

**An Investigation into the employment of Persons with Disability (PWD) in the
KwaZulu Natal (KZN) construction industry.**

University of KwaZulu Natal

by

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Supervisor

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COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE

DECLARATION - PLAGIARISM

As the candidate's Supervisor I agree to the submission of this thesis.




Signed:

Date: 30/11/2016

Prof. T. C. Haupt

I, Sheldon Govender declare that:

1. The research reported in this thesis, except where otherwise indicated, and is my original research.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
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S. Govender

ABSTRACT

South Africa has a history of oppression and the legacy of the apartheid regime still sounds on today in the form of discrimination. The movement away from this image has been embarked upon since reaching change in 1994 when apartheid was overturned. The implementation of equity policies in South Africa have been inhibited by negative issues surrounding employing Persons with Disabilities (PWD). Despite the current skills shortage in the KwaZulu Natal (KZN) construction industry, adequately skilled PWD are still overlooked and underrepresented.

This dissertation aimed to examine the attitudes, perceptions and knowledge of potential employers, labourers and PWD as well as the implementation of equity policies in the KZN construction industry to determine why PWD were so underrepresented, through the quantitative survey of 50 construction firms, 30 Labourers and 25 job-seeking PWD who were purposively selected from a defined database. The close-ended questionnaire was used as the surveying instrument. There was a 70% response rate. The data were analysed with the Statistical Package for Social Science (SPSS) version 24.

Even though government legislature was in place regarding equity policies, it was revealed there was still difficult to apply these policies and despite PWD being suitably qualified to perform certain functions on site, they were not being considered. Reasons opined included the negative attitudes of potential employers regarding PWD, lack of knowledge of potential employers regarding employment of PWD, physical barriers to the participation by PWD and unwillingness to actively accommodate PWD.

There was a general consensus that given the opportunity, adequately skilled PWD could potentially play a positive role in alleviating the skills shortage in the KZN construction industry. For this to happen, there needs to be greater awareness by potential employing contractor's about the capabilities of PWD, the actual cost of reasonable accommodation in the execution of on-site functions and the implementation of more effective company-compliance management at a provincial level.

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Abbreviations

CIDB - Construction Industry Development Board

EEA – Employment Equity Act.

KZN – KwaZulu Natal Province in The Republic of South Africa.

TAG - Guidelines on the Employment of People with Disabilities (Department of Labour)

SPSS - IBM Statistical Package for Social Science

OECD - Organisation for Economic Co-operation and Development

PWD – Persons with Disabilities

CHAPTER 1: BACKGROUND AND SCOPE OF STUDY

1.1 Definition of Disability

According to Metts (2000) approximately one in every ten people are disabled worldwide. The lives of persons with disabilities (PWD) - and the quality of their lives - are primarily affected by two disadvantages, namely the disability itself and the response of the general public to their disabilities in the form of discrimination and stigma (Corrigan, 2014).

This study examines the stigma and discrimination associated with disability in the construction industry, and posits that the barriers to the participation of persons with disability (PWD) in the construction industry results from:

- Persons with hiring responsibilities in construction firms in general showing unwillingness to consider PWD as viable candidates for positions within the industry. This despite the fact that hiring PWD may possibly help alleviate certain skill shortages;
- Existing buildings that do not accommodate the needs of the physically disabled;
- A general lack of commitment by the industry to train the physically disabled for jobs in this sector;
- Social provisions such as special education and segregated transport where the disabled are segregated on the grounds of their disability;
- Lack of access for disabled persons to many information formats. For example, a deaf person cannot meaningfully watch a training video that does not have subtitles. A format is deemed inaccessible if it does not cater to the impairment of the disabled person; and
- Organisational policies that are inflexible, particularly those involving practices and procedures to accommodate persons with disabilities (Maja, *et al* 2008).

The Northern Officers Group in Leeds (TNOG, 2015) suggests that the societal stigma related to disabilities can be directly attributed to a misunderstanding of the meaning of what the term “disabilities” actually means. It is important to note the difference between impairment and a disability and define these terms as:

Impairment – “An injury, illness or congenital condition that causes, or is likely to cause, a loss or difference of physiological or psychological function.”

Disability – “The loss or limitation of opportunity to take part in society on an equal level with others due to social and environmental barriers”

A disabled person is described as a person with impairments who experiences a disability resulting from negative interactions with his or her social environment. The impairment is part of the negative interaction between the parties involved but it is not the cause of, nor does it justify someone’s disability (TNOG, 2015).

The Disabled World (2016) describes disability as being a function or condition of an individual who is deemed significantly impaired when compared by standards usually applied to a normal reference group. ‘Disability’ is used to refer to the impairments to an individual’s functioning, physical, sensory, cognitive and intellectual abilities that inhibit the individual from carrying out their normal day-to-day activities.

The impaired person faces a life of multi-dimensional adversity. There are three distinct dimensions recognised by the International Classification of Functioning, Disability and Health (2015), namely the impairment of body structure and function, activity restrictions and participation restrictions.

The individual may have been born with the impairment or it may have been a result of an incident during the life of the individual. In 2001, The World Health Organisation (WHO) listed disabilities as follows:

- Mobility and Physical impairments;
- Spinal Cord Disability;
- Brain Disability;

- Vision Disability;
- Hearing Disability;
- Cognitive or learning Disability;
- Psychological disorders;
- Invisible Disability – that which exists but cannot be seen.

In South Africa, the Employment Equity Act 1998 (EEA) recognises the following as disabilities:

Development Disability

- Attention Deficit Disorder
- Asperger Syndrome
- Down Syndrome
- Dyslexia

Mental Disabilities

- Bipolar Disorder
- Depression
- Dyscalculia
- Memory Loss
- Obsessive Compulsive Disorder
- Schizophrenia
- Alzheimer's Disease
- Anxiety Disorder

Hearing Impairments

- Deafness
- Meniere's Disease
- Tinnitus
- Hearing loss

Mobility Impairments

- Rheumatoid Arthritis
- Osteoarthritis
- Cerebral Palsy
- Muscular Dystrophy
- Parkinson Disease
- Paralysis
- Stroke
- Amputation
- Polio

Visual Impairment

- Blindness
- Blurred Vision

This study considers the South African legislation to be more appropriate to local circumstances, rather than the list proposed by the WHO (EEA, 1998).

1.2. Disability exclusions

When considering exclusions applied to PWD, the Integrated National Disability Strategy (INDS, 2015) notes that key elements include discrimination and inequality in the workplace. PWD have difficulty accessing basic human rights and have also been excluded from the mainstream of society. Two of the major exclusions can be described as:

- Poverty exclusions where the poor, due to adverse circumstances, are not afforded access to basic facilities making them more prone to disability; disability exacerbates poverty, making this a vicious cycle;
- Unemployment exclusions, where the majority of PWD rely on government grants to survive. These subjects have been excluded from the open labour market for various reasons including a lack of proper education and experience, lack of access to public facilities as well as the generally poor attitude of the employing community. (INDS, 2015)

1.3 Policies that protect the disabled in South Africa

The South African Constitution states that, “South Africa belongs to all who live in it; we are united in our diversity.” – From the preamble to Constitution of the South African, page 1.

There are policies that are in place to protect PWD, and these include inter alia:

- Section 9 of the Constitution that provides for the enactment of national legislation to prevent or prohibit unfair discrimination and to promote the achievement of equality. “Equality includes the full and equal enjoyment of all rights and freedoms. To promote the achievement of equality, legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination may be taken. The state may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy, marital status, ethnic or social

origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth. No person may unfairly discriminate directly or indirectly against anyone on one or more grounds in terms of subsection .”

- The Promotion of Equality and Prevention of Unfair Discrimination Act that serves to prohibit the unfair discrimination on the grounds of disability, Point 9 –“No person may unfairly discriminate against another person on the grounds of disability, including denying or removing from any person who has a disability, supporting or enabling facilities necessary for their functioning in society. Contravening the code of practice or regulations of the South African Bureau of Standards that govern environmental accessibility, failing to remove obstacles that unfairly limit or restrict persons with disabilities from enjoying equal opportunities or failing to take steps to reasonably accommodate persons with disabilities.”.

- The Employment Equity Act 55 of 1998 (EEA) protects people with disabilities against unfair discrimination and entitles them to affirmative action measures. It further states that at least 2% of a company’s workforce needs to be disabled. There is a R500 000 penalty for a first time offender and R900 000 for repeat offenders within a 3 year time period (Strydom, 2004).

- The Labour Relations Act 66 of 1995, chapter viii 1 (f), 10 (1), 11 (b) (2), protects the rights of the disabled. Schedule 8 and item 11 say that no employee should be dismissed on the grounds of disability and that the environment in which the employee was working should be investigated to see how it could have been better adapted to suit the disabled person.

- The Code of Good Practice relating to the requirements of the EEA on key aspects of disability in the workplace section 1.1-1.3 “The Code is a guide for employers and employees on key aspects of promoting equal opportunities and fair treatment for people with disabilities as required by the Employment Equity Act (the Act). The Code is intended to help employers and employees understand their rights and obligations promote certainty and reduce disputes to ensure that people with disabilities can enjoy and exercise their rights at work.”

- The South African government has produced The White Paper on Integrated National Disability (1997) which proposes methods of promoting and protecting the rights of the disabled. Section 1, the Summary of Objectives states “There must be an integration of disability issues in all government development strategies, planning and programmes. There must be an integrated and co-ordinated management system for planning, implementation and monitoring at all spheres of government. And, to complement the process, there must be capacity building and wide public education.”
- The National Skills Development Strategy 2005-2010 has committed to providing assistance and skills development, with a target of 4% of the working population being disabled.
- Broad-based Black Economic Empowerment Act 53 of 2003 contains a section defining BBEE with section 1.3.2 stating “The economic empowerment of all black people including women, workers, youth and disabled people, people living in rural areas, through diverse but integrated social and economic strategies.”
- The Occupational Health and Safety Act 85 of 1993 states “The employer must provide and maintain a working environment that is safe to all employees and the needs of employees with disabilities must be included. Evacuation procedures should take into account any specific or additional measures to ensure that an employee with a disability is safely evacuated from a building or work site during emergencies.”

South African President Jacob Zuma indicated in the State of the Nation Address (SONA) in 2014 that a Disability Act was being created to deal with the enforcement, non-compliance and implementation of the United Nations Convention on the Rights of Persons with Disabilities. The convention covers areas such as accessibility, rehabilitation, participation in political life, equality and non-discrimination of PWD.

Despite legislation and policies, South Africa is still facing low PWD employment levels. Dube (2005) describes the reasons as being:

- A universal definition of a disabled person is not generally accepted and there is a general lack of understanding of this concept;

- At government level there is limited conceptual understanding about the plight of PWD as well as inappropriate or inadequate institutional arrangements;
- Policy implementation has been inconsistently addressed;
- There are capacity constraints in the form of inadequate resources at policy enforcement level that impact on implementation of policies;
- There is little commitment to policies; there is no evidence of performance management that would keep track of progress and allow for the development of these policies;
- Limited fiscal commitment has been demonstrated. It was shown in the National Budget review that R351m was set aside for Expanded Public Works Programme (EPWP) integrated grant for provinces and R251m was set aside for social sector EPWP for incentives for provinces. These are not entirely for PWD but PWD are included as a target population in these sums. The total allocated budget was R85b showing that a portion of the R602m allocation to EPWP total is relatively low in the holistic view (Budget review, 2015).

1.4 Statistics on the employment of the disabled in South Africa

When the latest census regarding disability was published in 2011, Statistics South Africa (SSA, 2011) estimated a population of 54.96 million in South Africa. There are no current statistics showing the number of disabled persons within the country, and, according to the Integrated National Disability Strategy (2015), this lack of adequate information is because it would be almost impossible to ascertain an accurate number. The reasons for the inability to gather information is stated as:

- Different definitions of disability;
- Poor service infrastructure for people with disabilities in underdeveloped areas;
- Negative traditional attitudes towards PWD;

- Levels of violence having impeded the collection of data; and
- Different survey technologies (INDS, 2015).

SSA, in 2011, stated that the prevalence rate of PWD in South Africa is 7.5%, which many have argued to be incorrect owing to the difficulty of collecting relevant data. In this study the rate of 7.5% is accepted as SSA is the statistical authority in this country. Thus it is assumed that the South African population includes 4.125 million disabled persons as the population stands at 55 million in total. When comparing the South African status to more developed countries such as the United States of America (USA), with 19 % disability prevalence (US, Census Bureau Reports, 25 July 2012) and England with 18% prevalence (Office for Disability Issues, 2009/10) there would appear to be a large inaccuracy in the South African estimations. According to the Joint Publication of the World Health Organisation (2011), 15% of the world's population consists of PWD. This statistic is probably more representative of South Africa as confirmed by various writers including Ferreira (2015). According to Maja et al., (2008) only 1.8% of the disabled population is employed. This statistic suggests that only 74 250 disabled people are employed in South Africa. The total may be less than this. An employment equity study of over 100 large to small firms within South Africa was done by Global Business Solutions in 2001 covering over 150, 000 employees. It was found that less than 1% of the total workforce was disabled and further, only 0.35% of new appointments were persons with disability.

In response to questions the South African President, Jacob Zuma, stated, “The recent Employment Equity Commission report indicated dismal figures with regards to the representation of persons with disability at top and senior management levels in the workplace. This was put at 0.8%, together with that of African women (Hansard 2011)

1.5 The shortage of skills within the construction industry

It is axiomatic that South Africa, with its general lack of skills in various sectors, would be better off with all skilled workers contributing towards the economic well-being of the country. According to the Department of Labour (2015), the disabled have a potentially significant role to play in this respect.

Wordon (2015) estimated that 800,000 skilled people emigrated from South Africa abroad, in the period 1995 -2005. Further, emigration was most prevalent among people of the ages 18 -44 and that emigration was not just a “white” action but is becoming more popular among the so-called black and coloured races, their emigration numbers increasing by 20% and 30% respectively over the same period. This exodus of skilled personnel means that South Africa is not only losing current skills but future skill sets as well (The Sunday Times, 30 March 2008).

According to the South African National Treasury Budget Review (2015), the South African Government will spend R813 billion on infrastructure over the period ending 31 December 2019. These investments will improve access by South Africans to healthcare, schools, water, sanitation, housing and electrification. Development to some roads, railways and ports have been planned. This represents growth opportunities across a lot of the country’s crucial sectors, predominantly the construction industry.

The construction industry does, however, have a growing skills shortage. Statistics issued by the Higher Education Department (2015) show a shortage of 46,000 artisans within South Africa. Price Waterhouse Coopers (PwC) SA Construction report (2014), stated that more than two-thirds of CEOs in the construction sector were anxious about access to key skills.

Human Settlements Deputy Minister Zou Kota-Fredericks (2015) has stated, “The property and construction sector can be a field of dreams with a myriad of opportunities for new job seekers.” This statement can be seen to give confidence to job seekers in the construction industry.

1.6 The potential of disabled persons in the construction sector

Many believe that the disabled do not possess the right attributes to work in the construction industry. However according to the Quadrapara Association of South Africa (QASA) (QASA, 2015) who have extensive interaction with PWD in a variety of situations that are related to construction, PWD possess exactly what is needed. QASA contend that disabled persons develop critical thinking abilities, are determined and goal oriented, have

qualities such as perseverance above that of many able bodied persons, value the job more, and are more likely to be productive and are absent less when compared to able bodied persons.

PWD also bring unique abilities to the built environment. One example is when working in a high noise environment, an able-bodied person might not be able to take the noise whereas a deaf person would not hear it. Arguably, the disabled person's impairment could make the task at hand easier when compared to an able-bodied person. QASA (2015) has also shown that PWD inspire their co-workers. To see someone who has overcome difficulties raises the collective morale, creating a good working environment and increasing productivity.

According to Job Accommodation Network (2009), PWD often do not need any more special treatment than is already given to ordinary able-bodied employees. For example, if an able-bodied employee needs permission to visit the doctor, the employee is usually allowed time or an employee who has bad eyesight may not be required to read a lot. Similarly, an employee with a bad back may not be required to carry anything heavy. Accommodation is already unconsciously made for able-bodied persons.

1.7 PWD in other sectors

Studies conducted by Maja, Mann, Singh, Steyn & Naidoo (2008), into the employment of PWD in both the motor manufacturing and banking sectors have shown that PWD have successfully participated in these demanding and in the case of motor industry, physically intensive environments. Of the 10500 employees in the motor company studied, it was found that PWD made up 1.5% and of the 1000 employees in the banking company, it was found that PWD made up 0.4%. Both these numbers are significantly low despite PWD found to be capable in their respective positions, and leaves a gap in the market that's a viable untapped skill source.

1.8 Problem statement

Despite the prevailing skills shortage, the South African construction industry has failed to recognise PWD as an additional source of construction skills while at the same time not complying with various government policies including the Employment Equity Act No. 55 of 1998, by continuing to exclude them from participating in the construction industry, resulting in low numbers of disabled employees within the South African construction industry.

1.9 Hypotheses

The hypotheses to be tested in this study are:

H1 – The KwaZulu-Natal (KZN) construction industry is not implementing government policies regarding PWD;

H2 – Employment of PWD will help alleviate the current construction skills shortage in KZN;

H3 – The KZN construction industry actively discriminates against PWD; and

H4 – Contractors resist creating special opportunities through redesigning construction activities to accommodate PWD.

1.10 Objectives

The study objectives are:

- To determine the employment strategy of construction firms in KZN to determine the pervasiveness of the implementation of policies pertaining to persons with disabilities;
- To establish whether there is a skills shortage in the KZN construction industry and whether persons with disabilities are being considered as a means of alleviating the shortage;

- To determine whether there is an underlying prejudice against the employment of disabled persons that prevents their entry and participation in the KZN construction industry;
- To identify the barriers to the entry of the KZN construction industry of persons with disability; and
- To establish whether construction stakeholders actively create opportunities for persons with disabilities to participate through minor changes to construction activities and the work environment.

1.11 Ethical considerations

Owing to the sensitive nature of issues involving PWD, the utmost care and consideration would be taken in dealing with PWD that are in line with the terms described in the ethical clearance (Anexure A). In compliance with international accepted ethical standards, no names of participants will be recorded on the various research instruments. Anonymity will be assured in this manner as no statement would be linked to any particular individual. No compensation will be paid to any participants in the study. Quality assurance will be done with respect to the following aspects:

- Quality of data capturing by encoders; and
- Frequency distributions run to check that variables contain only values in the accepted ranges and variable labels.

1.12 Methodology

The methodology for this study will be an extensive literature review as well as quantitative research methods in utilising a self-administered questionnaire. Opinions, attitudes, expectations and views of a selected sample of persons with disabilities and able-bodied persons within the KZN construction industry of significance to the topic will be gathered. This data will be statistically analysed using analytical software. The findings

from the data analysis will be compared to the findings from the literature review and used to formulate conclusions as well as recommendations.

The employment strategies of the KZN construction industry will be examined by providing questionnaires to persons in the construction industry involved in recruitment, PWD and general labourers, establishing whether there is a skills shortage and, if so, whether PWD are considered to fill those positions. To this end, the study will examine previous studies and review relevant literature and make use of questionnaires and participants in the industry. The questionnaires will again be used to gain opinions from other stakeholders to establish any underlying prejudice towards PWD.

Barriers will be identified using an in-depth literature review of previous studies done, as well as the legislation regarding the employment of PWD. A questionnaire will be administered to PWD to obtain their perspective regarding barriers they face. A questionnaire will be administered to contractors to establish whether they create opportunities for PWD through minor changes to the work processes, and to find out if they have made, or plan to make, any changes.

1.13 Limitations

The study will be subject to the following limitations, namely:

- The study will be conducted in KZN only due to financial constraints;
- The study will target only contractors as representatives of the construction industry (and not consultants) to get an accurate depiction of the “on-site” situation;
- For the purpose of this study, the researcher will use only disabilities that are restrictive but still allow function on an active construction site. The study will focus on PWD who have the capacity to function productively in one way or another on an active construction site.

1.14 Assumptions

The following assumptions have been made for this study, namely:

- Persons with disability are under-represented in the KZN construction industry;
- There are roles for disabled persons to play in the KZN construction industry;
- All participants fully understand the concepts tested;
- The information used in this study is without prejudice, and relevant; and
- The data that will be gathered and used in this study is factual, and accurate.

1.15. Significance of the study

Skills shortages in South Africa still pose a major threat to the sector. In lieu of this threat, this study proposes to look outside of the norm and to suggest that PWD be used to alleviate the skills shortage in the KZN construction industry.

1.16 Structure of the study

Chapter 1 – Introduces the problem of how PWD are not accommodated in the KZN construction industry and shows the need for the study to highlight their right to be recognised as equal contributors to the construction sector in KZN. It also outlines the problem statement, hypotheses, research methodology, study objectives, assumptions and structure of the study.

Chapter 2 – Approaches the in-depth literature review to find out what other authors have found in this field of study and to use their findings as a comparison for this study from an international point of view to a uniquely South African point of view, using relevant statistics. It examines what the legislation provides on the employment of PWD. It reflects on figures published by Stats SA describing the numbers of the disabled employment and the percentage available to join the construction sector. The chapter seeks to discover barriers to their entry using previous literature.

Chapter 3 – Details the research methodology and how it will be used in this study to serve the particular aims of this study. It will discuss the approach chosen and how it was

developed to meet the requirements of each objective. In this case, the instrument will be the questionnaires and the interviews (if need be).

Chapter 4 – This chapter contains the finding of the research that will consist of the data from the study as well as the information from the statistical data analysis.

Chapter 5 – The findings from the research data will be discussed and compared to the initial findings of the literature review. A summary will be produce on the holistic findings that will be accompanied by recommendations for future research in this field.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

From an international perspective, statistical information on PWD is provided by the Organisation for Economic Co-operation and Development (OECD) and the United Nations (UN) through various published papers. Many published works cover construction employment practice. Local legislation and white papers issued by the government have made a reasonably substantial contribution to the control and understanding of the problems of PWD (Lindsay, Goodfellow, Stergiou-Kita, Kirsh & Lero, 2013).

This chapter will examine and review literature covering both statistical reviews of the incidence and effects of disability, practices surrounding the problem within the construction industry and the perceptions and experiences of persons with disabilities as well as employers in the construction industry.

2.2 An international perspective

Substantial statistics and practices are examined by the OECD, an international economic organisation with 34 participating countries including South Africa. The OECD reports that many leading nations are not doing enough to assist the disabled. They suggest that it might be a viable option to create partnerships with trade unions, which may serve as watchdogs and bring a transformation to the employment of persons with disability within the membership of the OECD, and this would translate to the rest of the world (Etherington & Ingold, 2012).

PWD are among the most discriminated against, economically impoverished, politically marginalised, “invisibles” in society (Skills and Employability Department, 2008). This group does however represent approximately 10% of the world’s population with a population of 650M of which close to 470M are of a working age (Ibid). The United Nations (UN) has published that 82% of PWD in developing nations are living below the poverty line. Despite numerous successful inclusionary practices, globally there are still a

large number of barriers to the participation of PWD in the working environment. They go on to indicate some of these barriers:

- Legislative insufficiencies;
- Difficulty executing accommodation of PWD in the work environment in various ways including physical environment, access to information, training etc.;
- The image of industries being shown as predominantly for able-bodied persons; and
- Underlying negative attitudes still prevailing (Ball et al., 2005).

The rate of unemployed PWD that are of working age is estimated to be 80% to 90%. This is lower in industrialised nations, being between 50 – 70%. In most developed countries, the prevalence of unemployment within the working age disabled community is in the region of 50% (United Nations (UN) Enable, 2007).

To build a global picture, particularly of developed and developing countries this study examined the statistics covering the employment of PWDs in the countries that are regarded as influential countries in Africa. These nations influence SA in some way whether it is economically through trade, or through entertainment, or through travel.

- Europe: there are approximately 40 million PWD of which 43% to 54% were of working age. It was found that the unemployment rate was more than two to three times higher than that of able-bodied persons in the area (UN Enable Factsheet, 2007);
- The United States of America: The United Nations (UN) Fact sheet showed that only 35% of the disabled population that are of working age are employed, as compared to the 78% of the able-bodied persons of working age. That represents over twice as many PWD that are unemployed in the area (Ibid); and
- The Pacific and Asia: There are 370 million persons with disabilities, 238 million of them of working age. The disability prevalence rate in these areas is in excess of 80%, which represents more than twice the able bodied unemployment rate in the same area. (Perry, 2002).

2.2.1 The international legal framework

According to United Nations Enable (UNE) (2007) international law with regard to supporting legislation is important in the sense that it sets the standard in the global community of the promotion of human rights and in this case the rights of PWD. Further, these standards need to be translated into policies and effect positive change in the lives of PWD for them to be effective.

There are seven core human rights conventions regarding PWD that are acknowledged by the UNE namely:

- International covenant on international and political rights;
- International covenant on economic social and cultural rights;
- Convention on elimination of all forms of racial discrimination;
- ILO convention concerning vocational rehabilitation and employment (Disability);
- Inter-American Convention of the elimination of all forms of discrimination against persons with disabilities;
- African Charter of human and people's rights; and
- European Social Charter.

These laws are binding on countries that have endorsed them. There are laws that are part of international customary law that do not need to be endorsed, and two major laws are:

- Human rights law.
- The non-discrimination law.

There are international disability rules, resolutions, guidelines, principles and declarations that are not necessarily binding. They represent the moral commitment by a country in an endeavour to better the social and economic state of the country. The application of the international laws is done by enforcement through the domestic court system. The problem

arises when non-application is caused by the lack of awareness by courts on how to categorise and deal with the issues. The norms are not widely known and hence the international standard is not always kept up (Ibid).

2.3 The construction industry

Construction has been defined as the activity that creates all types of new buildings and engineered structures including the repair and maintenance of existing structures (Wells, 1984). The construction sector has been described as complex and a sector of economy that involves a range of stakeholders and linkages to other areas of activity (Hildebrandt, 2000).

It has been shown that the construction industry is a major contributor to the world economy in the following ways:

- Infrastructure and fixed capital;
- Direct contribution to the Gross Domestic Product (GDP);
- Provision of National needs; and
- Lastly and relating specifically to this study, it is responsible for large economic outputs within a country as it generates meaningful employment which leads to income for the people (Field & Ofori, 1988; Stasiak-Betlejewska; Potkány, 2015).

Like most major economic contributors, the construction industry suffers from a lack of meaningful participation by PWD and is dominated by able-bodied persons (Hildebrandt, 2000). When companies talk about diversification efforts in general, they are looking at efforts to bridge the gaps applicable to race and gender, with very little emphasis on disability (Lengnick-Hall et al., 2008).

2.4 Factors contributing to the low levels of PWD employment

2.4.1 The image of the construction industry

Rameezdeen (2006) has stated that despite the fact that the construction industry contributes substantially to economies, it has been synonymous with a negative image. More specifically the construction industry has a largely negative image in relation to persons with disabilities (Gale, 1994; Sangweni, 2015). The construction industry has always been associated with exceedingly high costs, and chaotic working conditions with a very poor health and safety record (Ball, 1988, 2014; Fayek & Seresht 2014). The majority of people see construction as dirty, non-professional, tedious, dangerous, cyclical and non-technical (Reid, 1995; Ginige, Amaratunge & Haige, 2007). This negative image has caused a wide belief that there are few worthwhile career opportunities within the construction industry and that PWD would have no place in such an environment for the sake of their own well-being. They are therefore deterred from pursuing careers in construction (Baldry, 1997; Pekuri, 2011).

An image-based theme called Corporate Social Responsibility (CSR) examines aspects of a business that reveal an image to society regarding the company's commitment to being ethically correct to all its stakeholders, including its workforce (Moirs, 2001). The World Business Council for Sustainable Business (2002) states that CSR is also concerned about the upliftment and positive contribution to a company's local community in terms of job creation. According to the United Kingdom (UK) Government (2005) CSR is the actions of the company that go beyond the statutory requirements to create a positive image.

Graves, Waddock and Kelly (2001) have six key fundamental objectives of CSR, which are namely:

- A workplace that is safe and comfortable for all employees;
- Human rights, which is an all-encompassing term relating to the human rights laws;
- Community involvement that represents upliftment of the community;

- Environmental protection that refers to not harming the environment in the business' activities;
- The market-place, that represents satisfying customer and supplier needs; and
- An ethical business agenda, that refers to fulfilling moral responsibilities to stakeholders in the business. (Ibid).

According to Rameezdeen (2006), the aspect of these six agendas that speaks directly to the involvement of PWD is community involvement. In general, the disabled are overlooked in community involvement and the focus instead turns to philanthropy. Studies conducted in Sri Lanka by Yin (1994) and Phoya (2012) attempted to survey the commitment to CSR by local construction businesses. The results show that most businesses do not know about the global concept of CSR. However, they are involved to varying extents with the six objectives, but with the disabled not forming a significant part of the commitment. This survey is a useful tool in the comparative strategy of this study as Sri Lanka is also a developing country.

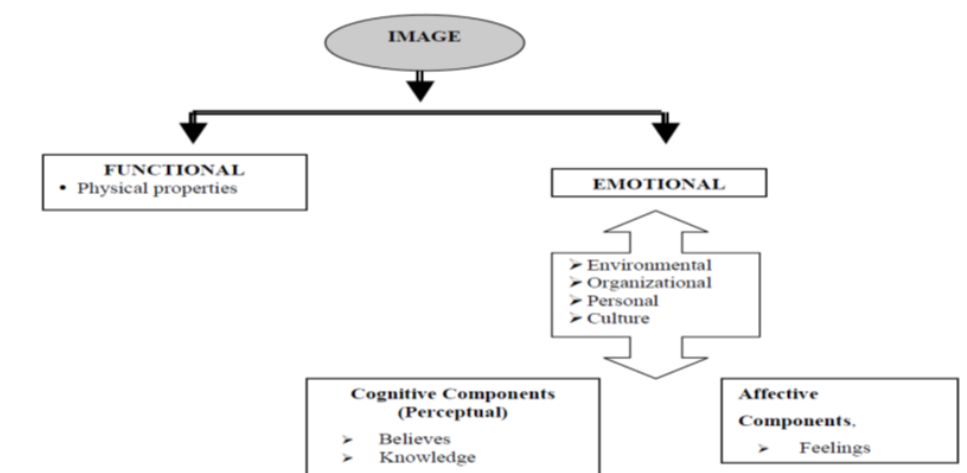


Figure 1. Contributors to a negative image

Source: Rameezdeen, 2006

Figure 1 shows the factors that build a negative image applying CSR principles. This visual analysis shows the interrelation between the physical environment and emotional factors.

These are the general impressions that lead to more detailed evaluations of those within the industry, resulting in one developing an image from a network of meanings stored in one's memory. The formation of this image is a multi-dimensional one (Grunig, 1993; Helm, 2007).

2.4.2 Awareness of opportunities by persons with disability

The negative image of the construction industry has caused a negative attitude in the minds of jobseekers who may have considered the construction industry for employment. This negative attitude also contributes to the shortage of skills in the industry (Rameezdeen, 2006). To get more persons with disability to participate in the construction industry, there needs to be greater awareness regarding opportunities for them (Fawcett, 1999; Tshobotlwane, 2005). Traditional recruitment processes are an obstacle regarding the employment of PWD. To encourage employment of PWD, these processes need to change (Olsen, 2001). Offering training to PWD to fill positions in construction is one viable way to encourage PWD to participate, even if they were not originally interested (Fawcett, 1999; Tshobotlwane, 2005). This training process can be embarked upon once the potential employer has distinguished what activities PWD can realistically and successfully perform on site. There is an option to rework inputs to activities to make it possible for persons with disability to perform them (Haupt, 2006).

2.4.3 Construction industry attitudinal barriers towards persons with disability

Potential employers see PWD as permanently incompetent. The adoption of this negative attitude has caused potential employers to be closed to the possibility that persons with disability can perform certain designated functions and they focus on all the functions they cannot do. This negative focus has caused a chronic prejudice in the work place that sees potential employers deterring PWD by making the route to employment for PWD very difficult (Lagadien, 1996; Van Niekerk, 2013).

Table 1. Attitudes of employer's regarding hiring PWD

	Reason	Percent of respondents		
		In agreement	Strongly agree	Strongly disagree
1	They are worried about the <i>cost of providing reasonable accommodations</i> so that workers with disabilities can do their jobs	81.4	30.1	2.9
2	They <i>don't know how to handle the needs</i> of a worker with a disability on the job	80.9	25.4	4.1
3	They are afraid they <i>won't be able to discipline or fire</i> a worker with a disability for poor performance, because of potential lawsuits	80.2	23.4	4.8
4	They can't ask about a job applicant's disability, making it <i>hard to assess</i> whether the person can do the job	73.3	20.3	4.9
5	They are concerned about the <i>extra time</i> that supervisors or co-workers will need to spend to assist workers with disabilities	70.9	14.8	3.8
6	They are worried about <i>other costs</i> , such as increased health insurance or worker's compensation premiums	69.9	22.8	4.2
7	They are afraid the workers with disabilities <i>won't work up to the same standards</i> as other employees	68.5	12.1	5.4
8	They rarely see people with disabilities <i>applying for jobs</i>	66.3	12.5	8.0
9	They believe that people with disabilities <i>can't do the basic functions</i> of the jobs they apply for	55.8	8.1	8.9
10	They <i>discriminate</i> against job applicants with disabilities	53.3	12.8	12.6
11	They are concerned about <i>attitudes of co-workers</i> toward the person with a disability	46.7	7.1	8.8
12	They find that job applicants with disabilities <i>don't have the necessary skills</i> and experience	41.8	6.2	12.3
13	They think of workers with disabilities as " <i>problem employees</i> "	40.9	5.9	12.3
14	They find that job applicants with disabilities <i>don't present themselves well</i> in interviews	31.5	3.9	12.4

Source: Kaye, Jans and Jones (2011)

2.4.4 Attitudes towards disabled persons

A study done in the USA by Kaye, Jans & Jones (2011) highlighted two tiers of reasoning for why employers would not hire PWDs.

From table 1 it is evident that the top three reasons as to why they would not hire the disabled and these reasons include:

1. Employers were concerned by what they thought were high costs associated with employing the disabled. They were concerned that “reasonable accommodation” would cost too much, they would have to change the entire work set-up and that would affect the bottom line. – (‘Reasonable accommodation’ means necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms.);
2. Employers were concerned about the lack of concrete knowledge of how to deal with the disabled. The fear was that there would be an added burden on managers to learn about the disabilities and learn about the laws surrounding the disabilities. This added burden would also affect the productivity of the staff; and
3. Employers were fearful of being stuck with an employee who could not be disciplined or fired owing to potential legal problems in both labour law and disability employment law. This fear stems from the stereotype that any mistake could lead to legal action and that the disabled have the attitude that they can get away with anything owing to their disability. This litigation leads to bad publicity and ever growing legal costs.

The second tier of reasons is the:

1. Difficulty assessing an applicant’s ability or inability to perform the specific task in the job description. There is a stereotype that the disabled cannot perform functions on par with able-bodied counterparts;

2. Employers had concerns over perceived extra supervision of the disabled in the workplace compared to that given to the able-bodied workers. This stereotype is a result of the lack of exposure many recruiters have with the disabled; and
3. Employers are concerned that the presence of the disabled person would negatively affect the attitude of the co-workers, leaving a feeling of inequality in the workplace that could affect productivity.

Research by Lengnick-Hall, Gaunt & Brooks (2008) showed that employers believed that PWD are involved in more work-related accidents than able-bodied persons. This is a misconception and both groups have almost the same accident rate. They also dispelled the myth that employing PWD brings litigation associated with termination. From July 1992 to September 1997, the Equal Employment Opportunity Commission in the United States received 90,803 complaints under The American Disability Act (ADA):

- 29% was failure to accommodate;
- 9.4% was discrimination at hiring stage; and
- 62.9% was wrongful termination.

From 1997 to 2006 only 19% of complaints resulted in awards for the complaining parties. According to Allbright (2001) even though fear of litigation may have some sort of effect on the employment of PWD, it is often more overstated than it is justified. Greenwood and Johnson (1987) and Hernandez, McDonald, Divilbiss, Horin, Velcoff & Donoso (2008) suggest that potential employers often do not hire PWD because they fear a negative reaction from their existing able-bodied staff resulting in lower productivity and higher costs of production. Stone and Collela (1996) and Schur, Kruse, Blasi and Blanck (2009) suggest that there are three main reasons why some able-bodied co-workers are uncomfortable with the employment of PWD:

- They are afraid that their own workload will increase to accommodate the PWD;
- They are afraid that some disabilities are contagious; and

- The negative effect of interpersonal outcomes, namely they are afraid of how to act around the PWD.

All these feelings play an important role in organisations especially where team members are involved in the hiring process.

According to Lengnick-Hall et al. (2008), potential employers are afraid that customers would react negatively towards employees with disabilities. Customers without disabilities have similar fears to those of the co-workers in that:

- They do not quite know how to treat a PWD; and
- They have feelings of awkwardness, discomfort and ambivalence when interacting with PWD.

Cheshire (2002) conducted research in the United Kingdom that showed employers are most concerned about maximising their profits and feel that employing PWD will reduce their profit margin. This feeling has caused the employer to adopt a negative employment attitude towards all PWD and lends a feeling of prejudice towards them that precludes the possibility of employing them.

2.4.5 Health and Safety

According to the Health and Safety Executive (2014) there are ways of dealing fairly with PWD and affording them equal job opportunities within the bounds of health and safety. Further, health and safety with disability is a joint venture between the employer and the employee and both parties should be responsible for making sure that PWD are safe at work. One of the key methods of executing this strategy is what is known as a risk assessment. Risk assessment has been described as a careful inspection of what, in the place of work, could cause harm to people, so that one can decide whether or not one has made enough provisions or should do more to prevent harm to one's employees or the surrounding community (Burgon, 2013).

When undertaking a risk assessment, the employer must be careful to include persons with disability. It starts with medical and psychological testing that is aligned with the

employment equity strategy and is relevant and appropriate to the outputs of the designate job. According to Health and Safety Executive (2014) the employer should ask the PWD about the work environment and get an idea of what they think might be harmful to them or others and use this in the assessment.

It is globally accepted that if there are five or more employees, the findings of the assessment need to be written down and updated regularly. Employers cannot make an assumption about PWD regarding what they can or cannot do. They have to look at each PWD individually and use a risk assessment to identify their potential role in the workplace (Ibid).

2.5 The South African context

South Africa like every country needs all available skilled labour to contribute to alleviating the skills shortage faced in the country in order to prosper. Unlike most other countries, South Africa has a history of oppression and the legacy of the apartheid regime still sounds on today in the form of discrimination. The movement away from this image is one that has been embarked upon since 1994 when apartheid was overturned. Owing to the fact that the South African democracy is still in its fledgling state and that its history has to be taken into account in any policy making, South Africa has unique features regarding, for example,

- Equality;
- Employment; and
- Acknowledging and protecting PWD (Integrated National Disability Strategy, 2015).

2.5.1 The employment status of PWD of working age in KwaZulu-Natal

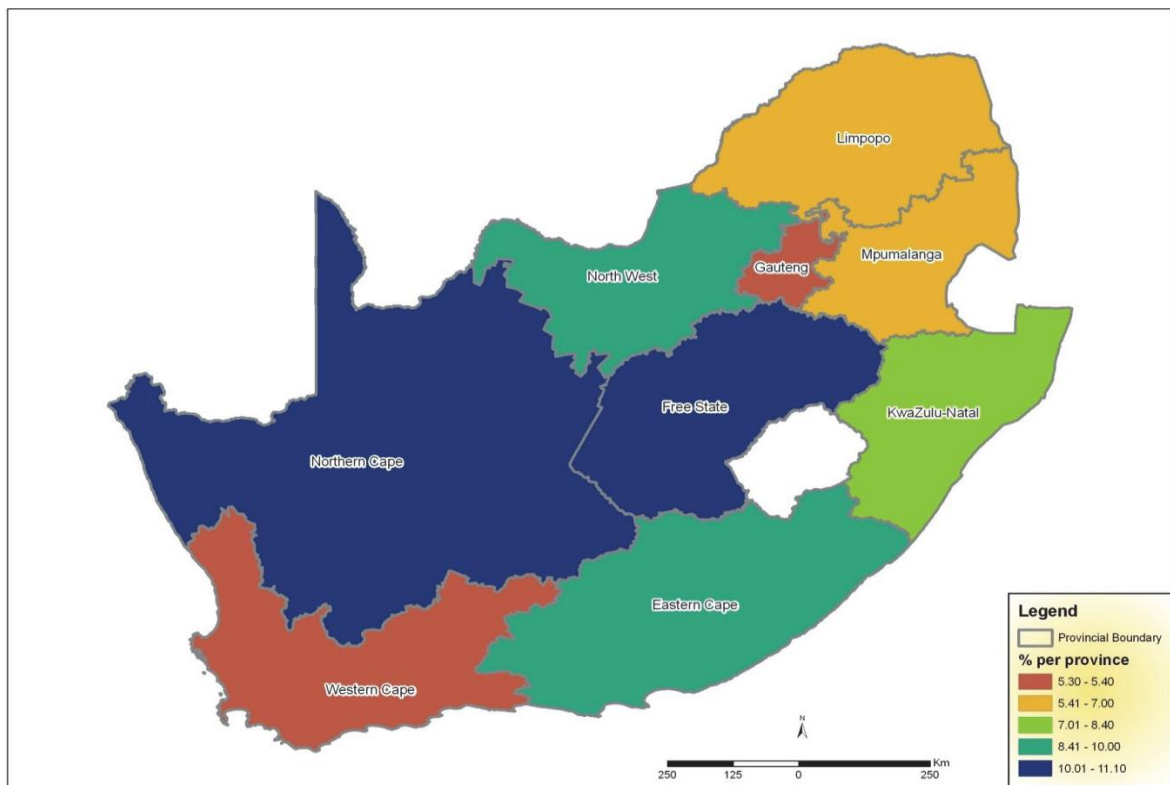


Figure 2. South Africa and the prevalence of disability in each province.

Source: Stats SA (2011)

According to Stats SA (2011), a census has shown a disability prevalence of 7.5% in South Africa and has shown that disability is more prevalent with females (8.4%) as compared to males (6.4%).

From table 1 it is evident that in KZN there are approximately 8.4% of the population suffering with some kind of disability; that equates to 620,481 PWD. This number is relatively high when compared to the other provinces that are also very economically active, with KZN 58% more than Gauteng and 56% more than the Western Cape.

Table 2. Disabilities per age group

Age group	With disabilities		Without disabilities		Total	
	N	%	N	%	N	%
5-9	447 843	10,8	3 719 835	89,3	4 167 678	100,0
10-14	161 828	4,1	3 802 210	95,9	3 964 038	100,0
15-19	108 738	2,6	4 118 948	97,4	4 227 686	100,0
20-24	99 665	2,4	4 128 757	97,6	4 228 422	100,0
25-29	100 371	2,5	3 906 800	97,5	4 007 171	100,0
30-34	96 274	3,0	3 104 571	97,0	3 200 845	100,0
35-39	108 559	3,8	2 735 168	96,2	2 843 727	100,0
40-44	132 672	5,5	2 283 966	94,5	2 416 638	100,0
45-49	189 774	8,7	1 998 996	91,3	2 188 770	100,0
50-54	225 498	12,2	1 626 667	87,8	1 852 165	100,0
55-59	233 735	15,6	1 268 491	84,4	1 502 226	100,0
60-64	216 572	18,7	942 615	81,3	1 159 187	100,0
65-69	184 428	22,7	627 474	77,3	811 902	100,0
70-74	186 401	29,4	447 044	70,6	633 445	100,0
75-79	148 452	36,6	257 502	63,4	405 954	100,0
80-84	120 001	44,5	149 446	55,5	269 447	100,0
85+	109 319	53,2	96 256	46,8	205 575	100,0
Total	2 870 130	7,5	35 214 746	92,5	38 084 876	100,0

Source: Stats SA 2011

Zopedol (2012) found that the Department of Labour had promulgated that any child aged 15 – 18 may not do any work inappropriate for their age. The researcher will use the working age as 18-64. Extrapolating from Figure 2, the amount of disabled persons (aged 18 – 64) in South Africa could be around 1,199,369 which represents around 41.79% of the total PWD in South Africa (Stats SA 2011).

The KZN prevalence portion of the national statistic is 21.6%. Therefore it can be assumed using these statistics that there could be around 259,063 PWD of working age in KZN.

Table 3. Types of disabilities within the PWD population in South Africa

Type of difficulty	Sex and degree of difficulty (numbers and percentage)									
Type of difficulty	sex	None	Mild	Severe	Do not know	Total	None	Mild	Severe	Do Not know Total
Seeing	Male	19 293 437	1 604 318	279 553	11 460	21 188 768	91,1	7,6	1,3	0,1 100,0
	Female	19 771 350	2 481 581	458 526	11 912	22 723 368	87,0	10,9	2,0	0,1 100,0
	Total	39 064 787	4 085 898	738 079	23 372	43 912 136	89,0	9,3	1,7	0,1 100,0
Hearing	Male	20 461 507	545 433	127 271	10 179	21 144 389	96,8	2,6	0,6	0,0 100,0
	Female	21 796 259	706 475	161 098	10 613	22 674 444	96,1	3,1	0,7	0,0 100,0
	Total	42 257 767	1 251 907	288 369	20 791	43 818 834	96,4	2,9	0,7	0,0 100,0
Communication	Male	20 756 600	225 018	97 450	10 850	21 089 918	98,4	1,1	0,5	0,1 100,0
	Female	22 258 298	248 432	93 832	11 015	22 611 576	98,4	1,1	0,4	0,0 100,0
	Total	43 014 898	473 450	191 282	21 864	43 701 494	98,4	1,1	0,4	0,1 100,0
Walking/ climbing stairs	Male	20 559 261	426 317	172 044	7 836	21 165 458	97,1	2,0	0,8	0,0 100,0
	Female	21 759 194	673 818	251 135	8 504	22 692 651	95,9	3,0	1,1	0,0 100,0
	Total	42 318 455	1 100 135	423 179	16 340	43 858 109	96,5	2,5	1,0	0,0 100,0
Remembering/ concentrating	Male	20 343 787	570 561	187 095	18 470	21 119 914	96,3	2,7	0,9	0,1 100,0
	Female	21 522 772	834 537	269 084	17 224	22 643 617	95,1	3,7	1,2	0,1 100,0
	Total	41 866 559	1 405 098	456 179	35 694	43 763 530	95,7	3,2	1,0	0,1 100,0
Self-care	Male	19 877 403	389 097	288 597	31 756	20 586 852	96,6	1,9	1,4	0,2 100,0
	Female	21 326 855	448 266	300 273	31 408	22 106 801	96,5	2,0	1,4	0,1 100,0
	Total	41 204 257	837 363	588 869	63 164	42 693 653	96,5	2,0	1,4	0,1 100,0

Source: Stats SA 2011

Table 3 shows the different classes of disabilities in South Africa. The statistics show that the disabilities are separated into seeing, hearing, communicating, walking/climbing stairs, remembering/concentrating, and self-care. It thereafter separates the categories into mild, severe and do not know. Using these statistics, a researcher can determine the PWD who can perform function on site.

Table 4. Severity of disability

Severe - severe hearing, walking and climbing – restrictive but able to perform site functions	
Mild -Communicating, remembering and concentrating - restrictive but able to perform site functions	
In terms of numbers:	
Severe – 711,548	11%
Mild – 5,964,446	89%
Total: 6,675,994	100%

Source: Stats SA (2011)

Table 3 and 4 show the different types of disabilities and separate them into: mild and severe. There are certain exclusions in this list such as mild hearing, severe seeing, severe communication remembering concentrating. For the purpose of this study, the researcher will use only disabilities that are restrictive but still allow function on an active construction site.

Using the possibility that the population percentage of working-age persons is 41.79%, the total number of persons of working age and of disability that can work on a construction site could be about 2,789,898 and if the KZN factor of 21.6% is applied, it means that there could possibly be about 602, 618 persons in KZN who suffer from disability and are of working age.

In developing countries - such as South Africa - the unemployment rate among the disabled is between 80% and 90% (Blanck, 2000). However according to Lynn (2015), South Africa is an anomaly in developing countries owing to the fact that it has good infrastructure but massive social and economic problems. As a consequence of the social and economic situation, the researcher has used the lower end of the scale to depict South African disabled unemployment rate at 80%. Of the estimated 602,618 disabled and employable persons in KZN, it is likely that 482 094 of them are unemployed. These unemployed PWD could potentially assist to alleviate the skills shortage in South African and, in particular, the KZN construction industry

2.6 Contracting employment statistics

The South African construction industry contributes 2% - 3% to the GDP and is a key contributor in the alleviation of poverty by creation of jobs (Lawless, 2005). In the construction industry, contracting contributes the most to job creation. The contracting industry is split into three parts, namely:

- Civil Engineering;
- Non-residential; and
- Residential.

Contractors are reliant on the labour force that predominantly consists of

- Unskilled labour;
- Semi-skilled labour; and
- Artisans.

Table 5. The civil, residential and non-residential sector in South Africa.

Type of contracting	Total number of employees	Approximate number of companies	Average company size into employment
Civil-Engineering	900,000	260	346
Non-residential	142,000	3,500	41
Residential	190,000	18,000	11
Total	422,000	21,760	19

Source: Lawless (2005)

Table 5 suggests that there are about 422,000 formal contracting employees in South Africa with informal contracting employees making the total contracting employees in excess of about 1,000,000, which makes it the fourth largest employer in the country. This group of work, in theory, represents an employment opportunity for PWD as there is little/no formal training required for being, for example, an unskilled labourer. However, the meaningful participation by PWD is still low. The Construction Industry Development Board (CIDB) that is governed by the CIDB Act 38 of 2000 is the regulatory body that registers

construction companies in South Africa who want to work in the public sector in order to provide the best service to the public sector. The CIDB awards points to contractors, and these establish that contractor's grade. These allocated points form part of the public tendering process (Lawless, 2005).

A part of the scoring process refers to an economic empowerment tool called Broad Based Black Economic Empowerment (B-BBEE) which encourages the meaningful employment of PWD in companies. The employment of PWD could potentially add 11% to a B-BBEE score which is significant enough for employers' consideration. The B-BBEE is a means of creating an inclusive society through business practices. Having a company demographic that is a realistic representation of the population is an effective way to bring across a message of equality (Woolley, 2005).

2.7. The barriers to entry of PWD to the South African Construction Industry

2.7.1 Attitudes

Societal attitudes play an important role in the employment of PWD in the form of social support. The negative attitude of potential employers is still a problematic area in South Africa (Watermeyer, 2006).

2.7.1.1 The South African Culture (Potential employers)

In the South African context, there is a significant relationship between culture and business, where cultural beliefs and ethics form a large base for how businesses are run (Maja et al., 2008). According to Landsdown (2002) the relationship does not necessarily bode well for the disabled population. In the African cultural context, being disabled has the implication of punishment or a curse to the disabled person's family and often leads to ostracism of the family. In addition, it is not frowned upon by the community in the rural area for the father of the disabled person to abandon his family and start a new family. This sort of cultural stigma creeps into the work environment. The impact of the stigma often causes the mother - or caregiver - to hide the disabled person from the public to avoid any further victimisation (Ibid).

2.7.1.2 Emotional and Psychological factors (PWD)

Employment offers a chance for PWD to be socially integrated into the community and to receive respect from peers. However PWD potentially suffer from a lack of personal drive that stems from low self-esteem, shyness and a lack of worldliness that contributes to a mental barrier that prevents their participation in the work environment (Young, 2001). Studies done in the USA show that many PWD live in fear of being judged, and this fear and emotional fragility causes them to not want to be exposed in any form let alone putting themselves in a position to be employed and the fear of the rejection that becomes a possibility (Ibid)

2.8 Education and training

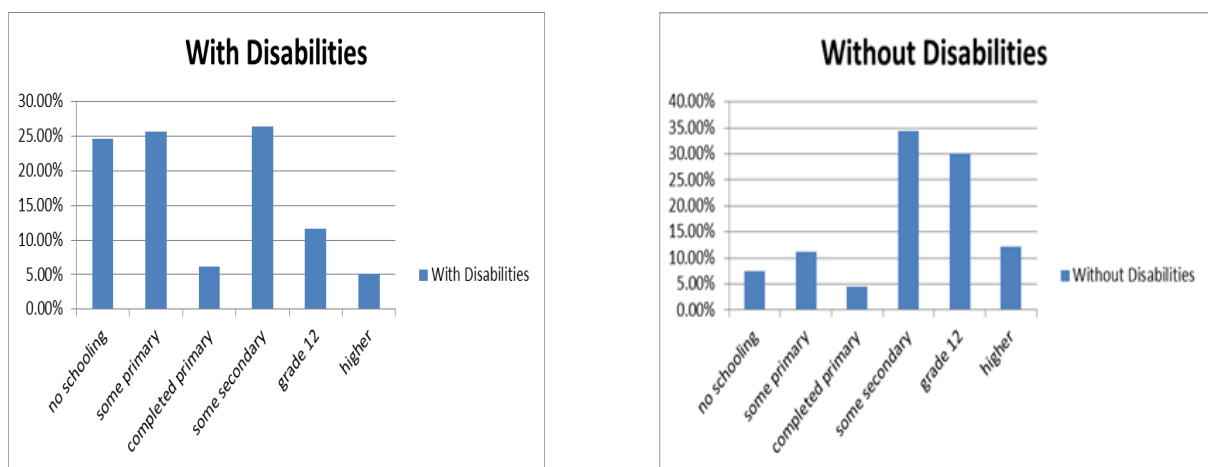


Figure 3. Different levels of education between persons with and without disabilities

Source: Stats SA, 2014

Figure 3 shows the different levels of highest education between persons with and without disabilities. It shows the low levels of education by persons with disability, with 24.6% not attending school, 25.7% having some primary school education and 26.4% having some secondary school education. These significant low education numbers are often a stereotype that remains in the minds of potential employers when looking at a PWD (Gottlieb, Myhill & Blanck, 2010).

According to the Constitution of the Republic of South Africa it is compulsory for all children of the ages 7 – 16 to be enrolled in school. Studies by the Integrated National Development Strategy (1997) have shown that only 30% of children with disability who are within the defined age range are attending school. SSA (2011) has shown that more than 35% of disabled children that were supposed to be enrolled in the early childhood development program were not. Children with severe walking and communicating disabilities showed a high prevalence of absenteeism at primary and high school level. This lack of access to education and resulting marginalisation has led to a corresponding lack of knowledge and skills. Even employers who were willing to employ persons with disabilities did not because of their lack of basic knowledge (Bachelder & Braddock, 1994).

This problem is not prevalent in more developed countries like the USA (Lengnick-Hall et al., 2008 where PWD are roughly equivalent to those without disability (Ibid.). Among working age individuals, 34.5% of PWD had high school diplomas and 28% had some sort of tertiary education when compared to 27.9% of persons without disabilities having high school diploma with 30.5% having some tertiary education (Rehabilitation Research and Training Centre on Disability Demographic and Statistics, 2005).

2.8. Active discrimination by not providing reasonable accommodation.

All employers should reasonably accommodate their employees; this is an affirmative action and non-discrimination requirement. The purpose of reasonable accommodation is to afford PWD the opportunity to perform the functions of the job. It refers to modifications or alterations to the way the job is ordinarily performed so as to allow a suitably qualified disabled person to perform the job. The amount of accommodation depends on the job and its essential functions, the work environment and the type of impairment the person has (Employment Equity Act No. 55 of 1998).

2.8.1. Physical Environment

The physical factors, especially in certain physically demanding environments such as the construction environment, are massive barriers to PWD. According to the Bill of Rights in the South African Constitution: “everyone has the right to an environment that is not harmful to their health or well-being.”

South African 2008 National Building Regulations and Building Standards Act (NBRBSA) of 1977 section S deals with the provisions of facilities for PWD.

Section S1 described the types of buildings that are required for the disabled and S2 describes the facilities needed by the buildings. For the purpose of this study, the researcher will look at the general requirements for PWD as per the NBRBSA:

- Persons with disabilities shall be able to safely enter the building and use all facilities within it;
- There shall be a means of access suitable for use by persons with disabilities, from the main and ancillary approaches of the building to the ground storey; via the main entrance, and any secondary entrance;
- There shall be a means of egress suitable for use by persons with disabilities from any point in a building to a place of safety in the event of an emergency;
- Any lift installation that is provided shall be capable of serving the needs of persons with disabilities who are likely to be using the building;
- Any commonly used path of travel shall be free of obstacles which limit, restrict or endanger the travel of persons with disabilities, or which prevent persons with disabilities from accessing the facilities provided in the building and the presence of such obstruction shall be made evident in a suitable manner to persons with impaired vision; and

- A suitable means of access shall be provided to any auditorium or hall situated in any building and such auditorium or hall shall, in relation to its seating capacity, be provided with sufficient open space to accommodate a reasonable number of people who use wheelchairs or other assistive devices.

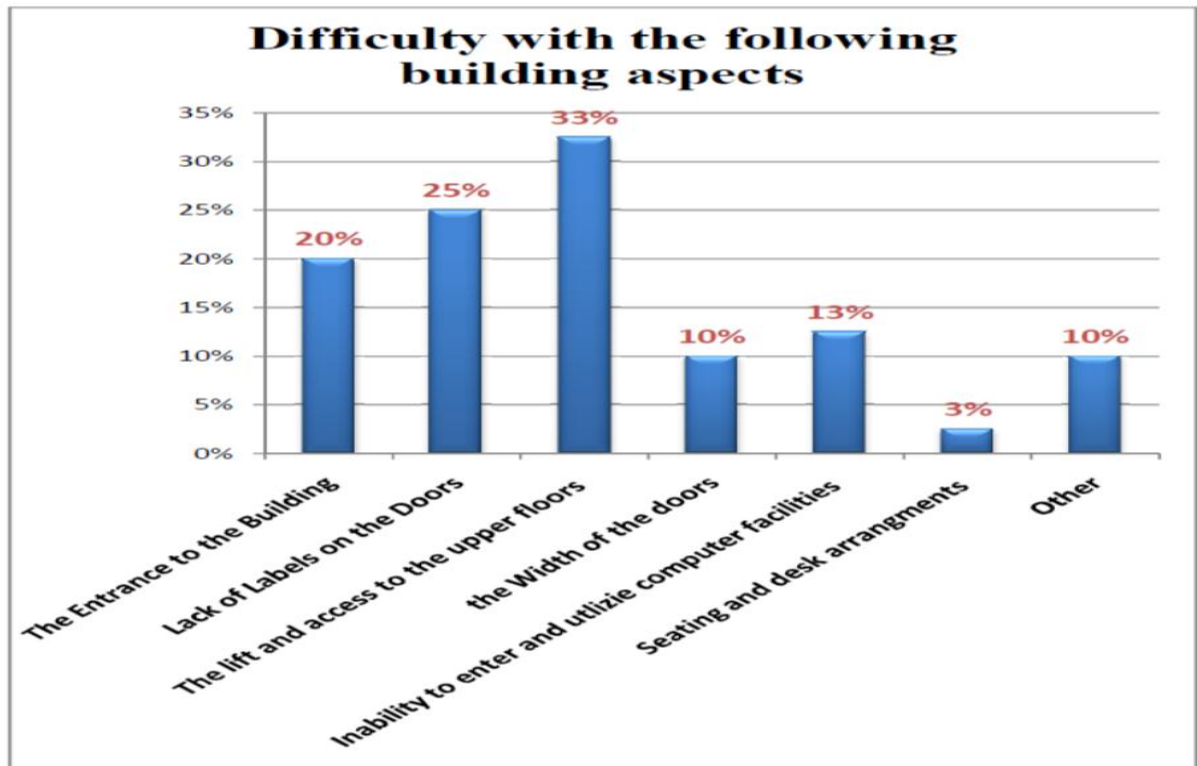


Figure 4. Major difficulties of disabled within a non-compliant building

Source: South Africa, 2008. National Building Regulations and Building Standards Act 103 of 1977. Part S, Section 2.

Figure 4 shows the results from a study by Paruk, Poonsamy & Rasool, (2011) demonstrating the major difficulties of the disabled within a building that is not compliant with the NBRBSA.

There are a number of buildings in KZN, at industry level - as well as at an educational institution - that do not adhere to the NBRBSA regulations and PWD are consequently not catered for in the buildings. This non-adherence makes the participation of PWD in any activity within these buildings very difficult (Paruk et al., 2011). The inability of PWD to

manoeuvre in buildings within the built environment is a discriminatory barrier to their meaningful participation in the construction industry (Tshobotlwane, 2005).

2.9.2 Access to information

According to the EEA, access to information is vitally important to performing any task. The information on site is usually not very accessible by PWD and without this information they cannot be expected to perform any task with any degree of competence. This failure to provide access to information forms part of the discrimination towards the participation of the disabled in the construction industry. Adapting existing hardware or acquiring new hardware is an option. Using voice activation with sound technology is also a viable option. This also includes re-organising workstations to ensure that people with disabilities can work effectively and efficiently; an example is adjusting work schedules, if necessary (Ibid).

2.9.3. Training and Assessment

According to EEA, changing training processes and assessment material is part of reasonable accommodation, as described in the legislation, and goes a long way towards accommodating PWD in the workplace - for example by requesting training material on tape for the visually impaired. The construction industry does not generally provide this service and there are low applications for training in the construction industry (Olson, 2001).

2.9.4. Equipment

Social Security Disability Help (2014) has stated that operating heavy machinery in the construction industry is not advisable for PWD. Once a person who operates heavy machinery in the construction industry develops a disability, that person should try to train in another aspect of construction or should go into the field of training in the previously operated heavy machinery (Ibid). This theory has shown that machinery on site is not suitable for the disabled and discriminates against them by preventing their participation in machinery work on site. There are certain instances where PWD can operate machinery specifically designed to be used by them. In most cases employers are not accommodating,

citing the reason that the cost of accommodation in this instance is too high. In many cases, the cost of accommodation has been overstated, providing a false reason not to go forward with the accommodation (Cheshire, 2002).

2.9.7 Transportation Barriers

Lack of transportation facilities and the unaffordable costs of special transport are a major factor in not only the unemployment of PWD but their general participation in society as a whole (Banerjee, 2008). The lack of awareness by potential employers and education facilities such as training centres about the unavailable transport facilities for PWD is a barrier to participation of PWD in the work environment (Schmidt & Smith, 2007).

2.10. The effect of legislation

2.10.1 The Employment Equity Act

The Employment Equity Act No. 55 of 1998 (EEA) is based on section 9(3) of the Constitution Act, No.108 of 1996.

According to the Constitution:

"The State may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth."

The EEA protects and promotes equality in the workplace, overcomes prejudice against the historically marginalised and achieves equitable representation of previously disadvantaged groups in the current workforce. In terms of Section 6 of the EEA, 'no person may unfairly discriminate, directly or indirectly, against an employee, in any employment policy or practice, on one or more grounds, including disability.' The preamble also states, "Achieve a diverse workforce broadly representative of our people; and to promote economic development and efficiency in the workforce." To achieve this goal, the act endeavours to implement fair employment practices, eliminate discrimination and promote equal opportunities.

The EEA does not necessarily assist the plight of PWD. There are some key shortcomings in the EEA that are barriers to the entry of PWD to the working environment and by implication the construction industry (Marumoagae, 2012).

The removal of discrimination in the work environment does not ensure that equality will be achieved. The elimination of unfair discrimination and employment equity are complementary and once the relevant authorities understand this, more practices will have to be put in place to further to assist the plight of PWD. Without these new practices, there are insufficient practices currently in place to address the issue of employment of PWD (Ibid).

Employers cannot be asked to employ unsuitably qualified candidates on the basis that they are disabled (Ibid). It was held in the case of *Stoman v Minister of Safety and Security & Others*, that the, “appointment of people who are wholly unqualified, or less than suitably qualified or incapable, in responsible positions, cannot be justified.” The code does say that PWD cannot be prejudiced against on the basis of lack experience if they are relevantly qualified and have capacity to gain the skills needed for the job. According to Sharma et al (2008), this prejudice still exists.

2.10.2. South African legal context

The Minister of Labour has approved a Code of Good Practice on the Employment of People with Disabilities. The Code is issued in terms of section 54(1) (a) of the Employment Equity Act No. 55 of 1998, and provides a guideline for employers, trade unions and PWD on promoting fair and equal opportunity as per the Employment Equity Act.

A complementary guide is the Technical Assistance Guideline on the Employment of Persons with Disabilities (TAG) (Department of Labour, 2002) which serves as a guide to the employers and PWD to help them understand different aspects of the EEA including:

2.10.3 Rights and Obligations of Employers and PWD:

2.10.3.1 Employers

- Have an obligation to implement non-discriminatory measures in the workplace;
- Have the right to create an economically sustainable enterprise without discriminating against the disabled;
- Are required to consider the opportunities offered when employing PWD; and
- Are required to look at practical ways to bring to fruition, transform and aid the plight of the disabled by making their employment realistic and meaningful.

2.10.3.2 Persons with disabilities rights

- To not be discriminated against in any aspect of employment;
- As per the act, to the affirmative action measures they are entitled to;
- To be equally informed in the process of employment, with a potential employer;
- To accommodation as deemed necessary;
- To prioritise opportunities that exist to prepare for entering the work environment; and
- To look practically at ways to move forward.

Although these codes are not summaries of the law and do not create new rights, courts must consider the code when applying the EEA. It is for this reason that companies need to structure their disability equity policies and programmes applying the codes. (Ibid).

The initial step of the recruitment phase is to check if applicants require any accommodation during the recruitment phase, and then make the necessary accommodations to allow all applicants to have fair and equal opportunity to participate in the process (Ibid). Companies in South Africa do not necessarily abide by the code and use

a blanket technique where the mechanical aspects of the recruitment process stay the same for all (Marumoagae, 2012).

According to the Division of Human Resources and Equity, UKZN (2009) many selection procedures discriminate against PWD. For example, in the interview process where all candidates should be interviewed in the same manner, potential employers often ask questions relating to the disability and how it would affect the performance of the candidate's duties. Even if a candidate willingly discloses the disability or if the disability is visible, the potential employer should ask only questions pertaining to the capabilities of the candidate regarding the job position as if the candidate were an able-bodied person (Ibid). It was often seen that interviewers were not able to keep uniformity and exclude questions relating to the candidates' disability, thereby allowing discrimination to creep into the selection (Unger, 2002).

Only once the job offer has been made to the disabled person can the employer discuss how the disability could limit the performance of the disabled person if in any way (Technical Assistance Guidelines on the Employment of People with Disabilities TAG of Labour, 2002). Many companies in KZN do not follow this protocol and this non-conformance is a factor that leads to inherent prejudice against the disabled and causes them not be selected, despite their being sufficiently qualified. The focus would have shifted from the qualifications to the disability (Unger, 2002).

2.11 Chapter Summary

Like earlier studies on the same topic, this chapter elucidates, on the basis of the most recent literature available, that PWD are less likely to be employed than able-bodied persons. Traditional ideas of disability based on medical models have regularly been reproduced uncritically, confirming that a disability is a personal tragedy. It assumes that the disabled person cannot care for him/herself and relies on others for fundamental care. The effect has been to disregard the merit of equal opportunity.

Although great interest in policy has resulted in strides having been made in the fulfilment of basic laws regarding persons with disability, there has been little movement in the

direction of equal opportunity employment of PWD or with the eradication of global and local discrimination at an employment level.

The literature has shown that PWD are still being institutionally discriminated against. 22 years from freedom, South Africa still offers very little employment to PWD in the construction industry which stems from various different reasons: Non-conformance to legislation regarding employment of PWD; Negative attitudes of potential employers to PWD; The image of the construction industry; The physical barriers facing PWD; and a general lack of awareness regarding PWD and opportunities that exist both for the PWD and the potential employer.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology has been described by Leedy and Omrod (2013), as “The general approach the researcher takes in carrying out the research project. This approach dictates the particular tools the researcher selects”. Research methodology is the systematic approach to solving a research problem and addressing the logic behind it. It focuses on individual, nonlinear steps in the research process and on unbiased procedures. This translates to a step by step procedure of conducting research (ibid.).

This chapter outlines the systematic research approach followed in the study. Firstly, by providing a detailed outline of the data collection tools and techniques available to a researcher. Secondly, by selecting those tools and techniques that would meet the aims of the study, and, thirdly, by using quality standards to ensure the validity and reliability of the data collected. This chapter will also describe how the collected data will be treated and outline the limitations of the study.

3.2 Introduction – the nature of research

Some definitions of research are as follows:

- Research, simply stated, refers to the search for knowledge. Research is described as the scientific and systematic search for pertinent information on a designated topic. Research is often described as a voyage of discovery that leads from the unknown to the known (Sivasubramanian, 2012: 1);
- Research involves defining and redefining problems, formulating hypothesis or suggested solutions, collecting, organising and evaluating data, making deductions, reaching conclusions and further testing to establish whether the conclusions fit the hypotheses (Kothari, 2004: 31);
- Research comprises the manipulation of things, perceptions or symbols for the purpose of generalizing, correcting and verifying knowledge, whether that

knowledge assists in the formulation of a notion or in the practice of an art (Redmond & Mory, 1923: 10; Schwartzel & Eloff, 2012. :4); and

- Research methodology can be defined as a way of systematically solving the research problem that has been set out in a study. It is a depiction of how research is done scientifically. This depiction comprises the steps that a researcher follows in order to delve into the research problem and find the solution and the logic behind each step. Research methodology involves various methods and techniques that are tested to find which are relevant and which are not pertinent to the study. The selected methods and techniques are used to prove or disprove a hypothesis by testing (Sivasubramaniyan, 2012).

The main aim of research is to discover answers to problems through a system of scientific procedure. This chapter shows the process of discovering research methods and techniques suitable for the study and demonstrates how the research tools have been developed to test the study hypotheses.

3.3 Research based on objectives

There are many different types of research, four of which are:

- Formulative or exploratory research that aims at gaining new insight into theories or gaining familiarity with a specific phenomenon;
- Diagnostic research that is used to determine the frequency with which something occurs or with something associated with a particular thing;
- Hypothesis testing research methods that test the hypotheses of fundamental relationships through variables and
- For the [urpose of this study, Descriptive research that portrays the characteristics of a group or an individual; and (Tandon, 1992; Olsen, 2004).

3.4 Classification of research

Research can be classified into two distinct categories based on how it deals with phenomena.

The first is physical or natural science which deals with phenomena that can be tested in a laboratory in a predetermined and controlled environment. The second is social science which is based on human behaviour in a natural environment that comprises many different variables such as physical, psychological and social factors. Social research aims to find answers to unexplained social phenomena (Stake, 1995; Kohlbacher, 2006).

3.5 Pertinent characteristics of social research

The following comprise some essential factors relating to social research, namely:

- Deals with social phenomena and studies human beings and their reactions, responses and attitudes to different stimuli within society;
- Aims at discovering new facts through studies that find new relationships between different kinds of behaviour;
- Is a scientific undertaking making use of scientific tools and techniques to adequately gather responses to social circumstances and to interpret that information;
- Must be objective; and
- Is dynamic, which means that what is true now might not necessarily be true tomorrow (Adama, 2010).

3.6 Different types of research

In addition to different categories of research, there are also different types of research that relate closely to the nature of the research being carried out. These are:

3.6.1 Basic research and applied research

Basic research is also known as fundamental or pure research owing to the fact that its main purpose is to disclose a fundamental fact. Basic research is concerned with control rather than with the direct application of the outcome (Creswell, 2004). Applied research, which is also known as field research, deals with testing theories and determining

relationships. Control is sacrificed in an endeavour to apply the outcome of the research (Ibid).

3.6.2 Conceptual research and empirical research

Conceptual research is used in order to build on existing ideologies or create new ones through abstract theory or ideas. Empirical research, on the other hand, often disregards theories and systems and focuses mainly on experience and observations. It relies on data collection as a primary source of research. This research is characterised by the researcher's control over the variables and his or her manipulation of them. Empirical research is helpful when a researcher wants to discover how one variable affects another in some way (Harvey, 1990; Sarantakos, 2012).

3.6.3 Descriptive research and analytical research

Descriptive research, which is also known as ex post facto research, is concerned with describing the state of affairs of something as it exists presently. It does this through fact-finding and surveys. A main characteristic is that researchers have no control over any variables and they observe a situation as it happens.

In analytical research a researcher has to gather a vast amount of pre-existing data on a particular subject, analyse the data and formulate an opinion using the results of the analysis (Yin, 2002).

3.6.4 Quantitative research and qualitative research

Quantitative research generally looks to study cause and effect. This research is based on the measurement of characteristics using a quantitative method. The quantities of data can typically be collected using a tool such as a watch or a structured questionnaire. The results can then be expressed in a quantitative manner that is subject to rigorous formal analysis (Leedy and Ormrod, 2013). The quantitative approach can be sub-categorised into the following:

- Simulation Approach which involves the construction of an artificial environment from which data can be gathered. This specific method permits dynamic

observation in a controlled environment. Simulation can be set up to show the running of a system over time in an endeavour to understand future conditions;

- Inferential Approach which gathers data to form a foundation from which information is derived and deductions made regarding a population's relationships or characteristics. This generally means a survey method where a sample is studied, deductions are made, then those deductions are inferred to the rest of the population (De Vos, 2002);
- Experimental approach which takes control over the environment by manipulating variables to determine their relationships (Adama, 2010); and
- Qualitative research which is a behavioural science that deals with the subjective assessment of human behaviour, attitudes and opinions. It allows the researcher to gain insight into what motivates people to do what they do. As the findings comprise the researcher's opinions and insights, they are not subject to any rigorous forms of analysis (Bloor, 2007). Generally in-depth singular and group interviews are used, as well as projective methods. Many researchers believe that qualitative methods are useful when a researcher needs to validate, supplement and explain data already collected via the quantitative method (Popkewitz, 1984; Tuli, 2011). Many writers have said that there is one main challenge when using the qualitative approach and that is the elimination of bias when processing the collected data. Qualitative analysis consists of three simultaneous flows of activity, these being data display, data reduction and the formulation of a conclusion (Berger and Luckman, 1973; Knoblauch, 2016).

Qualitative research can be divided into three fundamental approaches: interpretative, critical and positivist.

- Interpretative researchers believe that a subject should be studied in its natural environment and as a result the researcher will, in some way, affect the environment of the study. Interpretative research believes that access to reality is through social construction such as language and consciousness. It suggests that

reality can only be fully understood through subjective intervention and interpretation thereof (Boland, 1985; Aliyu, 2014);

- Positivism is the ontological assertion that reality or truth is independent and free of the viewer or observer (Ayer, 1999; Aliyu, 2014). Positivism is based on the assumption that reality is stable and that phenomena can be observed and described objectively and separately from the researcher. Positivism involves the isolation and manipulation of phenomena to distinguish relationships and regularities. Positivism is generally associated with the repetition of results (Creswell 2004). Many theorists have said that positivism is not suitable for social research as it has conflicting paradigms; and
- Critical research is seen as a tool for social critique in which restraining and isolating conditions are shown through the illumination of current societal contradictions in an effort to eliminate the causes of the isolations (Harvey, 1990; Bloor, 2007). It is believed to be historically formed and produced by people. Social cultural and political factors contribute to a population's ability to change their circumstances from the norm (Ngwenyama and Lee, 1997; Coffey and Atkinson, 2006).

Some other important forms of qualitative research are:

- Motivation research which uses in-depth interviews, word association tests, sentence completion tests and story completion tests to discover underlying feelings and the motives for doing things; and
- Opinion or attitude research which is purposely designed to determine how people feel and react to a certain institution or subject. This study aims to gain insight into how attitudes are formed and how they affect or influence a population's response to a designated subject (Denzin and Lincoln, 2007).

3.7 Triangulation

The concept triangulation is sometimes used to describe a conscious amalgamation of quantitative and qualitative methodology. The word triangulation was originally coined by Denzin in 1978 and referred to the use of multiple methods of data collection with the aim of increasing the reliability of observation (De Vos, 2002). Triangulation is particularly useful when looking to confirm findings through the convergence of different research approaches. Triangulation uses both qualitative and quantitative methods to study the same phenomena in an effort to validate the findings (Chileshe and Watson, 2005).

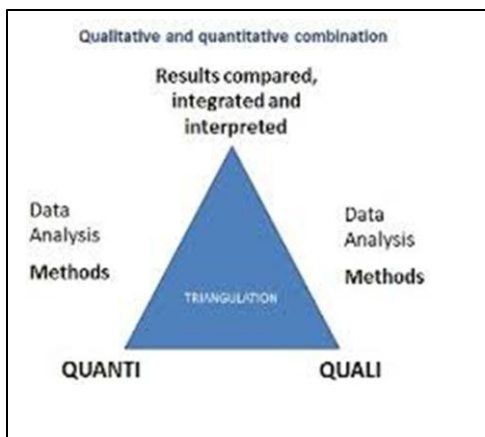


Figure 5. Triangulation

Source (Olsen, 2004)

Figure 5 shows how triangulation is achieved through the use of quantitative and qualitative methods of research. The figure shows how quantitative and qualitative data can be used to corroborate results to provide better detailed research.

There are two main types of triangulation – simultaneous and sequential. Simultaneous triangulation is where both qualitative and quantitative methods are used at the same time. Although there is limited interaction between the methods, the data eventually complements both. On the other hand, sequential triangulation applies when the results from the data collection of one method are used in the design of the other method in an effort to use the latter method as a validation for the first method (Bowen, 1996; Creswell, 2004).

For the purpose of this study the research approach called mixed methodology design by Creswell (2004) will be employed. This approach comprises a combination of both qualitative and quantitative research in an effort to increase the reliability of the data collected and ensure the study is comprehensive and complete.

3.8 Methodology

3.8.1 The survey approach

The survey approach involves gathering useful information about a group of individuals in a population regarding their experiences, opinions, characteristics and feelings towards certain stimuli through sets of questions to which the answers are tabulated. The ultimate goal of the survey is to gain knowledge about the population as a whole by surveying just a sample of it. The survey is generally used when there is not enough information available in written text to satisfy the requirement of a study (Leedy et al., 2013).

The survey method of study is useful in that, along with collecting data from a real world environment, it allows the researcher to study more than one variable at a time. This is an advantage over a laboratory or field study that restricts the researcher in the number of variables that can be studied (Casebeer and Veerhoef, 1997; Denzin and Lincoln, 2007).

3.8.2 Types of surveys

“Social survey is fact-finding study dealing chiefly with working class, poverty and with the nature and problems of community.”(Jayapalan, 2002:15)

There are many different types of survey methods as described by Molenberghs (2004) and Adama (2010). These include, for example:

3.8.2.1 General or specific survey

A general survey deals with the data collection of a general population without needing a hypothesis while a specific survey deals with the data collection of a population with the aim of gaining information to test a pre-set hypothesis.

3.8.2.2 Preliminary and final survey

A preliminary survey is the pilot study that helps the researcher gain insight into the subject of the study. This helps the researcher develop tools, such as a questionnaire, to survey the sample. The final survey is that produced after the pilot has been done.

3.8.2.3 Regular and ad hoc surveys

Regular surveys are those done repetitively in an effort to measure trends in the effect that time has on a study. The study gathers information at regular intervals and compares the information to show the part time plays in the study. Ad hoc surveys, on the other hand, are done once, are non-repetitive and are generally done to supplement a study and to provide information required.

3.8.2.4 Census and sample survey

A census survey deals with the investigation of every single participant in a population. This method is costly in terms of time, labour and material, but the information gathered will be very accurate. A sample survey, conversely, deals with a relatively small part of the entire population and the results of surveying the sample are then applied to the whole population.

3.8.2.5 Advantages of using the selected sample survey method

- It is less time and resource consuming;
- It is universally applicable;
- It removes personal bias;
- It is based on actual observations, hence it is more reliable;
- Many variables can be tested at once; and
- There is direct contact between researcher and respondent (Tandon, 1992; Newman, 2007).

3.8.3 Tools used in the survey method of research

3.8.3.1 Questionnaires

Within social science research, the questionnaire is a well-recognised tool for acquiring information on a participant's social characteristics, knowledge, standards of behaviour, attitudes, beliefs, present and past behaviour, perceptions and reasons for action. The questionnaire always has specific reference to the topic at hand (Bulmer, 2004).

Questionnaires, according to McClure (2002), can be divided into the type of research objectives they are being used to achieve.

- Structured Questionnaires are close ended as the responses are predefined. The researcher needs to determine all possible answers with pre-coded responses. The questionnaires could be face to face, telephonic or self-completing, depending on the nature of the research and the type of respondent. The questionnaire is conducted and analysed fairly quickly at a relatively minimum cost. This method is very useful in a quantitative approach to research;
- Unstructured questionnaires are those that prompt free responses. They are commonly referred to as a topic guide. They will comprise a list of questions in a logical sequence which the researcher is able to change to allow for explanations. Open ended questions allow the respondent to provide answers that are complete, comprehensive and meaningful. The unstructured questionnaire may not be as quick or easy to analyse as the close ended questionnaire but it is very useful in understanding opinions and attitudes in a qualitative approach to research study. This form of questionnaire can be done via email as a self-completing questionnaire or face to face. Face to face has been recommended so as to provide the necessary explanations to the respondent; and
- Semi-structured questionnaires is a mix of unstructured and structured questions. Some of the questions and their sequence are determined in advance, while others evolve as the interview proceeds

3.8.3.2 Interviews

The interview in qualitative research is a tool used to show the meaning of, and reasons for central themes in society from the view of the participants. A qualitative research interview looks to uncover both a meaning and a factual level (Kvale, 2006).

Interviews are especially useful in gathering material regarding a participant's experiences in that they allow the interviewer to pursue in-depth information pertaining to the topic. They are also useful as a follow up to a questionnaire where ideas need further explanation or corroboration (McNamara, 1999; Henning, Van Rensberg & Smit, 2004).

There are four main types of interviews as explained by Trochim and William (2002). These are the general interview, the conversational interview, the closed, fixed-response interview, the standardised and the open-ended interview.

- The general interview allows a certain degree of flexibility and adaptability in the interview, is intended to gather the same general information from all the interviewees. It is directed towards a goal and is less open ended than a conversational approach to interview.
- The conversational, informal interview which is one in which few or no formalised questions are asked. It is unstructured and allows the interviewee to express his or her opinion in keeping with his or her nature. It encourages openness and honesty.
- The closed fixed-response interview which involves asking a predetermined set of questions in a logical order and getting responses from the interviewee from a predetermined list of answers. The same set of questions is put to all the interviewees. This is generally used by an interviewer who is not well versed in the interviewing process.
- The standardized open-ended interview which asks the same questions to all interviewees. This form of questioning is beneficial to the interviewer in the sense that it allows for faster interviews as well as an easier analysis and comparison of responses.

3.8.3.3 Case study

A case study is a deep and intensive study of a particular social unit that is confined to a very small number of cases. It usually shows a complexity of factors, social processes and their sequence and relationships. It places emphasis on full contextual analysis. Many theorists have based their approach to the case study on a constructivist paradigm which states that truth is relative and is dependent on perspective (Yin, 2003). It shows the importance of subjectivity but does not entirely rule out objectivity. It is based on the social construction of reality (Stake, 1995). Case studies enable a close relationship between the researcher and the participant; they allow the participant to show his or her views of reality which allow the researcher to gain insight into the reasons for the participants' actions (Lather, 1992; Eisenhardt, 2002).

Situations when case studies can be used have been described by Baxter (2006):

- To answer “how” and “why” questions;
- When the researcher wants to cover pertinent contextual conditions;
- When one cannot influence the behaviour of contributors to the study; and
- When the boundaries between context and phenomena are not clear.

Types of case studies vary according to whether the researcher wants to compare a case, describe a case or explore a case. Often the types of case studies are typical

- Descriptive case study. This type of study is often deals the understanding of phenomena in the “real world” context in which it had occurred;
- Instrumental case study. This is a supportive study secondary to the main objective. It is used to provide insight on a study and to refine ideas. The case is often looked at from an in-depth point of view for the purpose of external interest.;
- Explanatory case study. This type of case study often seeks to understand questions about real-life relationships that are too complex for ordinary surveys or experiments.

- Exploratory case study. This type of case study seeks answers to interventions that have no clear set of outcomes;
- Intrinsic case study. This type of case study does not seek to build any theories or understand any abstracts. It is based on the case itself and the understanding thereof;
- Collective case study. This type of case study is similar in its nature and objectives to other case studies in the field; and
- Multiple case studies. This type of case study has the goal of replicating findings throughout many separate cases. The researcher will be able to draw comparisons and see differences that enable him or her to make deductions regarding trends.(Yin, 2003).

The common downside associated with the case study is that often researchers attempt to answer a question that is too broad or choose a topic that has too many objectives for one study. Case studies generally take an extended period of time and tend to cost more when compared to traditional forms of research. The lack of control is generally a hampering factor for the researcher. Even though comparison of similar cases is possible, it is not entirely reliable in the sense that no two cases can be exactly the same in terms of parameters and other contributing factors (Miles, and Huberman, 1994; Zucker, 2009).

3.9 Characteristics of research

3.9.1 Objectivity

Objectivity is the regulative ideal where researchers conduct research in a manner that involves them being open, honest, unbiased and precise as well as welcoming criticism (Reiss & Sprenger, 2013). Social research often depicts the subjectivity of the researcher. It is depicted in almost all aspects of the layout from the choice of topic to the hypothesis to the methodology. Very often a researcher reflects his or her own values in the research. Objectivity in social research deals with the methods of gathering data and the scoring thereof in an effort to negate subjectivity in generalising the results. Generalisation can

only be achieved if the apparatus and procedures used are objective in the sense that many different users can perform the same test and come to the same conclusion (Ratner, 2002).

3.9.2 Validity

Validity encompasses the entire research process and confirms that the results are in keeping with all the requirements of the research method. An instrument is said to be valid if it measures what it is supposed to measure. Care and diligence must be applied when dealing with the control processes of the research and with the random method of sampling (Winter, 2000; Golafshani, 2003). There are two different types of validity that are recognised, namely internal and external validity.

Internal validity, which deals with the consistency of the design of the research, ensures the inclusion of all the steps generally accepted in social research. Findings are said to be invalid when they are affected by factors other than those which are thought to affect them or the analysis of the data is found to be non-supportable. Some factors which affect internal validity are: history, instrument sensitivity, time allowed for data collection, size of population, and subject variability (Golafshani, 2003).

External validity deals with the generalisation of the findings to the general population. If the study is found to be externally invalid then the results cannot be applied to any study other than the one that it is in. It examines the results looking for casual relationships. There are methods of increasing the external validity such as randomisation and control groups; however there is not a method of totally eliminating the problems posed by external validity. Some factors influencing external validity are: data collection methods, time, the research environment, population characteristics and the relationship between subject selection and research (Ibid).

The different types of validity as stated by Carmines and Zeller (1979) and Shenton (2004) are:

1. Face validity to determine if a test seems to measure what it is meant to measure;
2. Construct validity to determine the degree to which the research accurately tests its intended hypothetical construct;

3. Content validity is a logical method that determines whether the content of the construct in its entirety is measured in the test. The content of the behaviour should correlate with the test task; and
4. Concurrent validity compares the results of this study with another established study testing the same thing over the same time period using valid criteria.

3.9.3 Reliability

Reliability deals with the quality of the measurement, in terms of its repeatability and consistency. Errors in measurement that affect reliability are random. If a respondent gives a specific response to a question, he or she is expected to give the same response if asked again; if he or she does not, then the researcher faces the problem of determining which answer should be taken as correct. The researcher should phrase the question in such a way that the respondent can only give the genuine answer (Kimberlin & Winterstein, 2008)

The different types of reliability as stated by Drost (2007) are:

1. Internal consistent reliability is used to measure the consistency of results across items within an investigation;
2. Rationale reliability is used to test how the items on a test relate to the other items and to the test as a whole to determine internal consistency;
3. Inter-observer reliability is used to examine the extent to which different observers give consistent assessments of the same phenomenon;
4. Standard error of measurement is used to depict reliability in how often the researcher can expect error in a designated size;
5. Parallel forms reliability is used to evaluate the uniformity of results of two tests created in the same way from the same content area; and
6. Test retest reliability is used over time to measure the effect of time on the consistency of results.

3.9.4 Rigour

Rigour or trustworthiness of a study usually refers to whether the researcher has applied the correct tool to meet the objectives. Rigorous research must be both transparent and explicit (Drost, 2007). There are many questions a researcher has to ask before a study is deemed to pass the rigour test, such as:

- Does the research tool test what is required for the purpose of the study?
- Is there an appropriate level of detail allowed for in the tool?
- To what degree do the tools maximize the chance of producing data with evident patterns?
- To what degree are the analytical techniques adopted, able to ensure discovery of all themes?
- What checks are in place to ensure that discovered patterns are not superfluous?
- What standard of data is required to provide a reader with support that the results are accurate? (Denzin et al., 2007)

3.10 Sampling

3.10.1 Qualitative sampling

It is not necessary to survey entire populations to achieve valid findings. Only a sub-set of the population (a sample) can be selected for any study (Leedy et al., 2005). Sampling in the qualitative realm is not strictly statistical. Some typical advantages are that it is less time and cost consuming and is based on saturation (Sarantakos, 2000). In qualitative sampling it is not a subject's representativeness that is important as much as the subject's relevance to the study. Generally it is for the reason of relevance that qualitative studies tend to use non – probability sampling (Neuman, 2005). Non probability sampling relates to non- random sampling while probability sampling is related to random sampling. (Kothari, 2004).

According to Denzin et al. (2007), there are three common types of sampling in qualitative research. These are purposive sampling, snowball sampling and quota sampling.

1. Purposive sampling seeks to identify a sample based on predetermined criteria relating to the research question. Depending on time and resource constraints, as well as the study objectives, the sample size will be decided. This form of sampling is usually based on saturation which implies that there is a point where new subjects no longer give new information to the research. This form of sampling is most successful when data collection and the analysis thereof are done simultaneously.
2. Snowballing is a form of purposive sampling. It uses subjects already contacted and allows them to use their social networks to refer other subjects to the study who could be potentially useful. This form of sampling usually allows the researcher to tap into hidden populations.
3. Quota sampling determines the number of subjects as well as the characteristics required during the design of the research tool. These characteristics allow the researcher to focus on subjects who have the most insight to offer based on their experience. The quota is reached through various recruitment strategies in communities.

3.10.2 Quantitative sampling

This type of sampling aims at getting an unbiased sample that represents the population of the given sample and allows the researcher to draw inferences about the same population. In quantitative sampling, a lot of emphasis is placed on the sample size. When considering sample size the researcher is guided by various factors other than the availability of resources. Randomisation is generally used in qualitative sampling to avoid any form of bias (Robson, 2002).

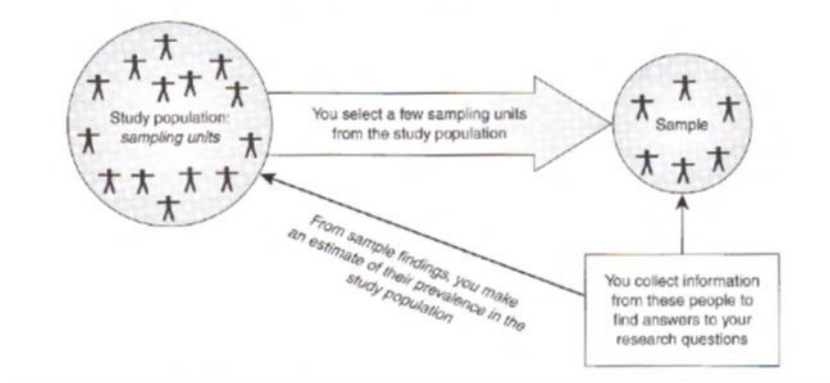


Figure 6: The concept of random sampling

Source Kumar (1982); Groves, (2010)

Random sampling is a method of quantitative sampling in which it is vitally important that all elements of a given population have an equal and independent chance of randomly being selected. For a sample to be random, both these criteria need to be met (Gall, Borg and Gall, 2000).

There are three major types of sampling for the quantitative method. These are random/probability, non-random/probability and mixed methods. Each of the three types of sampling has different methods of execution. The way these methods can be used depends on the criteria and constraints of the given quantitative research. The methods are stricter than those employed for the qualitative approach (Kumar, 1982; Groves, 2010).

The advantages of quantitative random samples are firstly that they represent the total population so generalisations can easily be made and secondly that statistical tests based on probability theories can be applied (Trochim and Donnely, 2001).

3.11 Data collection

3.11.1 Primary data collection

3.11.1.1 The structured questionnaire

The a questionnaire format was used as it is commonly known to accurately measure attitudes and opinions both past and present. Due to the sensitive nature of the research topic, the structured questionnaire was chosen. The formal nature of the structured questionnaire was appropriate as some of the target demographic have not had sufficient

formal education to properly articulate their opinions on paper through responses to open ended questions. Time constraints that are usually associated with stakeholders in the construction environment and the fact that opinions would be better extracted from a structured questionnaire rather than having to make deductions from general responses which is subjective in nature and subject to bias.

The target populations for this study were:

1. Decision makers within construction firms – to gain insight into the opinion of potential employers;
2. Construction labourers – to gain insight into the opinions of potential colleagues in the construction environment; and
3. Persons with disability capable of performing functions on an active construction site.

The questions contained in the structured questionnaire were extracted from the literature review. Careful consideration was taken when developing the questionnaire not to influence the opinions of the respondents in any way, so as to get the most accurate responses possible.

3.11.2 Secondary data collection

3.11.2.1 The literature review

Secondary data collection was conducted through a literature review. The literature review was conducted using historical studies of other researchers and advocates of PWD. The reason for the literature review was to get a firm background knowledge of the topic and a broad understanding of the general situation to determine the problem that would be investigated. The literature review puts the global situation into perspective and gives the researcher an idea of what potential outcomes could be. It also guides the researcher on what should be tested to determine the pertinent local situation. It further allows a global comparison of different situations from information containing the outcomes of the local testing. It was found that information regarding this topic in other countries as well as South Africa was available. The types of literature reviewed were:

- Journals
- Academic papers
- Textbooks
- Newspaper articles
- Political reports
- Internet database

3.12 The design of research instrument

The instrument was designed to address the study objectives. In particular, the instrument sought responses about perceptions of respondents to the employment of PWD within the KZN Construction Industry in terms of the following, namely

- Recognition of skills shortage In the KZN construction industry and acknowledgement of PWD as a potential resource
- Perception of ability of PWD to perform on site functions
- Perception of PWD from a business practice point of view
- Perception of PWD compared to able bodied staff
- PWD's Expectations of preferential treatment
- Hiring PWD in conjunction with the image of the construction company

The instrument also sought perceptions about their knowledge of legislation surrounding PWD and the compliance therewith in terms of the following, namely

- Knowledge of what is PWD
- Knowledge that PWD have special needs
- Knowledge of legislation pertaining to PWD
- Compliance with legislation
- Implementation of specific practices that promote the employment of PWD in the KZN Construction Industry
- Implementation of formal and informal policies enabling PWD
- Awareness of the plight of PWD in relation to the context of employment of PWD

Further, the instrument also sought perceptions about employment practices of contractors in dealing with PWD in terms of the following, namely

- Being aware of and understanding the concept of reasonable accommodation.
- Specific practices that show implementation of accommodation in the KZN construction Industry
- Monitoring and help provided by Management personnel to PWD during their employment.

A psychometric response scale was used to determine a composite measure of personality traits and opinions. A 5-point Likert scale was used to determine the level of agreement with the various statements where 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; and 5 = Strongly Agree

Reliability of the instrument

Internal consistency reliability is a measure of how well the items on the test measure the same construct or idea. Each construct for each respondent is evaluated using SPSS to produce a numerical value representing internal consistency known as Cronbach's Alpha that is a measurement of reliability. A reliable instrument reports a minimum Alpha reliability co-efficient of 0.7. "Values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb." (Field, 2009. p. 647)

3.13 Administration and data collection process

Non-probability purposive sampling was adopted owing to the predetermined criteria for participation. There were 50 construction firms, working in KZN, who were surveyed from the Transnet CIDB database.

A non-probability convenient sampling method was adopted for the general labourers as they would be surveyed at the same time their employers were, in an effort to use both responses to either corroborate or refute the other. A single general labourer was selected from each responding contractor's company where possible to voluntarily participate on behalf of and in consultation with the entire abled bodied staff.

There were 25 PWD surveyed from a Construction Education and Training Authority (CETA) accredited learnership. CETA is an organisation that supports training, education and skills development in the construction industry.

Previous samples done by Tshobotlwane (2005) have shown that samples of equivalent sizes would be adequate and representative for the study.

Respondents were personally visited and the questionnaires hand delivered, in an effort to personally introduce the study and explain its importance to the KZN construction industry however, upon request, electronic copies of the questionnaire were sent via email. Consent was again sought in an informal manner as well as the acknowledgement that each participant was a legal juristic person. In certain instances where handwritten answers were physically not possible, an administrator was used to write the answers for the respondent.

All questionnaires were totally anonymous to protect the identity of the respondent through not recording respondents names and were collected immediately after completion. Follow up procedures included querying emails and phone calls were conducted on a bi-weekly basis until the target was reached. No compensation was paid for responses.

Table 6: Evaluating levels of agreement

Scale	Interpretation
4.20 – 5.00	Strongly Agree
3.40 – 4.19	Agree
2.60 – 3.39	Neutral
1.80 – 2.59	Disagree
1.00 – 1.79	Strongly Disagree

Source: Tananuraksakul (2013)

Table 6 shows the interpretation of the scaled responses using a 0.8 interval scale developed by Tananuraksakul (2013) to categorize mean responses to a given statement into their respective intervals on a 5 point Likert scale.

3.14. Chapter Summary

This chapter described the research approach and methodology used in the study. It gives a brief background into other research options along with the chosen approach. The development of the research instrument in conjunction with the literature. Administration and follow up are also outlined.

CHAPTER 4: ANALYSIS OF DATA

4.1 Introduction

This chapter presents the analysis of the data collected using the structured questionnaire, in an attempt to measure respondents attitudes towards the employment of PWD within the KZN construction industry, using SPSS¹. Each of the three samples are dealt with separately.

4.2. PWD Profile

Table 7. PWD Sample

Sample	Distributed	Completed	Response rate
PWD	25	25	100%

From Table 7 it is evident that all 25 PWD from a CETA-accredited learnership participated in the study.

Table 8. Gender statistics

Male Respondants	Female Respondants
11	14
44%	56%

From table 8 it is evident that there were 11 male respondents and 14 female respondents. This represents 44% male and 56% female respondents which shows a fairly even response split between the genders and allows the better generalization of the responses.

¹ The IBM Statistical Package for Social Science version 24.

Table 9. Employment Statistics

Employment Statistics	Employed	Unemployed
	0	25

From table 9 and because all participants were part of a CETA programme, it is evident that all PWD from the sample are unemployed.

Table 10. Employment in the past 5 years

Employed within the past 5 years	Unemployed within the past 5 years	Actively looked for work
13 (52%)	12 (48%)	25 (100%)

From table 10 it is evident that just under half (48%) of PWD from this sample have been unemployed for a period longer than 5 years, despite being active looking for work and being a viable resource in the employment sector.

Table 11. Types of disabilities of respondents

Type of Disability	Number of PWD
Deaf/ hearing impaired	10
Head injury	1
Paraplegic	5
Arthrographosis	1
Cerebral palsy	2
Deformation of limb	1
Osteogenesis imperfecta	1
Polio	1
Partial Blindness	2
Missing a limb	1

From Table 11 it is evident that there are PWD within the sample of varying disabilities of which are restrictive but fall within the category of being able to perform on-site duties after a fair risk assessment.

Table 12. Reliability statistics PWD

	Perception	Knowledge and Compliance	Employment Practices
PWD	0.759	0.857	0.925

From Table 12 it is evident that the scales used in the study were internally consistent with Cronbach alpha reliability co-efficients > 0.7 .

Table 13. Perceptions regarding the employment of PWD (N=25)

Statement	Mean	Std. Deviation	Rank	Response category
PWD are able to perform site administration	4.84	0.37	1	Strongly agree
Employing PWD demonstrates social commitment of the organization to the public	4.80	0.58	2	Strongly agree
Employing PWD will help alleviate the construction skills shortage in KZN.	4.76	0.52	3	Strongly agree
PWD can play a role in construction	4.75	0.61	4	Strongly agree
Persons with Disabilities (PWD) can contribute positively to the KZN construction industry	4.72	0.54	5	Strongly agree
PWD are able to perform stores functions	4.72	0.54	6	Strongly agree
Employing PWD will enhance the image of the company	4.72	0.89	7	Strongly agree
PWD are not a threat to the H&S of able-bodied staff	4.68	0.63	8	Strongly agree
PWD conduct themselves well during interviews	4.60	0.82	9	Strongly agree

PWD are as productive as able-bodied workers	4.60	0.50	10	Strongly agree
PWD are more loyal and dedicated to their jobs as they value their jobs more	4.58	0.88	11	Strongly agree
PWD can perform certain key functions on site	4.56	0.87	12	Strongly agree
Employing a PWD is NOT costly	4.52	1.05	13	Strongly agree
PWD have been taught the necessary skills and have experience to perform duties on site	4.48	0.82	14	Strongly agree
PWD can be disciplined the same way as an able-bodied person	4.48	0.77	15	Strongly agree
PWD do not expect or want preferential treatment	4.48	1.16	16	Strongly agree
PWD readily and easily adapt to a changing work environment.	4.44	0.58	17	Strongly agree
PWD are able to do painting	4.36	0.99	18	Strongly agree
PWD can do bricklaying	4.25	1.11	19	Strongly agree`
The requirements of the Employment Equity Act 55 of 1998 are realistically achievable.	4.24	0.97	20	Strongly agree
PWD are able to do carpentry	4.21	1.02	21	Strongly agree
There is a skills shortage in the	4.16	0.94	22	Agree
PWD regularly apply for jobs in construction	3.76	1.13	24	Agree
PWD are easily accommodated in terms of access to facilities such as ablutions	3.60	1.38	25	Agree
PWD are NOT likely to take legal action at some point	3.56	1.50	26	Agree
Able-bodied staff respond well to PWD	3.13	1.36	27	Neutral

Employing PWD will NOT affect company profits	3.04	1.81	28	Neutral
PWD DO NOT require more time to supervise and training	3.00	1.29	29	Neutral
The construction industry encourages the employment of PWD	2.80	1.38	30	Neutral

From Table 13 it is evident that PWD tended to strongly agree with 21 statements, agreed with 4 statements and were neutral about the other statements. For example,

- PWD were able to perform site administration (mean =4.84);
- Employing PWD demonstrated social commitment by the organization to the public (mean =4.80);
- Employing PWD would help alleviate the construction skills shortage in KZN (mean =4.76);
- PWD could play a role in construction (mean =4.75);
- PWD could contribute positively to the KZN construction industry (mean =4.72).

Table 13 shows that PWD were self-aware as well as aware of the skills shortage within the construction industry. PWD strongly believed that they had a place in the KZN construction industry where they were capable of having a meaningful role and that being allowed to do so would have been in line with a company's social commitment to the community.

Further, PWD agreed about:

- There being a skills shortage in the KwaZulu Natal (KZN) construction industry (mean = 4.16);
- PWD regularly applying for jobs in construction (mean = 3.76);

- PWD being easily accommodated by access to currently available facilities such as ablutions (mean = 3.60); and
- PWD not being likely to take legal action at some point (mean = 3.56).

Additionally, PWD acknowledged the skills shortage in the KZN construction industry and that PWD were a potential skills resource who regularly made themselves available for employment, who did not need as much specialised accommodation as potential employers may have thought and, contrary to the common misconception, whose employment was not a legal risk to the company.

PWD also agreed but somewhat less about:

- Able-bodied staff responded well to PWD (mean = 3.13);
- Employing PWD not affecting company profits (mean = 3.04);
- PWD not requiring more time to supervise and train (mean = 3.00) and
- The construction industry encouraging the employment of PWD (mean = 2.80).

It appeared that able-bodied staff did not always respond well to the employment of PWD which might create a hostile working environment for PWD and become a barrier to their participation in the construction industry. They also accepted that they might need more supervision and training than able-bodied staff which might potentially affect company profits. PWD did not feel welcomed to job opportunities within the KZN construction industry which negatively impacted the future potential employment of PWD within an organisation.

Table 14. PWD Knowledge and compliance

Statement	Mean	Std. Deviation	Rank	Response category
I am aware of the needs of PWD in the working environment	4.86	0.35	1	Strongly agree
I am aware of the rights of PWD in terms of the SA Constitution	4.78	0.52	2	Strongly agree
I am aware of the provisions of the Labour Relations Act 66 of 1995 (LRA)	4.78	0.42	3	Strongly agree

I am aware that PWD need to be accommodated to participate in the Working environment	4.77	0.53	4	Strongly agree
I am aware of what constitutes being a PWD	4.74	0.54	5	Strongly agree
I am aware of the different types and classifications of disabilities	4.74	0.45	6	Strongly agree
I am aware that PWD face multi-dimensional discrimination within the employment sector	4.74	0.62	7	Strongly agree
Increased knowledge about PWD and their potential contributions would increase their employment	4.74	0.54	8	Strongly agree
I am aware of the benefits of employing PWD in relation to BBEE	4.61	0.58	9	Strongly agree
I am aware of the terms and conditions of the EEA	4.52	0.95	10	Strongly agree
There is a general lack of knowledge and awareness regarding PWD	4.29	1.33	11	Strongly agree
We are aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG)	3.78	1.51	12	Agree
I continuously keep abreast of issues relating to equity	3.64	0.76	13	Agree
There is formal procedures in place to deal with equality issues	3.61	1.47	14	Agree
Risk assessments are performed pertaining to PWD	3.52	1.26	15	Agree
There is written bullying/harassment policies or equivalent in place	3.48	1.65	16	Agree
Employment strategies are in line with the EEA and LRA	3.39	1.53	17	Neutral
There is informal procedures in place to deal with equality issues	3.13	1.42	18	Neutral
Those responsible for conducting interviews have been properly trained and are experienced in EE procedures	2.96	1.62	19	Neutral
TAG is implemented in organisations	2.91	1.12	20	Neutral
There are increased work opportunities for PWD	2.80	1.63	21	Neutral
Recruitment forms are developed to remove discriminatory language, questions and inferences	2.78	1.44	22	Neutral
PWD are proactively recruited	2.17	1.23	23	Disagree

From Table 14 it is evident that PWD tended to strongly agree with 11 statements, agreed with 5 statements, were neutral about 6 statements and disagreed with 1 statement. For example, they strongly agreed about:

- Being aware of the needs of PWD in the working environment (mean = 4.86);
- Being aware of the rights of PWD in terms of the Constitution (mean =4.78);
- Being cognisant of the provisions of the Labour Relations Act 66 of 1995 (LRA) (mean =4.78);
- Being aware that PWD need to be accommodated to participate in the working environment (mean =4.77);
- Being aware of what constitutes being a PWD (mean =4.74).

Evidently, PWD had strong awareness of their status as a PWD, their capabilities and their rights as a PWD. This awareness showed their understanding of the realistic expectations of employment within the KZN construction industry.

From Table 14 it is evident that PWD agreed about:

- Being aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG) (mean= 3.78);
- Continuously keeping abreast of issues relating to employment equity (mean= 3.64);
- The existence of formal procedures in place to deal with equality issues (mean= 3.61);
- The existence of written bullying/harassment policies or equivalent in place (mean= 3.48).

PWD were aware of current issues relating to their employment and therefore had a sense of knowing their rights and obligations. From their experience PWD were positive about formal written policy implementation put in place by contractors.

From Table 14 it is evident that PWD are neutral about:

- Those responsible for conducting interviews being properly trained and were experienced in employment equity procedures (mean = 2.96);
- TAG being implemented in organisations (mean = 2.91);
- There being increased work opportunities for PWD (mean = 2.80);
- Recruitment forms being developed to remove discriminatory language, questions and inferences (mean = 2.78).

PWD disagreed that PWD were proactively recruited (mean = 2.17)

This data further reiterates that from the experiences of PWD, they did not believe that construction companies instituted the correct structures and policies that contributed to the exclusion of PWD within the KZN construction industry - which they should. It also showed that construction companies did not recognise PWD as viable sources of labour and did not consider them for positions through active and obvious exclusion.

Table 15. PWD Employment Practices

Statement	Mean	Std. Deviation	Rank	Response category
I understand the concept of reasonable accommodation	4.57	0.59	1	Strongly agree
Equipment can be used by PWD in performing their jobs	3.83	1.50	2	Agree
PWD are regularly monitored	3.73	1.35	3	Agree
Information is accessible to PWD	3.61	1.53	4	Agree
Places of work is accessible to PWD	3.52	1.38	5	Agree
Help is provided when needed and also proactively	3.48	1.41	6	Agree
Training is modified to accommodate PWD	3.45	1.71	7	Agree
PWD are accommodated by modifying job inputs to suit them	3.32	1.73	8	Neutral
Exit interviews are conducted when a PWD leaves employment	3.17	1.64	9	Neutral

From Table 15 it is evident that PWD tended to strongly agree with 1 statement, agreed with 6 statements and were neutral towards 2 statements. For example they strongly agreed that they understood the concept of reasonable accommodation (mean = 4.57). PWD understood their inability to function as an able-bodied person and the need for accommodation by contractors to allow their participation in construction activities.

From Table 15 PWD agreed about :

- Equipment being usable by PWD in performing their jobs (mean = 3.83), and
- PWD being regularly monitored (mean = 3.73).

Further, PWD saw themselves as being able to use equipment suggesting that the amount of accommodation might not necessarily be as much as contractors think. They had been monitored by employers, showing that in certain cases employers were watching the performance of PWD more closely than they would an able bodied staff. This could be good if help and support were provided and it could have been bad if the monitoring was just to look for reasons to not employ PWD.

PWD were neutral about:

- PWD being accommodated by modifying job inputs to suit them (mean =3.32), and
- Exit interviews being conducted when a PWD left employment (mean=3.17).

Contractors were unwilling to learn what could be done differently to encourage the employment of PWD. They were not supporting PWD in their employment and, further, indifference was shown towards the future employment of PWD by not conducting exit interviews. These reasons deterred the participation of PWD within the KZN construction industry.

4.3 The contractor profile

Table 16. The contractors response rate

Sample	Distributed	Completed	Response rate
Contractors	100	50	50%

Table 16 shows 100 construction firms were approached in the KZN construction industry from the Transnet CIDB database with 50 contractors duly completing the survey yielding a 50% response rate.

Important information on contractors

All contractors worked in KZN making them eligible to participate in the study.

Table 17 – BBBEE scores of responding contractors

BBBEE Score	Frequency	Percent
1	25	51.0
2	18	36.7
3	4	8.2
4	2	4.1

From Table 17 it is evident that the BBBEE scores of responding contractors ranged from 1 to 4. The majority (51%) scoring 1 which is the highest score obtainable, while 36% of respondents scored 2 and 12.3% scoring less than 2. This data shows that the majority of respondents score highly on the BBBEE scorecard, are familiar with and have systems in place when dealing with previously disadvantaged persons.

Table 18 - CIDB distribution

CIDB Grade	Frequency	Percent
3	1	2
4	2	4.1
5	3	6.1
6	29	59.2
7	12	24.5
8	1	2
9	1	2

From Table 18 it is evident that responding contractors CIDB gradings ranged between 3GB and 9GB, with the majority of respondents (59.2%) scoring 6GB able to handle work up to R13, 000,000.00 and 29%, 7GB able to handle work up to R40, 000,000.00 . This data shows that the majority of respondents were of substantial size in the KZN construction industry and should have significant experience with employment practices.

- All contractors had been in business over 6 years .
- Contractors recruited - to a great extent - from the public sector.

Table 19. Contractor Reliability Statistics

	Perception	Knowledge and Compliance	Employment Practices
Contractor	0.728	0.918	0.908

From Table 19 it is evident that the scales used in the study were internally consistent with Cronbach alpha reliability co-efficients > 0.7.

Table 20. Contractors perception. N = 50

Statement	Mean	Std. Deviation	Rank	Response category
PWD are easily accommodated in terms of access to facilities such as ablutions	4.55	1.16	1	Strongly agree
PWD are able to perform site administration	4.18	0.94	2	Agree
Persons with Disabilities (PWD) can contribute positively to the KZN construction industry	4.12	1.24	3	Agree
PWD are able to perform stores functions	3.94	1.17	4	Agree
PWD can play a role in construction	3.82	0.90	5	Agree
The requirements of the EEA are realistically achievable.	3.60	0.93	6	Agree
PWD can perform certain key functions on site	3.56	1.13	7	Agree
PWD are not a threat to the H&S of able-bodied staff	3.55	1.19	8	Agree
Employing PWD will NOT affect company profits	3.55	1.26	9	Agree
PWD do not get preferential treatment	3.52	0.92	10	Agree
There is a skills shortage in the KZN construction industry	3.51	1.14	11	Agree
PWD can be disciplined the same way as an able-bodied person	3.49	1.16	12	Agree
PWD can do bricklaying	3.38	1.41	13	Neutral
PWD are NOT likely to take legal action at some point	3.36	1.07	14	Neutral
PWD conduct themselves well during interviews	3.34	1.11	15	Neutral
Able-bodied staff respond well to PWD	3.33	0.93	16	Neutral
PWD are more loyal and dedicated to their jobs as they value their jobs more	3.32	1.11	17	Neutral
The construction industry encourages the employment of PWD	3.28	1.16	18	Neutral
Employing PWD will help alleviate the construction skills shortage in KZN.	3.28	1.13	19	Neutral
PWD DO NOT require more time to supervise and training	3.26	0.99	20	Neutral
Employing PWD demonstrates social commitment of the organization to the public	3.25	1.69	21	Neutral
PWD are as productive as able-bodied workers	3.23	1.24	22	Neutral

PWD have been taught the necessary skills and have experience to perform duties on site	3.21	1.17	23	Neutral
PWD do not expect or want preferential treatment	3.09	1.27	24	Neutral
PWD regularly apply for jobs in construction	3.00	1.43	25	Neutral
Employing PWD will enhance the image of the company	2.96	1.55	26	Neutral
PWD are able to do carpentry	2.88	1.41	27	Neutral
Employing a PWD is NOT costly	2.84	1.30	28	Neutral
PWD are able to do painting	2.82	1.21	29	Neutral
PWD readily and easily adapt to a changing work environment.	2.81	1.24	30	Neutral

From Table 20 it is evident that contractors tended to strongly agree with 1 statement, agreed with 11 statements and were neutral towards the remaining statements. For example, they strongly agreed that PWD were easily accommodated in terms of access to facilities such as ablutions (mean= 4.55).

Contractors saw a possible role for PWD in the construction industry having agreed that accommodation to certain facilities was possible.

From Table 20 contractors agree about:

- PWD being able to perform site administration (mean = 4.18);
- PWD being able to have contributed positively to the KZN construction industry (mean = 4.12);
- PWD being able to perform stores functions (mean = 3.94);
- PWD being able to play a role in construction (mean = 3.82), and
- There being a skills shortage in the Kwa Zulu Natal (KZN) construction industry (mean = 3.51).

Contractors agreed that there was a skills shortage in the KZN construction industry and that PWD could play a role in construction and be accommodated in certain instances. However they supported the misconception that PWD should be confined to the periphery

of site administration. This shows that contractors were not willing to employ PWD in a site building activity capacity.

Further, it is evident that contractors were neutral about:

- PWD readily and easily adapting to a changing work environment (mean= 2.81);
- PWD being able to do painting (mean= 2.82);
- PWD being able to do carpentry (mean= 2.88);
- Employing a PWD NOT being costly (mean= 2.84);
- PWD having been taught the necessary skills and have experience to perform duties on site (mean= 3.21);
- PWD being as productive as able-bodied workers (mean= 3.23);
- PWD NOT being likely to take legal action at some point (mean= 3.36), and
- PWD being able to do bricklaying (mean= 3.38).

Contractors still had the preconception that PWD did not have the capacity to work in construction because they had not been taught the necessary skills. They considered that all physical disabilities inhibit physically intensive jobs like bricklaying (without providing risk assessments) and that modifying the work environment to accommodate PWD was too costly and not worth the monetary outlay. Contractors still had the mind-set that employing PWD was a legal risk that was not worth taking. This prejudicial mind-set causes a barrier to entry of PWD into the KZN construction industry.

Table 21. Contractors Knowledge and compliance

Statement	Mean	Std. Deviation	Rank	Response category
I am aware that PWD need to be accommodated to participate in the Working environment	4.32	0.98	1	Strongly agree
I am aware of what constitutes being a PWD	4.27	1.11	2	Strongly agree
Increased knowledge about PWD and their potential contributions	3.98	1.16	3	Agree

would increase their employment				
I am aware that PWD face multi-dimensional discrimination within the employment sector	3.88	1.12	4	Agree
I am aware of the benefits of employing PWD in relation to BBBEE	3.88	1.02	5	Agree
I am aware of the needs of PWD in the working environment	3.86	1.14	6	Agree
I continuously keep abreast of issues relating to equity	3.80	1.09	7	Agree
I am aware of the terms and conditions of the EEA	3.80	1.08	8	Agree
I am aware of the rights of PWD in terms of the SA Constitution	3.76	1.13	9	Agree
I am aware of the different types and classifications of disabilities	3.72	1.11	10	Agree
I am aware of the provisions of the Labour Relations Act 66 of 1995 (LRA)	3.69	1.12	11	Agree
Recruitment forms are developed to remove discriminatory language, questions and inferences	3.69	1.21	12	Agree
Those responsible for conducting interviews have been properly trained and are experienced in employment equity procedures	3.50	1.27	13	Agree
There is a general lack of knowledge and awareness regarding PWD	3.31	1.02	14	Neutral
There is written bullying/harassment policies or equivalent in place	3.22	1.47	15	Neutral
We are aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG)	3.21	1.20	16	Neutral
There are increased work opportunities for PWD	3.10	1.05	17	Neutral
Employment strategies are in line with the EEA and LRA	3.08	1.32	18	Neutral
There is formal procedures in place to deal with equality issues	2.92	1.55	19	Neutral
There is informal procedures in place to deal with equality issues	2.86	1.43	20	Neutral
TAG is implemented in organisations	2.85	1.44	21	Neutral
Risk assessments are performed pertaining to PWD	2.60	1.48	22	Neutral
PWD are proactively recruited	2.50	1.12	23	Disagree

From Table 21 it is evident that contractors tended to strongly agree with 2 statements, agreed with 11 statements, were neutral about 9 statements and disagreed with 1 statement. For example they tend to strongly agree about:

- Being aware that PWD needed to be accommodated to participate in the working environment (mean= 4.32);
- Being aware of what constitutes being a PWD (mean= 4.27).

Contractors possessed a sense of awareness regarding what constituted being a PWD and the needs of PWD in terms of their abilities and need for reasonable accommodation to participate in construction.

Also, it is evident that contractors agreed about:

- Increased knowledge about PWD and their potential contributions increasing their employment (mean= 3.98);
- Being aware that PWD faced multi-dimensional discrimination within the employment sector (mean= 3.88), and
- Being aware of the benefits of employing PWD in relation to BBBEE (mean= 3.88).

Contractors were aware of the plight of PWD and the benefits of employing them from a BBBEE point of view. There was a lack of knowledge about PWDs' potential contributions to the construction industry.

Additionally, contractors were neutral about:

- Employment strategies being in line with the EEA and LRA (mean= 3.08);
- There being informal procedures in place to deal with equality issues (mean= 2.86);
- There being formal procedures in place to deal with equality issues (mean= 2.92);
- TAG was implemented in organisations (mean= 2.85);
- Risk assessments being performed pertaining to PWD (mean= 2.60).

There was a common theme amongsrespondents that PWD were not proactively recruited. It also showed that contractors were not engaging in activities that would place them on better footing to employ PWD, such as performing risk assessments which would allow the contactor to evaluate the possibility of PWD performing certain on-site functions, instead they dismissed it.This was prejudicial and was a serious barrier to entry to the construction industry by PWD. Contractors were also not implementing TAG, which is vitally important when aligning with the Employment Equity Act (EEA), therefore they were practicing non-compliance – this creates another barrier to entry for PWD. Implementation of other legislation pertaining to the employment of PWD also had low priority, reiterating the problem of noncompliance by contractors with legislation as a barrier to entry by PWD. Not having formal or informal policies in place to deal with equality issues was a by-product of government agencies not enforcing laws pertaining to the employment of PWD.

Further, disagreed that PWD were proactively recruited (mean= 2.50).

Contractors had little ambition of employing PWD and did not go out of their way to recruit suitable candidates who were capable of performing the required on-site function. This was because contractors did not see PWD as capable or equal to able bodied persons.

Table 22. Contractors Employment Practices

Statement	Mean	Std. Deviation	Rank	Response category
Information is accessible to PWD	3.54	1.29	1	Agree
I understand the concept of reasonable accommodation	3.52	1.05	2	Agree
Places of work is accessible to PWD	3.50	1.15	3	Agree
PWD are accommodated by modifying job inputs to suit them	3.29	1.24	4	Neutral
Equipment can be used by PWD in performing their jobs	3.24	1.30	5	Neutral
Help is provided when needed and also proactively	2.88	1.35	6	Neutral
Training is modified to accommodate PWD	2.50	1.49	7	Disagree
PWD are regularly monitored	2.46	1.53	8	Disagree
Exit interviews are conducted when a PWD leaves employment	2.43	1.53	9	Disagree

From Table 22 it is evident that contractors agreed with 3 statements, were neutral to 3 statements and disagree with 3 statements. for example, contractors tended to agree about:

- Information being accessible to PWD (mean= 3.54);
- Understanding the concept of reasonable accommodation (mean= 3.52);
- Places of work being accessible to PWD (mean= 3.50).

Contractors have reported that they undersood, not to great extent, reasonable accommodation and they in-part accommodate PWD in the way their organisation was physically set up.

Also, contractors were neutral about:

- PWD being accommodated by modifying job inputs to suit them (mean= 3.29);
- Existing equipment being used by PWD in performing their jobs (mean= 3.24);
- Help being provided to PWD when needed and this was done proactively (mean= 2.88).

Contractors were well aware that, in certain instances, participation by PWD in construction activities would be a risk because of their inability to use machinery designed specifically for able bodied persons. They had also indicated that knowing this, they did not provide help to PWD required to use such machinery.

Further, contractors disagreed about:

- Training being modified to accommodate PWD (mean= 2.50);
- PWD being regularly monitored (mean= 2.46), and
- Exit interviews being conducted when a PWD leaves employment (mean= 2.43).

Contractors were not interested in providing tailored assistance to PWD in performing their jobs, which was a barrier to their participation in the KZN construction industry. It is also evident that there were no exit interviews which shows non-commitment to employment of

PWD. This evident non-commitment in employment practice shows that contractors did not have ambition of employing PWD, and would rather employ able bodied staff.

4.4 General labour profile

Table 23. General labourers response rate

Sample	Distributed	Completed	Response rate
General labourers	50	30	60%

General laborers had the knowledge of the inputs required for the potential functions on site and they would interact mostly with the PWD who were employed by the firms they worked for. From Table 19 it is evident that 30 general laborers participated in the study.

Table 24. General labourer reliability statistics

	Perception	Knowledge and Compliance	Employment Practices
General Labour	0.898	0.922	0.883

From Table 24 it is evident that the scales used in the study were internally consistent with Cronbach alpha reliability co-efficients > 0.7 .

Table 25 Perception of general labour, N= 30

Statement	Mean	Std. Deviation	Rank	Response category
PWD are able to perform stores functions	4.63	0.67	1	Strongly agree
PWD are able to perform site administration	4.53	0.86	2	Strongly agree
PWD are not a threat to the H&S of able-bodied staff	4.37	0.89	3	Strongly agree
Employing PWD demonstrates social commitment of the organization to the public	4.37	0.85	4	Strongly agree
The requirements of the Employment Equity Act 55 of 1998 (EEA) are realistically achievable.	4.31	1.11	5	Strongly agree
PWD can perform certain key functions on site	4.10	1.30	6	Agree
Able-bodied staff respond well to PWD	4.10	0.88	7	Agree

PWD DO NOT require more time to supervise and training	4.10	1.12	8	Agree
Employing a PWD is NOT costly	3.97	1.22	9	Agree
PWD do not get preferential treatment	3.97	1.10	10	Agree
PWD do not expect or want preferential treatment	3.93	1.28	11	Agree
PWD have been taught the necessary skills and have experience to perform duties on site	3.91	1.44	12	Agree
PWD are able to do carpentry	3.90	1.49	13	Agree
PWD can play a role in construction	3.90	1.32	14	Agree
Persons with Disabilities (PWD) can contribute positively to the KZN construction industry	3.87	1.59	15	Agree
PWD regularly apply for jobs in construction	3.87	1.17	16	Agree
PWD are NOT likely to take legal action at some point	3.83	1.26	17	Agree
Employing PWD will help alleviate the construction skills shortage in KZN.	3.79	1.40	18	Agree
PWD conduct themselves well during interviews	3.77	1.14	19	Agree
PWD readily and easily adapt to a changing work environment.	3.77	1.30	20	Agree
PWD are able to do painting	3.69	1.54	21	Agree
PWD are easily accommodated in terms of access to facilities such as ablutions	3.69	1.42	22	Agree
PWD can do bricklaying	3.62	1.57	23	Agree
The construction industry encourages the employment of PWD	3.47	1.38	24	Agree
Employing PWD will NOT affect company profits	3.47	1.83	25	Agree
There is a skills shortage in the Kwa Zulu Natal (KZN) construction industry	3.13	1.48	26	Neutral
PWD are as productive as able-bodied workers	3.10	0.84	27	Neutral
PWD DO Not require more time to supervise and train	3.00	0.83	28	Neutral
Employing PWD will enhance the image of the company	2.67	1.67	29	Neutral
PWD are more loyal and dedicated to their jobs as they value their jobs more	2.32	1.42	30	Disagree

From Table 25 it is evident that general labourers tended to strongly agree with 5 statements, agreed with 20 statements, were neutral about 4 statements and disagreed with 1 statement. For example they strongly agreed about:

- PWD being able to perform stores functions (mean= 4.63);

- PWD being able to perform site administration (mean= 4.53);
- PWD not being a threat to the health and safety of able-bodied staff (mean= 4.37);
- Employing PWD demonstrating social commitment of the organization to the public (4.37), and
- That the requirements of the Employment Equity Act 55 of 1998 (EEA) being realistically achievable (mean= 4.31).

The finding suggest that PWD should be restricted to administrative functions and avoid physically intensive functions. General laborers did not feel endangered by having PWD in the working environment. They supported the employment of PWD since the requirements of the EEA were achievable.

General labourers agreed about:

- PWD not expecting or want preferential treatment (mean= 3.93);
- PWD being able to do carpentry (mean= 3.90);
- PWD playing a role in construction (mean= 3.90);
- PWD contributing positively to the KZN construction industry (mean= 3.87), and
- PWD doing bricklaying (mean= 3.62).

General labourers agreed that PWD had a role to play in the physical aspects of constructions such as bricklaying and carpentry. Being active in these roles on a daily basis they were in a prime position to comment on the inputs of the activity and the potential of PWD in performing these functions. They opined that PWD did not want to be different in the execution of their duties within the organisation.

Additionally, general labourers were neutral about:

- PWD being as productive as able-bodied workers and that there was a skills shortage in the Kwa Zulu Natal (KZN) construction industry (mean= 3.10);

- More PWD being disciplined the same way as an able-bodied person (mean= 3.00);
- Employing PWD enhancing the image of the company (mean= 2.67).

This data was useful in that it showed that all the negative responses from general labour tended to deal with comparisons of PWD to themselves. They tended to state that PWD were not their equal in the construction industry and also stated that they did not necessarily see a skills shortage, showing that they saw themselves as sufficient in the market. These negative attitudes and prejudices towards PWD also negatively swayed employers in employing PWD and is a barrier to entry to the construction industry by PWD.

Further, general labourers reported that they tended to disagree that PWD were more loyal and dedicated to their jobs (mean= 2.32). It might be that they had this attitude as they valued their jobs and do not wish to lose them to PWD by making it seem as though PWD were their equal in any way. General labourers did not feel comparable with PWD. The labourers regarded themselves as superior to PWD, and this was a negative attitude shared by contractors and a barrier to the entry of PWD to the KZN construction industry.

Table 26. General labourer's knowledge and compliance

Statement	Mean	Std. Deviation	Rank	Response category
I am aware that PWD need to be accommodated to participate in the working environment	4.87	0.43	1	Strongly agree
I am aware of the different types and classifications of disabilities	4.83	0.53	2	Strongly agree
I am aware of the terms and conditions of the EEA	4.60	0.77	3	Strongly agree
I am aware of what constitutes being a PWD	4.57	0.82	4	Strongly agree
We are aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG)	4.57	0.63	5	Strongly agree
I am aware of the needs of PWD in the working environment	4.53	1.04	6	Strongly agree
I am aware that PWD face multi-dimensional	4.53	0.86	7	Strongly agree

discrimination within the employment sector				
I am aware of the rights of PWD in terms of the SA Constitution	4.50	0.94	8	Strongly agree
I am aware of the benefits of employing PWD in relation to BBBEE	4.50	0.68	9	Strongly agree
I am aware of the provisions of the Labour Relations Act 66 of 1995 (LRA)	4.43	0.77	10	Strongly agree
I continuously keep abreast of issues relating to equity	4.40	0.81	11	Strongly agree
Those responsible for conducting interviews have been properly trained and are experienced in employment equity procedures	4.33	0.88	12	Strongly agree
There is formal procedures in place to deal with equality issues	4.25	1.11	13	Strongly agree
TAG is implemented in organisations	4.24	1.06	14	Strongly agree
Employment strategies are in line with the EEA and LRA	4.20	1.16	15	Strongly agree
Recruitment forms are developed to remove discriminatory language, questions and inferences	4.20	1.21	16	Strongly agree
Risk assessments are performed pertaining to PWD	4.00	1.29	17	Agree
Increased knowledge about PWD and their potential contributions would increase their employment	3.83	1.26	18	Agree
There is a general lack of knowledge and awareness regarding PWD	3.31	0.89	19	Neutral
PWD are proactively recruited	3.27	0.87	20	Neutral
There is written bullying/harassment policies or equivalent in place	3.23	1.10	21	Neutral
There are increased work opportunities for PWD	3.21	0.82	22	Neutral
There is informal procedures in place to deal with equality issues	2.83	0.91	23	Neutral

From Table 26 it is evident that general labourers tended to strongly agree with 16 statements, agreed with 2 statements and were neutral about 5 statements. For example they strongly agree about:

- Being aware that PWD needed to be accommodated to participate in the working environment (4.87);
- Being aware of the different types and classifications of disabilities (4.83);
- Being aware of the terms and conditions of the EEA (4.60);
- Being aware of what constitutes being a PWD (4.57), and
- Being aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG) (mean= 4.57).

General labourers were aware of the plight of PWD and their need for assistance in being accommodated while performing certain functions. Their first-hand experience on site shows an understanding of inputs and therefore allows them to make valid comments about PWD needing to be accommodated. They also seemed to be aware of the legislation that surrounds the employment of PWD.

General labourers agreed that increased knowledge about PWD and their potential contributions would have increased their levels of employment (mean= 3.83). General labourers are aware that in the KZN construction industry there was a lack of knowledge about PWD. An increase in knowledge about the possible involvement of PWD would have served to lower some of the barriers currently resisting their entry into the KZN construction industry.

in addition, general labourers were neutral about:

- There being a general lack of knowledge and awareness regarding PWD (mean= 3.31);
- PWD being proactively recruited (mean= 3.27) ;
- There being written bullying/harassment policies or equivalent in place (mean= 3.23);
- There being increased work opportunities for PWD (mean= 3.21);

- There being informal procedures in place to deal with equality issues (mean= 2.83).

There was still a lack of knowledge that prevented the entry of PWD to the KZN construction industry and increasing knowledge might have helped in the employment of PWD. General labours did not see procedures in place to assist in the employment of PWD which they saw as a barrier. It also reinforced the perception that there was a general non-commitment to the employment of PWD by not proactively recruiting PWD and create opportunities for PWD.

Table 27. General Labourer's Employment Practices

Statement	Mean	Std. Deviation	Rank	Response category
Places of work are accessible to PWD	4.43	0.77	1	Strongly agree
I understand the concept of reasonable accommodation	4.33	0.88	2	Strongly agree
Information is accessible to PWD	4.17	1.09	3	Agree
Training is modified to accommodate PWD	4.00	1.11	4	Agree
Equipment can be used by PWD in performing their jobs	3.75	1.39	5	Agree
PWD are accommodated by modifying job inputs to suit them	3.25	1.28	6	Neutral
PWD are regularly monitored	3.07	0.83	7	Neutral
Help is provided when needed and also proactively	2.93	0.94	8	Neutral
Exit interviews are conducted when a PWD leaves employment	2.80	0.85	9	Neutral

It is evident from table 27 that general labourers tended to strongly agreed with 2 statements, agreed with 3 statements and were neutral to 4 statements. For example they strongly agreed about:

- Places of work were accessible to PWD (mean= 4.43);
- They understood the concept of reasonable accommodation (mean= 4.33).

General labour understood what reasonable accommodation was, and deemed the place of work and information to be accessible to PWD, showing partial commitment to the working environment having been conducive to employing PWD. This was a similar

response to that made by contractors. This did not however deal with building standards and information standards that are generally a minimum requirement for all organisations whether you employ PWD or not. It was not tailored.

Also, general labourers agreed about:

- Information being accessible to PWD (mean= 4.17);
- Training being modified to accommodate PWD (mean= 4.00);
- Available equipment being usable by PWD in performing their jobs (mean= 3.75).

General labour had reported that the employing contractors accommodated PWD by means of items such as access to information and training modification. This response was not consistent with what was reported by the contractors with whom the power and ability lies to modify inputs to suit PWD. This response by general labour suggests that general labourers showed loyalty to their employers by not disclosing their blatant non-compliance in accommodating PWD. This response was significant because the general labour participating in this study are employed by the same contractors who also participated in this study. Their inconsistent responses were considered evidence of knowledge of active discrimination towards PWD.

Further, general labourers were neutral about:

- PWD being regularly monitored (mean= 3.07);
- Help being provided when needed and also proactively (mean= 2.93);
- Exit interviews being conducted when a PWD left employment (mean= 2.80).

According to general labourers PWD were not regularly monitored, which showed that contractors were not interested in their disabled staff and therefore could not determine if they needed help or not. It also served to corroborate the contractors' responses in that general labour tended to agree that exit interviews were not conducted and help was not provided. This reinforced the theme of non-commitment by employers to the employment of PWD. These items are barriers to the entry to the KZN construction industry by PWD

and showed a negative attitude leading to non-conformance by the employer in employment practices.

4.5 Comparison of views of respondent groups

Table 28. Comparison of views of respondent groups

Respondents	Perception		Knowledge and Compliance		Employment Practices	
	Mean	SD	Mean	SD	Mean	SD
PWD	4.23	0.95	3.90	1.02	3.63	1.42
Contractor	3.40	1.18	3.47	1.20	3.03	1.32
General Labour	3.77	1.25	4.14	0.91	3.63	1.01

From Table 28 it is evident when comparing the consolidated means for each construct that:

Perception: PWD agreed most strongly (mean=4.23) with statements relating to perception while general labour (mean=3.77) tending to agree with the statements to a lesser extent. Contractors agreed the least (mean=3.40) about perception about PWD. These findings showed that PWD were the most positive about their capable participation in the construction industry and that general labour also support them to an extent. It showed that contractors were the least positive, showing the unequal commitment to the employment of PWD within the KZN construction industry. A lack of knowledge by contractors being a reason why the overall employment of PWD is low.

This means that despite PWD being willing, competent and general labour supporting this, it was still contractors, who had the hiring power in the KZN construction industry and they were hesitant to employ PWD stemming from a poor perception about the capabilities of PWD, thinking that they were, in the main incapable of functioning on site (without proper testing done) and the fear that employing PWD could eventually turn out to be a serious administrative and legal issue that they would like to avoid. There existed negative associations as well as perceived negative implications of hiring PWD that would affect their company profitability, therefore they did not hire them and continued with able bodied persons.

Knowledge and compliance: General labourers have agreed most (mean = 4.14), with statements relating to knowledge and compliance. PWD (mean= 3.90) also agreed, but to a lesser extent and contractors (mean= 3.47) agreed the least of the 3 respondents.

These findings showed that that contractors were less positive than PWD and, being the people with the decision making power, the onus was with them to keep abreast of the requirement for compliance in employing the required personnel. It was found that there was insufficient knowledge of PWD together with the legislature dealing with the employment of PWD to effectively execute proper compliance with regards to employment strategies. It was found that they were not implementing the legislature they should have been, to allow PWD a fair chance at participation in the construction industry. This non-application of proper prescribed PWD compliance was a barrier to the entry of PWD into the construction industry. PWD had a relatively high level of self-awareness of their situation and the corresponding legislative landscape despite this it was seen that in an effort to participate in an already prejudicial construction industry they tended to be willing to accept sub-standard compliance practices. However, even this acceptance and compromise has not positively impacted their employment in the KZN construction industry

It also showed that general labour seemed to be very aware of the plight of PWD, however they tended to be unsympathetic towards PWD when it came to company compliance, not seeing the need for modification of structures to suit PWD and this was a barrier to the participation of PWD in the construction industry.

This means that the lack of knowledge and non-compliance with legislature that contractors should be instituting has negatively impacted the employment of PWD. Without enabling legislature, there was no procedural infrastructure to the employment of PWD nor were there prompts to the employment of PWD with a look at economic benefits. The lack of enforceability has also made it a cycle of marginalisation of PWD without a view to change. This has caused low numbers of employment of PWD within the construction industry.

Employment practices: The data shows that PWD and general labourers had jointly agreed most (mean = 3.63) with statements in employment practices, and contractors (3.03) were neutral to the statements.

These findings served to reiterate a running theme that contractors, the people with the power to institute proper employment practices that enabled the employed PWD to continue to participate in the construction industry, were less interested in implementing these proper employment practices to provide, active or otherwise, support to PWD. The lack of support stemmed from them stating that accommodation of PWD was too costly and saw PWD as affecting their potential competitive edge. Contractors saw any break in the continuity of an activity as bad. This was an obstacle that employed PWD faced on a daily basis in the KZN construction industry and which had deterred their future participation in the construction industry. It also showed that at the time, PWD were willing to over compensate and accept less accommodation and support than was necessary in an effort to have participated in the construction industry.

This means that the lack of supportive mechanisms or the lack of endeavour to institute supportive mechanisms to disabled employees within a contracting firm, was a deterring factor to the past and future participation of PWD within the industry, despite PWD trying to overcome potential obstacles.

4.6 Analysis of variance (ANOVA)

Anova is a collection of statistical models used to analyze the differences among group means and their associated procedures. Where $P < 0.05$ it is said to be a significant variance. (Newton, 2009).

PWD ANOVA

Table 29. Perception

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	19.326	17	1.137	0.738		insignificant

Employment practice	Within Groups	8.986		5	1.797		
	Total	28.311		22			
	Between Groups	7.211		18	0.401	0.782	insignificant
Knowledge and compliance	Within Groups	3.405		6	0.567		
	Total	10.615		24			

From table 29 it is evident that there is insignificant variance when comparing PWD Perception to both employment practice and knowledge and compliance.

Table 30. Knowledge and Compliance

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	27.531	18	1.529	0.030		significant
Perception	Within Groups	0.781	4	0.195			
	Total	28.311	22				
	Between Groups	2.675	19	0.141	0.325		insignificant
Employment Practice	Within Groups	0.475	5	0.095			
	Total	3.15	24				

From table 30 it is evident that there is significant variance when comparing PWD Knowledge and Compliance to perception and a insignificant difference when comparing PWD Knowledge and Compliance to Employment practices.

Table 31. Employment practices

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	2.522	17	0.148	1.997	0.228	insignificant
Perception	Within Groups	0.371	5	0.074			
	Total	2.894	22				
	Between Groups	6.034	17	0.355	5.309	0.037	significant
Knowledge and compliance	Within Groups	0.334	5	0.067			
	Total	6.369	22				

From table 31 it is evident that there is insignificant variance when comparing PWD employment practice to perception and a significant difference when comparing PWD employment practice to knowledge and compliance.

Contractors ANOVA

Table 32. Perception

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	24.325		35	0.695	0.029	significant
Knowledge and compliance	Within Groups	2.384		14	0.17		
	Total	26.71		49			
	Between Groups	43.418		33	1.316	0.004	significant

Employment Practice	Within Groups	7.034		14	0.502		
	Total	50.453		47			

From table 32 it is evident that there is significant variance when comparing Contractors Perception to both employment practice and knowledge and compliance.

Table 33. Knowledge and Compliance

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	19.247		29	0.664	0.10	insignificant
Perception	Within Groups	4.734		20	0.237		
	Total	23.98		49			
	Between Groups	42.584		28	1.521	0.002	significant
Employment Practice	Within Groups	7.869		19	0.414		
	Total	50.453		47			

From table 33 it is evident that there is insignificant variance when comparing contractor's knowledge and compliance to perception and significant variance when comparing it to employment practice

Table 34. Employment Practice

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	17.798		23	0.774	0.001	significant

Perception	Within Groups	4.986		24	0.208		
	Total	22.784		47			
	Between Groups	16.59		23	0.721	0.000	significant
Knowledge and compliance	Within Groups	3.81		24	0.159		
	Total	20.401		47			

From table 34 it is evident that there is significant variance when comparing Contractors Employment practice to both perception and knowledge and compliance

General Labourers ANOVA

Table 35. Perception

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	8.939		25	0.358	0.000	significant
Knowledge and compliance	Within Groups	0.021		4	0.005		
	Total	8.959		29			
	Between Groups	9.788		25	0.392	0.093	insignificant
Employment Practice	Within Groups	0.391		4	0.098		
	Total	10.179		29			

From table 35 it is evident that there is insignificant variance when comparing general labourers's perceptions to employment practices and significant variance when comparing it to knowledge and compliance.

Table 36. Knowledge and compliance

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	12.203		22	0.555	0.000	significant
Perception	Within Groups	0.082		7	0.012		
	Total	12.285		29			
	Between Groups	8.093		22	0.368	0.415	insignificant
Employment Practice	Within Groups	2.086		7	0.298		
	Total	10.179		29			

From table 36 it is evident that there is insignificant variance when comparing general labourers's knowledge and compliance to employment practices and significant variance when comparing it to perception.

Table 37. Employment Practice

		Sum of squares	df	Mean Square	F	P	Rate
	Between Groups	11.593			16	0.000	significant
Perception	Within Groups	0.692			13		
	Total	12.285			29		
	Between	8.666			16	0.00	significant

	Groups						
Knowledge and compliance	Within Groups	0.293			13		
	Total	8.959			29		

From table 37 it is evident that there is significant variance when comparing general labourers Employment practice to both perception and knowledge and compliance

4.7 Data Summary

Table 38. Data Summary, composite mean comparison of respondent groups

Respondents	N	Mean	Standard Deviation
PWD	25	3.92	1.13
Contractor	50	3.30	1.23
General labour	30	3.85	1.06

The above Table 38 shows the response to statements in the questionnaire by PWD, contractors and general labourers. This table endeavours to produce a summary of each respondent's positivity towards the employment of PWD within the KZN construction industry.

The composite mean was useful because all questions from all three constructs were phrased in the positive in an endeavour to test holistic positivity of respondents towards the employment of PWD in the KZN construction industry. The composite mean was a very high level view of the employment landscape regarding PWD in the KZN construction industry.

The data shows that PWD had the highest composite mean of 3.92. General labourers had the second highest, with a mean of 3.85 and contractors had the lowest, with a neutral mean of 3.30.

Despite contractors in the KZN construction industry having very good BBBEE and CIDB scores their familiarity with the EEA was found to be very limited (Tshobotlwane, 2005). The findings from this study has corroborated the literature and has found that owing to the

competitive nature of the construction industry, contractors only implement the basic requirements of the Act in order to meet prequalifying criteria for ratings. When meeting BBBEE minimum criteria it was found that the majority of contractors targeted previously disadvantaged groups, namely females and blacks, without having to target what was seen as an extra, regarding PWD and they were not positive to anything more than the minimum requirements. The reasoning for this under-implementation of the EEA was found to be that contractors were not implementing TAG because the majority of them did not know about TAG's existence (Unger, 2002).

Tshobotlwane (2005) suggested that contractors were hesitant to create opportunities for PWD because they saw PWD as being capable of only administrative functions. Contractors were found to be indoctrinated with culture of the South African construction industry which institutionally discriminates against PWD (Maja *et al.*, 2008). This discrimination was based on their assumption that employment of PWD negatively affects company profits (Cheshire, 2002). Contractors did not know many key aspects of PWD and therefore were not in a position to make informed decisions regarding PWD.

This study showed that contractors did not have a negative attitude towards PWD in general. They did however have a negative attitude about the participation of PWD on their construction sites in anything other than an auxiliary administrative function; a function that sees PWD "out of the way." It was found that the bottom line dictated that any disturbance to continuity in work functions was seen as bad and having a negative impact on the business. Therefore modification of jobs to suit PWD and encouraging the participation of PWD was not considered. Burdening managers with the task of extra management to PWD was viewed as wasted effort. Contractors had a general lack of knowledge about PWD caused by lack of exposure to PWD, and fear of employing PWD, thinking that they could be stuck with unskilled, incapable personnel that could not be managed or disciplined. They considered that employment of PWD would lead to further complications within the working environment.

Potential employers often did not hire PWD because they feared a negative reaction from their existing able-bodied staff resulting in lower productivity and higher costs of production (Greenwood & Johnson 1987; and Hernandez, McDonald, Divilbiss, Horin,

Velcoff & Donoso, 2008). Stone and Collela (1996) and Schur, Kruse, Blasi and Blanck (2009) had also suggested that some able-bodied co-workers are uncomfortable with the employment of PWD because they were afraid that their own workload will increase to accommodate the PWD; They were afraid that some disabilities were contagious; and the negative effect of interpersonal outcomes, namely they were afraid of how to act around the PWD.

This study showed that general labour were supportive of PWD from PWD's on-site capabilities to supporting their need for accommodation and that modifications would be minor and not expensive. However, when being directly compared to PWD they did not respond well. There was degree of prejudice and hostility towards PWD insinuating that PWD were not better than corresponding general labourers. This response could be seen as a natural self-preservation response to a potential threat to their jobs, but revealed one of the underlying barriers to the entry of PWD into the KZN construction industry that was stifling the potential of PWD to not be a threat to the vast majority of able bodied staff. General workers were open to the fact that PWD was an uncharted concept in construction and better knowledge would help incorporate them into the industry. It was also noted that general labour tended to try to shield their employing contractor when it came to non-compliance and this was also seen as a significant barrier to the entry of PWD into the KZN construction industry.

According to QASA (2015) there were numerous benefits to employing PWD in that they offered just as much as able-bodied persons and possibly more in terms of having a very positive attitude and outlook towards employment, often willing to accept less accommodation than was required. According to Job Accommodation Network (2009) PWD did not need any accommodation in carrying out their functions.

This study revealed that PWD faced discrimination in many forms in the KZN construction industry and employers actively discouraged their employment through various barriers. PWD still had a very positive view on their potential participation in the KZN construction industry. Despite the negativity surrounding their employment, they still had a role to play in alleviating the skills shortage in the construction industry. PWD were capable of being on an active construction sites, they had a high level of self-awareness pertaining to their

capabilities and needs in terms of reasonable accommodation. The majority of PWD were aware of their rights and employers obligations to them. PWD felt that they should work in the KZN construction industry, often playing down the need for any accommodation.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter provides a summary of the key findings of the study and provides recommendations pertaining to the inclusion of PWD in the KZN construction industry. The study aimed at determining the reasons why PWD were under-represented in the KZN construction industry through an examination of the perceptions of various participant groups regarding the employment of PWD within the construction industry, the level of knowledge and compliance that currently exists within the construction industry regarding the employment of PWD and the employment practices of potential employers regarding PWD.

The problem statement that underpinned the study is restated as follows, namely

Despite the prevailing skills shortage, the South African construction industry has failed to recognise PWD as an additional source of construction skills while at the same time not complying with various government policies including the Employment Equity Act No. 55 of 1998, by continuing to exclude them from participating in the construction industry, resulting in low numbers of disabled employees within the South African construction industry.

The hypotheses to be tested in this study were:

H1 – The KwaZulu-Natal (KZN) construction industry is not implementing government policies regarding PWD;

H2 – Employment of PWD will help alleviate the current construction skills shortage in KZN;

H3 – The KZN construction industry actively discriminates against PWD; and

H4 – Contractors resist creating special opportunities through redesigning construction activities to accommodate PWD.

The study objectives were to:

- To examine the employment strategy of construction firms in KZN to determine the pervasiveness of the implementation of policies pertaining to persons with disabilities;
- To establish whether there is a skills shortage in the KZN construction industry and whether persons with disabilities are being considered as a means of alleviating the shortage;
- To determine whether there is an underlying prejudice against the employment of disabled persons that prevents their entry and participation in the KZN construction industry;
- To identify the barriers to the entry of the KZN construction industry of persons with disability; and
- To establish whether construction stakeholders actively create opportunities for persons with disabilities to participate through minor changes to construction activities and the work environment.

5.2 Hypothesis testing

5.2.1 Hypothesis 1:

The KwaZulu-Natal (KZN) construction industry is not implementing government policies regarding PWD.

Studies by Tshobotlwane, (2005) have shown that construction firms in South Africa despite claiming to be positive towards the EEA, have only certain employment equity practices in place and the majority do not address the issue of employment of PWD. This

lack of implementation of pertinent policies is caused by the lack of holistic awareness of the EEA, their obligations thereto and the lack of accountability for not implementing the EEA, as is seen in the work of Marumoagae (2012).

This study showed that the majority of respondents were familiar with the terms and conditions of the EEA and have some policies in place that ensure that they are equal opportunity employers. This was, however, not supported in practice as very few employers employ PWD and the majority stated that, even though they had policies conforming to the EEA, the ideals of the act are not realistically achievable. The employers further stated that, in terms of employment equity they were more concerned with the issues of gender and race. It was also evident that there was little or no focus on proactively recruiting PWD or promoting PWD within the organisations. It is then fair to say that, even though there are some employment equity policies in place, contractors in the main do not have specific formal written policies that actively address the issue of employing PWD. TAG, which is a technical assistance guide to implementing the EEA and would have prompted the firms to put processes in place to make the working environment more accessible for PWD to participate in, was reported to be not to have been implemented. The majority of respondents have reported that there is a general lack of knowledge in the KZN construction industry regarding PWD. This lack of knowledge is evidence that PWD are not included in business planning and is an indicator that not a lot of time or effort is put into this stream of policy implementation.

The hypothesis that the KwaZulu-Natal (KZN) construction industry is not implementing government policies regarding PWD cannot be rejected.

5.2.2 Hypothesis 2:

Employment of PWD will help alleviate the current construction skills shortage in KZN;

According to Lawless (2005) the construction industry in South Africa is potentially a major contributor to the employment sector. However statistics issued by the Higher Education Department (2015) has shown a shortage of about 46,000 construction workers. Statistics from Stats SA (2011) revealed PWD to be an additional source of labour and skills. Etherington & Ingold, (2012) showed that PWD could be a viable option in the

employment sector. Tshobotlwane, (2005) showed that PWD can potentially help in alleviating the skills shortage in the construction industry however, despite being competent, PWD are not being considered to fill available positions. Further investigation through psychometric testing proved PWD capability in performing various tasks including on site activities (Annexure F).

This study has shown that PWD and contractors agreed that there is a skills shortage. It was also agreed by PWD and general labourers that PWD can perform certain on site physical functions such as painting, carpentry and bricklaying. The majority of contractors have been found to not share these sentiments, believing strongly that PWD have only an auxiliary role to play in construction such as site administration and stores. The study also revealed that contractors think that it is too costly to employ PWD in terms of accommodating them; believing that they are not on a par with abled bodied persons and would reduce profits. Contractors also believe that they could face legal action from the employed PWD at some point and that PWD could stay away from work more than abled bodied persons, which cuts into their profits. From a business point of view, PWD and general labourers agreed that employing PWD did not require much change and accommodation which would not be costly and in terms profits it would not be a risk. They also agreed that PWD easily adapt to a changing environment. Contractors did not share these sentiments, citing that in general, they (PWD) could not adapt to a changing environment, which is the nature of construction, and therefore would not be a viable employable resource. This again, ties back to a lack of knowledge about the capabilities of PWD. It is clear that when contractors report that risk assessments are not performed; if they did they would know that PWD can perform various on-site functions.

The hypothesis that PWD can help alleviate the current skills shortages in KZN cannot be rejected.

5.2.3 Hypothesis 3:

The KZN construction industry actively discriminates against PWD;

Studies conducted by Rameezdeen, (2006) has shown active discrimination towards PWD by contractors. This negativity has stemmed from negative attitudes caused by the general

image of the construction industry not being conducive for the inclusion of PWD. Studies done in the USA by Kaye, Jans & Jones (2011) has revealed that contractors do not consider employing PWD for various reasons including but are not restricted to: High costs of accommodation, non-productivity, health and safety risks as well as the potential legal issues. This research was corroborated further in additional research conducted by Lengnick-Hall *et al* (2008) where employers believed that PWD are involved in more work-related accidents than able-bodied persons. Research by Maja et al, (2008) has shown that in the South African context, evidence was found that inherent cultural discrimination exists. Studies by Gottlieb, Myhill and Blanck, (2010) has shown that low education and lack of experience by PWD in South Africa has caused discrimination towards PWD in the minds of potential employers. A study by Schur, Kruse, Blasi and Blanck (2009) revealed that general labour show discrimination towards PWD because they may believe PWD will take their jobs at some point and their workloads would increase at some point owing to the employment of PWD.

This study found that PWD are capable in the working environment. However, despite this finding, it was found that general labourers have hostility when being directly compared with PWD, showing that they do not see themselves as comparable showing a degree of discrimination towards PWD. The study has also shown that contractors did not agree with an equal comparison, thinking that it would be a risk appointing PWD over able bodied staff. Contractors seemed to be reluctant to hire PWD, showing very little confidence in their ability and contributions. The study shows contractors and general labourers both disagreed that employing PWD will enhance company image and agreed it was just for social commitment, nothing more. This shows a deeper discrimination in the form of taking the issue of employment of PWD and the plight of PWD very lightly. The study has shown that contractors are of the opinion that PWD want preferential treatment and that it's costly to accommodate PWD. This has led contractors lack of accommodating PWD, not actively implementing policies to recruit PWD (which they have a legal obligation to do) and showing further evidence of active discrimination. Not modifying job inputs or training, disinterest in monitoring employed PWD, not providing any form of help to PWD or conducting exit interviews that would help in the future successful employment of PWD, has shown further discrimination.

The hypothesis that the construction industry actively discriminates against PWD cannot be rejected.

5.2.4 Hypothesis 4:

Contractors resist creating special opportunities through redesigning construction activities to accommodate PWD

Research studies conducted by Fawcett (1999) and Tshobotlwane (2005) respectively have shown that there is lack of special opportunities created for PWD that is owed to a lack of awareness of the capabilities of PWD. Research by Rameezdeen (2006) revealed that special opportunities are not created for PWD in construction because the culture of the construction industry is an able-bodied one. Lengnick-Hall *et al* (2008) also found that special opportunities could be created but are not because of the financial bottom line implications of accommodation. Research by Haupt (2006) has shown that through minor activity input modification, PWD can participate in the South African construction industry. This study has shown that despite understanding reasonable accommodation, and their place of work being reasonably accessible by PWD, contractors do not modify training; they do not think that PWD can use the machinery as it stands, and they do not modify inputs of work functions so as to include PWD. The study has revealed that in construction the financial bottom line matters; any perceived potential negative change to that bottom line through modification and interruption of continuity is not welcomed. It has further shown that contractors do not monitor PWD when they are employed, they do not provide active help and they also do not provide risk assessments or exit interviews, therefore they are not aware of what inputs could possibly change to accommodate PWD. The study has also shown that there is a general lack of knowledge caused by the lack of exposure to PWD. The lack of instituted policies encouraging the employment of PWD affects the way PWD are treated by employers in the construction industry. It was agreed by respondents that, had there been better knowledge, employers would know that slight modifications would be sufficient to accommodate PWD.

The hypothesis that contractors resist creating special opportunities for PWD cannot be rejected.

5.3 Recommendations

It is a well-known fact that South Africa is 22 years into democracy and in the greater scheme of things this could be construed as just past the fledgling stages. The early part of democracy focused largely on empowerment of previously disadvantaged persons but, despite being included in the policies, PWD were largely side-lined in the implementation thereof. To begin the process of integration there needs to be stricter policy compliance testing at a ground level as well as dissemination of information on policies and legislations regarding PWD. More resources need to be committed to increase the government's capacity to implement these enabling policies because it was found that pertinent legislature was not implemented by contractors in dealing with PWD because of a lack of awareness of the legislature

The BBBEE scorecard needs to look more closely into the way in which the employment of PWD is scored because it was found that when targeting previously disadvantaged person, PWD were not considered as much as black persons and females. If the active recruitment of PWD were to have its own designation on the scorecard, the avoidance of PWD and the targeting of only other demographics would not be possible.

Compulsory educational and training programmes for contractors need to be implemented so as to raise awareness of the potential of PWD in alleviating the skills shortage as well as the internal benefits of employing PWD as a lot of contractors reported not being aware of the benefits of employing PWD and further did not know their capabilities.

The eradication of discrimination and negative attitudes towards the employment of PWD within the KZN construction industry needs to be robust in its approach as contractors were found to be focused on production and saw employing PWD as a favour to the community. There needs to be total commitment towards the plight of PWD if we are to take this nation into the next phase of this democracy.

5.4 Further possible Studies

1. This study could be replicated in other provinces as this province is confined to KZN and therefore cannot be applied to other provinces.
2. A study could be done measuring profitability of companies with PWD verse companies without PWD taking into consideration the cost of reasonable accommodation to test whether or not employing PWD impacts on a company's bottom line as this was a reason stated by contractors that negatively affects their competitiveness in the open market and a reason why they did not consider employing PWD
3. A study could be done measuring the productivity of PWD against the average general labourer, taking into account the contributing resources used in productive activities to potentially prove that PWD can be productive and be a reliable, viable source of labour to alleviate the skills shortage in the construction industry. This study would be significant because both Contractors and General labourers stated that PWD were not on par with abled bodied workers and this idea has contributed to their exclusion from the construction industry.

5.5 Conclusion

The study has served to corroborate various other studies done by professionals in the South African construction industry including Tshobotlwane, (2005) that there are major barriers to the employment of PWD in the KZN construction industry that prevent the participation of PWD, namely:

1. The difficulty in implementing legislature.

Despite a very high level understanding of the EEA, contractors are still not fully implementing all the policies of the EEA pertaining to the employment of PWD. This non-conformance is largely due to not being aware of the contents of the EEA which has led the majority of contractors to not implement TAG. Had they been aware of and implemented TAG, systems of compliance could have been in place to give PWD a

chance a fair participation in the construction industry. Non-conformance is also due to the fact that contractors are not aware of their obligations as per the EEA and this is due to lack of enforcement by government sectors which could have prompted contractors to continuously keep abreast of the EEA and implement policies accurately to the end to which it is intended.

2. The lack of knowledge and awareness of PWD leading to negative attitudes and discrimination towards PWD.

There is general consensus that given the opportunity, adequately skilled PWD could potentially alleviate the skills shortage within the KZN construction industry. PWD have been found to be capable of construction activities and are an employment option during the construction phase. However they are still struggling to make a recognised contribution to the workforce within the KZN construction industry and are, at the moment, a wasted human resource. Despite the fact that PWD are capable of participating in the construction process, many contractors adopt a negative attitude towards PWD stemming from not fully being aware of their potential contributions. Contractor Competition has caused Contractors to consider PWD a risk to the financial bottom-line which is seen as paramount importance when being competitive in a market. Contractors would rather employ abled bodied persons and resist creating special opportunities for PWD favouring continuity of activities and uniformity of participants which discriminates against PWD. Evident discrimination resulting from negative attitudes towards PWD was seen as being the fundamental to the non-participation of PWD in the construction industry.

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ANNEXURE A: ETHICAL CLEARANCE



27 October 2016

Mr Sheldon Govender 207506969
School of Engineering
Howard College Campus

Dear Mr Govender

Protocol reference number: HSS/1292/016M

Project title: An investigation into employment of persons with disability in the KwaZulu-Natal (KZN) construction industry.

Full Approval – Committee Reviewed Protocol

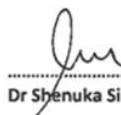
With regards to your response to received 26 October 2016 to our letter of 10 October 2016, the Humanities & Social Sciences Research Ethics Committee has considered the above mentioned application and the protocol has been granted Full Approval.

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully


.....
Dr Shenuka Singh (Chair)

/px

cc Supervisor: Dr Theodore Haupt
cc Academic Leader Research: Professor Christina Trois
cc School Administrator: Ms Nombuso Dlamini

Humanities & Social Sciences Research Ethics Committee

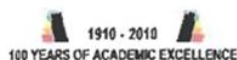
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Founding Campuses

Edgewood

Howard College

Medical School

Pietermaritzburg

Westville

ANNEXURE B: PARTICIPATION LETTER



To whom it may concern

Dear Sir/Madam

CONSTRUCTION AND DISABILITY

Sheldon Govender is currently reading for a Msc. Degree in Construction Project Management at the University of KwaZulu Natal and is investigating the employment of persons with disability in the KwaZulu Natal (KZN) construction industry.

This research is in an attempt to shed light on the plight of Persons with disabilities in the construction employment sector and in so doing, improve the performance and (in-part) alleviate skills shortages in the South African construction industry.

Your participation in this study is pivotal to its success. The attached questionnaire has been designed to not take longer than 10 minutes of your time. Your anonymity and confidentiality is guaranteed.

The results of the survey will be summarized in a report and sent to you upon your request.

Any queries on this study should be directed to Prof Theodore C Haupt or Sheldon Govender via the communication routes provided.

.....
Prof. Theo C. Haupt, Ph.D., M.Phil., Pr. CM., M. ACH&SM
Professor and Program Co-ordinator: Construction Studies: University of
KwaZulu-Natal, South Africa
Past Vice-President: Association of Schools of Construction of Southern Africa
(ASOCSA)
Regional Director: CIB Sub-Saharan Africa
Senior Academic Advisor: ASOCSA-CIB Sub-Saharan Student Chapter
Editor-in-chief: Journal of Engineering, Design and Technology (JEDT)
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ANNEXURE C: RESEARCH CONSENT



RESEARCH CONSENT FORM

Name of Researcher
Sheldon Govender (UKZN) (207506969)
Title of study
An investigation into the employment of persons with disability in the KwaZulu Natal (KZN) construction industry

Please read and complete this form carefully. If you are willing to participate in this study, ring the appropriate responses and sign and date the declaration at the end. If you do not understand anything and would like more information, please ask.

- I have had the research satisfactorily explained to me in verbal and / or written form by the researcher. YES / NO
- I understand that the research will involve: *(a questionnaire and/or AN interview)* YES / NO
- I understand that I may withdraw from this study at any time without having to give an explanation. YES / NO
- I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study. YES / NO
- I understand that you will be discussing the progress of your research with others. YES / NO

I freely give my consent to participate in this research study and have been given a copy of this form for my own information.

Signature:

Date:

School of Engineering
Property Development Discipline
King George V Avenue
Durban 4041
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ANNEXURE D: PWD QUESTIONNAIRE



Questionnaire - Person With Disability

1. What is your gender?

2. How old are you?

3. What is your disability?

4. Are you currently employed?

5. Have you been employed in the past 5 years?

6. Are you actively looking for work?

7. Are you able to safely perform functions on an active construction site?

8. Have you ever been discriminated against when looking for a job?

Key : (1 - Strongly Disagree, 5 - Strongly Agree) Mark with a X



Perceptions	1	2	3	4	5
1. There is a skills shortage in the Kwa Zulu Natal (KZN) construction industry					
2. Persons with Disabilities (PWD) can contribute positively to the KZN construction industry					
3. PWD can play a role in construction					
4. The construction industry encourages the employment of PWD					
5. PWD can perform certain key functions on site					
6. PWD are able to perform site administration					
7. PWD are able to perform stores functions					
8. PWD are able to do painting					
9. PWD are able to do carpentry					
10. PWD can do bricklaying					
11. Employing PWD will help alleviate the construction skills shortage in KZN.					
12. PWD are easily accommodated in terms of access to facilities such as ablutions					
13. Employing a PWD is not costly					
14. PWD have been taught the necessary skills and have experience to perform duties on site					
15. PWD are as productive as able-bodied workers					
16. PWD are not a threat to the H&S of able-bodied staff					
17. The requirements of the Employment Equity Act 55 of 1998 (EEA) are realistically achievable.					
18. Able-bodied staff respond well to PWD					
19. PWD do not get preferential treatment					
20. PWD do not expect or want preferential treatment					
21. PWD are not likely to take legal action at some point					
22. Employing PWD will not affect company profits					
23. Employing PWD will enhance the image of the company					
24. Employing PWD demonstrates social commitment of the organization to the public					
25. PWD regularly apply for jobs in construction					
26. PWD readily and easily adapt to a changing work environment.					
27. PWD do not require more time to supervise and training					

28. PWD can be disciplined the same way as an able-bodied person					
29. PWD conduct themselves well during interviews					
30. PWD are more loyal and dedicated to their jobs as they value their jobs more					
Knowledge and Compliance	1	2	3	4	5
1. I am aware of what constitutes being a PWD					
2. I am aware of the different types and classifications of disabilities					
3. I am aware of the needs of PWD in the working environment					
4. I am aware that PWD face multi-dimensional discrimination within the employment sector					
5. I am aware that PWD need to be accommodated to participate in the Working environment					
6. I am aware of the rights of PWD in terms of the SA Constitution					
7. I am aware of the terms and conditions of the EEA					
8. I am aware of the provisions of the Labour Relations Act 66 of 1995 (LRA)					
9. We are aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG)					
10. TAG is implemented in organisations					
11. Employment strategies are in line with the EEA and LRA					
12. I am aware of the benefits of employing PWD in relation to BBBEE					
13. There are increased work opportunities for PWD					
14. PWD are proactively recruited					
15. Recruitment forms are developed to remove discriminatory language, questions and inferences					
16. Those responsible for conducting interviews have been properly trained and are experienced in employment equity procedures					
17. I continuously keep abreast of issues relating to equity					
18. Risk assessments are performed pertaining to PWD					
19. There is formal procedures in place to deal with equality issues					
20. There is informal procedures in place to deal with equality issues					

21. There is written bullying/harassment policies or equivalent in place					
22. Increased knowledge about PWD and their potential contributions would increase their employment					
23. There is a general lack of knowledge and awareness regarding PWD					
Employment practices	1	2	3	4	5
1. I understand the concept of reasonable accommodation					
2. Places of work is accessible to PWD					
3. Information is accessible to PWD					
4. Training is modified to accommodate PWD					
5. Equipment can be used by PWD in performing their jobs					
6. PWD are accommodated by modifying job inputs to suit them					
7. PWD are regularly monitored					
8. Help is provided when needed and also proactively					
9. Exit interviews are conducted when a PWD leaves employment					

ANNEXURE E: CONTRACTOR QUESTIONNAIRE



Residential	
Commercial	
Multi-Story buildings	
Civil Works	

Key : (1 – Strongly Disagree, 5 – Strongly Agree) Mark with a X

Perceptions	1	2	3	4	5
1. There is a skills shortage in the Kwa Zulu Natal (KZN) construction industry					
2. PWD can contribute positively to the KZN construction industry					
3. PWD can play a role in construction					
4. The construction industry encourages the employment of PWD					
5. PWD can perform certain key functions on site					
6. PWD are able to do Site Administration					
7. PWD are able to perform stores functions					
8. PWD are able to do painting					
9. PWD are able to do carpentry					
10. PWD are able to do bricklaying					
11. Employing PWD will help alleviate the construction skills shortage in KZN.					
12. PWD are easily accommodated in terms of access to facilities such as ablutions					
13. Employing a PWD is not costly					
14. PWD have been taught the necessary skills and have experience to perform duties on site					
15. PWD are as productive as able-bodied workers					
16. PWD are not a threat to the H&S of our able-bodied staff					
17. The requirements of the Employment Equity Act 55 of 1998 (EEA) are realistically achievable.					
18. Able-bodied staff respond well to PWD					
19. PWD do not get preferential treatment					
20. PWD do not expect or want preferential treatment					
21. We are not likely to face legal action from PWD at some point					
22. Employing PWD will not affect company profits					
23. Employing PWD will enhance the image of the company					
24. Employing PWD demonstrates social commitment of the organization to the public					
25. PWD regularly apply for jobs in construction					



Residential	
Commercial	
Multi-Story buildings	
Civil Works	

Key : (1 – Strongly Disagree, 5 – Strongly Agree) Mark with a X

Perceptions	1	2	3	4	5
1. There is a skills shortage in the Kwa Zulu Natal (KZN) construction industry					
2. PWD can contribute positively to the KZN construction industry					
3. PWD can play a role in construction					
4. The construction industry encourages the employment of PWD					
5. PWD can perform certain key functions on site					
6. PWD are able to do Site Administration					
7. PWD are able to perform stores functions					
8. PWD are able to do painting					
9. PWD are able to do carpentry					
10. PWD are able to do bricklaying					
11. Employing PWD will help alleviate the construction skills shortage in KZN.					
12. PWD are easily accommodated in terms of access to facilities such as ablutions					
13. Employing a PWD is not costly					
14. PWD have been taught the necessary skills and have experience to perform duties on site					
15. PWD are as productive as able-bodied workers					
16. PWD are not a threat to the H&S of our able-bodied staff					
17. The requirements of the Employment Equity Act 55 of 1998 (EEA) are realistically achievable.					
18. Able-bodied staff respond well to PWD					
19. PWD do not get preferential treatment					
20. PWD do not expect or want preferential treatment					
21. We are not likely to face legal action from PWD at some point					
22. Employing PWD will not affect company profits					
23. Employing PWD will enhance the image of the company					
24. Employing PWD demonstrates social commitment of the organization to the public					
25. PWD regularly apply for jobs in construction					

18. We have performed risk assessments pertaining to PWD					
19. We have formal procedures in place to deal with equality issues					
20. We have informal procedures in place to deal with equality issues					
21. We have written bullying/harassment policies or equivalent in place					
22. Increased knowledge about PWD and their potential contributions would increase their employment					
23. There is a general lack of knowledge and awareness regarding PWD					
Employment practices	1	2	3	4	5
1. We understand the concept of reasonable accommodation					
2. Our place of work is accessible to PWD					
3. Information is accessible to PWD					
4. Training is modified to accommodate PWD					
5. Equipment can be used by PWD in performing their jobs					
6. We accommodate PWD by modifying job inputs to suit them					
7. We regularly monitor our PWD					
8. We provide help when needed and also proactively					
9. Exit interviews are conducted when a PWD leaves our employ					

ANNEXURE F: PSYCHOMETRIC TEST RESULTS

Psychometric Test Results

Ranking Report:

Table 1 demonstrates the 24 incumbents' individual results, and references their overall average for the assessment battery in descending order. The Ranking Report also indicates their results for every one of the competences included in the assessment battery:

Table 1: Results in Descending Order:

1.	3.78
Calculations	4
Clerical	5
Comparison	5
Conceptualization	4
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	4
Reading Comprehension	2
Time Management	4
2.	3.78
Calculations	5
Clerical	5
Comparison	5
Conceptualization	4
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	2
Time Management	4
3.	3.78
Calculations	5
Clerical	5
Comparison	5
Conceptualization	4
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	4
Reading Comprehension	2
Time Management	3
4.	3.56
Calculation	4
Clerical	3
Comparison	4
Conceptualization	4
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	4
Reading Comprehension	3
Time Management	4

5.	3.44
Calculations	4
Clerical	4
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	4
Reading Comprehension	3
Time Management	4
6.	3.44
Calculations	4
Clerical	3
Comparison	4
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	3
Observance [Mental Alertness]	4
Reading Comprehension	2
Time Management	4
7.	3.33
Calculations	5
Clerical	4
Comparison	4
Conceptualization	4
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	4
8.	3.33
Calculations	4
Clerical	3
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	3
Time Management	5
9.	3.33
Calculations	4
Clerical	3
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	3
Observance [Mental Alertness]	3
Reading Comprehension	2
Time Management	5

10.	3.22
Calculations	4
Clerical	3
Comparison	5
Conceptualization	3
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	3
Observance [Mental Alertness]	4
Reading Comprehension	1
Time Management	3
11.	3.11
Calculations	4
Clerical	3
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	2
Time Management	4
12.	3.11
Calculations	4
Clerical	3
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	4
Observance [Mental Alertness]	3
Reading Comprehension	2
Time Management	3
13.	3.00
Calculations	5
Clerical	3
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	3
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	2
14.	3.00
Calculations	4
Clerical	3
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	4
Reading Comprehension	1
Time Management	3

15.	2.89
Calculations	4
Clerical	3
Comparison	2
Conceptualization	2
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	3
Observance [Mental Alertness]	3
Reading Comprehension	2
Time Management	3
16.	2.89
Calculations	3
Clerical	3
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	3
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	4
17.	2.78
Calculations	4
Clerical	2
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	4
18.	2.78
Calculations	2
Clerical	2
Comparison	3
Conceptualization	3
Conformity / nonconformity [Integrity]	4
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	2
Time Management	4
19.	2.56
Calculations	4
Clerical	3
Comparison	2
Conceptualization	3
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	2
Observance [Mental Alertness]	2
Reading Comprehension	1
Time Management	3

20.	2.44
Calculations	1
Clerical	2
Comparison	2
Conceptualization	3
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	3
Observance [Mental Alertness]	2
Reading Comprehension	2
Time Management	4
21.	2.44
Calculations	5
Clerical	2
Comparison	1
Conceptualization	2
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	3
22.	2.33
Calculations	1
Clerical	2
Comparison	2
Conceptualization	3
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	2
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	4
23.	2.22
Calculations	1
Clerical	2
Comparison	3
Conceptualization	2
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	3
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	2
24.	2.00
Calculations	1
Clerical	1
Comparison	1
Conceptualization	1
Conformity / nonconformity [Integrity]	3
External Actualisation [Motivation]	3
Observance [Mental Alertness]	3
Reading Comprehension	1
Time Management	4

3. Interpretation of Results:

Assessment Report

The results are scored on a five-point scale, providing an overall score for the assessment profile, as well as individual scores for each competence in the profile. These scores can be interpreted as follow:

Table 2: Interpretation of the Assessment Results:

Score:	Interpretation:
5	= Exceptional:
<p>Potential: You have the inherent capacity to be exceptional in this specific competence.</p> <p>Growth: Over time and with the necessary investment, your potential will allow you to develop more than mere mastery of this specific area of this role. You can complete all the developmental tasks associated with this aspect of the role, and you can reach a level of top- functioning in your growth curve.</p> <p>Future: You may need very little or no further development to get to the top of this growth curve. It implies that you will be able to out-grow this competence and move on to higher levels of complexity in this competence or to another work role all together. You may need to put measures in place to avoid boredom in this area of the role.</p>	
4	= Skill Mastery:
<p>Potential: You have the inherent capacity to master this specific competence.</p> <p>Growth: Over time and with the necessary investment, your potential will allow you to develop more than mere competency in this specific area. You can complete most of the developmental tasks associated with this aspect of the role, and you can reach a very mature level of functioning in your growth curve.</p> <p>Future: You may need very little development to get to the top of this growth curve. Make the most of every available opportunity to develop your potential to a level of excellence.</p>	
3	= Competence:
<p>Potential: You have the inherent capacity be competent at this specific competence.</p> <p>Growth: Over time and with the necessary investment, your potential will allow you to exceed mere entry level requirements in this specific area. You can complete the many of the developmental tasks associated with this aspect of the role, and you can reach a satisfactory level of functioning in your growth curve.</p> <p>Future: You may need some development to get to the top of this growth curve. It implies that you should identify the specific areas of growth you need to target to reach a level of mastery. The definition of this competence may provide clues as to the specific growth areas you need to develop your potential to a level of mastery.</p>	
2	= Potential:
<p>Potential: You have the inherent capacity to develop into this competence over time.</p> <p>Growth: Over time and with the necessary investment, your potential will allow you to develop further in this specific area. You can develop the entry level-developmental tasks associated with this aspect of the role, and you can reach a level of basic functioning in your growth curve.</p> <p>Future: You need significant development to get to the top of this growth curve. It implies that you can start developing into what is required in this specific regard, and you are ready to start working towards becoming competent in this</p>	

competence.	
1	= Critical Weakness:
<p>Potential: You do not have the inherent capacity to sufficiently develop this competence.</p> <p>Growth: At this point in time, your potential will not allow you to develop in this specific area. You cannot develop the basic entry-level developmental tasks associated with this aspect of the role, and you are at the bottom-end of your growth curve.</p> <p>Future: You need to invest significant time, effort and energy in an intensive development plan to get to the top of this growth curve. It implies that you are at the bottom-end of this growth curve and are not capable of starting-off on this growth curve. It may also mean that you may need to consider an alternative growth-curve if you do not see significant improvement in this competence.</p>	

ANNEXURE G: PERCENTAGE ALLOCATION OF RESPONSES

PWD: Perceptions

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
PWD are able to perform site administration	0	0	0	16	84	4.84	0.37	1
Employing PWD demonstrates social commitment of the organization to the public	0	0	8	4	88	4.80	0.58	2
Employing PWD will help alleviate the construction skills shortage in KZN.	0	0	4	16	80	4.76	0.52	3
PWD can play a role in construction	0	0	8	8	83	4.75	0.61	4
Persons with Disabilities (PWD) can contribute positively to the KZN construction	0	0	4	20	76	4.72	0.54	5

industry								
PWD are able to perform stores functions	0	0	4	20	76	4.72	0.54	6
Employing PWD will enhance the image of the company	4	0	4	4	88	4.72	0.89	7
PWD are not a threat to the H&S of able-bodied staff	0	0	8	16	76	4.68	0.63	8
PWD conduct themselves well during interviews	0	4	8	12	76	4.60	0.82	9
PWD are as productive as able-bodied workers	0	0	0	40	60	4.60	0.50	10
PWD are more loyal and dedicated to their jobs as they value their jobs more	4	0	0	25	71	4.58	0.88	11
PWD can perform certain key functions on site	0	4	12	8	76	4.56	0.87	12
Employing a PWD is NOT costly	0	12	4	4	80	4.52	1.05	13
PWD have been taught the necessary skills	0	4	8	24	64	4.48	0.82	14

and have experience to perform duties on site								
PWD can be disciplined the same way as an able-bodied person	0	4	4	32	60	4.48	0.77	15
PWD do not expect or want preferential treatment	8	0	4	12	76	4.48	1.16	16
PWD readily and easily adapt to a changing work environment.	0	0	4	48	48	4.44	0.58	17
PWD are able to do painting	4	0	12	24	60	4.36	0.99	18
PWD can do bricklaying	4	4	13	21	58	4.25	1.11	19
The requirements of the Employment Equity Act 55 of 1998 (EEA) are realistically achievable.	4	0	12	36	48	4.24	0.97	20
PWD are able to do carpentry	4	0	17	29	50	4.21	1.02	21
There is a skills shortage in the Kwa Zulu Natal (KZN) construction industry	0	4	24	24	48	4.16	0.94	22
PWD do not get	12	0	16	28	44	3.92	1.32	23

preferential treatment								
PWD regularly apply for jobs in construction	4	4	40	16	36	3.76	1.13	24
PWD are easily accommodated in terms of access to facilities such as ablutions	12	8	24	20	36	3.60	1.38	25
PWD are NOT likely to take legal action at some point	12	16	20	8	44	3.56	1.50	26
Able-bodied staff respond well to PWD	13	25	21	21	21	3.13	1.36	27
Employing PWD will NOT affect company profits	36	8	12	4	40	3.04	1.81	28
PWD DO NOT require more time to supervise and training	16	20	24	28	12	3.00	1.29	29
The construction industry encourages the employment of PWD	24	16	32	12	16	2.80	1.38	30

PWD Knowledge and compliance

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
I am aware of the needs of PWD in the working environment	0	0	0	14	86	4.86	0.35	1
I am aware of the rights of PWD in terms of the SA Constitution	0	0	4	13	83	4.78	0.52	2
I am aware of the provisions of the Labour Relations Act 66 of 1995 (LRA)	0	0	0	22	78	4.78	0.42	3
I am aware that PWD need to be accommodated to participate in the Working environment	0	0	5	14	82	4.77	0.53	4
I am aware of what constitutes being a PWD	0	0	4	17	78	4.74	0.54	5
I am aware of the different types and classifications of disabilities	0	0	0	26	74	4.74	0.45	6
I am aware that PWD face multi-dimensional discrimination within the employment sector	0	0	9	9	83	4.74	0.62	7
Increased knowledge about PWD and their potential contributions would increase their employment	0	0	4	17	78	4.74	0.54	8
I am aware of the	0	0	4	30	65	4.61	0.58	9

benefits of employing PWD in relation to BBBEE								
I am aware of the terms and conditions of the EEA	4	0	4	22	70	4.52	0.95	10
There is a general lack of knowledge and awareness regarding PWD	8	8	0	13	71	4.29	1.33	11
We are aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG)	13	9	17	9	52	3.78	1.51	12
I continuously keep abreast of issues relating to equity	0	0	52	32	16	3.64	0.76	13
There is formal procedures in place to deal with equality issues	13	13	13	22	39	3.61	1.47	14
Risk assessments are performed pertaining to PWD	8	16	16	36	24	3.52	1.26	15
There is written bullying/harassment policies or equivalent in place	22	13	0	26	39	3.48	1.65	16
Employment strategies are in line with the EEA and LRA	17	13	17	17	35	3.39	1.53	17
There is informal procedures in place to deal with equality issues	17	17	22	22	22	3.13	1.42	18
Those responsible for conducting interviews have been properly trained and are experienced in employment equity procedures	32	8	16	20	24	2.96	1.62	19
TAG is implemented in organisations	9	30	30	22	9	2.91	1.12	20
There are increased work opportunities for PWD	36	12	8	24	20	2.80	1.63	21

Recruitment forms are developed to remove discriminatory language, questions and inferences	30	9	26	22	13	2.78	1.44	22
PWD are proactively recruited	39	26	17	13	4	2.17	1.23	23

PWD Employment Practices

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
I understand the concept of reasonable accommodation	0	0	4	35	61	4.57	0.59	1
Equipment can be used by PWD in performing their jobs	13	9	13	13	52	3.83	1.50	2
PWD are regularly monitored	0	32	9	14	46	3.73	1.35	3
Information is accessible to PWD	13	17	9	17	44	3.61	1.53	4
Places of work is accessible to PWD	13	13	9	39	26	3.52	1.38	5
Help is provided when needed and also proactively	4	30	17	9	39	3.48	1.41	6
Training is modified to accommodate PWD	23	14	5	14	46	3.45	1.71	7
PWD are accommodated by modifying job inputs to suit them	27	9	9	14	41	3.32	1.73	8
Exit interviews are conducted when a PWD leaves	17	30	9	4	39	3.17	1.64	9

employment								
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Contractors Perception

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
PWD are easily accommodated in terms of access to facilities such as ablutions	6	13	23	19	36	4.55	1.16	1
PWD are able to perform site administration	2	0	24	26	48	4.18	0.94	2
Persons with Disabilities (PWD) can contribute positively to the KZN construction industry	6	6	14	16	57	4.12	1.24	3
PWD are able to perform stores functions	4	8	22	22	44	3.94	1.17	4
PWD can play a role in construction	2	0	38	34	26	3.82	0.90	5
The requirements of the Employment Equity Act 55 of 1998 (EEA) are realistically achievable.	4	4	34	44	14	3.60	0.93	6
PWD can perform certain key functions on site	10	4	22	48	16	3.56	1.13	7
PWD are not a threat to the H&S of able-bodied staff	11	4	26	38	21	3.55	1.19	8
Employing PWD will NOT affect company profits	12	6	18	41	22	3.55	1.26	9

PWD do not get preferential treatment	2	4	52	23	19	3.52	0.92	10
There is a skills shortage in the Kwa Zulu Natal (KZN) construction industry	4	12	39	18	27	3.51	1.14	11
PWD can be disciplined the same way as an able-bodied person	6	9	40	19	26	3.49	1.16	12
PWD can do bricklaying	18	44	20	2	14	3.38	1.41	13
PWD are NOT likely to take legal action at some point	4	15	38	26	17	3.36	1.07	14
PWD conduct themselves well during interviews	4	19	32	28	17	3.34	1.11	15
Able-bodied staff respond well to PWD	4	4	60	17	15	3.33	0.93	16
PWD are more loyal and dedicated to their jobs as they value their jobs more	2	21	40	15	21	3.32	1.11	17
The construction industry encourages the employment of PWD	10	8	44	20	18	3.28	1.16	18
Employing PWD will help alleviate the construction skills shortage in KZN.	8	14	34	30	14	3.28	1.13	19
PWD DO NOT require more time to supervise and training	4	13	49	21	13	3.26	0.99	20
Employing PWD demonstrates social	29	4	19	8	40	3.25	1.69	21

commitment of the organization to the public								
PWD are as productive as able-bodied workers	9	23	21	30	17	3.23	1.24	22
PWD have been taught the necessary skills and have experience to perform duties on site	8	17	38	21	17	3.21	1.17	23
PWD do not expect or want preferential treatment	6	34	26	13	21	3.09	1.27	24
PWD regularly apply for jobs in construction	19	21	21	17	21	3.00	1.43	25
Employing PWD will enhance the image of the company	30	9	19	21	21	2.96	1.55	26
PWD are able to do carpentry	14	39	14	10	22	2.88	1.41	27
Employing a PWD is NOT costly	10	44	16	12	18	2.84	1.30	28
PWD are able to do painting	12	32	32	10	14	2.82	1.21	29
PWD readily and easily adapt to a changing work environment.	9	45	21	9	17	2.81	1.24	30

Contractors knowledge and compliance

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
I am aware that PWD need to be accommodated to participate in	2	2	18	18	60	4.32	0.98	1

the Working environment								
I am aware of what constitutes being a PWD	6	0	13	23	58	4.27	1.11	2
Increased knowledge about PWD and their potential contributions would increase their employment	4	6	23	21	46	3.98	1.16	3
I am aware that PWD face multi-dimensional discrimination within the employment sector	6	6	14	42	32	3.88	1.12	4
I am aware of the benefits of employing PWD in relation to BBBEE	4	2	28	34	32	3.88	1.02	5
I am aware of the needs of PWD in the working environment	8	4	12	46	30	3.86	1.14	6
I continuously keep abreast of issues relating to equity	8	4	10	56	22	3.80	1.09	7
I am aware of the terms and conditions of the EEA	6	2	27	37	29	3.80	1.08	8
I am aware of the rights of PWD in terms of the SA Constitution	8	4	18	44	26	3.76	1.13	9
I am aware of the different types and classifications of disabilities	6	2	36	26	30	3.72	1.11	10
I am aware of the provisions of the Labour	2	12	33	20	33	3.69	1.12	11

Relations Act 66 of 1995 (LRA)								
Recruitment forms are developed to remove discriminatory language, questions and inferences	6	6	20	43	25	3.69	1.21	12
Those responsible for conducting interviews have been properly trained and are experienced in employment equity procedures	8	10	22	40	20	3.50	1.27	13
There is a general lack of knowledge and awareness regarding PWD	4	10	55	12	18	3.31	1.02	14
There is written bullying/harassment policies or equivalent in place	24	4	20	30	22	3.22	1.47	15
We are aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG)	6	27	23	27	17	3.21	1.20	16
There are increased work opportunities for PWD	8	14	50	16	12	3.10	1.05	17
Employment strategies are in line with the EEA and LRA	8	35	20	14	22	3.08	1.32	18
There is formal procedures in place to deal with equality issues	33	8	10	33	16	2.92	1.55	19
There is	29	12	14	35	10	2.86	1.43	20

informal procedures in place to deal with equality issues								
TAG is implemented in organisations	21	26	21	11	21	2.85	1.44	21
Risk assessments are performed pertaining to PWD	36	14	18	18	14	2.60	1.48	22
PWD are proactively recruited	14	47	20	10	8	2.50	1.12	23

Contractors Employment Practices

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
Information is accessible to PWD	8	2	42	19	29	3.54	1.29	1
I understand the concept of reasonable accommodation	2	15	33	29	21	3.52	1.05	2
Places of work is accessible to PWD	6	6	46	15	27	3.50	1.15	3
PWD are accommodated by modifying job inputs to suit them	11	54	18	18	100	3.29	1.24	4
Equipment can be used by PWD in performing their jobs	10	59	10	21	100	3.24	1.30	5
Help is provided when needed and also proactively	8	40	23	10	19	2.88	1.35	6
Training is modified to accommodate	38	8	29	13	13	2.50	1.49	7

PWD								
PWD are regularly monitored	40	13	19	17	13	2.46	1.53	8
Exit interviews are conducted when a PWD leaves employment	41	11	26	9	15	2.43	1.53	9

General labourer's perception

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
PWD are able to perform stores functions	0	0	10	17	73	4.63	0.67	1
PWD are able to perform site administration	0	7	3	20	70	4.53	0.86	2
PWD are not a threat to the H&S of able-bodied staff	0	3	17	20	60	4.37	0.89	3
Employing PWD demonstrates social commitment of the organization to the public	0	3	13	27	57	4.37	0.85	4
The requirements of the Employment Equity Act 55 of 1998 (EEA) are realistically achievable.	0	14	7	14	66	4.31	1.11	5
PWD can perform certain key functions on site	7	7	17	10	60	4.10	1.30	6
Able-bodied staff respond well to PWD	0	7	13	43	37	4.10	0.88	7
PWD DO NOT require more time to supervise and training	3	20	53	20	3	4.10	1.12	8

Employing a PWD is NOT costly	3	13	13	23	47	3.97	1.22	9
PWD do not get preferential treatment	0	13	20	23	43	3.97	1.10	10
PWD do not expect or want preferential treatment	10	3	13	30	43	3.93	1.28	11
PWD have been taught the necessary skills and have experience to perform duties on site	3	3	14	14	10	3.91	1.44	12
PWD are able to do carpentry	13	7	13	10	57	3.90	1.49	13
PWD can play a role in construction	7	10	17	17	48	3.90	1.32	14
Persons with Disabilities (PWD) can contribute positively to the KZN construction industry	3	23	20	10	23	3.87	1.59	15
PWD regularly apply for jobs in construction	0	20	13	27	40	3.87	1.17	16
PWD are NOT likely to take legal action at some point	7	7	27	17	43	3.83	1.26	17
Employing PWD will help alleviate the construction skills shortage in KZN.	7	17	14	14	48	3.79	1.40	18
PWD conduct themselves well during interviews	3	10	27	27	33	3.77	1.14	19
PWD readily and easily adapt to a changing work environment.	3	20	17	17	43	3.77	1.30	20
PWD are able to do painting	14	10	21	3	52	3.69	1.54	21
PWD are easily accommodated in terms of access to facilities such as	7	21	14	14	45	3.69	1.42	22

ablutions								
PWD can do bricklaying	14	17	10	10	48	3.62	1.57	23
The construction industry encourages the employment of PWD	10	17	23	17	33	3.47	1.38	24
Employing PWD will NOT affect company profits	30	7	3	7	53	3.47	1.83	25
There is a skills shortage in the Kwa Zulu Natal (KZN) construction industry	23	7	27	20	23	3.13	1.48	26
PWD are as productive as able-bodied workers	0	20	60	10	10	3.10	0.84	27
PWD DO Not require more time to supervise and train	43	14	21	11	11	3.00	0.83	28
Employing PWD will enhance the image of the company	47	0	10	27	17	2.67	1.67	29
PWD are more loyal and dedicated to their jobs as they value their jobs more	0	13	17	17	53	2.32	1.42	30

General labourer's knowledge and compliance

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
I am aware that PWD need to be accommodated to participate in the Working environment	0	0	3	7	90	4.87	0.43	1
I am aware of the different types and classifications of disabilities	0	0	7	3	90	4.83	0.53	2

I am aware of the terms and conditions of the EEA	0	3	7	17	73	4.60	0.77	3
I am aware of what constitutes being a PWD	0	3	10	13	73	4.57	0.82	4
We are aware of the existence of the Technical Assistance Guideline on the Employment of PWD (TAG)	0	0	7	30	63	4.57	0.63	5
I am aware of the needs of PWD in the working environment	0	13	0	7	80	4.53	1.04	6
I am aware that PWD face multi-dimensional discrimination within the employment sector	0	3	13	10	73	4.53	0.86	7
I am aware of the rights of PWD in terms of the SA Constitution	0	7	10	10	73	4.50	0.94	8
I am aware of the benefits of employing PWD in relation to BBBEE	0	0	10	30	60	4.50	0.68	9
I am aware of the provisions of the Labour Relations Act 66 of 1995 (LRA)	0	0	17	23	60	4.43	0.77	10
I continuously keep abreast of issues relating to equity	0	3	10	30	57	4.40	0.81	11
Those responsible for conducting interviews have been properly trained and are experienced in employment equity procedures	0	3	17	23	57	4.33	0.88	12
There is formal procedures in place to deal with equality issues	0	11	18	7	64	4.25	1.11	13
TAG is implemented in organisations	0	10	14	17	59	4.24	1.06	14

Employment strategies are in line with the EEA and LRA	0	13	17	7	63	4.20	1.16	15
Recruitment forms are developed to remove discriminatory language, questions and inferences	0	17	13	3	67	4.20	1.21	16
Risk assessments are performed pertaining to PWD	3	13	20	7	57	4.00	1.29	17
Increased knowledge about PWD and their potential contributions would increase their employment	3	17	17	20	43	3.83	1.26	18
There is a general lack of knowledge and awareness regarding PWD	0	14	55	17	14	3.31	0.89	19
PWD are proactively recruited	0	17	50	23	10	3.27	0.87	20
There is written bullying/harassment policies or equivalent in place	3	27	27	30	13	3.23	1.10	21
There are increased work opportunities for PWD	0	17	52	24	7	3.21	0.82	22
There is informal procedures in place to deal with equality issues	3	33	47	10	7	2.83	0.91	23

General labourer's employment practices

Statement	Percentage					Mean	Std. Deviation	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
	1	2	3	4	5			
Places of work are accessible to PWD	0	0	17	23	60	4.43	0.77	1

I understand the concept of reasonable accommodation	0	3	17	23	57	4.33	0.88	2
Information is accessible to PWD	0	10	20	13	57	4.17	1.09	3
Training is modified to accommodate PWD	0	13	20	20	47	4.00	1.11	4
Equipment can be used by PWD in performing their jobs	13	0	25	25	38	3.75	1.39	5
PWD are accommodated by modifying job inputs to suit them	0	38	25	13	25	3.25	1.28	6
PWD are regularly monitored	0	23	53	17	7	3.07	0.83	7
Help is provided when needed and also proactively	0	37	43	10	10	2.93	0.94	8
Exit interviews are conducted when a PWD leaves employment	7	23	57	10	3	2.80	0.85	9

BIOGRAPHICAL SKETCH

Sheldon Govender was born in Pietermaritzburg in 1989 where he attended Raisethorpe high school and matriculated with an A-aggregate. Sheldon also represented KwaZulu Natal in both Volley-ball and Cricket at schools level. He then went on to study a bachelor of science in Property Development at the University of KwaZulu Natal where he was awarded for his outstanding dedication to his studies by SAPOA in 2011.

Sheldon then went on to complete his honours in Quantity Surveying at the University of KwaZulu Natal as well as completing his certification as an Associate Project Manager with the Project Management Institute and his candidacy as a Construction Project Manager with the South African Council for Project Management.

Sheldon has always had a passion for the plight of PWD stemming back from years of voluntary work with various non-governmental and church organisations in Pietermaritzburg.