted a study which aimed at determining the criteria set by the construction company in recruiting local skilled labour and strategies that can attract local skilled labour in Malaysia's construction industry. The findings revealed that potential companies select their skilled labourers based on criteria such as; gender, age, experience, Familiarity with construction methods/material and technical skills. Regarding attraction of skilled labour, money related strategies such as salary increment, bonus, allowance and overtime payment were highlighted. On other side Short *et al.* (2014) revealed that in hiring new construction labourers, recruitment officers put much emphasis on work experience and skills. Likewise Jayawardena (2007) pointed out that criteria such as experience, work history, task flexibility, attitude and formal qualifications are usually considered by the employers in the selection of a skilled workforce in the construction industry.

2.12 Summary of the Chapter

This section began with a brief introduction of TCI and its economic impact to the country. In addition, the chapter revised current literature on recruitment and selection of labourers. It showed several researches conducted to determine methods of recruitment and selection as well as the criteria used in selecting workers and challenges facing the process in various sectors and businesses.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This part describes the way the research was conducted from data collection to analysis as well as the significant grounds/reasons for the selected strategies. Therefore, in this study the research methodology consists of introduction, research design, research approach, unity of analysis, sampling size and sampling techniques, data collection techniques, analysis of the data.

3.2 Research Design

Research design can be defined as a structure, framework, plan or strategy used to generate answers to research problem (Orodho, 2003). Furthermore Cooper and Schindler (2014) argued that research design is the structure and study plan which help the researcher to achieve responses to the study issues. It systematically guides the accomplishment of the study objectives.

This study adopted cross-sectional study with descriptive characteristics; the descriptive cross section survey used to describe characteristics that exist in a population, but not to determine cause-and-effect relationships between different variables. Researchers record the information that is present in a population, but they do not manipulate variables. Cross-sectional survey allows the researcher to look at one independent variable as the focus of the cross-sectional study and one or more dependent variables. The study is being conducted once, which involves the process of gathering data in order to answer questions regarding the current status of the subject in the study (Mugenda & Mugenda, 2003). The research process went through steps illustrated in figure 3.1 below

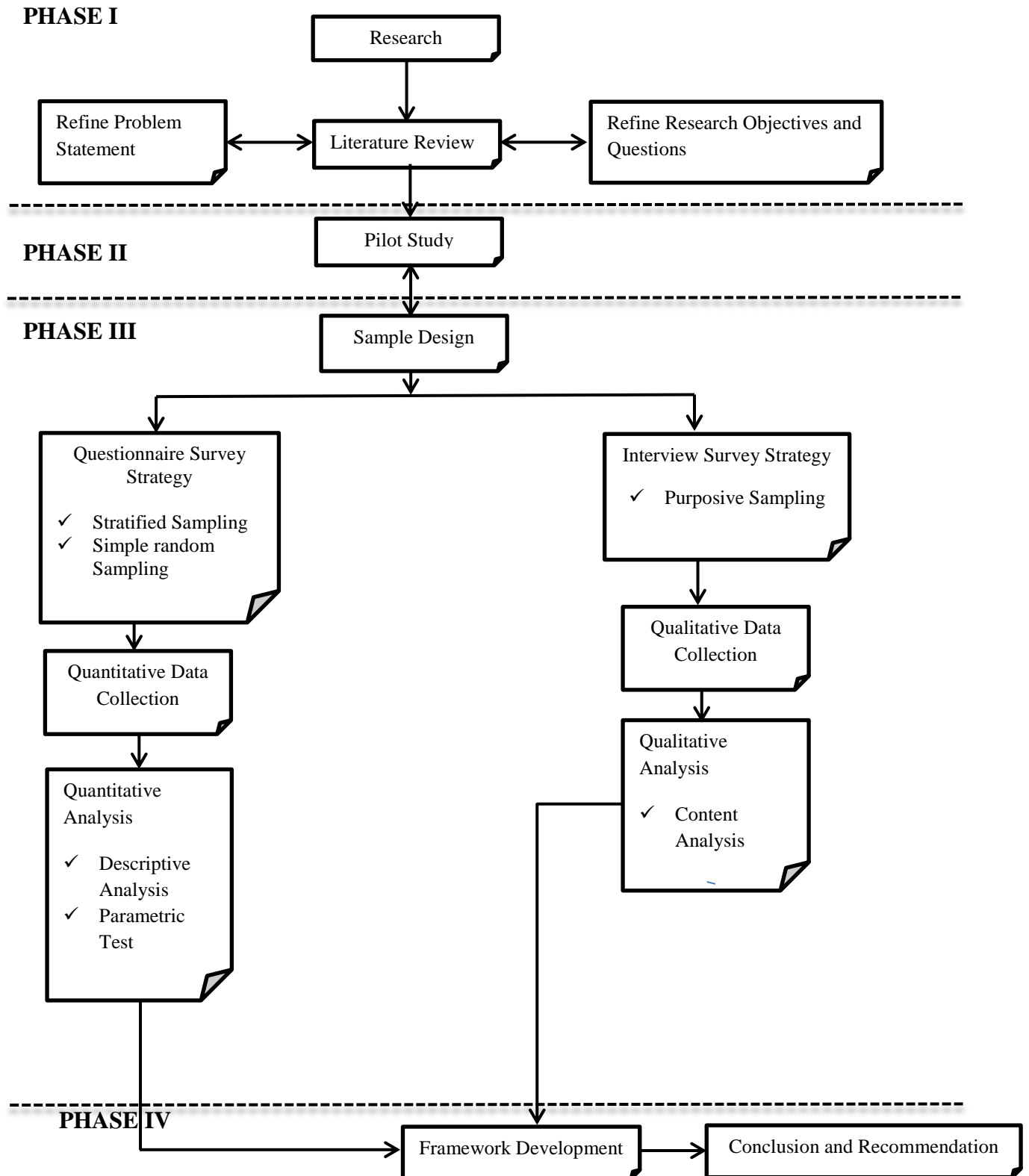


Figure 3.1 Research Design for the study

3.2.1 The Steps to be Followed During Execution of This Study

Phase I - Literature Review

This phase is a base or starting point for conducting the study. It involves carrying out an intensive literature review in order to find out what has been researched and discovered by other researchers in the same research topic while focusing to identify the gaps and additional data required in bridging the knowledge gap. This is also known as problem identification. Understanding the problem enable the formulation of the main and specific objectives of the study. From these specific objectives; research questions are able to be formulated.

Furthermore, the review of the literature consisted of various concepts concerning the study topic such as selection criteria, recruitment strategies, selection strategies and challenges of recruitment. The achievement of the literature review for the study was facilitated through reviewing books, past articles and journals that relate to recruitment practices and framework concept so as to provide a base or starting point for conducting the study.

Phase II - Pilot study

A pilot study was conducted in order to refine the research questions and also to test the questionnaires in case of any ambiguity. Moreover Saunders *et al.* (2007) argued that, conduction of pilot study enables the researcher to ascertain correctness and appropriateness of study design and instrumentation. This assisted the researcher to get consistent, relevant and usable data which further helped in drawing conclusion.

In additional Naoum (2007) clarifies that when you construct a questionnaire, it is advisable to conduct a pilot study prior collecting the final data from the entire sample. A pilot study provides a trial run for the questionnaire, which involves testing the wording of the question, determining ambiguous questions, testing the data collection tool. Researcher asked for some comments from the respondents regarding the questionnaire, so as to facilitate the improving of the questionnaire before conducting a main study.

Basically pilot study helped the researcher to correct and give more explanation on some variables in questionnaire. Example items in questionnaire like “Physical characteristics” in selection criteria part, “Job fairs” in recruitment method part and “Job boards” in recruitment method part was not well understood by some of respondents in pilot study then researcher

decided to add up some explanations like “i.e Fat, Slim, Tall, Short etc”, “eg. Construction exhibitions” and “eg Zoom Tanzania, Radar recruitment etc” respectively, which helped respondent to understand well the specific variable.

Phase III – Main Study

In this phase a mixed methods approach was used where by in quantitative aspect researcher used structured questionnaire as an instrument for data collection. Feedbacks from the pilot study assisted in finalizing the questionnaire and formulate the ground for the main survey. In qualitative aspect researcher used face to face semi structured interview as an instrument for data collection. The questions in both instruments focused around mentioned above objectives. Each instrument produced its own kind of data which is distinct from each tool used but both instruments allowed complementary information to be gathered in order to address the research questions (Halcomb & Hickman, 2015; Kavishe, 2018; Luvara, 2020).

Ultimately the analysis step followed, where by both quantitative analysis and qualitative analysis was conducted. In quantitative analysis descriptive analysis and parametric test with the help of SPSS were performed where by the researcher was able to analyze the data obtained from respondents through questionnaire. In qualitative analysis content analysis was performed. The rationale for the above mentioned selections has been explained in subsection 3.9.1 and 3.9.2 below.

Phase IV – Framework Development

Lastly, using the analyzed data and literature review the researcher was able to develop a framework, make conclusion and necessary recommendations.

3.3 Research Approach

According to Creswell (2003) there are three key research approaches which are; quantitative, qualitative and mixed methods approach. Quantitative analysis uses mathematical interpretations to investigate the properties. It involves the use of models and hypothesis to explore the relationship between variables also measurement of central tendency such as mean, standard deviation and coefficient of variation. Focusing only on numerical presentation of data has been the greatest limitation of quantitative research (Yin, 2006). Silverman (2000) argued that Quantitative research approach is the best approach to answer the ‘what,’ ‘where,’ ‘when’ and ‘who’ questions.

The qualitative approach is centered on the constructivism model (Mack, 2010). This approach requires the respondent to give their own perception and avoid the researcher from imposing their own perception of a social phenomenon (Mack, 2010; Baker & Edward, 2012).

Creswell and Plano Clark (2018) defined a mixed methods approach as an approach which combines both quantitative and qualitative approaches. This study used a mixed approach so as to minimize the shortcomings of both approaches and strengthen the process. By mixing the two approaches, results from different methods corroborate each other; results of one method clarify, illustrate and elaborate more on the results of the other method (Abdul-Aziz, 2008).

3.4 Conceptual Framework

According to Ndunguru (2007) a conceptual framework conveys together a set of research features or concepts together with variables and infers relationships among them. Their logical relations are mostly presented in the form of graphs, flow charts, diagrams, pictographs, charts or mathematical equations. Generally the aim for a conceptual framework is to indicate the utmost essential areas/extent to be covered by the study. Conceptual design assisted the researcher to conduct research design as well as knowing what information should be collected and analyzed (Kombo & Tromp 2006).

In this study the conceptual framework showed relationships between dependent variables and independent variables. Selection criteria, recruitment methods and selection measures are considered as independent variables where by an effective recruitment process is considered as a dependent variable. Figure 3.2 below shows the framework for this study.

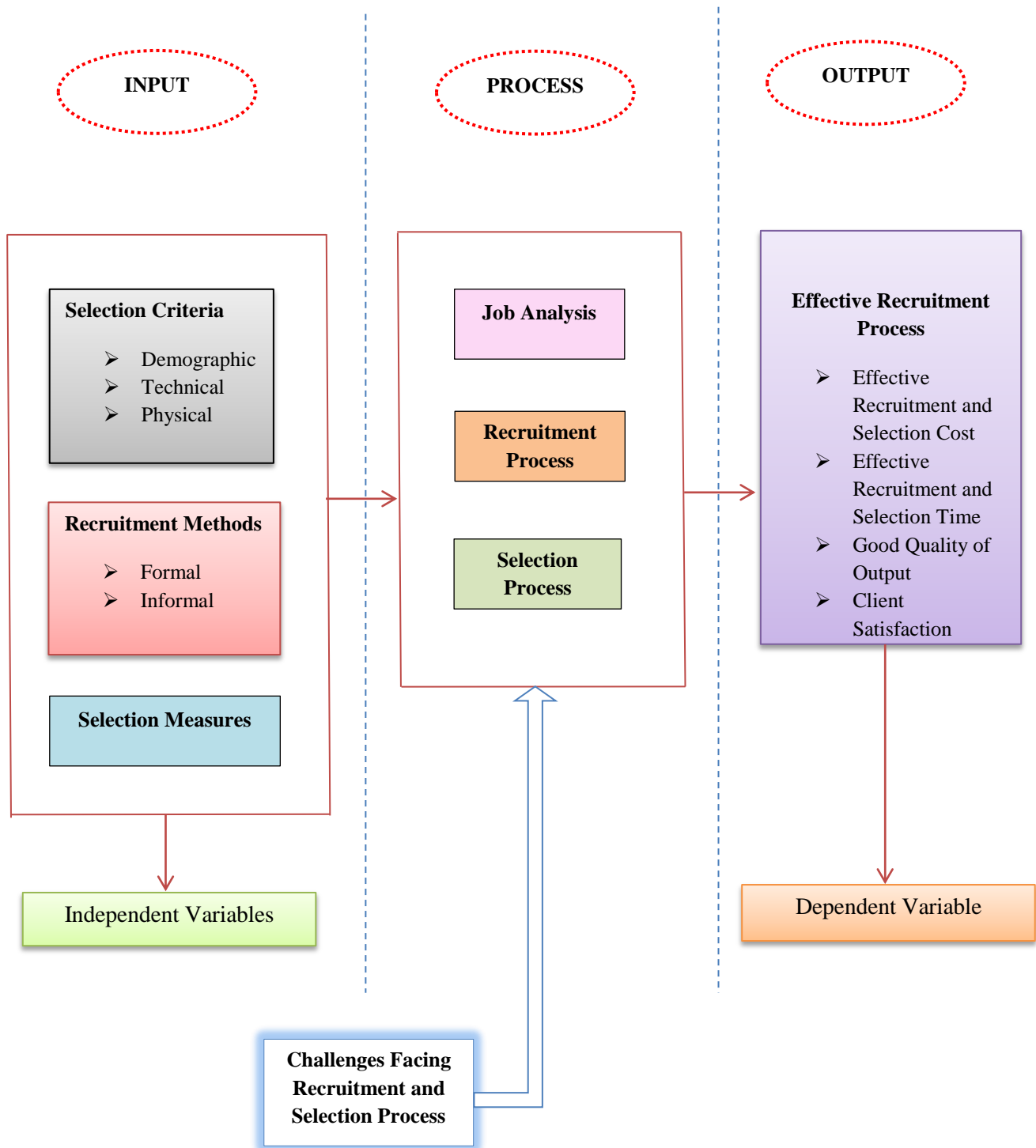


Figure 3.2 Conceptual Framework

Area of Study

Limitation on the area to work on is very important in any research, otherwise the study may not end (Makoba, 2008). For that case, this study was conducted in Dar es Salaam, Tanzania, the rationale for selecting Dar es Salaam as a study area includes; Dar es Salaam is the most growing city whereby most of the large constructions are undertaken, due to limited resources such as money and time Dar es Salaam is accessible to conduct survey and most of the projects are undertaken in Dar es Salaam. According to (CRB, 2021) 40% of the registered projects in Tanzania are undertaken in Dar es Salaam. Regarding the rural-urban migration, Dar es salaam is regarded as the main destination, consequently leading to high demand for housing and other infrastructure.

Furthermore Phoya (2012) submitted that a study by Moshi (2011) elaborated that Dar es Salaam city has been intensely transformed from having largely low-lying single storey buildings in the 1970's to an increasingly dense collection of multi-storey buildings .This intense transformation leads to increase in the growth of construction activities .Therefore, it was established that Dar es Salaam is a potential area where rich information can be obtained to answer the study research questions.

3.5 Unity of Analysis

According to Blumberg and Copper (2005), unit of analysis refers to the measure to show the level at which the research is done and the objective being required. The unity of analysis for this study was building projects. The personnel dealing with recruitment process in a building construction firm will be regarded as sub unity of analysis.

3.6 Study Population

Population can be defined as a set of elements which possess the information required and about which studies can be made (Malhotra and Birks, 2006).Normally a sample size is attained from the population (Kombo and Tromp, 2006).

As far as this study is concerned the population was all building projects undertaken in Dar es Salaam by class I to III contractors registered by the CRB from January, 2018 to December, 2020. In order to obtain the number of population for this study, a list of registered projects by CRB from January, 2018 to December, 2020 was obtained. After a thoroughly sorting, a

researcher identified a total number of 71 building projects undertaken by the said contractors as indicated in table 3.2 below.

Table 3.2: The study population from each stratum in Dar es Salaam

Projects Undertaken by Contractor	Population
Class I	39
Class II	18
Class III	14
Total	71

Source: CRB (2021)

3.7 Sample Size and Sampling Technique

3.7.1 Sample Size

Pandey & Pandey (2015) and Trochim (2006) claimed that sampling can be explained as a process of selecting a given number of subjects from a well-defined population for the aim of representing the whole population. Due to some constraints such as resources and time the researcher may not be able to study the whole population; however by studying the selected sample the researcher is able to draw the conclusion for the whole population. Therefore the sample selected to represent the whole population should be sufficient so as to obtain the reliable information.

Researcher used the following formula to obtain the sample size;

$$n = \left[\frac{z^2 pqN}{[e^2(N-1) + Z^2 pq]} \right]$$

Where:

n stands for the sample size

N stands for the total number of population

Z stands for the confidence level

e stands for the margin/sampling error or precision rate

p stands for degree variability/ sample proportion (0.5)

q Stands for $1-p$

Data used in sampling are confidence level (Z) - 95% (1.96) and margin/sampling error (e) - 5%. These values have been used in various studies like (Lyimo, (2017), Kallasa, (2019), Solomon, (2020) and Luvara (2020))

Calculation for Population Sample

$$\frac{1.96^2 * 0.5 * 0.5 * 71}{0.05^2(71 - 1) + 1.96^2 * 0.5 * 0.5}$$

$$=61$$

Calculation for Stratum sample

- Projects Undertaken by Contractor Class I

$$\frac{39}{71} \times 61 = 34$$

- Projects Undertaken by Contractor Class II

$$\frac{18}{71} \times 61 = 15$$

- Projects Undertaken by Contractor Class III

$$\frac{14}{71} \times 61 = 12$$

Table 3.2: The number of sample size from each stratum in Dar es Salaam

Projects Undertaken by Contractor	Population	Proposed Sample
Class I	39	34
Class II	18	15
Class III	14	12
Total	71	61

Source: CRB (2021)

3.7.2 Sampling Technique

Sampling technique refers to the process of selecting a number of individuals or objects from a study population such that the chosen group contains elements / characteristic found in the entire population (Orodho and Kombo, 2002).

For questionnaire survey; the study adopted stratified probability sampling. The rationale behind using this technique is; building projects are undertaken by different classes of contractors which are categorized into strata i.e. class I – VII. Therefore the projects undertaken contractors in Tanzania are heterogeneous. It was also precise to include all important strata in order to be free from bias and ensures a sample that accurately reflects the population being studied (Melekela *et al.*, 2017).

Furthermore, a simple random sampling was used to select specific project from the sample where data was collected.

For the interview survey; the study adopted purposive sampling. The purposive sampling technique is a non-probability sampling method which is focused on the features of the prevailing population and the purpose of the study. In purposive sampling, respondents were selected based on qualities possessed. Therefore, only respondent with rich information by considering their experience were interviewed.

3.8 Data Collection Methods

It is very important to select a proper instrument for data collection. Quinlan (2011) argues that, for quality assurance and quality control, study tools are very crucial. Data collection is the essential segment for any research study. In order to select the best instrument of collecting data, it's very important for a researcher to know the kind of data targeted as well as respondents.

Basically there are two types of data which are primary data and secondary data. In this study the first hand information were collected from personnel dealing with recruitment process in building construction project using a structured questionnaire and interview. Secondary data were collected through existing literature such as journals, books, articles, previous dissertation, internet search engine etc.

3.8.1 Questionnaire Survey

In this study, structured questionnaire with 5 likert scale ranges was used. Structured questionnaire is a quantitative method of research which is advantageous to the researcher since it lowers the researcher involvement and includes high number of respondents (Trueman, 2015). The questionnaire was closed in such a way it was simply save the computational process as well as time in the data collection process (Bhattacharyya, 2006).

The justification of using questionnaire is that; questionnaire is one of the utmost widely used data collection methods within the survey approach. The same set of questions are responded by the each respondent, it is a survey strategy which provide an effective way of collecting responses from a large sample prior to quantitative analysis. Questionnaire permits wide coverage for minimum expense both in terms of money and effort (Saunders *et al.*, 2007). Furthermore questionnaire is helpful for the person who cannot be easily reached.

3.8.2 Interview

Face-to-face Semi structured interview was conducted with personnel dealing with recruitment process in building construction project. Justification for selecting interview is that; a researcher is able to obtain in-depth and extensive information from respondents, high response rate and easily to get more clarification from respondent (Guion *et al.*, 2001).

3.9 Data Analysis

According to Houman, (2008), data analysis refers to the process of edit, modification, organization, summarization and expression of meaning or notion of data. It is very difficult to interpret raw data obtained directly from the field. Through data analysis, data are cleaned, coded and analyzed. Following nature of the research approach i.e mixed method design, therefore this study included both quantitative and quantitative analysis.

3.9.1 Analysis of Quantitative Data

With the aid of Statistical Package for Social Sciences (SPSS) version 25.0, descriptive analysis and parametric tests such as one-sample t-test was used to analyze the quantitative data. Quantitative data which were collected through the questionnaire were coded, inserted and processed into SPSS. Data coding refers to the allocation of numbers to the respondent's responses for the purpose of being entered in software (Sekaran and Bougie, 2011).

According to Naoum, (2007) descriptive analysis offers a general overview of the outcomes also it provides the idea of what is happening. In describing the aspects of data, typically formal terms are used which includes; frequency distribution (tabulation, bar chart, histogram, pie chart), measurement of central tendency (mean, mode, median) and measurement of dispersion (variation, standard deviation, coefficient of variation).

A one (single)-sample t-test of the mean was used to measure the significance of the variables. In Ling and Nguyen's study (as cited by Kavishe, 2018) it was illustrated that the cut off point for 5-point scale was set at "3.5" ($\mu = 3.5$), where μ is the test value. Therefore the researcher adopted a test value (μ) of 3.5, with a 95% confidence level.

3.9.2 Analysis of Qualitative Data

Researcher used a content analysis in analyzing qualitative data from the interview. Qualitative content analysis is a method which describe the meaning of qualitative data

systematically (Mayring, 2000; Schreier, 2012). This is done by assigning successive parts of the material to the categories of a coding frame. This frame is regarded as the heart of the method, after coding data are analyzed then follows with presentation and interpretation of findings. In this study findings were presented in quantitative style. This typically involved reporting coding frequencies, percentages

The rationale for selecting the content analysis as a method for qualitative data analysis is that; qualitative content analysis is systematic, it is flexible also it reduces data. The reduction of the amount of material enables the researcher to focus on selected aspects of meaning, specifically those aspects that relate to the overall research question (Flick, 2014)

3.10 Measurement of variables

Quantitative data on the respondent's opinions and views concerning recruitment and selection process was obtained using scaled variables from well-developed questionnaire. A five point likert scale of 5=Very Frequent, 4= Frequent; 3= Average; 2= Rarely; 1= Not at all was used to rank selection criteria, recruitment methods and selection measures while a scale of 5=Very Serious, 4= Serious; 3= Average; 2= Low; 1= Not at all used to report respondents insight on challenges facing recruitment and selection process. The five point likert scale was used since it is the most commonly used likert scale. It has been used by various studies like Phoya, (2012); Kavishe, (2017); Marobhe, (2019); Mrosso, (2019) and Solomon, (2020).

3.11 Reliability analysis

Reliability refers to the extent to which the measurement and process outcomes can be replicated (Rothman et al., 2008) similarly Deniz and Alsaffar (2013) highlighted that, the tendency for consistency observed in repeated measurements of the same phenomena is termed as reliability. Internal consistency is denoted as the extent to which all of the items in a scale measure the unlike aspects of the same attribute (Parmenter et al., 2000).

Cronbach's Alpha is commonly used to assess the reliability where there are more than two possible answers to problems (Deniz & Alsaffar, 2013). Cronbach's alpha coefficients ranges from 0 to 1, while coefficients of 0.7 or greater considered as sufficiently reliable, the high coefficient indicate that the questionnaire or tool is more reliable (Hair et al 2010).therefore in this study Cronbach's Alpha was used to measure the accuracy of the research instrument.

As Cronbach's Alpha is the best approach because it provides answers which are free of errors and steady (Sekaran and Bougie, 2011)

3.12 Development of Framework for Improving Recruitment and Selection of Skilled labourers

With the respect to the first specific objectives of the study and literature review , the framework for this thesis was formulated in form of a flow chart giving necessary guidelines or steps to be followed when recruiting and selecting skilled labourers.

3.13 Validation of the Framework

In the last phase of this study, the framework was validated in order to achieve the final objective of this study completely. At the end of the study, recruiters (practitioners) and experts validated the proposed framework developed during the research. The selected respondents were clearly chosen as stated below in order to identify recruiters and experts with appropriate experience and thorough understanding in the process of recruiting and selecting skilled laborers, hence boosting the framework's reliability and validity. As a result, a distinct tool (questionnaire) was created to accomplish the study's final objective.

3.13.1 Development of the Survey Questionnaire for Validation

The questionnaire was intended to assess the essential features of the proposed framework in each stage, including: Recruitment planning, Recruitment process, Selection process and Job offer. The survey questionnaire was divided into four main parts includes; the background information, introduction of the key concepts of the framework and validation issues, framework's main stages and Validation Questions and general Validation Questions.

3.13.2 Sampling of survey respondents for framework validation

In order to choose individuals for validation, a purposive sampling was used; where by a three-stage sampling procedure was adopted to choose potential participants. First, it was necessary to understand who qualifies before selecting them to validate the framework. Secondly, pre-defined criteria were applied to identify future original responses as indicated in the following paragraphs. Finally, the identified respondents were requested for their access and consent for participation in the study. Kavishe (2018), Luvara (2020) and Maro (2020) also used this approach of sampling during validation.

The study embraced O'Leary (1991)'s approach that multiple sorts of validators might be utilized for validating a system, model or framework, including: use of the same expert from whom the study gathers knowledge and/or information; use by experts other than those from whom knowledge was collected; end-user; expert knowledge; project sponsor and autonomous validators.

Based on the nature of the current study and the sort of framework intended to be established, the approaches included using the same expert who obtained knowledge during the study and using experts other than those who gathered knowledge (practitioners) previously. These were determined to be the best mix for validating the proposed system. Therefore, the first two validator categories, as described above and adapted from O'Leary (1991), were deemed to be more appropriate for the study and purposely selected. Lastly, the selected respondents were contacted via email and asked to participate in the survey.

3.13.3 Validation of the Framework

Participants were asked to score the suggested interventions on a five-point likert scale of strongly agree, agree, neutral, disagree and strongly disagree at each stage of the framework. Also, a blank space was included under each question to allow participants to provide justification for their replies.

The mean results were determined using Microsoft excel. A satisfactory score would be above "3," which was above 2.5 (50 percent) on a five-point Likert scale mean score.

Finally, the proposed framework was evaluated by validators for applicability, efficiency, and adaptability. In addition, the researcher sought feedback from the participants on the proposed framework for assessing deficiency, benefit, and prospective improvements.

3.14 Ethical Considerations

Ethical considerations are very crucial for any study. Research ethics may be denoted as doing what is morally and legally right in research (Parveen and Showkat, 2017). Researchers have to be responsible for the ethical conduct of their own research at different levels of the research process.

Various ethical issues were considered throughout the conduct of this study which includes; looking for official way in gaining access to construction sites, keeping confidentiality which

mean that information obtained from respondents were not shared to other persons lather than they were used for the purpose of carrying out this study only also, names of the respondents were not be mentioned, clarifying to respondents that participating in the study is voluntary, respondents were fully informed about the purpose, utilization of the expected research outcomes , in interview respondents were given a choice of rejecting data collection devices such as audio recorders.

In addition researcher obtained an introduction letter from university which requested respondents to assist the researcher during extensive search for field data. Moreover respondents who participated in this study were not be given any kind of payment or compensation.

3.14 Summary of Chapter

This chapter contains the methodology adopted in this research. It has been disclosed that the study design is concurrent mixed methods, with both quantitative and qualitative methods being utilized. In the quantitative method, a survey technique with a survey questionnaire was used, but in the qualitative approach, a survey interview was used. The study's sample size was set to include sixty one building projects. The chapter described the procedures for data analysis as well as the strategies for validity and reliability. Nevertheless, this section has shown how the framework was developed and validated. The chapter closes with a discussion of the study's ethical considerations. Having discussed the methodology of the study, the next chapter discusses results from the field.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter demonstrates the results of the data gathered from the field and intensively discusses the findings obtained. This section presents both the quantitative and the qualitative analysis. The characteristics of respondents and companies which include gender, position in the project, education qualification, professional qualification, experience in construction industry and company categories were first presented followed by the reliability analysis by examining internal consistency of the measurement instrument. Following completion of reliability analysis, the findings related to the objectives of the study were presented and discussed. Lastly the summary of the chapter was given.

4.2 Questionnaires Survey

Google documents were used as a platform to create online questionnaires that were administered between March and May 2021 to the selected sample. Statistical Package for Social Sciences (SPSS) version 25.0 was used to analyze the quantitative data. In the analysis of the quantitative data, statistical procedures involved the use of the following two techniques measures of central tendencies and one-sample t-test. One-sample t-test was conducted to determine if a statistically significant difference existed between variables. If the variable is statistically significant, it means that probability of being wrong is small that is; results obtained are not likely to have occurred by chance (Gerald, 2018). Furthermore the author argued that one sample t-test is normally used to compare sample mean and population mean which is mostly hypothesized. In this study the hypothesized population mean (test value) was 3.5 as identified in chapter 3; subsection 3.9.1.

4.2.1 Response Rate

This research aimed at studying registered building projects undertaken by contractors class I, II and III in Dar es Salaam Tanzania. The number of sample size from every registered building project undertaken in Dar es Salaam by contractors class I, II and III was 34, 15, and 12 respectively. A total of 61 questionnaires were administered to the selected projects, in which an overall of 68.85 percent of the distributed questionnaires was collected as presented in Table 4.1.

Mugenda and Mugenda (2003) recommended that a response rate of 50% is adequate for analysis and publicity, a response rate of 60% is good whereas 70% response and above is outstanding. The response rate in this study was due to the researcher's use of Google forms, which made it simple to contact the intended respondents, questions were clear and respondents were extremely cooperative throughout this study.

Table 4.1: Response Rate

S/N	Projects Undertaken by Contractor	Distributed Questionnaires	Returned Questionnaires	Response rate
1.	Class I	34	55.74%	42.62%
2.	Class II	15	24.59%	14.75%
3.	Class III	12	19.67	11.48%
	Total	61	100.00%	68.83%

4.2.2 Profile of Respondent

This segment mainly intended to provide general information about the respondents of the questionnaire survey in terms of category of the gender, position in project, education qualification, professional qualification, experience of the respondent and company registration. As displayed in Table 4.2 (variable A1), Out 42 respondents, 36 respondents (86%) were males while 6 respondents (14%) were females. The dominance of male is due to the nature of construction industry which is known to have more males involved than females.

Regarding variable (A2) there are several positions in construction projects which deal with recruitment and selection of skilled labourers as one among the responsibilities at the site. These positions include Site Manager, Site Agent, Site Engineer General Foreman and Site Quantity surveyor. In this study 31.0% percent were Site Manager, 7.1% percent Site Agent, 28.6% percent Site Engineer, 4.8% percent General Foreman and 28.6% percent Site Quantity surveyor.

Also for (variable A3) it was indicated that majority of the respondents (90.5%) had Bachelor's Degree education. The findings revealed that majority of recruiters in building projects have a university level of education. Therefore, they were in a good position to explain the recruitment and selection process of skilled labourers in a project.

With regard to (Variable A4), findings showed that majority of respondents as mirrored by the posts they held and the roles assumed are professionals. It can be observed that all

respondents had professional status although most of them (54.8%) are quantity surveyors; Civil engineers are next, accounting for more than a one-quarter (33.3%) of all respondents.

For (Variable A5), results indicated that more than half (66.7%) had 1-5years of work experience in construction industry, while (33.3%) had work experience of 6 and above years of work experience. Hence, most respondents had adequate work experience; this implies that the researcher can conformably rely on respondents' data.

Concerning (Variable A6) results showed that study included building projects undertaken by contractors Class I 26(61.9%), Class II 9(21.4%) and Class III 7(16.7%).

Table 4.2 Profile of Respondent

Characteristics	Categories	Frequency	Percentages
A1: Gender	Male	36	86.0%
	Female	6	14.0%
	Total	42	100.0%
A2: Position in Project	Site Manager	13	31.0%
	Site Agent	3	7.1%
	Site Engineer	12	28.6%
	General Foreman	2	4.8%
	Site Quantity surveyor	12	28.6%
	Total	42	100.0%
A3: Education Qualification	FTC	1	2.4%
	Bachelor's Degree	38	90.5%
	Master's Degree	3	7.1%
	Total	42	100.0%
A4: Professional Qualification	Civil Engineer	14	33.3%
	Quantity Surveyor	23	54.8%
	Construction Manager	3	7.1%
	Civil Technician	1	2.4%
	Environmental Engineer	1	2.4%
	Total	42	100.0%
A5: Experience in Construction Industry	Less than 1 year	0	0.0%
	1 – 5 years	28	66.7%
	6 – 10 years	10	23.8%
	Over 10 years	4	9.5%
	Total	42	100.0%
A6: Company Registration by CRB	Class I	26	61.9%
	Class II	9	21.4%
	Class III	7	16.7%
	Total	42	100.0%

4.2.3 Reliability Analysis

The cronbach's alpha test shows values ranging from 0.708 (Selection methods) to 0.913 (Recruitment Methods) as shown in the Table 4.3. All items in this study have relatively high internal consistency therefore were comprised in the research tool because they contained coefficients of more than 0.70 which are considered to be highly reliable for the tool (Hair *et al.*, 2010).

Table 4.3 Reliability Analysis

S/N	Items	Cronbach's Alpha	Number of items
1.	Selection Criteria	0.763	10
2.	Recruitment Methods	0.913	14
3.	Selection Methods	0.708	5
4.	Challenges Facing Recruitment and Selection Process	0.882	14

4.3 Interview Survey

Semi-structured interviews were preformed because of their ability to provide detailed information, as they are more flexible to discover new issues in some areas that could provide new dimensions of issues that are not predetermined (Axinn and Pearce, 2006). In total, a number of eight semi structured interviews were conducted in building projects with recruiters whom researcher though they could provide rich information for the study.

4.3.1 Sample characteristics

The respondents' designations, years of experience, level of education and professional qualification are shown in Table 4.4 where by the majority of interviewees (6/8, 75%) fell within the 6-10 years and more than 10 years categories, whereas the remaining interviewees (2/8, 25%) were in the 1-5 years category and none of the interviewees had an experience of less than 1 year. Moreover all 8 interviewees are male who have different positions in the project as illustrated in Table 4.4. Furthermore, the sample size can be considered adequate since the saturation threshold is between 5 and 50 interviews (Patton, 2002).

Table 4.4: Interview Sample Characteristics

S/N	Interviewee	Gender	Position in the Project	Years of Experience
1.	A	Male	General Foreman	Over 10 years
2.	B	Male	Site Quantity Surveyor	1- 5 years
3.	C	Male	Site Engineer	6-10
4.	D	Male	General Foreman	6-10
5.	E	Male	Site Manager	6-10
6.	F	Male	General Foreman	Over 10 years
7.	G	Male	Site Manager	6-10
8.	H	Male	Site Quantity Surveyor	1- 5 years

4.4 Criteria for selecting skilled labourers in building construction projects

As illustrated in Table 4.5 the top ranked criteria considered during selection of skilled labourers is “Experience and past performance on similar nature of works” which had a mean of 4.76. This was followed by “Familiarity with construction methods, material and health and safety issues” and “Relevant knowledge in handling tools and equipment” which had a mean of 4.55 and 4.26 respectively. The least considered criteria are “Marital Status”, “Gender” and “Age” which had a mean of 1.9, 2.95 and 3.00 respectively. This implies that demographic criteria are not considered during selection of skilled labourers.

Regarding one sample t-test, t-test results showed that more than half (60%) of the criteria were statistically significant since their p values were less than 0.05. The remaining (40%) of the criteria were not statistically significant since their p values were more than 0.05.

Similarly, Table 4.6 provides a summary of selection criteria identified by the interviewees, whereby all interviewees (n=8, 100%) mentioned “Experience and past performance on similar nature of works” as the most criteria considered followed by “Familiarity with construction methods, material and health and safety issues” and “Relevant knowledge in handling tools and equipment” with the same frequency percentage of (n=8, 37.5%).

Table 4.5 Criteria for Selecting Skilled Labourers in Building Construction Projects (Questionnaire Survey)

SN	Selection Criteria	TNR	T-test $\mu = 3.5$	df	Sig 2- tailed	Mean	STD	Rank	SL $p < 0.05$
1.	Experience and past performance on similar nature of works	42	16.884	41	0.000	4.76	0.484	1	Significant
2.	Familiarity with construction methods, material and health and safety issues	42	10.733	41	0.000	4.55	0.633	2	Significant
3.	Relevant knowledge in handling tools and equipment	42	5.761	41	0.000	4.26	0.857	3	Significant
4.	Communication skills	42	0.148	41	0.883	3.52	1.042	4	Not Significant
5.	Undergone vocational training	42	-0.732	41	0.469	3.36	1.265	5	Not Significant
6.	Physical fitness and Physical characteristics	42	-1.470	41	0.149	3.21	1.260	6	Not Significant
7.	Personality characteristics	42	-1.851	41	0.071	3.17	1.167	7	Not Significant
8.	Age	42	-2.291	41	0.027	3.00	1.414	8	Significant
9.	Gender	42	-2.397	41	0.021	2.95	1.481	9	Significant
10.	Marital status	42	-10.023	41	0.000	1.90	1.031	10	Significant

Notes: SL =Significance level; Results significant at 95% when $p < 0.05$; df= Degree of freedom=41;STD=Standard Deviation; TNR=Total Number of Respondents

Table 4.6 Criteria for Selecting Skilled Labourers in Building Construction Projects (Interview Survey)

S/N	Selection Criteria	Interviewee								F	%
		A	B	C	D	E	F	G	H		
1.	Experience and past performance on similar nature of works	✓	✓	✓	✓	✓	✓	✓	✓	8	100.0
2.	Physical fitness and Physical characteristics								✓	1	12.5
3.	Age	✓								1	12.5
4.	Familiarity with construction methods, material and health and safety issues	✓	✓			✓				3	37.5
5.	Relevant knowledge in handling tools and equipment	✓		✓					✓	3	37.5
6.	Honesty(integrity, truthfulness, straightforwardness)	✓		✓						2	25.0

Notes: F= Frequency; %=Percentage

Discussion

The following sub sections discuss some of the criteria identified by respondents.

4.4.1 Experience and Past Performance on Similar Nature of Works

Based on Table 4.5, this is the most ranked criteria with mean 4.76 and statistically significant ($t(41) = 16.884, p = 0.000 < 0.05$). Findings revealed that building contractors put much consideration on personal experience which directly affects the output. Therefore working experience is very essential for a skilled labourer as it increases productivity of labourer, lowering the rate of error in the working process and increases worker's value to the company. The findings are supported by the various scholars (Short *et al.*, 2014; Manap *et al.*, 2017; Ahmed *et al.*, 2017; Jayawardena, 2007) who indicated that experience is one of the most important criteria to consider before engaging a new labourer.

Moreover Manap *et al.* (2017) argued that taking into account experience is common scenario that occurs in many countries nowadays, regardless of the industry. Employers tend to recruit someone with a lot of experience so that they don't have to spend too much time training them.

On the other side, the interviewees came up with similar results, as shown in Table 4.6. All eight interviewees stated that experience is the most important criteria they consider when selecting a labourer. The following are some of **interviewee C's** chosen comments which shows the reason for considering working experience. He said;

Actually, we are more interested in how a labourer delivers his output, so we place a high value on experience because it is more directly related to his output.

4.4.2 Familiarity with Construction Methods, Material and Health and Safety Issues

The second ranked criteria is "Familiarity with construction methods, material and health and safety issues" as indicated in Table 4.5, with mean 4.55 and statistically significant ($t(41) = 10.733, p = 0.000 < 0.05$). This finding concurs with the finding of the study done by Manap *et al.*, (2017). It showed that familiarity with construction methods/material was among the top most ranked criteria for selecting labourer at construction site. This implies that contractors avoiding wastage of material and time by employing a person who is familiar with building materials and different construction methods.

4.4.3 Relevant Knowledge in Handling Tools and Equipment

Based on Table 4.5, this is the third ranked criteria with mean 4.26 and statistically significant ($t(41) = 5.761, p = 0.000 < 0.05$). This means that employers prefer labourers who know how to handle and work with tools and equipment on construction sites. Handling of construction equipment and tools can pose a threat to workers' safety and cause quality problems in projects (Haslam et al., 2005) if not done with care and relevant knowledge. Therefore if a skilled labourer knows how to handle tools and equipment, this will contribute to high quality of output and low rate of hazards at the site.

On the other side **interviewee A, C and H** mentioned this criterion as shown on Table 4.6. Interviewee A argued that they use this criterion to determine their knowledge in construction. If someone knows different types of tools and equipment in a particular trade and knows how to use them, it's somehow show that, that person knows what is supposed to be done on such trade.

4.4.4 Marital Status, Gender and Age (Demographic Criteria)

Based on Table 4.5, marital status, gender and age are the bottom ranked criteria with mean 1.90, 2.95 and 3.00 respectively and statistically significant. For the case of marital status this result concurs with finding of the study done by Manap *et al.*, (2017) which showed that recruiters in construction projects do not consider marital status of the workers since their productivity does not depend greatly on their marital status. On the other side this results contradict with findings of some scholars (Mullen *et al.*, 2017; Harcourt and Harcourt, 2002; Nadler and Kufahl, 2014) who argued that in job interview as well as in job application forms, marital status is still asked.

Regarding gender; result of this study contradicts with various literatures (Manap *et al.*, 2017, Adisa *et al.*, 2017). For instance Manap *et al.* (2017) indicated that in Malaysia, contractors consider gender in selecting skilled labourers at the site. Males were ranked higher which indicate that most of the contractors believe that due to nature of construction industry male labourers perform better. They also believe that having women working on construction sites doing all of the skilled labourer work that is supposed to be done by men is unsuitable and inappropriate. Some of the labour work necessitates stamina that a woman lacks. Furthermore, it is uncommon to see a woman doing potentially hazardous labor work. It is more about their welfare than it is about discrimination.

Also, Adisa *et al.* (2017) argued that in Nigeria, gender of job applicants play a leading role in the process of recruitment and selection. The rigorous family duties of women, which sometimes affect their job requests, are taken into account in the recruitment process by most firms. For this reason, many companies (especially private companies) prefer to employ men.

On the other side, interview results show that gender is not an issue in construction, what contractor need is a person who can best perform the intended task. They don't mind if that person is male or female. **Interviewee A** argued that sometimes it happens that a particular trade gang constitutes of only male labourers, but this is due to the nature of the work of not consideration made during selection. The said situation is most common in tough trades like Steel fixing trade as most of labours are male. For instance **interviewee A** highlighted that;

I have been working in the construction industry in the steel fixing trade for more than 15 years. During this time, I once met a female steel fixer, and all the time I have been a general foreman, I have never met a female steel fixer. Female labourers are mostly found in the painting trade due to the fact that painting does not involve much energy, it is easy to perform and it pays.

Concerning Age; Also result of this study contradicts with that of (Wilson *et al.*, 2007; Manap *et al.*, 2017). For instance Manap *et al.*, (2017) indicated that, in Malaysia construction industry age is one of the criteria taken into account when engaging a skilled labourer, where by contractors prefer to engage young labourers. Similarly Results of Wilson *et al.*, (2007) revealed that, in New Zealand younger workers were considered more appropriate and were considerably more likely to be shortlisted by employers. The main aspect that distinguished older and younger employees is the flexibility and adaptability of younger employees, also younger candidates are trainable, go-getters and easy to get up to speed

At the side of interview, only **interviewee A** mentioned Age as one among the criteria considered during selection; **interviewee A** prefer to have a mixed-age gang, as older laborers have more experience and younger laborers are faster at executing tasks. As a result, the mixing aids the gang in delivering a high-quality product on time.

4.5 The Methods of Recruiting and Selecting Skilled Labourers in Building Construction Projects

This objective assessed the methods of recruiting and selecting skilled labourers in building construction projects. The objective was split into two segments by the researcher to make it easier to attain.

4.5.1 Recruitment Methods for Recruiting Skilled Labourers in Building Construction Projects

Looking at Table 4.7, findings show that “Recall former labourers” is the most used recruitment method which had a mean of 4.67 followed by, “Employee referrals” and “Walk in labourers which had a mean of 4.19 and 3.62 respectively. Also findings show that “Radio advert”, “TV advert” and “Internet/Online recruitment” are the least method used, which had a mean of 1.71, 1.74 and 1.88 respectively.

Similarly, Table 4.8 displays a summary of interview results, whereby interview participants identified three recruitment methods for recruiting skilled labourers which are “employee referrals”, recall former labourers and walk in labourers which had a frequency percent of (n=8, 100%), (n=8, 100) and (n=8, 50) respectively.

Discussion of Findings

As can be seen from Table 4.7, building contractors mostly rely upon informal methods, as all three top ranked methods fall within a group of unpaid informal recruiting methods. This result supported by Ahmed and Briggs (2011) who claimed that none of the construction companies surveyed use paid recruiting services to find skilled labourers. Following segments discusses the top ranked recruitment methods.

4.5.1.1 Recall Former Labourers

Recall former labourers which had a mean of 4.67 and statistically significant ($t(41) = 11.628, p = 0.000 < 0.05$). This means that construction companies tend to work with laborers with whom they are familiar and have previously worked. This finding is supported by findings of Kikwasi (2011) who revealed that; as a way of obtaining skilled labourers, contracting companies use former workers of the company who have maintained contact with employer.

Table 4.7 Methods for Recruiting Skilled Labourers in Building Construction Projects (Questionnaire Survey)

SN	Recruitment Methods	TNR	T-test $\mu = 3.5$	df	Sig 2- tailed	Mean	STD	Rank	SL $p < 0.05$
1.	Recall former labourers	42	11.628	41	0.000	4.67	0.650	1	Significant
2.	Employee referrals	42	5.190	41	0.000	4.19	0.862	2	Significant
3.	Walk in labourers	42	0.649	41	0.520	3.62	1.188	3	Not Significant
4.	Recruitment from vocational training / college	42	-5.463	41	0.000	2.48	1.215	4	Significant
5.	Employment agents	42	-5.814	41	0.000	2.33	1.300	5	Significant
6.	Job fairs	42	-6.519	41	0.000	2.26	1.231	6	Significant
7.	Company website	42	-6.188	41	0.000	2.24	1.322	7	Significant
8.	Social media	42	-7.660	41	0.000	2.05	1.229	8	Significant
9.	Job boards	42	-7.660	41	0.000	2.05	1.229	8	Significant
10.	Newspaper advert	42	-9.279	41	0.000	1.95	1.081	10	Significant
11.	Labour associations/union	42	-9.593	41	0.000	1.90	1.078	11	Significant
12.	Internet/Online recruitment	42	-8.505	41	0.000	1.88	1.234	12	Significant
13.	TV advert	42	-	41	0.000	1.74	0.989	13	Significant
14.	Radio advert	42	-	41	0.000	1.71	0.918	14	Significant

Notes: SL =Significance level; Results significant at 95% when $p < 0.05$; df= Degree of freedom=41;STD=Standard Deviation; TNR=Total Number of Respondents

Table 4.8 Methods for Recruiting Skilled Labourers in Building Construction Projects (Interview Survey)

S/N	Recruitment Methods	Interviewee								F	%
		A	B	C	D	E	F	G	H		
1.	Walk in labourers	✓	✓	✓		✓				4	50
2.	Recall former labourers	✓	✓	✓	✓	✓	✓	✓	✓	8	100
3.	Employee referrals	✓	✓	✓	✓	✓	✓	✓	✓	8	100

Notes: F= Frequency; %=Percentage

This was also evident in interviews, where all (8) interviewees mentioned former laborers as their primary source of recruitment. **Interviewee C and H** clarified why it is essential to recall former labourer. **Interviewee C** commented as follows;

We mostly engage former labourers because we know their capabilities, the quality of their work, and we are compatible with and capable of managing them. We don't like engaging new labourers because it takes a lot of time to train them instead of delivering outputs.

Interviewee H commented that;

It is much easier to work together with someone with whom you feel at ease and confident in his abilities. Besides, we choose to recall former employees because we trust them; this reduces the risk of equipment and materials being stolen from construction sites.

4.5.1.2 Employee Referrals

Based on Table 4.7, this is the second ranked recruitment method with mean 4.19 and statistically significant ($t(41) = 5.190, p = 0.000 < 0.05$). This finding concurs with findings of various studies (Fowler, 2011; Kikwasi, 2011; Djabatay, 2012; Adu-Darkoh, 2014; Bogatova, 2017) which show that employee referral is a common method of recruiting labourers in which employees in the company tell their friends and colleagues about job vacancies that are available.

This was also corresponding to the interviewee results where by all (8) interviewee stated referral as the commonly used method of recruiting skilled labourers. **Interviewee C** stated that *having a referral from an existing skilled labourer is a less expensive and faster choice*. It was also argued that since labourers know themselves, it is very easy to find competent labourer by using current workforces.

4.5.1.3 Walk-in Labourers

The third ranked recruitment method as presented in table 4.7 is “Walk in labourers” which had a mean of 3.62 and not statistically significant ($t(41) = 5.190, p = 0.000 < 0.05$). This findings ties with Kikwasi (2011)’s argument that; one among the sources of skilled labourers used by contractor at the site is “employees gathering on construction sites in search of work”. Also, this was expressed by **interviewee A, B, C and E** as indicated in Table 4.8. Specifically **interviewee A** claimed that;

We usually use walk-in labourers when there is a deficit of skilled labourers at the site. However, since we do not know their capacity, the level of supervision is increased.

4.5.2 Methods for Selecting Skilled Labourers in Building Construction Projects

Table 4.9 displays results of the mean agreement responses, descriptive statistics such as the mean, standard deviation (SD), degrees of freedom (df), t-values and sig “2-tailed”. The results shows that their mean score were above 3.0 which ranged from 4.24 (“Short interview with the skilled labourers”) to 3.24 (“Reference check”). Moreover, the t-tests of the mean indicate that more than half (60%) of the criteria were significant with mean greater than 3.5, positive t-value and p-value less than 0.05.

As indicated in Table 4.9, “Short interview with the skilled labourers” is the most used selection method which had a mean of 4.24 followed by, “Performance testing to the main work” and “Performance testing to the temporary structure” which had a mean of 4.14 and 3.98 respectively. The remaining two measures (“Reference check” and “Vocational training certificate”) were ranked lowly and observed to be the bottom ranked methods.

Likewise Table 4.10 highlights interview results for selection measures, whereby “performance testing to the main work” was the most mentioned method which had a frequency percentage of (n=8, 87.5%) followed by “performance testing to the temporary structure as a sample” and “short interview with the skilled labourers” which had the same frequency percentage of (n=8, 62.5%)

The following are the top ranked methods;

4.5.2.1 Short Interview with the Skilled Labourers

Based on Table 4.9, this is the top ranked selection measure which had a mean of 4.24 and statistically significant ($t(41) = 3.967, p = 0.000 < 0.05$). More than half (57.1) of respondents claimed that this measure is used very frequent. This finding is quite similar to various findings (Bogatova, 2017; Kanu, 2015; Ryan and Tippins, 2004) which showed that interview is most used selection measure. Similarly as observed by Redman and Wilkinson (2001) the use of interview adds to the organization the benefit of measuring communication and interpersonal skills, since the interviewer directly meets the applicant. Therefore the interviewer is able to gather more information concerning the applicant.

Regarding interview, **interviewee H** declared that the kind of interview done at the site is informal interview. It can be performed in site offices or outside of the offices. He stated that;

We normally perform informal interview before engaging them, it's like a casual or social chatting. Often no formal documentation is done after such interview. Actually it's to find out whether the labourer has worked for any construction company before and whether a person could fit in available vacancy.

Table 4.9 Methods for Selecting Skilled Labourers in Building Construction Projects (Questionnaire Survey)

S/N	Selection Measures	TNR	T-test $\mu = 3.5$	df	Sig 2- tailed	Mean	STD	Rank	SL $p < 0.05$
1.	Short interview with the skilled labourers	42	3.967	41	0.000	4.24	1.206	1	Significant
2.	Performance testing to the main work	42	7.358	41	0.000	4.14	0.566	2	Significant
3.	Performance testing to the temporary structure as a sample	42	4.796	41	0.000	3.98	0.643	3	Significant
4.	Vocational training Certificate	42	-0.808	41	0.424	3.33	1.337	4	Not Significant
5.	Reference check	42	-1.363	41	0.180	3.24	1.246	5	Not Significant

Notes: SL =Significance level; Results significant at 95% when $p < 0.05$; df= Degree of freedom=41;STD=Standard Deviation; TNR=Total Number of Respondents

Table 4.10 Methods for Selecting Skilled Labourers in Building Construction Projects (Interview Survey)

S/N	Selection Measures	Interviewee								F	%
		A	B	C	D	E	F	G	H		
1.	Performance testing to the main work	✓	✓	✓		✓	✓	✓	✓	7	87.5
2.	Performance testing to the temporary structure as a sample	✓	✓	✓	✓				✓	5	62.5
3.	Recommendation letter from previous employers / supervisors (Reference check)					✓				1	12.5
4.	Short interview with the skilled labourers	✓			✓	✓		✓	✓	5	62.5

Notes: F= Frequency; %=Percentage

4.5.2.2 Performance Testing to the Main Work

Looking from Table 4.9, the second ranked selection measure is “Performance testing to the main work” which had a mean of 4.14 and statistically significant ($t(41) = 7.358, p = 0.000 < 0.05$). This means that the majority of building contractors tend to assess the quality performance of skilled laborers before engaging them. Although they test them direct to the

main work, which may sometimes resulting to rework. In this aspect **interviewee C** commented that;

Most of the time, labourers are checked on the main works; we can provide them with 2-3 square meters to plaster or skim on the main works. However, in some trades, such as welding, we may give them an angle to weld and then evaluate their performance.

Also, **interviewee A** stated that;

For new labourers, we usually test the steel fixer in some of the early stages in steel fixing, for example you can tell him to move the reinforcement steel bar from the storage to the machine's location, and then you can tell him to read, cut and bend the steel according to the designs as shown in drawings. Failure to do that, the labourer would not be engaged.

4.5.2.3 Performance Testing to the Temporary Structure

Table 4.9 indicates that “Performance testing to the temporary structure” is the third ranked selection measure with mean of 3.98 and statistically significant ($t(41) = 4.796, p = 0.000 < 0.05$).

4.6 Challenges Facing Construction Firms in Recruiting Skilled Labourers in Building Construction Projects

A total of 14 challenges were identified and researched on to discover to what extent these pose as issues to building contractors during recruiting skilled labourers. From Table 4.11, the findings, show that the first highest ranked challenge is “Location of the site” which had a mean of 3.71, followed by “lack of experienced labourers” and “Lack of the policy that govern the process of recruitment and selection” which had a mean the same mean of 3.45. The least challenges identified from the study are language barrier, aging workforce and lack of enough man power which had a mean of 2.60, 2.64 and 2.71 respectively.

This implies that in Tanzania, the construction industry's workforce is not a problem; rather, it is the skill and experience possessed by the available manpower that has an impact on the performance of construction projects.

Similarly “Location of the site” was also expressed in interview, where by **interviewee A, C, F and G** said it as a challenge facing the process. Also as shown in Table 4.11 low construction skills was mentioned by **interviewee H** who said that, not all labourers possess the required skills, some labourers lack construction skills, which makes it difficult to choose them.

Moreover some new challenges were identified by **interviewee A, B, C, D, E and H**. Specifically interviewee A, B, C and H mentioned “Payment differences between one company and another” as the main challenges facing recruitment and selection process. As many labourers weight the payment between one company and another, so once they have two opportunities to select they mostly chose the company which pays higher. Also **interviewee B, D and E** commented that availability of competent labourers at the time when need arises is one among the challenges they face at the site.

Additionally **interviewee A** added that “Project duration” is also another challenge they face during the process of recruiting and selecting skilled labourers. It was also observed that when the labourer have two opportunities to select they mostly consider the duration for that task, hence the task which has the longer duration is on the high side to be selected than the one with shorter duration. Following segments discuss the top ranked challenges;

Discussion

4.6.1 Location of the Site

The findings from Table 4.11 show that most challenging aspect in recruiting and selecting skilled labourers is location of the site which had a mean of 3.71 and statistically not significant ($t(41) = 1.074, p = 0.289 > 0.05$). This indicates that availability of competent differs from one place to another. It was discovered that contractors face this issue in certain regions and where the site is located in a remote area. This finding is supported by studies conducted by Rawlinson (2019) and Adu-Darkoh (2014) whereas location was indicated as challenge hindering recruitment process.

More details were revealed during the interview, as **Interviewee C** stated that;

The site's location is one of the process's challenges; for example, it is difficult to get skilled labourers in Zanzibar; in that case, you will need to take labourers from the mainland. It is also a problem in some of the main land regions, such as Singida.

He continued saying; “When labourers are lucky enough to be found in such places, their productivity is low, resulting in high construction costs”

4.6.2 Lack of Experienced Labourers

Table 4.11 illustrate that, the second ranked challenge that building contractors face during recruiting and selecting skilled labourers is “lack of experienced labourers” which had a

mean of 3.45 and statistically not significant ($t(41) = -0.290, p = 0.773 > 0.05$). This finding is supported by Kikwasi (2011) who claimed that some contractors decide to subcontract some of the trades in a project due the reason that, it is very difficult to obtain competent and experienced labourers when engaging own labourers. Also Karimi *et al.* (2016) argued that unavailability of experienced labourers is one of the challenges facing contractors and it has a direct effect on the decrease in building project productivity. They (Karimi *et al.*, 2016) also assert that employees with less experience are less familiar with appropriate construction procedures and processes, making them more likely to be injured. Similarly Choudhry and Fang (2008) revealed that experience is of major importance to the risky conduct of skilled labourers.

In additional efficient selection of personnel is only possible if there are a sufficient number of competitive candidates (Denisa, 2017). Therefore if contractor do not find enough number of competent and experienced labourers, selection process will be ineffective hence works produced will be of poor quality. As Windapo (2016) highlights, project failures occur due to inadequate number of competent labour or experienced tradesmen.

4.6.3 Lack of the Policy That Govern the Process of Recruitment and Selection

The third ranked challenge- is “lack of the policy that govern the process of recruitment and selection” as indicated in Table 4.11, with mean 3.45 and statistically not significant ($t(41) = -0.254, p = 0.801 > 0.05$). This implies that recruitment and selection process is done, however contractors/recruiters have no guidance on how to conduct recruitment and what procedures to follow in order to have a successful recruitment and selection process.

This finding is consistency with extant literature (Samwel, 2018; Boxall, Purcell and Wright, 2007; Cascio 2003). For instance Cascio (2003) claimed that one of the primary issues facing companies' performance is their failure to create and implement effective policies for attracting competent workers to meet organizational goals. Likewise, Boxall *et al.* (2007) pointed out that an organization needs to establish a successful recruitment policy in order to pursue its survival and prosperity, so an organization must answer five different questions which includes; who to recruit? What are the best places to look for employees? What are the best places to look for potential candidates? When should you bring on new employees? What is the message that has to be conveyed?. Furthermore, Samwel (2018) argued that

recruiters in small industries in Mwanza region had nothing to guide and direct the recruitment and selection process.

Table 4.11 Challenges in Recruiting and Selecting Skilled Labourers in Building Construction Projects (Questionnaire Survey)

S/N	Challenges	TNR	T-test $\mu = 3.5$	df	Sig 2- tailed	Mean	STD	Rank	SL $p < 0.05$
1.	Location of the site	42	1.074	41	0.289	3.71	1.293	1	Not Significant
2.	Lack of experienced labourers	42	-0.290	41	0.773	3.45	1.064	2	Not Significant
3.	Lack of the policy that govern the recruitment and selection process	42	-0.254	41	0.801	3.45	1.214	3	Not Significant
4.	Low skills level of construction workers	42	-0.714	41	0.479	3.38	1.081	4	Not Significant
5.	Difficult to find workers who fit the company culture	42	-1.850	41	0.072	3.21	1.001	5	Not Significant
6.	Lack of enough financial resource	42	-1.450	41	0.155	3.19	1.383	6	Not Significant
7.	Difficult to attract the right candidates	42	-2.496	41	0.017	3.07	1.113	7	Significant
8.	Inadequate information on the available vacancy	42	-2.379	41	0.022	3.02	1.297	8	Significant
9.	Ineffective selection measures	42	-3.044	41	0.004	2.98	1.115	9	Significant
10.	Poor human resource planning	42	-2.656	41	0.011	2.98	1.278	10	Significant
11.	Difficult in building strong employer brand	42	-3.204	41	0.003	2.93	1.156	11	Significant
12.	Lack of enough man power	42	-4.189	41	0.000	2.71	1.215	12	Significant
13.	Ageing workforce	42	-4.459	41	0.000	2.64	1.246	13	Significant
14.	Language barriers	42	-4.361	41	0.000	2.60	1.345	14	Significant

Notes: SL =Significance level; Results significant at 95% when $p < 0.05$; df= Degree of freedom=41;STD=Standard Deviation; TNR=Total Number of Respondents

Table 4.12 Challenges in Recruiting and Selecting Skilled Labourers in Building Construction Projects (Interview Survey)

S/N	Challenges	Interviewee								F	%
		A	B	C	D	E	F	G	H		
1.	Lack of experienced labourers						✓		✓	2	25.0
2.	Location of the site	✓		✓			✓	✓		4	50.0
3.	Low skills level of construction workers								✓	1	12.5
4.	Payment differences between one company and another	✓	✓	✓					✓	4	50.0
5.	Project/task duration	✓								1	12.5
6.	Availability of competent labourers at the time need arises		✓		✓	✓				3	37.5

Notes: F= Frequency; %=Percentage

4.7 Proposed Framework for Improving Recruitment and Selection of Skilled Labourers

With the respect to findings of specific objectives of the study and literature review, the framework for this thesis is developed in form of a flow chart that provides essential steps or guidelines to be followed while recruiting and selecting skilled labourers. The flow chart was divided into four main stages namely; Recruitment planning, Recruitment process, Selection process and Job offer as shown in Figure 4.1

4.7.1 Explanation of Stages of Proposed Framework

4.7.1.1 Stage I: Recruitment Planning

Recruitment planning refers to the prearranged approach for engaging employees. It serves as a schedule / baseline for companies to find qualified candidates without triggering company downtimes. The plan facilitates the recruiting process and acts as a checklist for employers. This helps companies to ensure that they engage people who have the required skills and are qualified to do the work. This also prevents construction delays and reduces building costs. In this stage contractor must recognize the need in project. In particular, it is to prepare roles profiles and individual specifications; including preparation of the categories of skilled workers required for a project; identify the number of skilled workers required and the time when a particular labourer number and category are required. Then he should plan for sources of skilled labourers, and how they will be recruited and selected. Throughout the process contractor will be guided by documents such as work Program, bills of quantities and drawings.

The construction work programme allows the contractor to outline the scope of work, describes the activity series, defines the necessary resources and outlines how quick the work will get done. This helps to know the number of qualified workers in a certain period and how many labourers to engage so as reach a certain point. In BOQ all building items in the project are described with their quantities. This helps the contractor to figure out what kind and number of skilled labourers needed. For drawings, they communicate technical details of the projects and so allow contractor to get a better understanding of what is written in the BOQ and thus assist contractor in determining which trades are needed for specific project.

Moreover, contractors should follow the recruitment and selection policy developed by the company or government through its regulatory bodies such as CRB, AQRB, ERB .

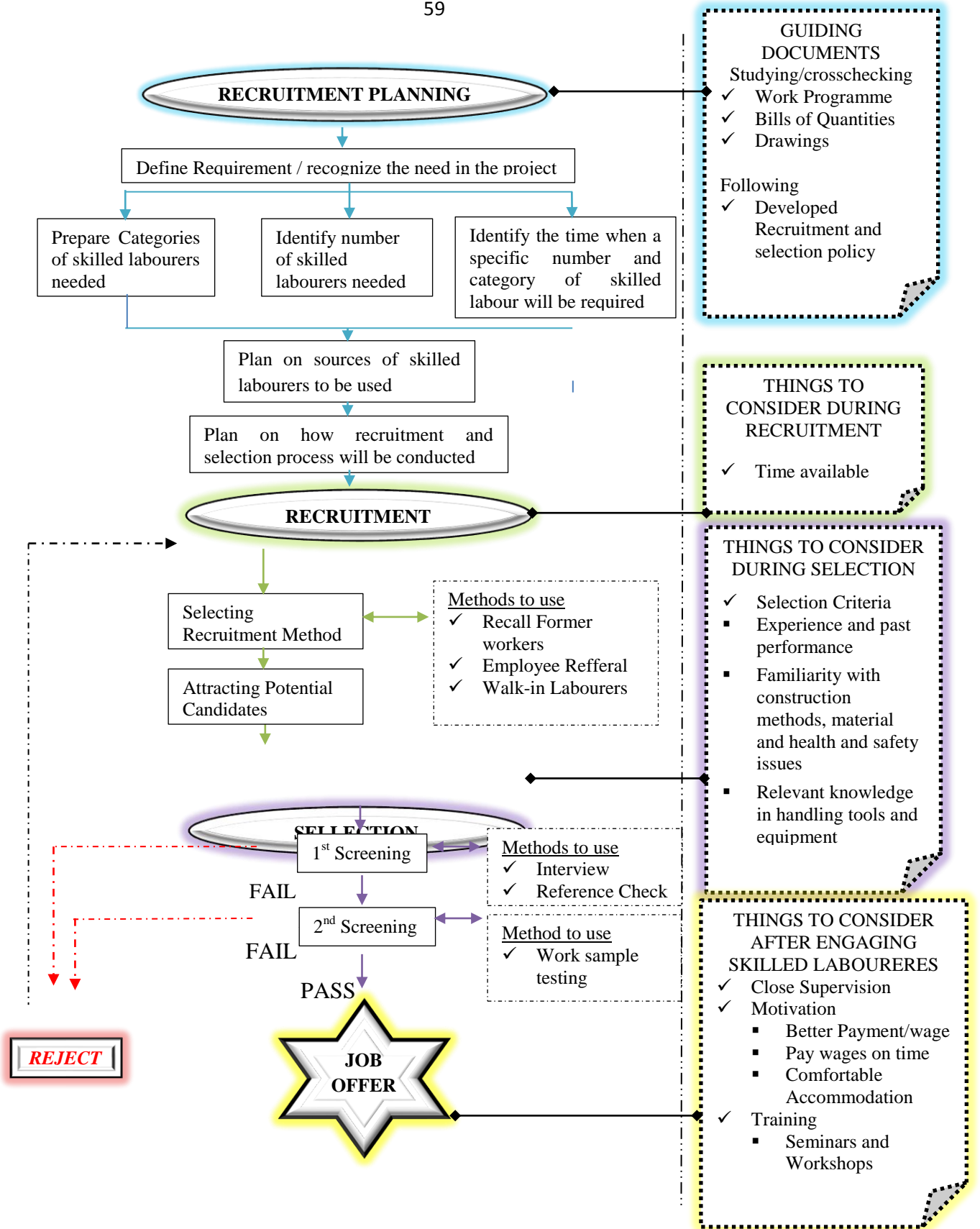


Figure 4.1: Proposed Framework for Improving Recruitment and Selection Process of Skilled Labourers in Construction Sites

Key: Main Stage; Sub-stage; Method to use; Things to consider

4.7.1.2 Stage II: Recruitment

In recruiting, contractors must first choose the method of attracting potential candidates. As skilled labourers acquire their knowledge informally, contractors can use the top two ranked recruitment methods as described in table 4.6 to reach the competent skilled labourers. .

However contractors may use walk-in labourers when they find that they have to accelerate work or that a shortage exists at the mid-range of production. After the selection of recruitment method, the recruitment process is followed.

In this phase, contractor generally needs to take into account the time frame available to undertake this process, if they have only a limited time; they need to use a convenient method of attracting labourers.

4.7.1.3 Stage III: Selection

Selection is the stage when the contractor selects the potential labourers from a pool of attracted labourers. Under selection, two screening has to be done, where by in the first screening contractor may use interview and / or reference to select labourers. In this screening, candidate's experience, communication skills, and personality are assessed. If the candidate fails the first screening he/she will be rejected, but if the candidate passes he/she will go to the second screening when work sample will be done. In this contractor will be able to assess the quality of candidate's output and his ability in performing work. If the candidate fails the second screening he/she will be rejected, but if the candidate passes he/she will be given a job.

In this stage contractor should focus on the top ranked selection criteria which includes; "Experience and past performance on similar nature of works" , "familiarity with construction methods, material and health and safety issues" and "relevant knowledge in handling tools and equipment" as indicated in Table 4.8.

4.7.1.4 Stage IV: Job Offer

After engaging the labourer, contractor should increase the level of supervision so as to make sure that a good quality of output is attained. Also motivation should be taken into consideration. According to Sarma (2008) the main aim of motivation is to make the people work in a responsible, disciplined and loyal manner with passion and creativity, hence improve the quality of output. Also Gamaga (2014) pointed out that, a motivated workforce is

a happy workforce. If the workforce is satisfied, they often give the company their full commitment by delivering goods or services of high quality.

Therefore for motivation, contractor should provide good employment condition which will help to attract the labourers and make them eager to work in such company. So, the good employment condition should be attained by providing better wages, early payment, sanitary facilities, safety equipment and comfortable accommodations. This will address challenge of payment and availability of competent labourers when needs arises as mentioned in interview. Because by doing so every labourer will be interested to work in such company.

Furthermore, contractors should provide training through seminars and workshops so as to enable employees to acquire the necessary information and skills and to carry out varied activities at the site. As a results number of skilled and experienced labourers will increase.

4.8 Validation of the Proposed Framework

The outcomes of the framework validation process are presented in this section. This is a crucial last section of the study to achieve the ultimate objective by confirming the quality and validity of the framework (O'Keefe and O'leary, 2000; Kavishe, 2018; Luvara, 2020, Maro, 2020)

4.8.1 Respondents Survey in Validation Process

A total of fifteen (15) potential respondents were identified and invited to participate in the survey. As explained in Chapter 3; section 3.13.2, the chosen respondents fall into two schools of thought. Respondents were identified and contacted via e-mail to inquire about their availability and consent to participate in the survey. All of the respondents met the criteria outlined in Chapter 3; sub-section 3.13.2. Fortunately, a number of 15 experts/practitioners indicated their availability and willingness to fill in the questionnaire. As a result, 15 validation questionnaires were distributed to free consent respondents through email and by hand between the middle of July and early August 2021. However, three reminders were given to participants; only 60% of the questionnaires from participants were returned. Because Sekaran and Bougie (2010) demonstrated that a response rate of at least 30% is acceptable for surveys, the obtained response rate was appropriate for analysis.

4.8.2 Demographic Information of the Respondents

As shown in Table 4.13, 100% (9 of 9) of the respondents had sufficient knowledge of the recruitment and selection process. 22.2% (2/9) of the respondents had 1-5 years of experience in his expertise, while 33.3% (3/9) of the respondents had 6-10 years of experience and 44.4% (4/9) had over 10 years of experience. Furthermore, all respondents had atleast a Bachelor's degree level of education, with 2 number (22.2%) had Bachelor's degree qualifications as equally as those with Ph.D qualifications. and 5 (55.5%) had Master's degree qualifications. These findings show that the respondents possessed the essential knowledge and expertise, which satisfied and corresponded to the researcher's criteria.

Table 4.13 Profile of survey respondents for out-of-sample Framework validation process

S/ N	Gender	Years of Experience	Education Level	Professional Background	Knowledge on Recruitment and Selection Process
1.	Male	Over 10 years	Ph.d	Quantity Surveyor	Yes
2.	Male	1-5 years	Bsc	Engineer	Yes
3.	Male	6- 10 years	Bsc	Engineer	Yes
4.	Male	6- 10 years	Msc	Engineer	Yes
5.	Male	Over 10 years	Msc	Quantity Surveyor	Yes
6.	Female	Over 10 years	Ph.d	Quantity Surveyor	Yes
7.	Male	Over 10 years	Msc	Quantity Surveyor	Yes
8.	Male	1- 5 years	Msc	Engineer	Yes
9.	Female	6- 10 years	Msc	Quantity Surveyor	Yes

4.8.3 Validation results

4.8.3.1 Rating of Suggested Solutions

The findings of data extraction from validation questionnaire responses are shown in Table 4.14. Respondents were asked to rate the proposed solutions on a five-point Likert scale, as described in subsection 3.13.3 of Chapter 3. Since the five Likert scale used, a set score above "3" which is more than half (2.5) would mean a satisfactory alternative to successfully and effective recruitment and selection process and less than "3" would mean an unsatisfactory solution

According to Table 4.14, all suggested interventions within the framework obtained a mean of above 3 with the top rated framework validation criterion "Work Programme", originated from the Planning stage with a mean score of 4.89. Followed by "Recall Former workers" originated from planning phase and "Experience and past performance on similar nature of works" originated from recruitment/attraction stage with the same mean score of 4.78 The

least rated interventions are “Drawings,” with a mean score of 3.78 from planning stage. Followed by “Relevant knowledge in handling and use of tools and equipment” with a mean score of 3.89 from selection stage and “Consideration of time available during selecting recruitment method to use” with a mean of 4.00 from recruitment stage.

All validation criteria were deemed satisfactory since they achieved mean scores above 3, which were within the study's suggested cutoff criterion of 3 or above.

Table 4.14 Results of Validation of Questionnaire Survey

Phase	Validation criteria	Respondents									Mean
		1	2	3	4	5	6	7	8	9	
1- Recruitment Planning	Define Requirement / recognize the need in the project										
	Prepare Categories of skilled labourers needed	5	5	5	4	4	5	4	5	5	4.67
	Identify number of skilled labourers needed	4	4	5	4	4	5	4	5	5	4.44
	Identify the time when a specific number and category of skilled labour will be required	4	5	5	4	4	5	4	5	5	4.56
	Plan on sources of skilled labourers to be used	5	4	5	4	3	5	4	4	5	4.33
	Plan on how recruitment and selection process will be conducted	5	4	3	4	3	5	4	4	5	4.11
	Work Programme	5	5	4	5	5	5	5	5	5	4.89
	Bills of Quantities	5	4	4	3	5	3	4	4	5	4.11
	Drawings	5	3	2	3	3	4	5	4	5	3.78
	recruitment and selection policy	5	4	4	3	5	5	4	4	4	4.22
2- Recruitment	Recall Former workers	5	5	5	5	5	5	4	5	4	4.78
	Employee Referral	5	4	5	4	5	5	4	5	5	4.67
	Walk-in Labourers	5	4	5	4	4	5	4	3	4	4.22
	Consideration of time available during selecting recruitment method to use	5	3	4	2	3	5	4	5	5	4.00
3-Selection	Interview	4	4	4	5	5	5	4	5	2	4.22
	Reference Check	5	4	4	5	4	5	4	5	5	4.56
	Work sample testing	4	5	4	5	5	5	4	5	4	4.56
	Experience and past performance on similar nature of works	5	5	5	4	5	5	4	5	5	4.78
	Familiarity with construction	5	4	5	4	5	5	4	5	5	4.67

Phase	Validation criteria	Respondents									Mean
		1	2	3	4	5	6	7	8	9	
	methods, material and health and safety issues										
	Relevant knowledge in handling tools and equipment	5	4	3	4	3	5	3	4	4	3.89
4- Job Offer	Close Supervision	5	4	4	5	4	5	4	5	5	4.56
	Motivation	5	4	5	3	4	5	4	4	4	4.22
	Training	5	5	4	4	5	5	5	5	4	4.67

4.8.3.2 Applicability of the Proposed Framework Model

General validation questions about the proposed framework's overall applicability and suggestions for improvement were included in the questionnaire. The applicability, efficiency, and adaptability of the proposed recruiting and selection framework were assessed using the same five-point Likert scale and a test value of three. Table 4.15 reveals that the framework's applicability, efficiency, and adaptability were all evaluated higher than the sufficient score of 3 above, at 4.11, 3.89, and 3.67, respectively.

Table 4.15 Results of Validation of Applicability, Effectiveness and Adaptability of the Framework

S/N	Validation criteria	Respondents									Mean
		1	2	3	4	5	6	7	8	9	
1	Applicability	5	4	3	4	3	5	4	4	5	4.11
2	Effectiveness	5	4	4	3	3	4	3	4	5	3.89
3	Adaptability	5	3	3	3	5	4	3	2	5	3.67

4.8.3.3 Recommendations

The validation suggestions are summarized in Table 4.16. Participants were asked three questions: the first was to clarify any deficiencies found in the proposed recruitment and selection framework; the second was to clarify the main benefits of the proposed recruitment and selection framework; and the third was to suggest ways to improve the proposed recruitment and selection framework.

According to Table 4.16, only four participants, namely participants' no. 1, no. 4, no. 6, and no. 7, provided recommendations. Modifications on the proposed framework have been incorporated as shown in Section 4.9. However, none of them have shown a shortcoming in the suggested framework.

Table 4.16 Summary of Suggestions for the Proposed Framework Model

Respondent	Deficiency Observed	Major benefits of proposed framework	Suggestion to improve the proposed framework
1	Need minor improvement	Very useful and user friendly	<p>The framework should portray the relationship between laborer classifications, laborer numbers, and the time when laborers are needed.</p> <p>The framework is overly wordy; the wording could be shortened, and more information should be provided in the framework explanation.</p> <p>The nature of the work and plans for future works and resources available to contractors should likewise be considered during recruitment</p>
4	NIL	Help projects to achieve value for money.	NIL
6	NIL	All stages and criteria are crucial for the recruitment process; this will enhance the engagement of qualified, fit, and good candidates.	<p>The work program is important for estimating the labor force or personnel required. Also, drawing and policy. However, the BOQ does not directly indicate the kind of personnel required. I would suggest including the method statement plan and the health and safety plan as part of the guiding document.</p> <p>After the applicant is selected, he or she needs orientation and coaching to be familiar with the project and site. Though they may have experience, the nature of construction projects is unique in terms of design and site.</p>
7	NIL	Providing a road map for acquiring capable workers, thus reducing delays and reworks	No thank you

4.9 Improved Framework Model and Validation

Some of the suggestions given by the validator respondents were adopted and integrated into the framework model to further enhance the proposed model. The outcome is as shown in fig. 4.2.

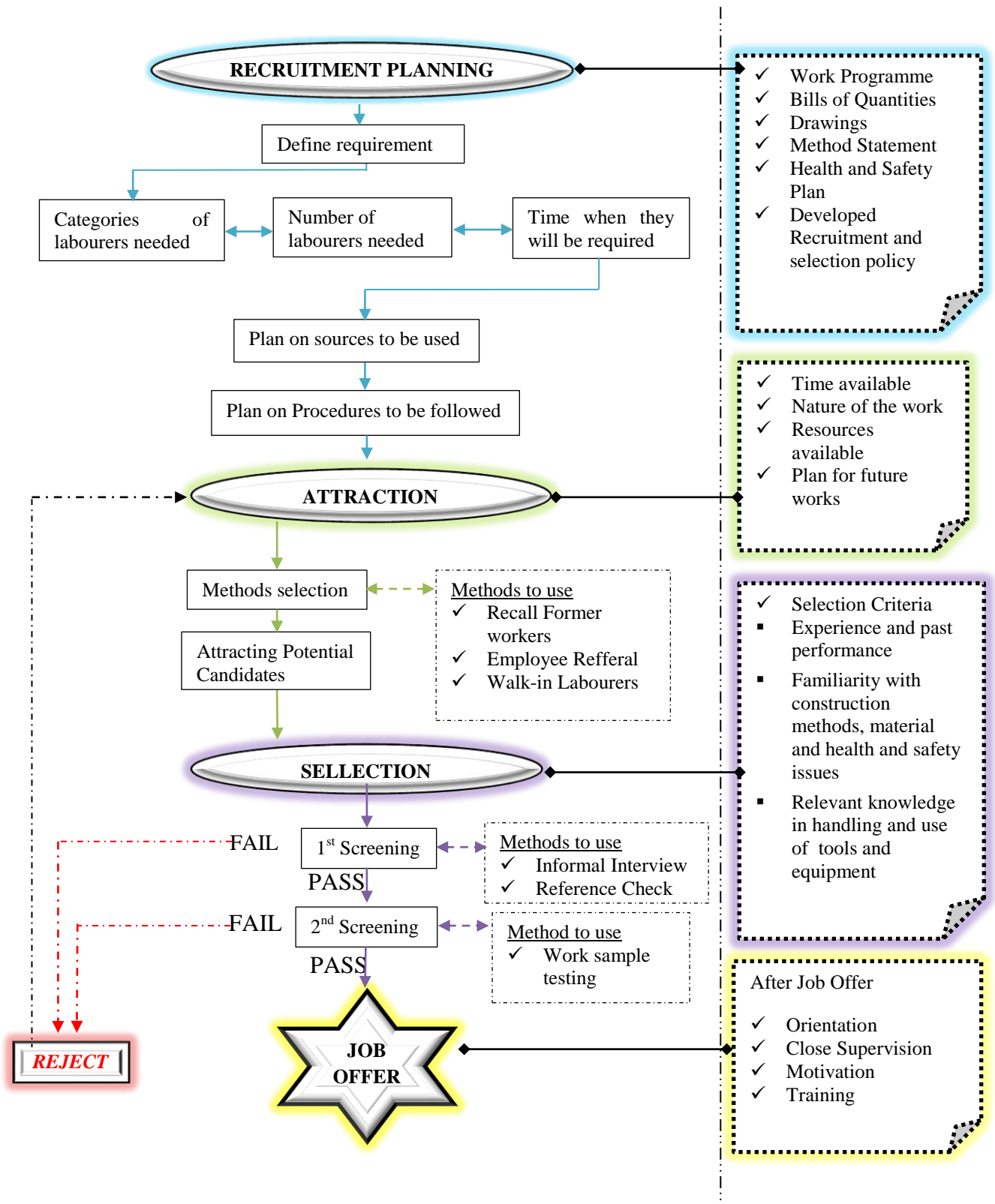


Figure 4.2: Validated Framework for Improving Recruitment and Selection Process of Skilled Labourers in Construction Sites

Key:

RECRUITMENT PLANNING Main Stage;
 Define requirement Sub-stage;
 Methods to use Method to use;
 Work Programme Things to consider

4.10 Summary of the Chapter

This chapter provides the detailed analysis of both the quantitative and qualitative data collected from the field. The findings have been combined with in-depth discussion so as to relate it to the previous studies and the current situation in the construction industry. The findings of this chapter have been arranged in accordance with the specific objectives of this study. With reference to results obtained from the study and the existing literature, the recruitment and selection framework has been developed and lastly validated. The framework is important to the organization practices as it adds value to building contractors' projects by enhancing good engagement of competent workers and good performance. The next chapter provides the conclusions and recommendations of this study.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter contains the conclusions of the study which have been mapped to the specific objectives of the study. It contains three main sections which includes; conclusion of the study, recommendations for practical implications and recommendations for further study.

5.2 Conclusion

5.2.1 Criteria for Selecting Skilled Labourers in Building Construction Projects

This objective assessed criteria that are considered by contractors during selecting skilled labourers in building construction projects in Tanzania. According to the findings, in Tanzania, building contractors regularly emphasize personal qualifications but pay less attention to demographic criteria. They believe that qualification has a greater impact on the personal output.

The study identified “experience and past performance on similar nature of works” as the first criteria prioritized by the building contractors followed by “familiarity with construction methods, material and health and safety issues” and “relevant knowledge in handling and use of tools and equipment”. In interviewee “experience and past performance on similar sort of works” was mentioned as the most important criterion by all interviewees. This demonstrated the significance of this criterion in the selection of skilled labourers. It also recognized that the least considered criteria are “marital status”, “gender” and “age”

5.2.2 Methods for Recruiting Skilled Labourers in Building Construction Projects.

Regarding recruitment methods, the study discovered that building contractors mostly use informal methods to attract skilled labourers hence construction companies do not dedicate a lot of time and resources to searching people for skilled labour positions. Also, none of the respondents agreed to use formal recruiting methods. Furthermore, it was noted that the methods used are non-payable methods that means contractors do not use money to attract skilled labour as it is done in attracting office workers as for office worker contractors sometimes use payable methods such as advertisement (Ahmed and Briggs, 2011).

The study identified that “Recall former labourers” is the mainly used recruitment method followed by, “Employee referrals” and “Walk in labourers. The least used methods which are “Radio advert”, “TV advert” and “Internet/Online recruitment”.

5.2.3 Methods for Selecting Skilled Labourers in Building Construction Projects.

In assessing methods for selecting skilled labourers in building construction projects, study identified that; the most commonly used selection method is a “short interview with skilled labourers,” followed by “Performance testing to the main work” and “Performance testing to the temporary structure as a sample,”. Also it was observed that “reference check” and “vocational training certificate” were ranked low and were found to be the lowest ranking criteria.

From the interview it was acknowledged that contractors typically do informal interviews, which are like a social or casual talk with skilled workers, which brings the chance of assessing communication and inter-personal abilities to the organization.

5.2.4 Challenges in Recruiting and Selecting Skilled Labourers in Building Construction Projects

The study concluded that the top three challenging matters in recruiting and selecting skilled labourers in building construction projects are “location of the site”, followed by “lack of experienced labourers” and “Lack of the policy that govern the process of recruitment and selection”. However all these three top challenges were not statistically significant. The least challenges identified from the study are language barrier, aging workforce and lack of enough man power.

Also new challenges were obtained from interview which includes payment differences between one construction company and another” Many workers weigh the payment between one construction company and another; they mostly choose the one that pays the greater wage when they have two options for selecting. This is followed by availability of competent labourers at the time when need arises (see Table 4.12).

5.2.5 Proposed Framework for Improving Recruitment and Selection of Skilled Labourers

Lastly the researcher developed and validated a framework for assisting building contractors in recruiting and selecting skilled labourers. The framework showed all processes from planning to job offer (See Figure 4.1 and 4.2).

5.3 Recommendations

The study was able to identify the criteria for selecting skilled labours, the methods of recruitment and selection process which includes recruitment methods and selection measures, challenges hindering the process and lastly develop the framework for assisting contractors during recruitment and selection of skilled labourers at site. Thereof, it has also been able to provide ways to address the difficulties identified; the study proposed collectively the following ways:

- i. Provision of training to skilled labourers at the site. Training and development enable employees to acquire the necessary information and skills and to carry out varied activities at the site. To ensure that this is achieved, contractors might collaborate with regulatory bodies and other stakeholders in the construction industry. This will contribute to increasing the number of qualified employees.
- ii. Skills recognition and impartment; The recognition and transmitting of the capabilities of certain employees to others, as well as on-the-job trainings, can considerably increase internal capacity and thus cut even external training expenditures. In the end, this will enable site managers / contractors to better shape and assign tasks to any skilled labourer at the site and lastly increase the number of well-equipped labourers.
- iii. Early preparation of recruitment plan; this will help contractors to know kind and number of skilled labourers needed at the early stage and being able to identify a place where all these needed labourers will be obtained. It will also assist reduce challenge of absence of skilled workers in a certain location.
- iv. Development of recruiting and selection policy; it is necessary to have a properly defined recruitment and selection policy that is effectively implemented to best fit needs in the project. In the course of time, policies should also be modified.
- v. Motivation; contractor should provide good employment condition which will help to attract the labourers and make them eager to work in such company. So, the good

employment condition should be attained by providing better wages, early payment, sanitary facilities, safety equipment and comfortable accommodations. This will address challenge of payment and availability of competent labourers when needs arises as mentioned in interview. Because by doing so every labourer will be interested to work in such company.

- vi. The construction industry's stakeholders must establish a skill test and certification system to help practitioners and employer to obtain and select people with adequate skills as the construction sector rely mostly on informal skilled workers.
- vii. Seminars and workshops; The Contractors Registration Board (CRB) should conduct seminars and workshops to train contractors on the need to adopt skills testing and certification programs for the competency verification of their future employees.
- viii. Moreover, contractors should put in place a special payment package for those with the right skills, by doing this; every worker will make great efforts to acquire the abilities needed for this particular package. This will help to boost the number of competent skilled workers.

5.4 Areas for Further Research

Further research can be conducted on the following areas;

- i. A Study on the Practice of Recruiting and Selecting Office Workers (Professionals)**

Output in Construction industry does not depend only on skilled labourers, the input of professionals is also of paramount important, thus it is vital to examine how best office workers (professionals) can be recruited and selected by the employer so as to engage professionals with greater impact in an construction firm.

- ii. A Study on the Challenges Associated in the Course of Recruiting and Selecting Office Workers (Professionals) in Construction Industry:**

Construction stakeholders for instance contractors encounter different challenges in the course of recruiting and selecting labourers. A study on the challenges facing construction firms concerning recruitment and selection of office workers (professionals) will also provide essential information in which the stakeholders will be aware of the strategies needed to tackle the problems.

- iii. **Framework for Assisting the Process of Skills testing and Certification for Skilled Labourers.** Failure to determine the labourers with required skills results in poor project performance, due to the way labourers acquire skills; there is a need of developing a framework which will assist the entire process of skills testing and certification. Just because following certification, stakeholders specifically contractors will be able to select individuals with essential capabilities because certified workers will be having credentials.

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APPENDICES**APPENDIX I – List of Publications**

1. Evarist, C.Y., Luvara, V.G.M. & Chileshe, N. (2021). Constraining Factors Impacting Recruitment and Selection Practices among Tanzanian Building Contractors, *International Journal of Construction Management*, (Published).
2. Evarist, C.Y., Luvara, V.G.M. & Chileshe, N. (2022). Recruitment and selection practices of building contractors in Dar es Salaam, Tanzania: Criteria and methods. *International Journal of Construction Management*, (under review).

APPENDIX II

QUESTIONNAIRE SURVEY

Dear Respondent

My name is Christina Yati Evarist, I am a Masters student at Ardhi University in the school of Architecture, Construction Economics and Management, department of Building Economics. I am conducting a research with the aim of **developing a framework which will assist building contractors in recruiting skilled labourers in a construction project in Tanzania.**

With the utmost respect you are kindly requested to participate in this research through responding all questions in this questionnaire. The answers you are going to provide for every question should be in the view of your company's recruitment and selection practices. There are no correct or incorrect answers; just provide your understandings on how your company undertake recruitment and selection process.

This survey is purely for academic purpose and all the answers that you provide will not be disclosed and will be treated with utmost confidentiality. Identity will remain anonymous.

Your cooperation is highly treasured.

Christina Yati Evarist

MSc. Construction Economics and Management

Ardhi University

Email: *evaristchristina0@gmail.com*

Phone: + 255 738 467 826 / + 255 652 687 826

SECTION 1: DEMOGRAPHIC INFORMATION

1. Name of the project (optional).....

2. Your gender

Male

Female

3. Your position in this project

Site / Contract Manager

Site Agent

Site Engineer

General Foreman

Other; Please specify.....

4. What is your highest education qualification?

FTC

Diploma

Bachelor's Degree

Master's Degree

5. Which of the following describe your professional qualification?

Civil Engineer

Quantity Surveyor

Architect

Construction Manager

Civil Technician

Other; Please specify.....

6. How long have you been working in the Construction Industry?

Less than 1 year

1 – 5 years

6 – 10 years

Over 10 years

7. What class is your company registered under Contractors' Registration Board(CRB)

Class I

Class II

Class III

SECTION 2: SELECTION CRITERIA

8. How often do the following selection criteria considered in your project in selecting potential skilled labourers?(Please tick in the appropriate box, maximum one tick per row using a 5 point likert scale where **5=Very Frequent, 4= Frequent; 3= Average; 2= Rarely; 1= Not at all**)

S/N	Selection Criteria	5	4	3	2	1
1.	Experience and past performance on similar nature of works					
2.	Physical fitness and Physical characteristics (i.e Fat, Slim, Tall, Short etc)					
3.	Personality characteristics					
4.	Undergone vocational training					
5.	Age					
6.	Gender					
7.	Marital status					
8.	Familiarity with construction methods, material and health and safety issues					
9.	Relevant knowledge in handling tools and equipment					
10.	Communication skills (i.e language etc)					

SECTION 3: RECRUITMENT AND SELECTION METHODS

A. Recruitment Methods

9. How often does the following recruitment methods used in your project to recruit skilled labourers?(Please tick in the appropriate box, maximum one tick per row using a 5 point likert scale where **5=Very Frequent, 4= Frequent; 3= Average; 2= Rarely; 1= Not at all**)

S/N	Recruitment Methods	5	4	3	2	1
1.	Employment agents					
2.	Walk in labourers (labourers gathering on construction sites to seek employment)					
3.	Recall former labourers					
4.	Employee referrals (asking existing skilled labour to recommend a potential skilled labour from their existing networks)					
5.	Internet/Online recruitment					
6.	Labour associations/union					
7.	Recruitment from vocational training / college					
8.	Newspaper advert					
9.	TV advert					
10.	Radio advert					
11.	Company website					
12.	Job fairs (eg. Construction exhibitions)					
13.	Job boards (eg Zoom Tanzania, Radar recruitment etc)					
14.	Social media					

B. Selection Measures

10. How frequent do the following selection measures used in your project to determine the skills level of the skilled labourers?(Please tick in the appropriate box, maximum one tick per row using a 5 point likert scale where **5=Very Frequent, 4= Frequent; 3= Average; 2= Rarely; 1= Not at all**)

S/N	Selection Measures	5	4	3	2	1
1.	Performance testing to the main work (eg. Painting 1m ² then assessing the performance)					
2.	Performance testing to the temporary structure as a sample					
3.	Recommendation letter from previous employers/supervisors (Reference check)					
4.	Vocational training Certificate					
5.	Short interview with the skilled labourers					

SECTION 4: CHALLENGES

11. The under listed are some of the challenges come across the recruitment and selection process in an organization.(Please rank them by ticking in the appropriate box, maximum one tick per row using a 5 point likert scale where **5=Very Serious, 4= Serious; 3= Average; 2= Low; 1= Not at all**)

S/N	Challenges in Recruitment and Selection Process	5	4	3	2	1
1.	Lack of the policy that govern the process of recruitment and selection					
2.	Lack of experienced labourers					
3.	Difficult to find workers who fit the company culture					
4.	Lack of enough man power					
5.	Difficult in building strong employer brand					
6.	Difficult to attract the right candidates					
7.	Lack of enough financial resource					
8.	Ineffective selection methods/measures					
9.	Location of the site					
10.	Language barriers					
11.	Ageing workforce					
12.	Low skills level of construction workers					
13.	Poor human resource planning					
14.	Inadequate information on the available vacancy					

Thanks for your time

APPENDIX III**INTERVIEW SURVEY**

1. What is your position in this project?
2. What is your highest education qualification?
3. What is your professional qualification?
4. How long have you been working in the Construction Industry?
5. What class is your company registered under Contractors' Registration Board (CRB)?
6. Does your company have a formal policy for recruiting and selecting skilled labourers?
7. Do you set out requirements in form of job descriptions or role profiles and person specifications?
Probe: When do you set requirements?
8. How do you recruit your skilled labourers?
Probe: When do you do it?
Probe: Is there any formal procedures do you follow during conducting recruitment and selection of skilled labourers?

9. Which method(s) do you use to recruit potential skilled labourers in your project?
10. What selection measures do you use to determine the potential skilled labourers?
11. What selection criteria do you consider in selecting potential skilled labourers?
 - Demographic criteria
 - Physical criteria
 - Qualification criteriaProbe: In which circumstances are these criteria considered?
12. What are the challenges do you face in the process of recruiting and selecting skilled labourers?
13. What do you think are the best initiatives that can advance the process of recruiting and selecting skilled labourers?

END**THANK YOU**

APPENDIX IV – QUESTIONNAIRE FOR VALIDATION OF PROPOSED FRAMEWORK FOR IMPROVING RECRUITMENT AND SELECTION PROCESS OF SKILLED LABOURERS IN CONSTRUCTION SITES

A: Background Information

12. Your gender

Male Female

13. What is your highest education qualification?

Bachelor's Degree Master's Degree Ph.D

14. Which of the following describe your professional qualification?

Engineer Quantity Surveyor Construction Manager

15. How long have you been working in the Construction Industry?

Less than 1 year 1 – 5 years 6 – 10 years Over 10 years

B: Introduction to the Recruitment and Selection Framework

The framework development process used an efficient methodology and tools to facilitate the process, which included the three stages: Literature review; Questionnaire and Interview survey

- *A Literature review* was done across several studies on the recruiting and selection process in order to explore the best selection criteria, recruitment and selection methods, and challenges that the process faces.
- *Questionnaire* and *Interview* surveys were conducted in order to study the local context in terms of criteria, methods, and challenges.

In developing the framework, the top most highlighted challenges were taken into consideration and addressed (*see Figure 4.1 attached*). Therefore the aim of the developed framework was to propose solutions in the form of framework that will address the recognized challenges and provide the best methods as well as the selection criteria. The proposed framework comprises of four main stages, (Recruitment planning, Recruitment process, Selection process and Job offer) Hence, the suggested framework intends to provide methodical advice at each level of the recruiting and selection process in developing countries, particularly in Tanzania.

Please find the developed framework in the next page as extracted from the study findings and respond the questions that follow

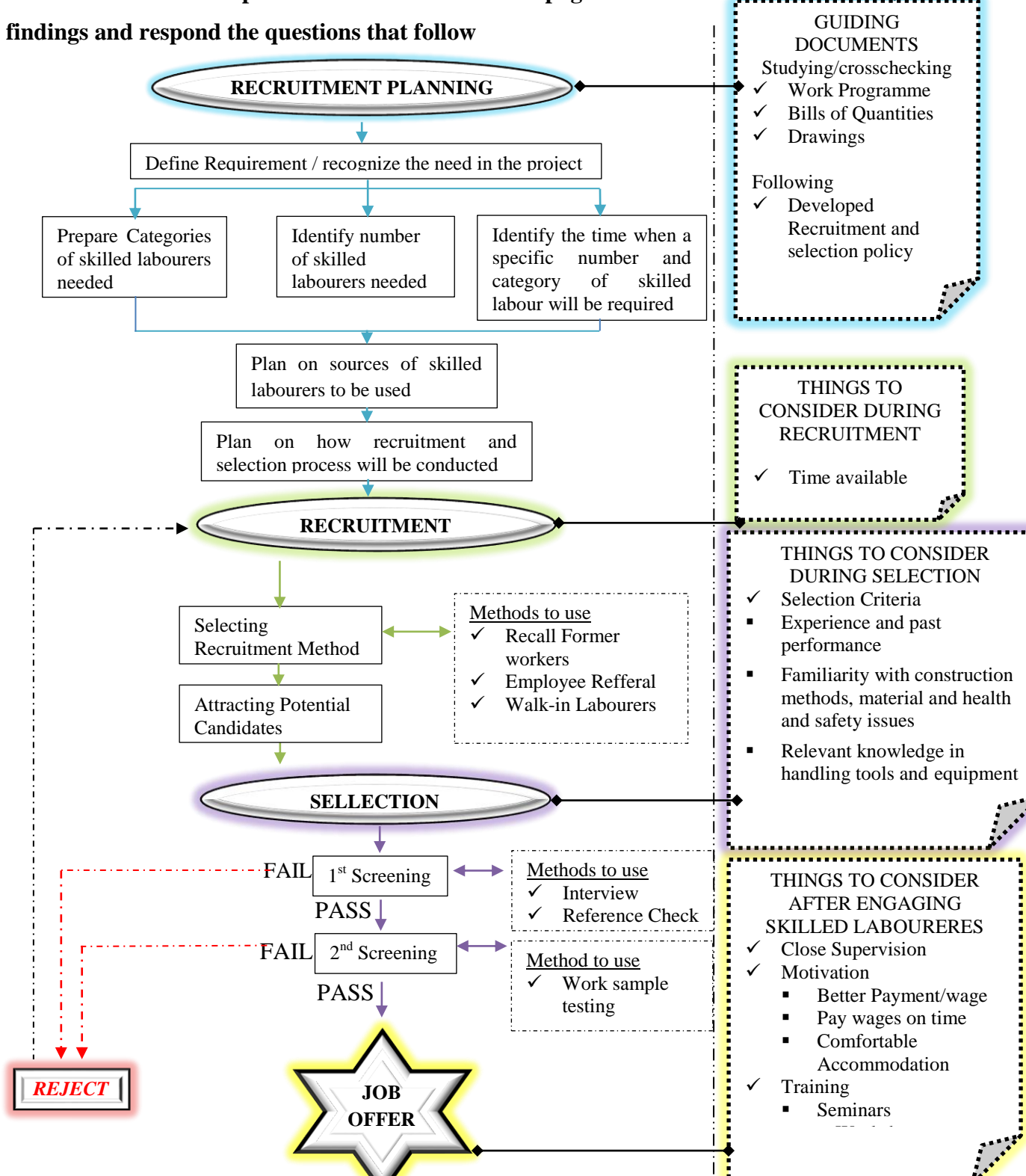


Figure 4.1: Proposed Framework for Improving Recruitment and Selection Process of Skilled Labourers in Construction Sites

Key:

RECRUITMENT PLANNING Main Stage;
 Define Requirement / recognize the need in the project Sub-stage;
 Methods to use Method to use;
 THINGS TO CONSIDER Things to consider

C: Framework's Main Stages and Validation Questions

This section introduces the framework's main stages. Each stage has validation questions at the end.

Stage I: Recruitment Planning

In this stage contractor must recognize the need in project. In particular, it is to prepare roles profiles and individual specifications; including preparation of the categories of skilled workers required for a project; identify the number of skilled workers required and the time when a particular labourer number and category are required. Then he should plan for sources of skilled labourers, and how they will be recruited and selected. Throughout the process contractor will be guided by documents such as work Program, bills of quantities, drawings and developed recruitment and selection policy.

Q1: To what extent do you agree that the consideration of recruitment planning activities, stages provides a strong solution for the successful and effective recruitment and selection of skilled labourers?

[Fill with ✓: 5=Strongly agree; 4=Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree]

Phase	Validation criteria	1	2	3	4	5
1-Recruitment Planning	Define Requirement / recognize the need in the project					
	Prepare Categories of skilled labourers needed					
	Identify number of skilled labourers needed					
	Identify the time when a specific number and category of skilled labour will be required					
	Plan on sources of skilled labourers to be used					
	Plan on how recruitment and selection process will be conducted					

Please give a short rationale for your opinion

.....

Q2: To what extent do you agree that the reviewing/crosschecking of the following documents will strongly facilitate the recruitment planning process?

[Fill with ✓: 5=Strongly agree; 4=Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree]

Phase	Validation criteria	1	2	3	4	5
1-Recruitment Planning	Work Programme					
	Bills of Quantities					
	Drawings					
	recruitment and selection policy					

Please give a short rationale for your opinion

.....

Stage 2: Recruitment

In recruiting, contractors must first choose the method of attracting potential candidates. As skilled labourers acquire their knowledge informally, contractors can use recall former workers or employee referral method to reach the competent skilled labourers. However contractors may use walk-in labourers when they find that they have to accelerate work or that a shortage exists at the mid-range of production.

In this phase, contractor generally needs to take into account the time frame available to undertake this process, if they have only a limited time; they need to use a convenient method of attracting labourers.

Q3: To what extent do you agree that the above recruitment methods will strongly address the successful and effective Recruitment process?

[Fill with ✓: 5=Strongly agree; 4=Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree]

Phase	Validation criteria	1	2	3	4	5
2- Recruitment	Recall Former workers					
	Employee Refferal					
	Walk-in Labourers					

Please give a short rationale for your opinion.

.....

Q4: To what extent do you agree that time available should be considered during selecting recruitment method to use?

[Fill with ✓ from a 5 point likert scale below]

5. Strongly agree 4. Agree 3. Neutral 2. Disagree 1. Strongly disagree

Please give a short rationale for your opinion.

.....

C3: Stage III: Selection

Under selection, two screening has to be done, where by in the first screening contractor may use interview and / or reference to select labourers. In this screening, candidate's experience,

communication skills, and personality are assessed. If the candidate fails the first screening he/she will be rejected, but if the candidate passes he/she will go to the second screening when work sample will be done. In this contractor will be able to assess the quality of candidate’s output and his ability in performing work. If the candidate fails the second screening he/she will be rejected, but if the candidate passes he/she will be given a job.

In this stage contractor should focus on selection criteria such as; “Experience and past performance on similar nature of works”, “Familiarity with construction methods, material and health and safety issues” and “Relevant knowledge in handling tools and equipment”.

Q5: To what extent do you agree with above mentioned selection measures/methods with regards to successfully and effective selection process?

[Fill with ✓: 5=Strongly agree; 4=Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree]

Phase	Validation criteria	1	2	3	4	5
3-Selection	Interview					
	Reference Check					
	Work sample testing					

Please give a short rationale for your opinion.

.....

Q6: To what extent do you agree that the above mentioned selection criteria should be considered with regards to successfully and effective selection process?

[Fill with ✓: 5=Strongly agree; 4=Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree]

Phase	Validation criteria	1	2	3	4	5
3-Selection	Experience and past performance on similar nature of works					
	Familiarity with construction methods, material and health and safety issues					
	Relevant knowledge in handling tools and equipment					

Please give a short rationale for your opinion.

.....

C4: Stage IV: Job Offer

After engaging the labourer, contractor should increase the level of supervision so as to make sure that a good quality of output is attained. Also motivation should be taken into consideration,

Whereby contractor should provide good employment condition which will help to attract the labourers and make them eager to work in such company. So, the good employment condition should be attained by providing better wages, early payment, sanitary facilities, safety equipment and comfortable accommodations. Furthermore, contractors should provide training through seminars and workshops so as to enable employees to acquire the necessary information and skills and to carry out varied activities at the site.

Q7: To what extent do you agree that the above mentioned strategies address the successful and effective Recruitment and selection process?

[Fill with ✓: 5=Strongly agree; 4=Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree]

Phase	Validation criteria	1	2	3	4	5
4- Job Offer	Close Supervision					
	Motivation					
	Training					

Please give a short rationale for your opinion.

.....

D: General Validation Questions

This section comprises general validation questions which examine on the applicability of the framework and suggestions for improvement.

D1: Applicability

Q8. To what extent do you agree that the proposed framework is applicable in recruitment and selection Process?

[Fill with ✓ from a 5 point likert scale below]

5. Strongly agree 4. Agree 3. Neutral 2. Disagree 1. Strongly disagree

Please give a short rationale for your opinion.

.....

D2: Effectiveness

Q9. To what extent do you agree that the proposed framework can effectively address the identified challenges?

[Fill with ✓ from a 5 point likert scale below]

5. Strongly agree 4. Agree 3. Neutral 2. Disagree 1. Strongly disagree

Please give a short rationale for your opinion

.....
.....

D3: Adaptability

Q10. To what extent do you agree that the proposed framework is adaptable to different countries?

[Fill with ✓ from a 5 point likert scale below]

5. Strongly agree 4. Agree 3. Neutral 2. Disagree 1. Strongly disagree

Please give a short rationale for your opinion

.....
.....

D4: Recommendation

Q11. Please explain briefly any deficiency you have observed in the proposed framework?

.....
.....

Q12. Please explain briefly any major benefits you have observed in the proposed framework

.....
.....

Q13. What can you suggest to improve the proposed framework?

.....
.....

END

Thanks for your time

The researcher can be contacted at

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Phone: + 255 738 467 826 / + 255 652 687 826

APPENDIX V: INTRODUCTION LETTER

ARDHI UNIVERSITY

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Ref.No. ARU/A.2013/

14th April, 2021

TO WHOM IT MAY CONCERN

Dear Sir/ Madam,

RE: INTRODUCTION LETTER FOR POSTGRADUATE STUDENT

Refer to the subject above.

The Student above is pursuing Masters of Science in Construction Economics and Management (MSc. CEM) in our University. As a Student she is required to do dissertation work as part of the requirements for the award of the Masters of Science in Construction Economics and Management (MSc. CEM). For the accomplishment of this exercise, student is required to carry out literature review, extensive search for field data and subsequently analyse the same for conclusive scientific results.

We are therefore requesting you to assist the bearer of this letter **Ms. Christina Y. Evarist, with Reg. No. HD/T.1380/2019**, who will need information from your organisation. The title of his Dissertation is **"A Framework Towards Improving Recruitment and Selection Process of Skilled Labourers in Building Construction Projects."**

Thank you for your cooperation and contribution.

Yours Sincerely,


Dr. Shubira Kalugila
For: Deputy Vice Chancellor
Academic Affairs

