

IMPACT OF INDUSTRY IMAGE ON SHORTAGE OF SKILLED WORKERS: A SOUTH AFRICAN CONSTRUCTION INDUSTRY'S PERSPECTIVES

IRUKA C. ANUGWO *

Department of Construction Management & Quantity Surveying, Durban University of Technology (DUT), Steve Biko Campus, Durban, South Africa. *Corresponding Author Email: irukaA@dut.ac.za

CHIKEZIRIM OKORAFOR

Department of Civil Engineering & Construction Studies Midland, Durban University of Technology Scottsville 3209, South Africa. Email: chikezirimo@dut.ac.za

Abstract

Construction plays a vital role in South Africa's economic sustainability. However, there is a drastic need to attract skilled workers in order to sustain the increasing demands of its product and service. The image of the construction industry "not impressive or attractive" seems to be a major contributing factor causing shortage of skilled workers in the industry. The purpose of this study is to assess the impact of the image of the construction industry towards attracting young and skilled workers in South Africa. This study adopted a quantitative research method, in which a questionnaire survey was distributed among the members of GMBA (Gauteng Master Builders Association). Thus, a systematic sampling was used with a population size of 300 companies (from GMBA), sample size and questionnaires distributed were 150 respectively. The total number of respondents and analysed questionnaires were 54 – totalling a response rate of 18%. The study findings indicated that factors such as exposure to harsh and unsafe working conditions; low salaries and wages for workers, lack of vital information to prospective learners, and lack of support and sponsorship by organisations toward the learners are some of the critical issues considered as poor image of construction industry that are contributing to shortfall of skilled worker in industry. The study concluded that the shortage of skills in the construction industry can be attributed to factors such as the prospective learners regarding a career in the construction industry as a second choice.

Keywords: Construction Industry, Industry Image, Shortage of Skilled Workers, South African.

INTRODUCTION

Construction plays a vital role in South Africa's economic- and social development. It provides the physical infrastructure and backbone for economic activity. It also provides employment on a large-scale (cidb, 2007).

South African construction industry is facing critical challenges due to high shortfall of skilled workers and this situation has placed the industry in a continuing battle to sustain its numerous activities and opportunities (Anugwo & Draai, 2014; Oke, Aigbavboa & Khangale, 2018); and the challenges requires urgent attention include high level world class managerial, planning and engineering skills; town, city and regional planning skills; as well as artisan and technician skills (Oke, Aigbavboa & Khangale, 2018).

According to Oke et al., (2018), demand for construction products and services are increasing, and challenges for skills shortages among construction workers are witnessing a low number

of younger people being attracted to the industry. According to Rameezdeen (2007), there is a need for a revaluing of the construction image to form a positive image – an industry which is valued by society. Oke et al., (2018), further state that there is a need for technical, business, managerial and other forms of skills for artisans and professionals for the South African construction industry to be competitive and successful.

Thus, for construction firms and contractors to attract skilled artisans and professionals, there is a need to improve on their welfare, increase their salaries and wages as well as improve on their total compensation, and image of the industry (Oke et al., 2018; and Rameezdeen, 2007).

According to Rameezdeen (2007), to attract young workers into the construction industry mass media campaigns could be very effective. Since labour shortages and skill shortages are some of the pressing issues in the construction industry, further research is needed to systematically study how young people perceive the image of the construction industry, what are the main influencing factors of the image formation among them and how the misconceptions regarding the industry could be overcome Rameezdeen (2007).

There was a need to stimulate innovation in the construction industry to develop the uniquely South African technological solutions required to provide and maintain economic and social infrastructure (Anugwo, 2013). An investment in construction innovation should be based on a review of the current state of construction technology and the –industry. An analysis of the drivers and trends are required that will determine the shape and future of the construction industry landscape (Anugwo, 2013).

According to Rameezdeen (2007) and cidb (2007) the difficulty of attracting and retaining highly qualified; and young people but relatively poorly remunerated academic staff, made it increasingly difficult to radically challenge throughput rates.

The learner ship system introduced new SETA-driven and funded training pathways and removed the tax benefit which was replaced by a refund on the skills levy. Under that system theoretical training was provided by CETA-accredited training providers and the learners were required to find jobs to obtain their practical training.

Research Problem Statement

The dominant perception of the image of the South African construction industry is not attractive enough for young skilled workers, and this challenge is a contributing factor for skilled shortages in the industry.

Study Hypothesis

The young people lack vital information about the positive image of the construction industry, and thus has exacerbated the skilled workers shortages in industry.

Objective of the Study

To assess the impact of the image of the construction industry towards attracting young and skilled workers in South Africa.

LITERATURE REVIEW

According to Rameezdeen (2007), construction in any country is a critical and important sector of the economy, which involves various key stakeholders with other areas of economic activities such as manufacturing and the use of materials, energy, finance, labour and equipment.

Oke et al., (2018) the issues of inadequate and lack of basic skills in the construction industry is threatening the future of the South African construction industry as there is increased demand for construction products and services.

Anugwo and Draai (2014) cited Rasool and Botha (2011), who claimed that South Africa is facing critical challenges in terms of debilitating skills shortage. It was noted that not only was its own skills production system grossly inefficient, but the situation had been degenerated by its own skilled people leaving the country at an alarming rate (Anugwo and Draai, 2014), and image of the industry may be a contributing factor.

As Oke, Ngwenya, Aigbavboa, and Khangale (2019) claim that one key challenges associated with skills shortages in the construction sector is that current young people are not attracted or interested in the construction industry as a career.

Oke et al. (2019) further affirm that root causes of this challenges are issues of unattractive nature of construction-related career, the dirtiness of the job, physically challenging, stressful and perceived as a dangerous nature of the career.

In other perspectives, Rameezdeen (2007), the image construct contained two main aspects namely cognitive and affective. Thus, the cognitive is referred to as perceptual, and it is concerned with beliefs and knowledge about an object while the affective was related to feelings or emotions about an object.

Rameezdeen (2007) claims that, environments and places have perceptual and affective images and that places additionally have an overall image that is a summation of both perceptual and affective components. Rameezdeen (2007) further claims that the main reasons, in the order of priority, became the most pressing concerns of the general public regarding the image of construction industry are: low quality of the construction product; low professionalism and skill among workers (non-availability of skilled workers); inconvenience caused to the public during construction in terms of noise and pollution; time overruns in the product delivery; and lack of management inputs during construction which causes accidents and high wastage.

The construction and engineering professions were often not regarded as a first career choice by many learners. It could be argued that it was owing to a combination of two reasons, namely the image of the industry and the lack of attractiveness of the industry in previous years.

Specifically, the stressors within the contracting sector (physical demands, long hours, remote sites and the nomadic lifestyle) resulted in very few young people regarding it as a career of choice. For example, in a study conducted in the Western Cape, only 4% of Grade 12 learners expressed interest in pursuing studies in construction-related disciplines (cidb, 2007).

Cidb (2007) further noted that the national pass rate in mathematics and the unattractiveness of the industry to prospective learners were adversely affecting the input into the skills supply pipeline. Learners required higher grade mathematics and -science to be able to enrol in construction- and engineering programmes for HE (Higher Education) courses.

The overall national university entrance pass rate in mathematics and science for the higher grade was about 3% in 2004. Furthermore, engineering training provided learners with analytical skills which were highly sought after by the financial services and other sectors. It resulted in a loss of qualified professionals to the construction- and engineering sectors. According to Stefan and Carl (2010) health, safety and education were the primary challenges identified there. As constructed facilities have become ever more complex, the specialist skills required to create those advanced too.

The challenge of continual learning and updating of skills and knowledge at individual-, organisational- and sectoral level was identified as significant. Through more direct collaboration between industry and educational institutions, a workforce was created that was more technically competent. Stefan and Carl (2010) further explained that the underlying problems differed by typically included demographic trends that saw fewer young people electing to undertake vocational training.

Instead they favoured the higher education route or careers in other sectors. The image of the construction sector, namely that it was dangerous, exhausting and unrewarding, was also seen as a major stumbling block for incoming talent. A direct result of the dwindling number of people coming into the sector and the incumbent workforce retiring was the erosion of knowledge and skills in the sector.

That was seen as particularly acute in the South African context where personnel with many years of experience left the industry – and often left South Africa in search of greater rewards elsewhere.

According to Jeffy (2008) the terrain for artisan training began to change dramatically from the 1980s and by the 1990s and with the drafting of a new education and training dispensation, the focus was not so much on artisan training as on producing skills for a more modern economy. Jeffy (2008) further noted that there did not appear to be an appreciation of the value of the artisan, whose role became intrinsically linked with the apartheid system. Instead, there appeared to be an unrealistic assumption that traditional artisan skills would not be required in the new economy, which would require ‘smart skill’.

According to cidb (2007) the quality of learners who were entering construction and engineering programmes was also recognized as a challenge to skills development. Academic institutions often highlighted that the critical skills and attitudes of matriculates, irrespective of their matric passes, were often unsuitable for the rigour required in engineering studies. That mismatch resulted in elevated attrition rates, where students changed their studies mid-stream and subsequently a low throughput rate was achieved in engineering programmes.

cidb (2007) further expressed the opinion that in an environment of decreasing investment in

construction, together with the widespread use of labour brokers, it had not been possible for many learners to get the necessary practical training experience to complete their studies, thus not achieving the relevant qualification.

According to Stefan and Carl (2010) the second challenge was a people focused one – that of labour force welfare and -improvement. That challenge partially rose from the labour- and skills shortage and its constituent factors. Stefan and Carl further said that meeting the skills shortage would require more integrated educational programs where industry, Further Education (FE), Higher Education (HE) and trade training establishments work closely together to define the skill needs and appropriate delivery methods for future and existing industry personnel. Furthermore, improving the industry's safety record would go some way in addressing the image problems it suffered from. That could be achieved by improving on-site working conditions and making more use of off-site manufacturing.

RESEARCH METHODOLOGY

Research methodology is a technique used to systematically undertake and conduct study investigations which aim at identifying variables and their relationship to one another. Leedy and Ormrod (2005) state that the qualitative survey method is suited to answer questions about the complex nature of phenomena, whilst the quantitative survey method is used to answer questions about relationships using variables with the purpose of explaining and controlling phenomena. In order to grasp and uncover the depth relating to the shortage of skilled artisans and its relation to the industry image in the South African construction industry, a quantitative survey was conducted.

It reflected on the extent of the image of the industry as a contributing factor to lack of attractiveness for, and shortage of skilled construction workers in the South African construction industry. For the purpose of obtaining the primary data, questionnaires were distributed by facsimile, mail, hand delivery and e-mail to recipients from the membership list database of the GMBA (Gauteng Master Builders Association).

The members of the Gauteng Master Builders Association (GMBA) were used as a source of primary data generation. Thus, a systematic sampling was used with a population size of 300 companies (from GMBA), sample size and questionnaires distributed were 150 respectively. The total number of respondents and analysed questionnaires were 54 – totalling a response rate of 18%. The standard measure used for selecting building contractors and companies was in accordance with the information received from the GMBA. However, the questionnaire was structured using mainly the Likert scale as it is commonly used in research involving questionnaires.

The questionnaire was structured using mainly the Likert scale as it is commonly used in research involving questionnaires. The questions required the respondents to indicate their level of acceptance or agreement with the statements by either ticking a box or circling a response (Collis and Hussey, 2003 p.184). The question response options were set up using a 5-point scale as follows: 1 (strongly disagree) to 5 (strongly agree); and an 'unsure' option was

also provided for all these questions. The data that has been collected in this study were used to test the study hypothesis.

RESEARCH FINDINGS AND DISCUSSION

The analysis of the findings obtained from the data is presented below. For ease of reference, it is conformed to the standard layout of the questionnaire, including headings.

Response to the Survey

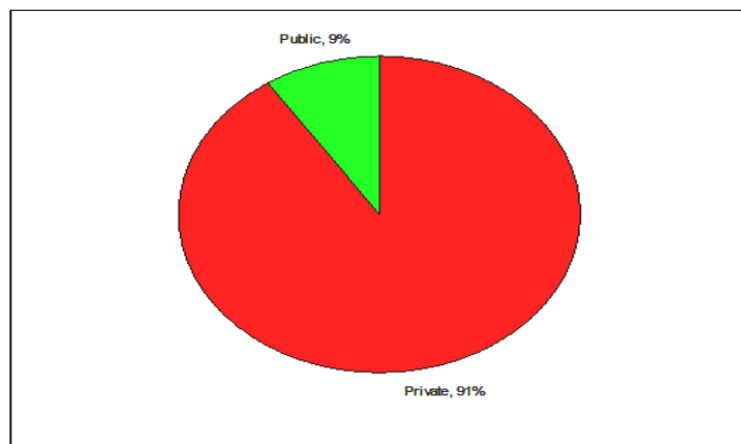


Figure 1: Response to the survey

Figure 1 shows that 91% of the respondents were from the private sector, whilst 9% of the respondents were from the public sector.

Gender response to the survey

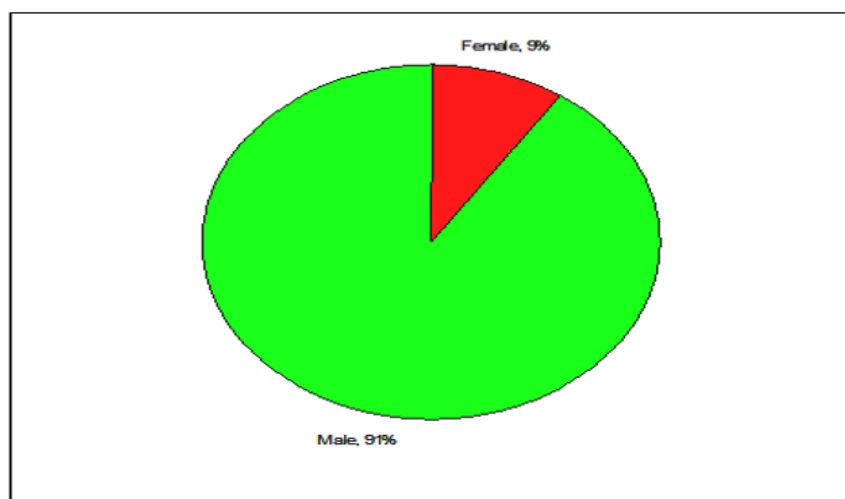


Figure 2: Gender response to the survey

Source: Researchers' Construct (2024)

Figure 2 indicates that 91% of the respondents were males and 9% of the respondents were females. The perception that men are predominate players in the building construction industry is therefore evident.

Discipline response to the survey

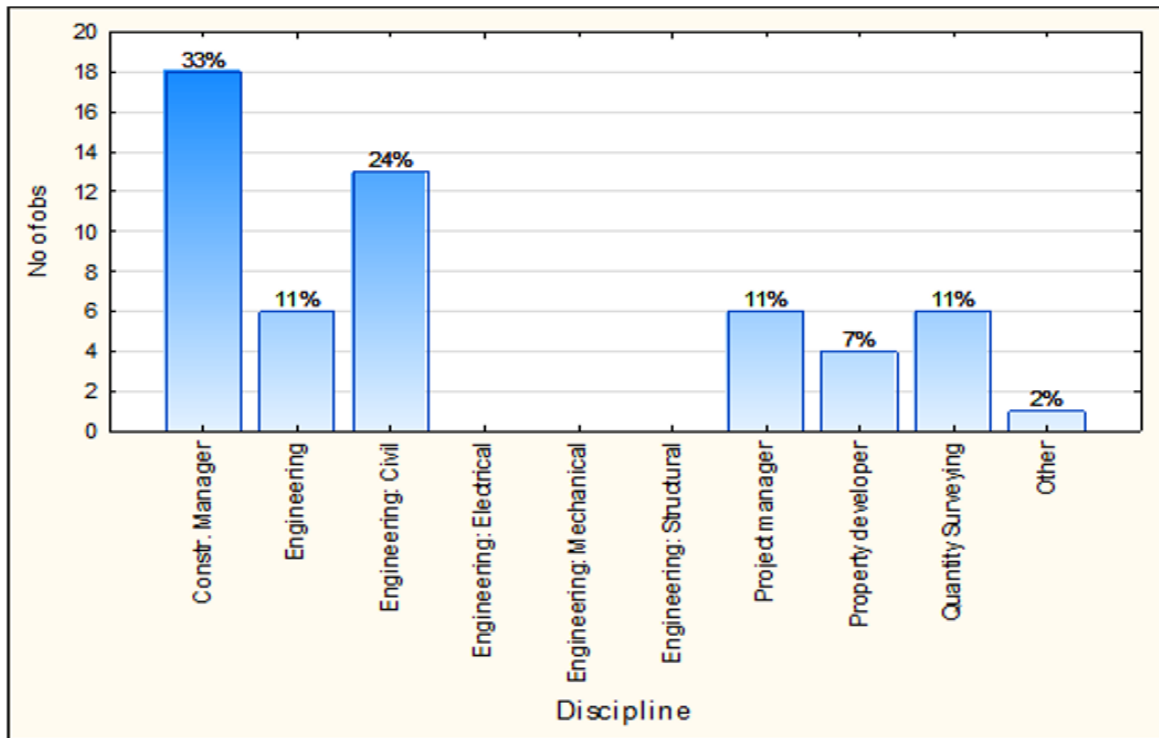


Figure 3: Discipline response to the survey

Source: Researchers’ Construct (2024)

Figure 3 indicates that 33% of the respondents were construction managers, 11% and 24% of the respondents were engineers and civil engineers respectively, whilst 11% of the respondents were project managers, 7% of the respondents represent the property developer, 11% of the respondents were quantity surveyors and 2% of the respondents were others.

Impact of Image of the Construction Industry in Contributing to Skilled Workers Shortages

Q1. On a scale of ‘strongly disagree’ to ‘strongly agree’, please indicate to.....

Table 1: To what extent have the following factors contributed to the image of the industry about its shortage of skills?

Factor Response (n=54)	Response %						Mean score	S Deviation
	Unsure	Strongly.....Strongly agree disagree						
		1	2	3	4	5		
Exposure to harsh and unsafe working conditions	1.85	5.56	3.70	11.11	31.48	46.30	4.11	1.12
Low salaries and wages for workers	0.00	1.85	5.56	31.48	42.59	18.52	3.70	0.90
Prospective learners regard a career in the industry as a second choice	5.56	1.85	11.11	37.04	20.37	24.07	3.57	1.06
Perceptions toward women in the industry	11.11	11.11	11.11	14.81	25.93	25.93	3.50	1.37
Increasing demand of many years' experience for workers during recruitment	1.85	3.70	20.37	35.19	24.07	14.82	3.26	1.14
Higher demand of academic standard	1.85	1.85	18.53	40.74	33.33	3.70	3.19	0.89
Lack of vital information to prospective learners	5.56	7.41	33.33	20.37	18.52	14.81	3.00	1.23
Lack of support and sponsorship by organisations toward the learners	7.41	3.70	27.78	38.89	12.96	9.26	2.96	1.01
Lack of appreciation of the value of artisans by senior- and middle management personnel.	11.11	11.11	16.67	37.04	14.81	9.26	2.94	1.14
Inadequate simulation programmes that target the prospective learner when at school and post school years (school leavers)	1.85	5.56	37.04	29.64	18.51	7.40	2.85	1.06
Are the organisations within the related industrial activities engaged in poaching of skilled workers	38.89	22.22	12.96	12.96	9.25	3.70	2.33	1.29
Increasing usage of labour brokers for recruitment approach	29.63	31.48	12.96	9.26	9.26	7.41	2.26	1.43
Increasing usage of hi-tech tools and methods in the industry	5.56	22.22	38.89	22.22	9.26	1.85	2.25	1.00
Increasing techniques of merger and acquisition between local and international organisations	24.07	29.63	25.93	9.26	9.26	1.85	2.05	1.12
Increasing engagement of contract job agreements other than permanent jobs	11.32	43.40	20.75	11.32	9.44	3.77	1.98	1.21

Source: Researchers' Construct (2024)

The responses in Table 1 reflect that most of the respondents agreed that issues related to the image of the industry included the following: that learners regard the industry as a second choice, harsh and unsafe working conditions, low salaries and wages and the perceptions toward women in industry' have mean scores > the mid-point of 3.00 and fall within the 3.40 < mean score ≤ 4.20 range. The effect is between some effect to less than major / less than major toward the factors that contributed to the shortage of skills in the industry. This confirms

the results depicted in Figure 2, that 9% accounts for males are the dominating gender, whilst only 9% accounts for females. However, it is obvious from the responses that factors such as high demand of academics' standards, lack of information to prospective learners and demand of many years' experience for recruitment are the major contributors to the menace of skills crisis in the industry. Thus, few partially disagreed whilst many remain on neutral grounds with respect to the impact and effect the abovementioned factors have had on the shortage of skills in the industry. The mean score falls within the $2.60 < \text{mean scores} \leq 3.40$ range, which indicates that these factors have between disagree to neutral / neutral. This shows that it has more or less impact on the shortage of skilled workers in the industry.

From the responses it can also be deduced that the usage of labour brokers for recruitment, the increasing engagement of contract job agreements other than permanent jobs, increasing usage of hi-tech tools and methods and organisations with related industrial activities involves in poaching of skilled workers has slight or no effect on the factors that contributes to shortage of skills. These factors have mean scores that falls within the $1.80 < \text{mean score} \leq 2.60$ range, which presents the factors have between strongly disagree to disagree / disagree.

Table 2: Analysis of result to test the study hypothesis

Factor Scale: Strongly agree (1) to Strongly disagree (5)	Mean score	Reference	Hypothesis supported	Inconclusive	Hypothesis not supported
Prospective learners regard a career in the industry as a second choice	3.57	Table 1	x		
Lack of vital information to prospective learners	3.00	Table 1	x		
Inadequate simulation programmes that target the prospective learner when at school and post school years (school leavers)	2.85	Table 1	x		
Total			3	0	0

Table 2 reflects a mean score above the midpoint of 3.00. It indicates that the respondents had the opinion that the shortage of skills in the construction industry can be attributed to factors such as the prospective learners regarding a career in the construction industry as a second choice. In addition, the lack of vital information about the industry to prospective learners can be viewed as a major contributor to the skills crisis in the industry. According to cidb (2007) many learners often do not regard the construction and engineering professions as a first career choice. It could be argued that it was due to a combination of two reasons, namely the image of the industry and the lack of attractiveness of the industry in previous years. Specifically, the stressors within the contracting sector (physical demands, long hours, remote sites and the nomadic lifestyle) resulted in very few young people regarding it as a career of choice. For example, in a study conducted in the Western Cape, only 4% of Grade 12 learners expressed interest in pursuing studies in construction-related disciplines.

Respondents were unsure whether the inadequate simulation programmes that target the prospective learner during the school and post school years (school leavers) acted as a major contributor to the skills crisis. It is reflected in the mean score below the midpoint of 3.00 and

is therefore deemed conclusive. Moreover, it can be agreed that the respondents are of the opinion that major causes of the skills crisis in South African construction is due to the lack of prospective learners. Prospective learners would mean a sufficient and dominated number of the available skills of artisans in order to ensure a steady skills-supply pipeline in the industry.

CONCLUSION AND RECOMMENDATIONS

There are lots of challenges bedevilling the building construction industry globally, more especially in an emerging developing country like South Africa. The major attribute of this menace is somewhat rooted in key factors such as the poor industry image of the construction industry and its activities. The poor image of the industry significantly impacts on attractiveness and competitiveness of the industry attracting and retaining young and skilled workers. Thus, elements of poor image of the study causing shortage of skilled workers are exposure to harsh and unsafe working conditions, issues of low salaries and wages for workers, young learners regard a career in the industry as a second choice; and senior managers' lack sense of appreciation and the value for artisans; and also the study concluded that inadequate simulation programmes that target the prospective learner when at school and post school years (school leavers), and oversea organisations engaging in poaching of skilled workers are exacerbated the shortfall of skilled construction workers in the South African construction industry. The study therefore recommends that South African construction industry practitioners and key stakeholders should intensely campaign towards promoting activities that project a positive image of the industry in order to attract and retain young and skilled workers within South Africa.

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