

AN INVESTIGATION OF THE POTENTIAL ROLE OF PHYSICALLY
CHALLENGED PERSONS IN CONSTRUCTION

By

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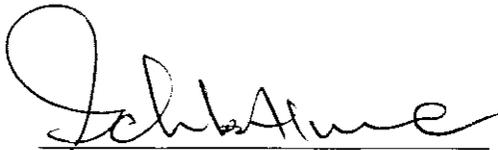
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DECLARATION

With this statement I, David Modisaotsile Tshobotlwane, affirm that the research work upon which this dissertation is based upon on, is my own (except where acknowledgements indicate otherwise), and that neither the entire research endeavour nor any part of it has been, is being, or is to be submitted for another degree in this or any other education institution.

A handwritten signature in black ink, appearing to read 'D. Modisaotsile Tshobotlwane', written over a horizontal line.

David Modisaotsile Tshobotlwane

December 2005

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By

David Modisaotsile Tshobotlwane

This dissertation is dedicated to my Grandmother Gopolang 'Serurubele' Tshobotlwane, my family and friends and the many others who touched my life positively.

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ABBREVIATIONS

| | |
|---------------|---|
| AIDS | Acquired Immune Deficiency Syndrome |
| CIB | Construction Industry Board |
| COSATU | Congress of South African Trade Unions |
| EEA | Employment Equity Act No. 55 of 1998 |
| EU | European Union |
| ILO | International Labour Organisation |
| LRA | Labour Relation Act No. 66 of 1995 |
| MISQ | A UML-based Modelling Methodology for |
| NEDLAC | National Economic Development Labour Council |
| NGOs | Non-governmental Organizations |
| | Optimizing Web Service Composition |
| PEPUDA | The Promotion of Equity and Prevention of Unfair Discrimination Act No. 52 of 2000 |
| SABERC | South African Built Environment Research Coordinator |
| SAFCD | South African Federal Council on Disability |
| SPSS | Statistical Program for the Social Sciences |
| SPWP | Special Public Works Programme |
| UK | United Kingdom |
| UN | United Nations |

DEFINITIONS

BARRIER

A problem, rule or situation that prevents someone from doing something or that makes ones environment difficult (International Labour Organisation, 1999).

DISABLED PERSON

An individual who is unable to use part of his or her body completely or easily because of a physical condition, illness, and injury (Souvenir, 1981).

DISCRIMINATION

The practice of treating other particular groups of people in society less fairly than others due to race, sex, age, disability and gender (Grothaus, 2004).

EMPLOYER

A person or organisation that employs workers under a written or verbal contract of employment which establishes the rights and duties of both parties, in accordance with national law and practice. Governments, public authorities and private companies as well as individuals may be employers (International Labour Organisation, 2000).

EQUAL OPPORTUNITY

Absence of discrimination, as in the workplace, based on race, colour, age, gender, national origin, religion, or mental or physical disability (Schlesinger, 2001).

LEGISLATION

Law enacted by a legislative body such as Labour Relations Act No. 66 of 1995 (Mifflin, 2003).

MARGINALIZE

To make somebody feel as if he or she is not important or cannot influence decisions or events; or to put somebody in a position in which he or she has no power (Kelly, 1999).

WORKING CONDITIONS

The factors determining the circumstances in which the worker works. These include hours of work, work organisation, job content, and welfare services (International Labour Organisation, 2004).

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The construction industry contributes to the economy in terms of its labour intensive nature and status as a major employer of labour in many countries. This pivotal role is divided by its unappealing status of being an industrial sector with the lowest level of employment of disabled persons. Despite the South African government's efforts to diversify the industry's labour force, these have had little concrete effect on changing the demographics of construction especially relative to the representation of minority groups such as women and disabled persons.

The industry presents both a challenging and hostile environment and attitudinal barrier for persons with disabilities. They have not been seen as part of the pool of people considered for employment, and when already employed, possible promotion. To change this negative image, conscious measures are necessary to remove barriers. These measures should include a change in leadership style and approach, fundamental change in culture, change in the negative image of the working environment, and full implementation of equal opportunity policies. This paper reports on the employment

status of disabled persons within the construction industry. To achieve this, the qualitative methodology was adopted and included surveys, self-administered questionnaires and interviews as well as the quantitative methodology to validate the completeness of data.

CHAPTER 1 BACKGROUND INFORMATION

Introduction

The misunderstanding of the term ‘disability’ has led to various barriers being introduced into the lives of those who are regarded as disabled in terms of the misunderstood meaning (Nagase, 1995). These barriers include reluctance to employ them in construction, inaccessibility to many buildings because of design, lack of special transport, and lack of educational resources to accommodate their needs. It is therefore important at the outset to explain what it means to be disabled and how this state of being disabled impacts or influences the daily lives of those affected. The Disability Discrimination Act of 1995 in the United Kingdom defines a disabled person as someone who has *“a physical or mental impairment which has a substantial and long term adverse effect on his or her ability to carry out normal day to day activities.”* This physical impairment includes multiple sclerosis, cancer and cerebral palsy. Further, it includes sensory impairments such as those affecting sight or hearing. In South Africa disability is defined as a physical or mental impairment that substantially limits one or more major life activities, a record of such impairment, or a perception of such impairment (Thomas, 2003). Examples of impairments include asthma, tuberculosis,

AIDS, cancer, angina, diabetes, hypertension, stutter, anxiety disorders, bipolar disorder, dyslexia, blindness or vision impairment, deafness or hearing impairment, and paralysis.

Nagase (1995) argues that even though disabilities are not a usual part of normal human experience, the impact of being disabled is exacerbated by unfavourable social, economic and political conditions. Causes of disability include among other, congenital or prenatal disturbances, communicable diseases such as poliomyelitis, trachoma and leprosy, non-communicable somatic disease, functional psychiatric disturbances, alcoholism and drug abuse, trauma or injury such as from traffic accidents, occupational accidents, and malnutrition (Nagase, 1995). In South Africa the incidence of disabilities among blacks is twice that of persons who are not black (Helander, 1993). While this aspect is not the focus of this study, any discussion of disability in the South African context without considering this factor is unrealistic.

Many countries have imposed laws that failed to recognize the existence of physically challenged persons. Consequently their inability has gone unnoticed under normal circumstances to carry out simple daily duties such as preparing food, cleaning their houses, being employed like other able-bodied persons, and enjoying their basic human rights such as listed for example in the Bill of Rights of the South African Constitution. Charles Darwin of Germany developed the Social Darwinism theory in terms of which the lives of disabled people were deliberately devalued. This particular theory favoured persons regarded as being naturally fit by its idea of “survival of the fittest” and “natural selection” (Kelves, 1985). The normal reproductive activities of people with disabilities were discouraged and at times banned through forced sterilization to prevent them from having children (Nagase, 1995). Francis Galton, a cousin of Charles

Darwin further developed the Eugenics theory from Social Darwinism. Eugenics is the Greek word meaning good in birth or noble in heredity (Nagase, 1995). This theory focused on restricting people with disabilities from reproduction by compulsory sterilization of both men and women (Kuehl, 1994). Apparently more than 200 000 disabled men and women were deliberately killed in Germany because of this Eugenics theory.

In 1933 in Germany Hitler passed a law that called for racial hygiene. This law required that any person suffering from a hereditary disease could only be allowed to have children by means of a surgical operation (Gallagher, 1995). In 1939, Hitler signed an order, which was proclaimed as the year of the duty to be healthy (Nagase, 1995). The order stated that

“Reichsleiter Philip Bowler and Karl Brandt, M.D. are charged with the responsibility of enlarging the authority of certain physicians to be designated by name in such a manner that person who, according to human judgment, are incurable can, upon a most careful diagnosis of their conditions of sickness, be accorded a mercy death” (US Nuremberg War Crimes Trial, 1947:16).

As a result of this order mental patients were legitimately transferred to killing centres equipped with gas specially developed to kill people quickly and efficiently. This law was cancelled in August 1941 due to pressure from churches. As recently as 1995 forms of the Eugenics theory were still being applied in countries such China, where they were enacted into regional legislation to prevent people with mental retardation from having children (Degener, 1995). Even in South Africa black children born with disabilities were killed without consulting their biological parents as they were seen as a curse to their families (Gopolang, 2004). This wide spread poor treatment of disabled

people across the world led to the establishment and formation of pressure groups that specifically targeted the issue of disability itself while claiming to represent the rights of disabled people.

In 1999 the South African government passed the Employment Equity Act No. 55 of 1998, in terms of which any company with more than 50 workers must employ physically challenged people. This Act did not however specify the actual percentage of total employment to be made up of physically challenged persons (Seirlis, 2000). The rationale behind this initiative was to eliminate direct and indirect discriminatory workplace practices against minority groups such as women and disabled people to ensure their equitable treatment and their advancement and development. At the same time the intention was the social upliftment of these groups and the promotion of diversity in South African workplaces (Seirlis, 2000). Further Section 9(3) of The Constitution sets out rights to equality. In doing so, it prohibits discrimination on the grounds of *inter alia* (race, gender, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language, and birth). Such discrimination is presumed to be unfair.

Germany introduced a Law of Severely Disabled People, which compelled public and private companies with more than 16 workers, to set aside 6% of their employment positions for disabled persons or pay a compensatory levy for each unfilled compulsory position (United Nations, 1993). Similarly Greece introduced a compulsory employment law in the public sector assigning the Manpower Employment Organization to oversee the training and placement of disabled persons in employment in that sector. A system of subsidies and grants is used to encourage companies to recruit disabled persons. Financial

aid schemes enabling disabled persons to set up their own businesses (United Nations, 1993).

Spain accommodates physically challenged persons in many spheres of daily productive life. Its Social Integration Law 13 of 7 April 1982 prohibits any form of discrimination in recruitment procedures and in the course of employment on the grounds of disability. Companies with more than 50 workers are required to reserve 2% of their jobs for people registered as disabled with the employment service. In the public sector, 3% of employment positions are reserved for disabled persons (United Nations, 1993).

France has introduced a law, which compels all public and private companies with more than 20 employees to reserve 6% of their jobs for disabled people. However this law does not include the manufacturing and commercial sectors as they evidently had made satisfactory progress relative to the employment of physically challenged persons amongst health challenged persons. Additionally, physically challenged workers qualify for public employment assistance and vocational training (United Nations, 1993).

The implementation process of laws on disabled persons

Despite this introduction of proactive and enabling legislation and policies the supervision, monitoring and evaluation of the implementation of these have not been well addressed. Therefore the problem of discrimination against physically challenged persons still exists. More physically challenged persons are marginalized and ignored because they are presumed by many construction companies to lack the requisite skills or potential needed to be meaningfully employed. The key impacting factors include the lack of educational facilities adapted to accommodate the needs of physically challenged persons, general inaccessibility of public transport and buildings; and the lack of skilled

persons able to train physically challenged persons (Seirlis, 2000). Reeve (1999:1), a disabled person stated:

“Oh, if the Government had only implemented a Bill enforcing all public (including bus and train) transport to cater to people with disabilities and then a Bill enforcing all businesses to offer some sort of training or contribute to training through a levy for people with disabilities. If that had been done, we the disabled would be a pleasure to employ! The Act would not be seen as a threat to company profitability but more of an opportunity to increase profits by buying their skills and potential, not their disability”.

Evidently much more has to be done than just the introduction of enabling legislation to accommodate disabled persons. The selection and employment of workers should be based on the skills they possess and not on their physical condition of disability (Reeve, 1999). Physically challenged persons are no different to able-bodied persons. They love to work, take holidays, travel, socialize, play, cry, laugh and smile. They are not immune to normal emotions, feelings, activities and experiences (Seirlis, 2000). They dream, set themselves goals and deserve reward for achievement. Many break laws and go to jail. Considering that they vote and their votes are equally important, they deserve to be treated like other able-bodied people rather than being discriminated against (Reeve, 2000; Mohit, 2002).

Challenges facing the Construction Industry

The challenge to the industry is that of unlocking doors to allow people with disabilities to play meaningful roles in all areas of the construction industry. Disabled persons still experience the hardships of the past. The legacies of Social Darwinism and eugenics, which discriminated against disabled people, still exist in many countries

(Napier, 2002). Disabled people continue to experience many barriers, which limit their participatory role in the construction sector. Negative attitudes of other employees and employer, construction site setups and recruitment as well as unemployment of disabled persons are still challenges that need to be redressed (Lagadien, 1996; Dench, 1996; Meager, 1996).

Reeve (1999) argues that many barriers need to be eradicated to accommodate disabled persons wanting to work in the construction industry and on construction sites.

The following are examples of these barriers:

- The perception that construction work is too physically demanding for disabled persons;
- A workplace culture that is not fully prepared to accept disabled persons on construction sites;
- *Construction trades that are traditionally able-bodied and male dominated;* and
- An element of insecurity and resentment that disabled persons may change the workplace culture.

The above-mentioned barriers show clearly that a lot needs to be done if people's perceptions of disabled persons are to change and barriers that prevent disabled persons from working on construction sites are to be eradicated. Since legislation places certain demands on companies, there is a need for the world to increase its pace of removing the barriers, which prevent disabled persons from gaining employment access in order to level the playing fields (Andrews, 2004).

Culture of the construction industry

Construction has been overwhelmed by the dominance of able-bodied males for many years. On many jobsites women and disabled construction workers are not welcome (Sutherland, 2000). Health discrimination and negative attitudes are still

prevalent on worksites, despite these discriminations being illegal in many countries. Several studies have shown that disabled construction workers who are fortunate enough to be employed suffer from discrimination on the basis of health, and factors associated with low job satisfaction, psychological and physiological health symptoms and workplace injuries (Olson, 2000).

Eppenberger and Haupt (2003) argue that the nature of construction work results in workers on construction sites being confronted with dangerous, life-threatening work conditions on a daily basis. Serious accidents and injuries occur with alarming frequency on construction sites throughout the world. The construction industry is regarded as a chief contributor to most accidents in the workplace. Statistics released in 1990 by the Department of Labour show that the construction industry is one of the leading industries with 13% of accidents. Many people believe that this percentage is less comparatively to high alarming rate of accidents that are happening on construction industry. This can maybe be the reason why disabled persons are not employed on construction sites.

The need to push back the frontiers of discrimination against disabled persons

Prejudices against disabled persons still exist in many countries. These prejudicial actions take many forms that include exclusion or restriction based on disability, record and perception of disability, which has the effect of nullifying the recognition, enjoyment or exercise, by persons with disabilities of their human rights and fundamental freedoms (WorldEnable, 2002). The South African government has prioritized the full participation and equalization of persons with disabilities. Legislation and governmental policies have been introduced to examine conditions restrictive to disabled persons, and promote barrier-free opportunities in all areas of life for persons with disabilities (Itayama, 2004).

Chapter 2 of the 1996 Constitution guarantees fundamental rights to all citizens. It includes, in Section 9, the equality clause and the right to freedom from discrimination based on a number of social criteria. Discrimination based on disability is specifically mentioned and disabled people are thus guaranteed the right to be treated equally and to enjoy the same rights as all other citizens. But despite this significant commitment by the government there is still a long way to go to redress the imbalances of the past. The Department of Labour, in consultation with relevant government departments [the South African Federal Council on Disability (SAFCD), National Economic Development and Labour Council (NEDLAC), trade unions (COSATU) and other stakeholders] are facilitating the development and implementation of enabling legislation to protect disabled job-seekers and workers against unfair discrimination, and promote an inclusive work environment that accommodates diversity (de Villiers, 1997)

Types of disabilities differ from one person to another. In some cases drastic changes will have to be made to the way in which construction sites are structured and organized in order to accommodate persons who are physically challenged (IOL, 2001). For example, it would be unrealistic to expect permanently paralyzed persons to work on site since construction work is labour intensive. However, there are groups whose disabilities are not too severe, for example, those who limp or have one hand only, who can perform certain jobs on a construction site. The challenge for the leading personnel in construction is to identify the type of work that these disabled people are able to do on a construction site.

Problem Statement

Despite the existence of enabling governmental policies and legislation such as the Employment Equity Act No. 55 of 1998, and Labour Relations Act No. 66 of 1995, the South African construction industry has failed to recognize the existence of disabled people and the contribution they can make to the industry especially in times of skills shortages, continuing to discriminate against them by not providing meaningful employment resulting in their under-representation in construction generally and on construction sites in particular.

Aims

- To examine the employment status of physically challenged persons within the construction industry in Western Cape; and
- To investigate and identify the type of work they can perform in the construction industry particularly on construction sites as one way of addressing their unemployment and poverty

Hypotheses

The hypotheses to be tested in this research are stated as:

H1- Construction industry participants do not have specific formal written policies in place that address the employment imbalances that negatively affect disabled people

H2- Construction firms do not proactively promote the employment of disabled persons

H3- Construction firms do not consider employing disabled persons to alleviate their shortage of skills

H4- Construction firms have employment practices and preferential policies that discriminate against disabled persons

H5- Construction firms that employ disabled persons do so for reasons other than recognizing their productive worth

Methodology

To achieve the objectives of this research project the following methodology will be followed:

An extensive review of the literature related to the research topic will be done that will include a survey of previous studies in the field. Self-administered questionnaires and interviews with selected samples of disabled persons and construction firms will be used to obtain opinions, expectations and attitude of these samples in relation to the research topic. Data collected will be statistically analyzed and the findings from this analysis will be discussed and compared against the literature reviewed. Conclusions will be drawn and recommendations formulated from the finding of the study.

Limitations

The study will be limited to the Western Cape province of South Africa with emphasis on the employment of physically challenged persons who are employed by construction companies on construction sites only. Additionally, the focus will be on physically challenged persons who have the ability to work on construction sites and less on those with severe disabilities such as permanently paralyzed persons, who would obviously not be able to work on sites in any capacity.

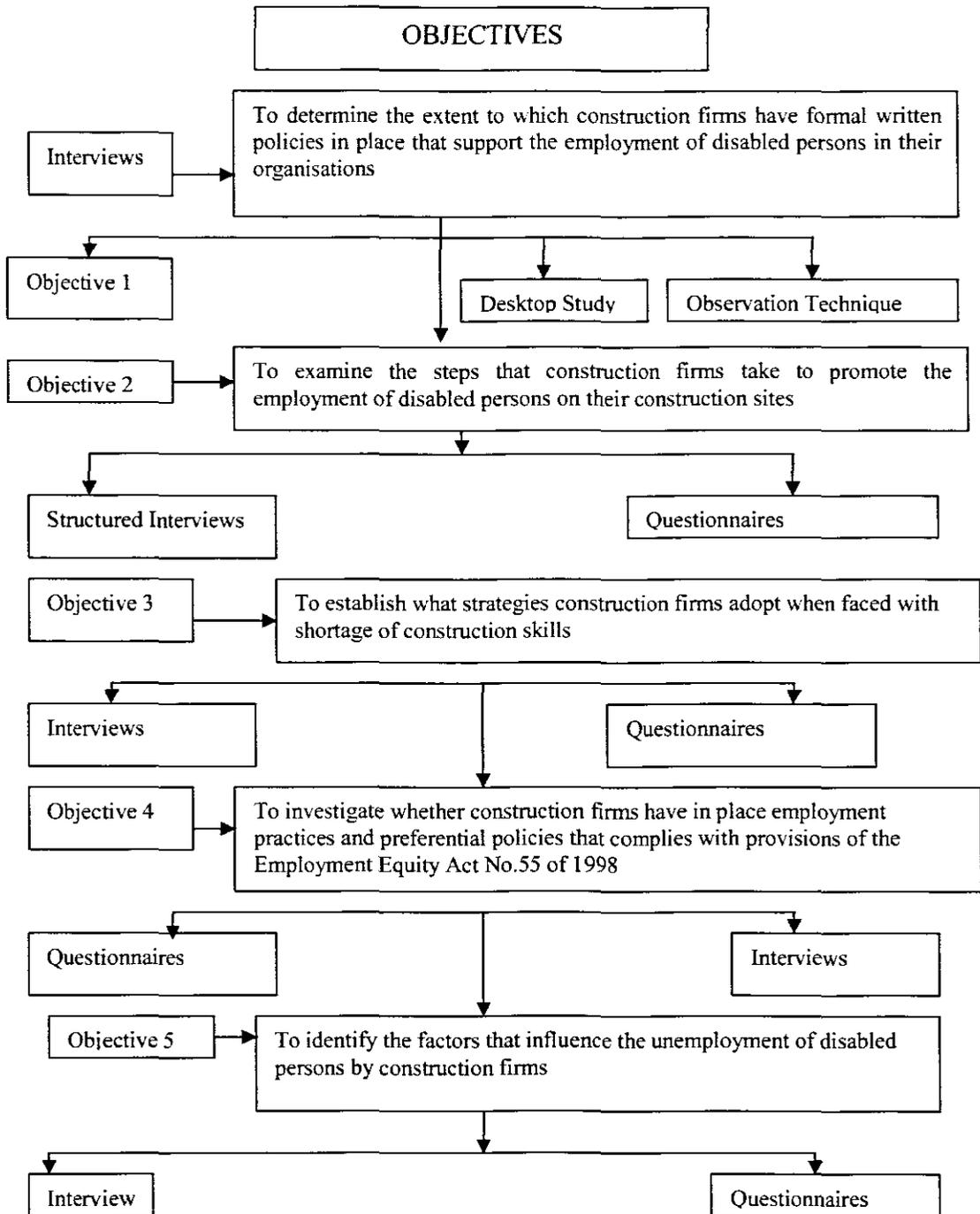


Figure 1. 1: Research Methodology Model

Assumptions

There are activities on construction sites that disabled persons can be involved with, which these persons are not presently doing. The information that is used on this study is correct and relevant without any prejudice.

Ethical Statement

To comply with international accepted ethical standards, no names of individuals will be recorded on research instruments. In this way no individual will be linked to a particular completed instrument, thus assuring anonymity. No compensation will be paid to any of the respondents for the participation in the study. Quality assurance will be done with respect to the following aspects:

- General conduct and competence of interviewers where interviews and surveys are conducted;
- Correctness and competence of responses especially where open ended questions are concerned;
- Quality of data capturing by encoders; and
- Frequency distributions run to check that variables contain only values in the accepted ranges and variable labels.

Dissertation structure

Chapter 1 introduces the research problem, motivation and the objectives of the study. In Chapter 2 literature on the area of research and the works of previous researchers are reviewed. In chapter 3 the methodology to achieve the objectives of the study are described in detail. Chapter 4 presents the key findings of the research. In Chapter 5 these findings are discussed and compared against the findings of literature. Chapter 5 also summarizes the main findings of the research and makes recommendations for future work in the area of disabled persons in construction.

Work scheme

It is intended that this research will be done according to the following time frame:

Table 1: Work program

| Function(s) / Activities | Duration |
|---|------------------------------|
| Introduction, problem identification, hypothesis, objectives and research methodology | 8 months (Jun-Jan) 2004-2005 |
| Literature review on the barriers that prevent people with disabilities from working on construction sector | 3 months (Feb-April) 2005 |
| Literature review on physically disabled people in South African construction sector | 2 months (May-Jun) 2005 |
| Research methodology | 1 month (July) 2005 |
| Data collection, analyzing, conclusion and recommendations | 5 months (Aug-Dec) 2005 |

CHAPTER 2 REVIEW OF RELATED LITERATURE

Introduction

*“We cannot revive old factions
We cannot restore old policies
Or follow an antique drum...
What we call the beginning is often the end.
And to make an end is to make a beginning.
The end is where we start from” (Eliot, 1963:1)*

These statements might seem to be frivolous but they relate to the changes that have been initiated by many countries to push back frontiers of discrimination against disabled persons in many areas of their lives. The last decades of the twentieth century have witnessed significant changes in the legal and policy frameworks concerning disability and persons with disability in countries around the world. Many governments have adopted policies, which aim to promote the rights of people with disabilities to participate as fully as possible in society. These policies that are frequently backed by legislation aim to improve employment opportunities for people with disabilities (ILO, 2002).

The South African government has developed enabling policies to create a society in which disabled persons and their needs are taken into consideration in the same way as all other citizens. Even though it has not yet enacted any specific legislation to address the needs of disabled persons, the South African government has promulgated the Employment Equity Act 55 of 1998 and Labour Relations Act 66 of 1995, which explicitly acknowledge the history of discrimination and prejudice suffered by disabled persons (Schwellnus, 2002).

This chapter re-emphasises the historic isolation and marginalisation of disabled persons, highlights the legal framework that presently exists and which aims to protect and advance disabled persons. The chapter reviews literature on the following aspects as indicated in Figure 2.1

The following impacts and relationships are examined

- A. Impact of existing legislation on the behaviour of employers in relation to disabled persons
- B. Existing legislation relative to issues of accessibility and accommodation of disabled persons on construction sites
- C. Contribution of legislation to create an appealing culture on construction sites
- D. Impact of legislation on the status of disabled persons in the construction industry
- E. Influence of attitudes of employers on the present low numbers of disabled persons employed in construction
- F. Contribution of these attitudes of employers to the employment status of disabled persons
- G. Impact of accessibility and accommodation issues of construction sites on the employment of disabled persons in the construction industry
- H. Examination of accessibility and accommodation as barriers that prevent disabled persons from working on construction sites
- I. Examination of other barriers that prevent disabled persons from working in the construction industry
- J. Impacts of these barriers as causes of the present status of disabled persons in the construction industry
- K. Study of the relationship between the present lack of cultural diversity of the construction industry and the number of disabled persons in the construction industry

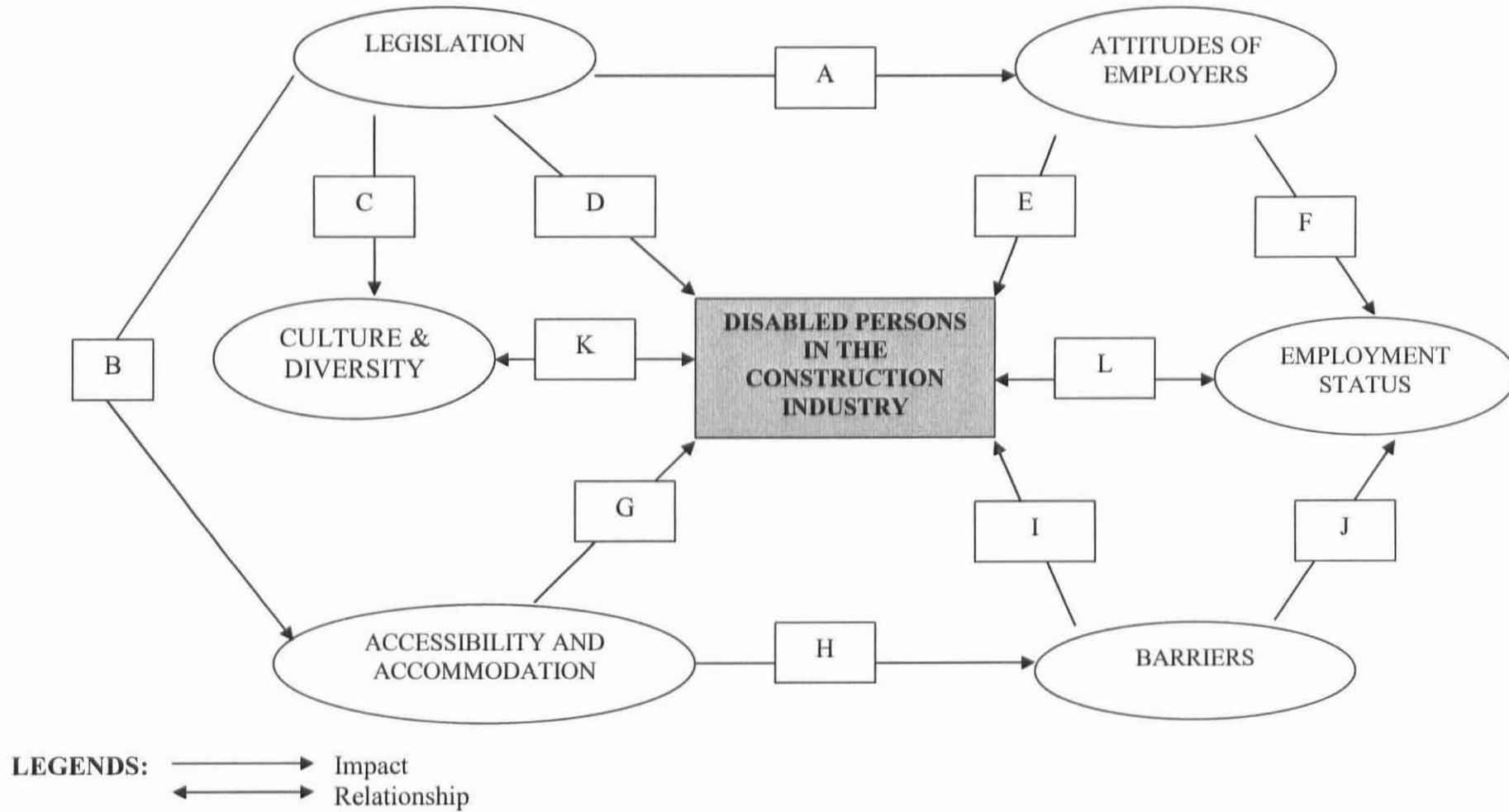


Figure 2.1: Factors affecting the employment of disabled persons in construction

Steps towards improving equity in construction firms

Historically, disabled persons have been discriminated against in many different societies. The forms of discrimination have varied from extinction and euthanasia to banishment and segregation. These actions have created conditions of ignorance and prejudice towards disabled persons. In many countries this marginalization and ignorance also resulted in the systematic under-representation of disabled persons in the key areas of society. In particular, their access to employment was severely restricted, resulting in widespread poverty and illness (Schwellnus, 2002; Swartz, 2004).

In South Africa, the apartheid system had an incapacitating impact of further marginalization and exclusion of disabled persons. The reality is that South Africans with disabilities are both underrepresented and underutilized in the workforce even though there have been more positive innovations to redress these imbalances (Strasheim, 2000). Strydom (2004) found that 12.7% of the South African population were disabled while less than 1% of this group was employed. These statistics indicate that the struggle for levelling the playing field of employment opportunity for disabled persons still continues. In terms of the Employment Equity Act No.55 of 1998 there are penalty measures for non-compliance ranging from R500 000 for a first offence up to R900 000 for repeated offences of the same type within a three-year period (Strydom, 2004). Even though statistics show that disabled persons are still being discriminated against, to date there has not been a single employer, construction included, who has been convicted because of not complying with the requirements of this Act.

The EEA includes a Code of Good Practice which provides help on the preparation, implementation and monitoring of Employment Equity Plans. This Code

provides guidelines to employers and employees to ensure that people with disabilities who are suitably qualified for a job enjoy equal opportunities and equitably represented in the workforce (Strasheim, 2000).

Schedule 8, item 11 of the Labour Relations Act 66 of 1995 (LRA) addresses the issue of the unfair dismissal of any employee on account of disability (Strasheim, 2000). It requires that prior to dismissing an employee with a disability, the person charged with determining the unfairness or fairness of such a dismissal should consider the extent to which the employee's work conditions could be adapted to accommodate the disability, or, if this was not possible the extent to which the employee's duties might be adapted (Msimang, 2000).

South African construction sites are still characterized by the dominance of able-bodied workers and a shortage of disabled persons who are capable of working on project sites. As a result there has been increasing pressure from the business community and other NGOs for amendments to the Labour Relations Act No. 66 of 1995 and Basic Conditions of Employment Act 75 of 1997. Lagadien (1996) believes that the amendment of these pieces of legislation will change the perception that South Africa has an inflexible labour market. Many researchers believe that initiative will create a more enabling environment for the creation of jobs especially for disabled persons as one of indigenous or minority groups (International Marketing Council of South Africa, 2003).

The South African Constitution is billed as one of the more progressive constitutions in the world because it covers almost all the needs and rights of all South Africans irrespective of diversity in colour, race, gender, and health status (McClain, 2001). It is founded on the fundamental values of equality, freedom and non-racism and, therefore prohibits any form of discrimination on the basis of race, disability,

gender and sex. The Integrated National Disability Strategy, which was developed in 1997, acknowledges the existence of disabled persons. It prohibits any form of unfair treatment designed to make disabled persons feel like objects of pity. Instead persons with disabilities should be regarded as capable persons who can contribute immensely to the development of society. The strategy supports the changes in the perception and attitude of society towards disabled persons (McClain, 2001).

The greatest challenge facing SA, therefore, in relation to the goals of the Integrated National Disability Strategy policy is to transform or change the mindset of able-bodied people to accept disabled persons as persons who have a role to play in society (McClain, 2001). The Promotion of Equity and Prevention of Unfair Discrimination Act of 2000 (PEPUDA) promotes the needs and rights of disabled persons and is committed to a vision of equality and non-discrimination (Schriner, 2001). Further it addresses issues around environment accessibility as well as reasonable accommodation in the workplace. PEPUDA expressly prohibits any unfair discrimination on the basis of disability.

McClain (2001) believes that legislation cannot on its own change the mindsets and transform the social landscape to capture the true spirit of these pieces of legislation. To make South Africa belong to all who live in it, equal in diversity, there has to be a structured monitoring system that will help the government to reach its own predetermined goal of making South Africa the country where all people benefit equally irrespective of their diversity. The critical question that the construction industry has to ask itself is now that constitutional provisions have been introduced that prohibit discrimination on the basis of disability, whether life has changed for disabled persons.

The employment status of disabled persons

Disabled persons are still being subjected to discrimination and denial of their rights in many countries despite the existence of international, regional, and national laws that prohibit this form of ill treatment. The ILO (2003) believes that the unemployment rate of disabled persons is twice or three times that of other able-bodied persons. They are generally concentrated in low-level, low-paid jobs, and are not adequately represented at the higher levels of construction firms. Physical accessibility problems are more prevalent in construction workplaces, often reflecting negative attitudes or prejudices among others in the labour market. The discrimination of disabled persons is a particular offence to human dignity and a denial of human rights on which priority action is overdue.

The labour force participation of disabled persons in South Africa is clearly below the average participation rate despite initiatives from the government to redress these imbalances. The contract form of employment of persons working on a Special Public Works Programme (SPWP) derived from the Basic Conditions of Employment Act of 1997 contradicts these initiatives. Clause no 5.1 of this form prohibits all persons who are receiving a state pension or assistance from a social security system (e.g. grant) from being employed on a SPWP. This may be the reason why there are few disabled persons working on construction projects. For the mere reason that this program only allows a worker to be employed not more than 24 months within the cycle of 5 years make disabled persons to choose grant rather than it because it is a live long financial assistance.

Thornton and Lunt (1994) believe that the cause of high unemployment among disabled persons is due to larger numbers of unemployed able-bodied persons, which makes it difficult for minority groups, which are regarded as the last option for

employment of any available post on construction sites. Unfortunately, in many circumstances, while appropriate occupational options may be identifiable, the reality is that disabled individuals often face significant barriers in obtaining and maintaining employment in the competitive labour market. Wallace and Currie (2003) believe that disabled persons still suffer from stigmas attached to them and extraordinarily high unemployment rates. When they are employed, they tend to be concentrated in the low paying, marginal sectors of the labour market. Persons with disabilities have additional expenses that able-bodied workers do not face, such as medication, special aids and devices, and special transportation services. Anecdotal evidence suggests that the measures of the Employment Equity Act No.55 of 1998 are not being implemented to increase the employment of disabled persons on construction sites. They are confronted with attitudinal and physical barriers, and deliberate discrimination that prevents them from working on construction sites. These barriers are presumed to be adding significantly to the daily challenges that they face. Preconceived attitudes, inappropriate behaviors, and limited expectations among construction firms prevent persons with disabilities from achieving their full potential in spite of governmental initiatives to introduce legislation and policies to address the issue of equity in the workplace. It is quite clear that even after ten years of democracy where all South African are presumed to be benefiting from the equal treatment of democracy, construction firms are still discriminating against disabled persons (Savtschenko, 2000).

According to the 1996 census, the distributions of disabled persons in the eight given provinces of South Africa are as follow:

Table 2. 1: Distribution of disabled persons by disability in South Africa

| Provinces | Type of Disability | | | | |
|---------------|--------------------|---------|----------|--------|-------|
| | Sight | Hearing | Physical | Mental | Other |
| Gauteng | 3.00% | 0.80% | 0.10% | 0.30% | 0.40% |
| Eastern Cape | 2.60% | 1.17% | 1.80% | 0.60% | 0.70% |
| Free-State | 0.50% | 1.30% | 1.60% | 0.50% | 0.60% |
| Kwazulu Natal | 2.20% | 0.90% | 0.50% | 0.50% | 0.30% |
| Mpumalanga | 3.50% | 1.10% | 1.50% | 0.40% | 0.30% |
| Northern Cape | 2.20% | 0.70% | 1.10% | 0.50% | 0.30% |
| North West | 3.90% | 1.10% | 1.10% | 0.50% | 0.50% |
| Western Cape | 1.00% | 0.50% | 0.90% | 0.40% | 0.20% |

Source: Global Diversity @ Work (2000)

These statistics only represent disabled persons who are defined according to their medical model definition. These figures are expected to increase considering the high level of poverty, crime and accidents (Sunday Independent Newspaper, 2000). This shows that currently South Africa is having more than 12.7 disabled persons. The commission of the European Union (2003) believes that the employment of disabled persons is a critical challenge for all industries. Their participation in the labour market allows them to earn a living and participate more fully in the economy. It further gives them dignity and a greater degree of independency. Therefore there is a need for disabled persons to participate fully in every area of the construction industry where it is possible rather than be segregated. Disabled persons are supposed to receive equal treatment at work, which include equality in terms of health and safety at work (Commission of the European Communities, 2003).

Attitudinal barriers and societal prejudices against disabled persons

Lagadien (1996) argues that many employers perceive a disabled person as incompetent in one way or the other even if he or she is not. This perception leads to negative attitudes, which focus on what disabled persons cannot accomplish, instead of what they in reality can accomplish. Further employers tend to underestimate the capabilities of disabled persons due to their disability status. This underestimation

leads to stereotypes of incompetence. This classification always places unfair irrational and unjustifiable barriers to the employment of disabled applicants.

Nyandwi and Wadasinghe (2001) believe that gender, race and disability are attributes that individuals bring with them to the workforce as part of their identity. These characteristics are often seen as disadvantages to the extent that they make certain groups appear to be different than others. Discrimination and racism are by-products of situations where these differences are perceived as a disadvantage or handicap. The South African government has gone beyond prohibiting discrimination to promoting equity in the workplace through the development of legislation that seek to eliminate barriers to employment for disabled persons. Nyandwi and Wadasinghe (2001) believe that market forces such as skill shortages, an aging population, migration trends and increasing economic integration signal a future labour market composed mainly of minority groups. They believe that for South Africa to remain competitive, it needs to adopt effective and long-term programs to improve the representation of disabled persons in their workforces.

There is a negative belief that most or all disabled persons share certain negative characteristics, which underlies prejudice against them. This stereotype against disabled persons has become less acceptable since the introduction of civil rights legislation by many governments (Amicus Curiae, 1999). Lagadien (1996) believes that the state of disability conveys important information about the potential and limitations of persons beyond the particular disability itself. The existence of a disability is not completely irrelevant to a person's capabilities. Any disability forms an impairment that imposes certain burdens and restrictions on the life activities of individual. The perception of disabilities, which are treated as negative limitations, often unreasonably leads to negative attitudes towards disabled persons because able-

bodied persons tend to think in terms of a handicapped person rather than a person who is handicapped (Lagadien, 1996). It is perceived that the disability is the central life experience of disabled persons, which influences all their mental and social abilities.

For many people, the characteristics by which able-bodied persons are judged (integrity, responsibility, sense of humor, amiability, and sensitivity), are suddenly changed when dealing with disabled persons. The unfair or negative characteristics become the focus of attention, and most assumptions are come into place that when a person is disabled his or her physical or mental impairment completely affects his or her life (Amicus Curiae, 1999). Able-bodied persons tend to create consistently negative impressions about this person who is then necessarily viewed as inferior in terms of all possible attributes simply on the basis of his or her disability. According to Amicus Curiae (1999) many people mistakenly link epilepsy to physical unattractiveness. They shout at the blind as if they are deaf and try to lift them as if they are orthopedically disabled. They incorrectly assume that persons with physical disabilities are mentally impaired, and that persons with psychiatric conditions are violent. They speak to persons with physical disabilities as if they were children. This unfair treatment always creates negative attitudes about disabled persons.

Culture of the construction industry

The construction industry does not have a good track record in terms of equal opportunities for its work force. In the past issues of discrimination, disadvantage and underrepresentation of minority groups have been raised (Dainty, 2004). There has been growing pressure and concern from different associations and non-governmental organisations about the low level of inclusion of disabled persons in this industry (Dainty, 2004). Employment of disabled persons has been a problematic issue. The

possible work that can be done by this group of the population has been found to be invisible in the workplace. This resulted in them not being given the same encouragement that able-bodied persons get. Furthermore, this failure to identify possible work opportunities leads to them not being seen as a part of the pool of people considered for playing a potential role in the development of construction industry particularly on construction sites (Bagilhole, 2002). Admittedly this culture has been changing even though the pace has been very slow. Construction firms are now beginning to level the playing fields. Dainty (2002) believes that these changes have been brought about by new legislation. Many people still believe that addressing discriminatory employment practices as well as provision of equal opportunities are good for any firm that wants to have a competitive edge over others. They believe that these initiatives improve customer service and enhance staff morale (Dainty, 2004). If the construction industry is to benefit from this trend, it has to break down its institutionalized barriers to allow disabled persons to explore their abilities. It has to develop robust policies and approaches that will help it to address this problem.

The labour force of construction is skewed because only able-bodied men dominate it. Women and disabled persons are still marginalized and prejudiced. A social and commercial environment in which disabled persons in particular are taking a growing role increases the need for improvement (Gale, 1999; Sandi, 1999). The question to be asked is how could a male-dominated industry such as construction known for its poor reputation and working conditions, tight margins and entrenched attitudes, improve its performance relative to providing equal opportunities to all members of the population.

The current skills shortage in many areas has emphasized the difficulties of recruiting disabled persons with the basic skills, knowledge and motivation to build a

competent workforce. In particular, there is concern that very few disabled persons are attracted to building as a career, at a time when the number of disabled persons entering other non-traditional careers is growing (Gale, 1999; Sandi, 1999).

Fawcett (1999) believes that the construction industry does not raise awareness of the opportunities available for disabled persons on construction sites. It is failing to improve conditions and to present an image and a reputation that can attract and keep high quality recruits of disabled persons (Olson, 2001). The number and quality of applications for training and careers in the construction industry are seen to be very low especially from this group. Olson (2001) believes that the policies and recruitment procedures have to change in order to attract this group. Targeting new sources of labour such as the disabled existing employees currently working in traditional occupations is very important. Innovative ideas are important to reach under-represented groups and encourage them to consider employment and training in building, particularly in the manual trades.

The implementation of new quality training for disabled persons will help to alleviate poverty among disabled persons. Fawcett (1999) believes that unemployment is a strong indicator of poverty. The study done by Canadian Council of Social Development shows that 36.2% of disabled persons between the ages of 15 and 64 are poor. This is high as compared to 18.5% of able-bodied persons

Haupt (2005) believes that the investigation and identification of possible work that can be satisfactorily done by this group is important. He believes that this identification of work opportunities for disabled persons will help contractors to build a good workforce by recruiting them (disabled persons), and encouraging them to stay in their firms by developing their careers because good people are a valuable resource.

As the world of work changes, more people are beginning to reject poor conditions and long hours of working due to lack of skilled personnel. Therefore it is important for the construction industry to realign itself with what other industries and professions are doing in terms of working hours and support mechanisms as one way of attracting disabled persons and improving their culture (Dainty, 2002).

Improving the image and culture of the construction industry

The institutional discrimination against disabled persons in construction industry contributes negatively to the image of the industry. The stereotypical assumptions, societal influences on the choice of work and prejudicial attitudes and negative behavior towards disabled persons still operate (Lagadien, 1996). The findings of a study done by the World Scientific Company at United Kingdom reports that equality in the construction industry can only be achieved by putting conscious measures in place that will remove discriminatory practices. These measures should include among other things proactive measures to recruit disabled persons, and retain them. These measures can only be achieved if top management of construction firms are supportive (Lagadien, 1996).

Recruitment of Disabled Persons

People with disabilities represent the single largest and most diverse minority in the South Africa and in the entire world. Yet despite the economic boom in South Africa, the employment of disabled persons is extremely low (McLaughlin, 2002). Experts in the field of workplace disability believe that employers have not tapped into this workforce because they are unaware of the range of their skills or do not know how to identify the individuals as potential employees (Bourke, 2004). Disabled persons face a more challenging recruitment process because of many barriers. Many

countries are trying to transform their recruitment and employment procedures to include disabled persons. Evidence to this is an introduction of Code of Good Practice on the Employment of People with Disabilities in South Africa. This code promotes the concept of a conditional job offer for disabled persons. This means that the employer can now make an offer of employment, conditional upon a medical or functional test, to determine his or her ability to perform the essential functions of the job offered. It is believed that this Code will see the start of the redress of the legacy of discrimination against disabled employees. Their visibility in the workplace is expected to increase noticeably.

Many researchers believe that disabled persons are faced with negative stereotypes as well as architectural, communication and other barriers related to disability despite the introduction of a Good Code of Practice. Disabled job seekers and workers are often denied their rights or face discriminatory practices at workplaces (Perry, 1998). Researchers argue that disabled workers have certain duties, as do all workers, to present themselves, including their interests, abilities, skills and workplace requirements, in an open and frank manner. In the hiring process, applicants should be judged on their abilities and qualifications. They need to have a full understanding of the job they are applying for to evaluate their interest and ability to do it. Further, once hired, all workers have to be judged and evaluated according to their job performance, without bias based on factors not related to the job (Perry, 1998). They have to have equal access to employment benefits and opportunities for advancement. When necessary, reasonable accommodations have to be made so that an individual with a disability can perform the requisite job tasks.

According to the LRA all employees have a responsibility to notify their employer of a condition that may affect their ability to do the job, or that may affect

their safety or that of others. Workers have a duty to represent themselves and their abilities in an honest manner (Blanck, 2000). They have to request a reasonable accommodation, if necessary, and accept that which is most appropriate for the situation, cost-effective and least intrusive to the workplace while still meeting their needs.

Dainty (2002) and Perry (1998) believe that true employment inclusion and integration means access to a range of workplace activities. In particular, without effective accessibility, individuals with disabilities will continue to face obstacles in work and in their daily lives (Blanck, 2000). Yet achievement of the promise of full inclusion and equal employment participation requires more than advancing technology but rigorous efforts. It requires study of underlying attitudes and behaviours toward individuals with disabilities in all parts of construction industry.

The employers' attitudes towards employing disabled people.

Research conducted by Leonard Cheshire (2002) the UK's largest disability care charity organisation providing innovative and flexible approaches to social care for more than 19,000 disabled people shows that many companies do not employ disabled people because they are more concerned about maximizing their profits. Employers feel that employing disabled people will reduce profits. Therefore, many claim that work in construction is not suitable for disabled people (Leonard Cheshire, 2002). There is generally a lack of the necessary facilities to accommodate the needs of disabled people on site. Several companies are concerned that government does not provide adequate incentives for them to create environments conducive to employing disabled persons.

Employers have frequently overstated the cost of adjustments in order to accommodate disabled persons in their workplaces and to retain employees who had

disabilities. These findings in the United Kingdom clearly show that much needs to be done to change the demographics of employees throughout the world (Leonard Cheshire, 2002).

A study conducted in Scotland highlights the benefits that can be enjoyed by any company employing disabled persons:

- People with disabilities possess valuable problem-solving skills because they are experts in finding creative ways to perform tasks others may take for granted;
- Employees with disabilities have proved to be dependable, dedicated, hardworking and productive employees;
- Many businesses report that the experience of working with people with disabilities increases every employee's morale and productivity;
- After acquiring a disability, employees who return to work after being rehabilitated help reduce a company's training and hiring costs and lower insurance premiums;
- Employers who have return to work programs establish a culture that regards employees as valuable not disposable;
- Employees with disabilities reflect the customer base and can help craft effective marketing strategies to reach this lucrative market for companies that hire them;
- People with disabilities make up part of the diverse workforce necessary for companies to succeed;
- There is a possibility of generating positive publicity in terms of workforce, trade unions and other organisations;
- A demonstration of good equal opportunities practice, promotes a positive overall company image;
- Accessibility of a previously untapped pool of labour, skills and abilities;
- The reduction of a turnover because disabled employees are presumed to be reliable and tend to stay longer with the one employer;
- Improvement of staff attendance rates (disabled employees are presumed to take less time of work); and
- Opportunities to develop a better understanding of organisational recruitment and training needs through the review of job descriptions and key job tasks (Intowork, 2003; Donohue, 2003).

Cultural Diversity in the Workplace Today

Hunt, Osborn and Schermerhorn (1997) believe that workforce diversity is a workforce consisting of a broad mix of workers from different racial and ethnic backgrounds, of different ages and genders, and of different domestic and national cultures. They believe that it is now becoming more and more prevalent in many

industries. Concepcion (2000) believes that having a diverse workforce and managing it effectively promotes the image of companies and attracts more clients including disabled persons from different spectrums. Disabled persons also will feel at home when another disabled persons serve them. Burgmann (2000) argues that diversity does not only mean optimising the productivity of all people including disabled persons in the company but also increasing the quality of the workforce. Cultural diversity and equality in construction industry is a dream that need to be realised. For small developing companies, diversity and equality can be seen as problematic because of lack of funds to modify the working environment to accommodate disabled persons (Burgmann, 2000).

Researchers believe that there is a need for able-bodied employees to support this diversity and not to fear that they might lose their jobs over minority as a result of diversity. They argue that construction industry is still left behind on the issue of diversity, but it can improve its cultural diversity by changing its bias policies. The law is very much important for those who have been locked out to protect them from the tyranny of the majority (Jackson, 1995).

Diversity and equality cannot be judged by targeted period, but through visible equal representation of all people (Concepcion, 2000). He believes that diversity does not only level the current playing field but also unearths rooted prejudices and stereotypes that discriminate against disabled persons.

The opportunity for all employees including disabled persons to achieve their maximum potential at work is something that needs to be widely recognized as a fundamental human right (Perry, 1998). Over the last few years, it has also become clear that there are construction firms that are pursuing workplace diversity as a competitive necessity. This was may be driven by realization that it is only through

valuing and pursuing workplace diversity and managing it well that firms can attract, retain and encourage the contributions from the people they need to satisfy their customers, work effectively with partners and suppliers, and satisfy shareholders (Perry, 1998). The pursuit of workplace diversity is a strategic organisational response to the globalization of a company's activities and the growing multiculturalism of workforces and marketplaces.

This concept of diversity goes well beyond the historical employment equity legislation enacted in national, provincial and local levels of South African government. It calls for the recognition of the contributions that individuals with disabilities can make as individuals. It calls for management of firms to be totally inclusive, not just tolerating those who are different but also celebrating those differences (Perry, 1998). It calls for the opening of non-traditional occupations to all people and for making reasonable accommodations in the workplace and work life to enable this to happen. It calls for diversity beyond just gender, race, or physical and intellectual abilities to include diversity in opinions, and other aspects of the variations in lives and lifestyles.

Perry (1998) believes that the new concept of diversity rejects the concept of quotas, mandated targets, or much of the legislative and regulatory framework that accompanies affirmative action, equal employment opportunity and employment equity legislation. It does not diminish their historical contribution to getting towards this new paradigm but it rejects their continued utility in the present day.

According to the Human Rights Commission (2003) employers and unions share the responsibility of accommodating employees with disabilities in the workplace. A major principle of accommodation is upholding the dignity of the employee being accommodated. Employers and unions therefore, share responsibility

in striving for inclusiveness where barriers are removed and the equal participation of disabled persons is possible.

Current status of South Africa relative to inclusion of disabled persons

The political changes in South Africa have failed to challenge many orthodox notions surrounding work (Thornton, 1995; Lunt, 1995). The belief that by the end of 21st century each and everyone will be enjoying the equal benefits of a democratic country in diversity does not appear to have been fully realized. The 2% target of working disabled persons that was supposed to be reached by the end of 2005 has still not been achieved. To achieve this target South Africa will have to learn from other countries.

In Germany, employers are obliged to set aside jobs that are suitable for disabled persons. They are obliged by legal requirements to install and maintain workrooms, plant, machines, and tools and arrange the work that the greatest number of severely disabled persons can find permanent employment. In the South African context it is surprising to see that little regard has been given to employment equity with addressing fundamental issues about the disabling role of the working environment. As Lagadien (2002) said, legislation alone cannot change the direction of an arrow without more commitment from stakeholders.

Pahad (2001: 2) believes that "It would be ironic were it to happen that freedom was achieved from apartheid, freedom was achieved from sexism and gender discrimination, freedom was achieved from mind control, detention and repression, and yet disabled persons in our society remain unfree." This statement is a clear indication that it is not only in the construction industry where disabled persons are still prejudiced, but in the entire country. There is a need to change the mindset and to transform the social landscape so as to create a truly democratic, people-centred

society where South Africa in general and disabled persons in particular, can share in the pickings of such a society in the broadest sense. There is a need to extend the boundaries of freedom and human rights in order to include disabled persons in all avenues of life.

Although progress has been made in the enactment of basic laws concerning the equalization of opportunities for persons with disabilities in South Africa, there has been little or no progress in the review of substantive laws, such as those pertaining to employment of disabled persons, and those related to discriminations of disabled persons at large (United Nations, 2000).

Still the situation for the vast majority of persons with disabilities is still totally unacceptable. It is the time for the South African government and the entire world at large to develop and implement the monitoring systems as effort to make real progress in areas of inclusion of disabled persons. This will help to avoid further suffering and discrimination of persons who happen to be disabled, but it will also help to protect general democratic values and the credibility of both the United Nations and member states.

CHAPTER 3 RESEARCH METHODOLOGY

Introduction

This chapter attempts to provide a detailed outline of data collection techniques and quality control measures employed to obtain meaningful data pertaining to this study. The validity and reliability of data are widely recognized as one of the fundamental factors of this study. In a nutshell this chapter will describe the data needed, its treatment, research techniques and limitation of the study.

The starting point of this research has been to define the research issue in order to characterize it or to distinguish it from all other work on the research topic. In so doing it would be possible to discover what it is that needs to be achieved. At this stage the subject seems all too complex and it is necessary to refine leaving things and issues that are well within the available capabilities and resources.

To satisfy the aims of this dissertation requires the use of suitable methodology. Methodology is defined as a system of methods and principles used in a particular discipline (Collins English dictionary). Holt (1998) points out that in the context of research, methodology may be perceived as the overall method applied to satisfy the aims of the investigation. He suggests that one should choose a research methodology that will satisfy the objectives and fit into the overall framework of the project.

Qualitative research methods

The current state of research supports different orientations to inquiry, which have been classified as scientific versus humanistic and qualitative versus quantitative. The following section captures the essence of the differences between

the qualitative and quantitative paradigms. Qualitative research usually presents data in the form of words rather than numbers. These data in the forms of words are usually gathered by observations, interviews, or documents. The challenge that qualitative research presents is a more unbiased processing of data collected (Popkewitz, 1984). Raw field notes need to be corrected and tape recordings need to be transcribed and corrected. Many researchers believe that qualitative methods are the best strategy for discovery, developing and testing hypotheses. They argue that these methods are useful when one needs to supplement, validate, and explain quantitative data gathered from some setting. Qualitative analysis consists of three concurrent flows of activity: data reduction, data display, and conclusion drawing. Berger and Luckman (1973) believe that qualitative methods call for a need to shift from the notion that science alone is a measure of reality, knowledge and truth. They believe that there is a need for shifting from the notion that knowledge is problematic and contested and that truth is locally and politically situated.

Qualitative methods are developed in social science to enable researchers to study social and cultural phenomena. Examples of qualitative research methods are action research, case studies and ethnography. Qualitative data sources include observation and participant observation, interviews, questionnaires, documents and text, and research impressions and reactions of researchers. Researchers believe that qualitative research can be positivist, interpretive, or critical. The following diagram outlines these three types of qualitative research.

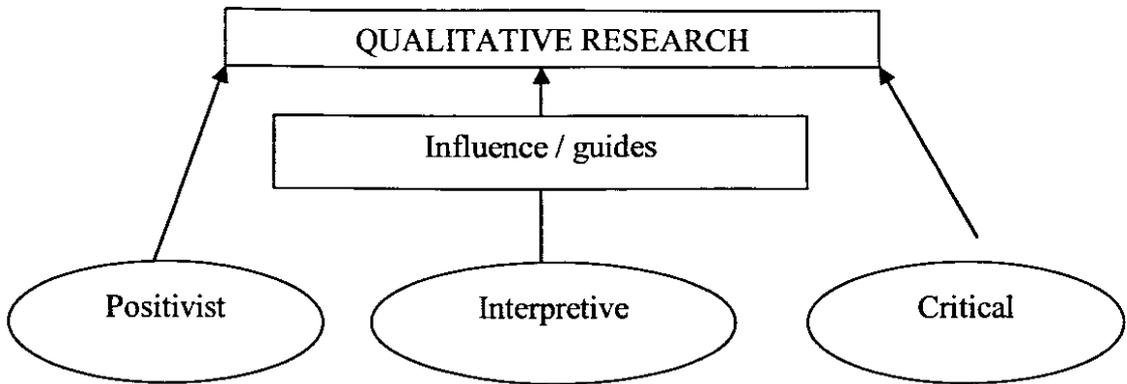


Figure 3.1: Qualitative Method
 Source: *MISQ* (Myers, 1997)

Positivism

Positivists assume that reality is objectively given and can be described by measurable properties, which are independent of the researcher and his or her instruments (Yin 2002). They believe that reality is stable and can be observed and described from an objective viewpoint without interfering with the phenomena being studied (Levin, 1988). They contend that phenomena should be isolated and that observations should be repeatable. Levin (1988) believes that this often involves manipulation of reality with variations in only a single independent variable so as to identify regularities in, and to form relationships between, some of the constituent elements of the social world. Positivism has also had a particularly successful association with the physical and natural sciences. There has, however, been much debate on the issue of whether or not this positivist paradigm is entirely suitable for the social sciences (Hirschheim, 1985). Many researchers are calling for a more pluralistic attitude towards research methodologies.

Interpretivism

Interpretivists assume that access to reality is only through social constructions such as language, consciousness and shared meanings (Boland, 1985). They contend that only through the subjective interpretation of and intervention in reality can that

reality be fully understood. The study of phenomena in their natural environment is key to the interpretivist philosophy, together with the acknowledgement that scientists cannot avoid affecting those phenomena they study. They admit that there may be many interpretations of reality, but maintain that these interpretations are in themselves a part of the scientific knowledge they are pursuing. Interpretivism has a tradition that is no less important than that of positivism,

Critical

Critical researchers assume that social reality is historically constituted and that it is produced and reproduced by people (Ngwenyama and Lee, 1997). Although people can consciously act to change their social and economic circumstances, critical researchers recognize that their ability to do so is constrained by various forms of social, cultural and political domination. The main task of critical research is seen as being one of social critique, whereby the restrictive and alienating conditions of the statistic are brought to light. Critical research focuses on the oppositions, conflicts and contradictions in current society, and seeks to eliminate the causes of isolation and domination (Ngwenyama and Lee, 1997).

For this study, the motivation for using qualitative methods comes from understanding the social and cultural context of construction firms in relation to the employment of disabled persons. Maxwell (1994) argues that the goal of understanding phenomena from the point of view of the participants and their particular social and institutional context is largely lost when only data are collected by using one method.

Quantitative research

Leedy and Ormrod (2001) argue that quantitative studies permit the researcher to identify a cause and effect relationship. They seek to answer questions such as “What and why”. Quantitative research methods are originally developed in the natural sciences to study natural phenomena. Examples of quantitative methods, which are now well accepted in the social sciences, include survey methods, laboratory experiments, formal methods (e.g. econometrics) and numerical methods such as mathematical modelling (Boudreau, Gefen and Staub, 2004). By using quantitative methods one is able to gather data with an instrument, such as a stopwatch or a structured questionnaire, and then quantify relationships between variables derived from the data.

Philosophical perspectives

All research, whether qualitative or quantitative, is based on some underlying assumptions about what constitutes valid research and which research methods are appropriate (Bowen, 1996). In order to conduct and evaluate research it is important to know that these assumptions are sometimes hidden. Chileshe and Haupt (2005) argue that to validate data collected, a triangulation method is necessary. Triangulation requires the application and combination of several research methodologies (qualitative and quantitative) in the research of the same phenomenon to validate data. It has been used extensively in social sciences. Frequently the purpose of triangulation in specific contexts is to obtain confirmation of findings through convergence of different perspectives. Many researchers support the idea of using triangulation method. Miles and Huberman (1994) believe that there are some researchers who argue that qualitative and quantitative methodologies cannot be combined because the assumptions underlying each and every one of them are vastly

different. Jayarathne (1983) argues that the only difference that distinguishes these methods from one another is the fundamental reason of the material being assessed, between research based on data that can be counted and data that can be experiential. Bowen (1996) believes that methodological triangulation can be classified as simultaneous or sequential. Simultaneous triangulation is the use of qualitative and quantitative methods at the same time. In this case, there is limited interaction between the two datasets during the data collection, but the findings complement one another at the end of the study. Sequential triangulation is used if the results of one method are essential for planning the next method. One of these methods has to be completed before the other one. Figure 3.2 shows the importance of using triangulation.

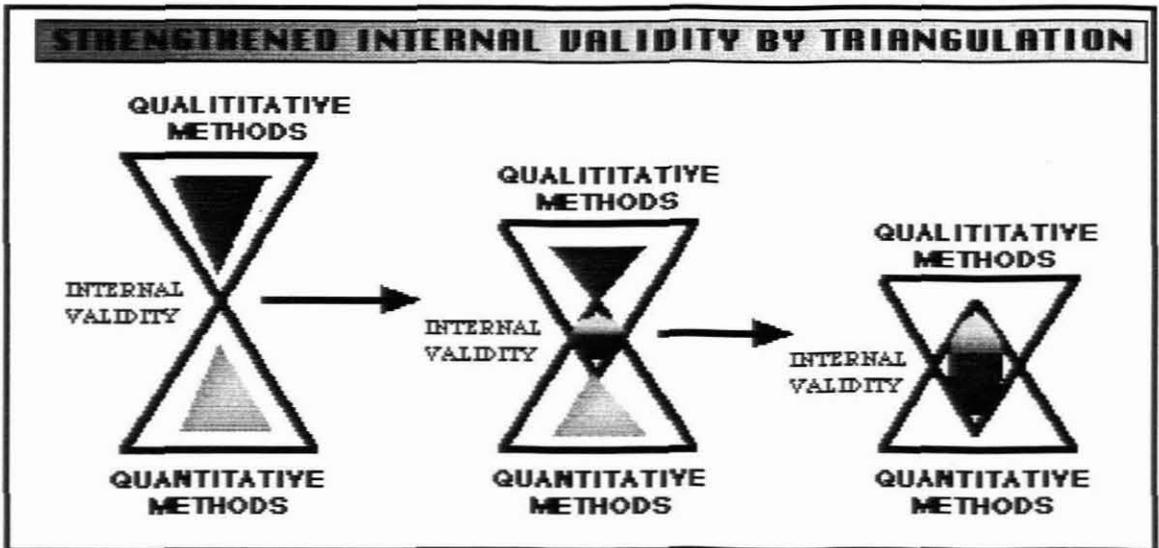


Figure 3. 2: Merger of Qualitative and Quantitative methodologies
(Source: Bowen, 1996)

Jaeger (1988) argues that the strength of research relies heavily in its triangulation of multiple sources of data. Anderson (1994) discusses several advantages, which are realized from using a combination of different methodologies. First, educational and psychological research is concerned with both basic and theoretical knowledge, and with the application of findings in practice. Research that

combines methodologies increases the potential of the investigation to address both of these ends. For example, qualitative research is often concerned with process as well as with outcomes; descriptive accounts provide practicing researchers with a means of drawing parallels and contrasts between the phenomena being investigated and their own practice. Guba and Lincoln (1985) argue that quantitative research seeks to measure and evaluate the phenomena or construct of interest, and provide a means for generalization and reproduction by other researchers. They believe that the use of both research methods enhances the value of the investigation. A second advantage of triangulating is that each method can build upon the strengths of the other. Qualitative research, which emphasizes understanding, contextualizing, introspection and theory construction, can provide a strong base for wider quantitative measures, scaling, and generalization. Quantitative research, with its emphasis on large samples, can provide an overview of an area that can reveal relationships, patterns, inconsistencies, and so forth that can be further investigated with qualitative methods. Finally, qualitative and quantitative methods can provide distinct but complementary information about the phenomena of interest.

Selection methodologies

A number of research methodologies have been identified. Table 3.1 lists the methodologies identified in this research, indicating whether they typically conform to the positivist, interpretivist or critical paradigms. Before introducing the methodologies used in this research, the researcher summarizes the key features of the key methodologies in the table, identifying their respective strengths and weaknesses. In the following sections, the choice of methodologies is justified and explanations are given how they both operate and interoperate in his research.

Table 3.1: Classification of Research Methodologies

| No | Scientific (Positivist) | Interpretivist (Ant-positivist) |
|----|-------------------------|---------------------------------|
| 1 | Laboratory Experiments | Subjective or Argumentative |
| 2 | Field Experiments | Reviews |
| 3 | Surveys | Action Research |
| 4 | Case Studies | Case Studies |
| 5 | Theorem Proof | Descriptive or Interpretive |
| 6 | Forecasting | Futures Research |
| 7 | Simulation | Role or Game Playing |

Survey Research

Surveys enable the researcher to obtain data about practices, situations or views at one point in time through questionnaires or interviews. Quantitative analytical techniques are then used to draw inferences from this data regarding existing relationships (Casebeer and Verhoof, 1997). The use of surveys permits a researcher to study more variables at one time than is typically possible in laboratory or field experiments, while data can be collected about real world environments. Casebeer and Verhoof (1997) believe that a key weakness is that it is very difficult to realize insights relating to the causes of or processes involved in the phenomena measured. There are, in addition, several sources of bias such as the possibly self-selecting nature of respondents, the point in time when the survey is conducted and in the researcher him or herself through the design of the survey itself.

Questionnaires

Questionnaires are a useful way of collecting information from a larger sample of people. Researchers are in most cases limited in the time available and therefore they prefer qualitative questionnaires. Oppenheim (1992) argues that they target a small sample of people and focus on getting as much information as possible from them. There are a number of questionnaire types, which are used for different types of research and in different ways. These include:

- **Unstructured questionnaire:**

Most of the questions are open ended. The researcher is free to change the order of asking questions and to explain them. The questionnaire may take the form of a checklist for discussion. The unstructured questionnaire is used in interviews and group discussions.

- **Semi-structured questionnaire:**

This questionnaire usually constitutes a mixture of closed or fixed response questions and open-ended questions. Semi structured questionnaires are useful in enabling the researcher to stage manage the interview so that all the open ended questions are answered fully (Lewis, 2003).

Researchers will find that they will often get a better response if they are present while people complete the questionnaire. Their presence will allow them to answer any questions that people may have about the instrument. As with any research their results will depend on the quality of their questions.

Interviews

Interviews are likely to be in-depth conversations with individuals concerning a particular topic. The individual that the researcher interviews will depend on what he or she wishes to find out. They will need to make contact with the individual that they wish to interview. They may do this through a letter or by e-mail. Many researchers strongly recommend that a researcher make a follow-up with a phone call should it be appropriate (Bainsley, 1992).

It is possible that the interviewee could ask for a copy of the questions or conduct the interview via e-mail. This is why it is worth preparing questions beforehand.

An interview is a really effective method of getting lots of information as it is likely that open-ended questions will generate a lot of conversation. Should a researcher be interviewing someone from the company it is worth carrying out some brief research on him or her first if he has not already (Critical Research, 2005).

Case Study

Campbell and Yin (2002) argue that case studies involve an attempt to describe relationships that exist in reality, very often in a single organization. Case studies may be positivist or interpretivist in nature, depending on the approach of the researcher, the data collected and the analytical techniques employed. Reality can be captured in greater detail by an observer-researcher, with the analysis of more variables than is typically possible in experimental and survey research. Case studies can be considered weak as they are typically restricted to a single organisation and it is difficult to generalise findings since it is hard to find similar cases with similar data that can be analysed in a statistically meaningful way (Gilgun, 1994). Furthermore, different researchers may have different interpretations of the same data, thus adding research bias into the equation.

Subjective research in most cases requires the researcher to adopt a creative or speculative stance rather than act as an observer (Creswell, 2002). It is a useful technique since new theories can be built, new ideas generated and subsequently tested. However, as an unstructured and subjective form of research, there is a strong chance of researcher bias.

Action Research

Kemmis and Taggart (1988) believe that action research is a form of applied research where the researcher attempts to develop results or a solution that is of

practical value to the people with whom the research is working, and at the same time developing theoretical knowledge. Through direct intervention in problems, the researcher aims to create practical outcomes while also aiming to reinform existing theory in the domain studied (Evered and Susman, 1978). As with case studies, action research is usually restricted to a single organisation making it difficult to generalize findings, while different researchers may interpret events differently. The personal ethics of the researcher are critical, since the opportunity for direct researcher intervention is always present.

Data Collection

Gardner and Lidz (1996) explain data collection as the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes. For this study data collected from primary (Diaries, journals, speeches, interviews, letters, memos, manuscripts and other papers in which individuals describe events in which they were participants or observers) and secondary (A work that interprets or analyzes an historical event or phenomenon) sources were used.

Primary Data

Self-administered questionnaire

Questionnaires were developed as a method of collecting data from the target population (Construction firms, labourers, and disabled persons). These questionnaires were created by using data collected from the literature. The reason for using questionnaires was because they are regarded as a formal approach to measuring characteristics, attitudes, motivations, and opinions, as well as past, current

future behaviours. The wording of these questionnaires was checked and carefully explored before being utilised to influence the accuracy of survey results.

Secondary Data

Literature review

The literature sources were selected to provide an explanation of the theoretical rationale of the problem being studied as well as to indicate what research has already been done and how findings relate to the problem at hand. The selected sources primarily assisted in tackling the problem of the research study. The understanding of what other researchers have done assisted in preparing to investigate the problem with deeper insight and more complete knowledge. The sources revealed investigations similar to this study from other countries as well as other sources of data that not been known to exist. The selected literature sources consisted of textbooks, periodicals, journals, web pages, researched articles, and internet database sources.

Specific Procedures

A random sample of 52 construction companies, 35 labourers and 20 disabled persons were selected. This study reviewed all surveys to determine if construction companies are compliant with the Constitution of South Africa. The researcher obtained permission from the South African Built Environment Research Center (SABERC) to collect data needed to test research hypotheses. The researcher went to different construction firms and introduced himself. The researcher then explained to the companies the purpose of the instrument. He informed the manager that instrument contains a cover letter, and survey questions. Respondents gave voluntary informal consent to assist in this research. Only one cover letter was used for all three groups (contractors, labourers, and disabled persons). From their responses ambiguous questions were identified and corrected.

Analysis of Data

Chronic Disease Prevention and Health Promotion (2005) describes data analysis as the process of systematically applying statistical and logical techniques to describe, summarize, and compare data. Results from completed surveys were collected and tabulated. Going through each and every questionnaire and establishing categories of subject areas coded the data, which were drawn from the information.

Taylor and Bogdan (1984 pg. 22) define coding as:

A systematic way of developing and refining interpretations of the data. The coding process involves bringing together and analyzing all the data bearing on themes, ideas, concepts, interpretations, and propositions.

Apparent level data were analyzed and reported to describe responses to survey items. Demographic data describing the views of respondents was also tabulated. Analysis of individual item responses within each content area included frequency percentages and cumulative percentages. Responses were rank ordered with frequencies, percentages and cumulative percentages reported in Chapter 4.

Limitations

There were several different limitations noted regarding this study. One limiting factor was the sample size. Due to only being able to survey construction companies around the Western Cape Province, and disabled persons from Cape Peninsula University of Technology the survey size was not large. Preferably a larger national survey would be better and enhance generalizing of the findings of the study. Another limitation was the time available to collect data. Only two months were allocated to this activity. A further impacting factor was the limited budget available to the researcher for the study.

The objective of this chapter was to describe the methodology adopted in this study. The literature reviewed provided the basis for constructing the research

instruments that were sent to selected contractors, labourers and disabled persons.

Both the qualitative and quantitative approaches were used to achieve the purpose of the study. The results from these data gathering methods are discussed in chapter 4.

CHAPTER FOUR DATA ANALYSIS AND INTERPRETATION

Introduction

This chapter presents the research findings of the various instruments. The SPSS (*Statistical Package for the Social Sciences*) computer software was used to analyze the data from the surveys of various stakeholders. In particular the aggregate measures of the descriptive statistics are presented such as the mean, standard deviation, and other measures of central tendency. The findings are presented and comments are made based upon them. The samples for this study consisted of 52 contractors, 35 general workers, and 20 disabled persons, which were interviewed on construction sites in the Western Cape Province of South Africa. The chapter is sub divided into six parts and structured as follows:

- First, the introduction is provided;
- second, the methods in the data analysis are explored;
- third, presents the descriptive statistics of the demographics and explore the descriptive statistics of the factors affecting the employment of disabled persons in the construction industry as highlighted in Chapter two (figure 2.1);
- fourth, the findings from the contractors (n = 52), general workers (n = 35) and disabled persons (n = 20) are presented;
- Fifth, cross comparison of the contractor and general worker sample is considered; and
- Sixth, and finally, a discussion of the findings is presented.

Data Analysis and Results of Survey

The analysis of the data gathered during the various surveys consisted of descriptive statistics determine the frequency distribution and central tendency of responses to fixed response questions. A 5-point Likert scale namely (TA = Totally

Agree, SA= Slightly Agree, N = Neutral, SD = Slightly Disagree, and TD = Totally Disagree) was used to determine the degree of concurrence relative to a range of statements. A range from the degree of concurrence was determined based upon the allocation of scores ranging from 1- 5 to the range totally disagree to totally agree respectively. A ratio of 1-5 (4) was also used namely ($4/5=0.8$) to discuss the degree of central tendency and the following scale developed:

- $\geq 1.00 \leq 1.80$: strongly disagree;
- $> 1.80 \leq 2.60$: slightly disagree;
- $> 2.60 \leq 3.40$: neutral;
- $> 3.40 \leq 4.20$: slightly agree; and
- $> 4.20 \leq 5.00$: strongly agree.

Computation of Levels of Agreement

This computation method of assessment as adopted from the CIB Working Commission CIB W99 (2005) was used to assess the level of agreement relative to the statements. Table 4.1 shows how statements are assessed.

Table 4. 1: Scoring the Level of Agreement of respondents

| Average Score | Strength of Agreement | Classification |
|---------------|-----------------------|----------------|
| 4.0 to 50 | 0.8 to 1.0 | High (H) |
| 3.0 to < 40 | 0.6 to < 0.8 | Medium (M) |
| 1.0 to < 30 | 0.2 to < 0.6 | Low (L) |

Adapted from Chileshe et al , 2005)

Chileshe, Fester & Haupt (2005) adopted these scores from the advancement indices and mean values to evaluate the level of agreement of respondents.

Respondents Profile

The profile of the respondents is shown in Table 4.2.

Table 4. 2: The profile of respondents

| Respondents | Frequency | Percentage |
|--------------------|------------------|-------------------|
| Contractors | 52 | 48.60 |
| General Workers | 35 | 32.71 |
| Disabled Persons | 20 | 18.69 |
| Total | 110 | 100.00 |

The majority of the respondents were contractors (48.59%) followed by general workers (32.71%) and finally disabled persons (18.69%).

Contractor sample

Table 4.3 indicates the extent to which respondents concur with the various statements in terms of percentage (%) responses ranging from 'strongly agree' to 'strongly disagree', and in terms of a mean score ranging between 1 and 5. The scale indicates that the larger mean is the greater the level of agreement with the statement. The responses of contractors relative to the compliance to the Employment Equity Act No.55 of 1998 are presented in Table 4.1

Compliance to Legislation

To find out how well contractors acquaint themselves and comply with the terms of the EEA, respondents were presented with six (6) statements.

Table 4. 3: Familiarity with the terms of the Employment Equity Act (EEA)

| Contractors' compliant to Employment Equity Act | TA | SA | N | SD | TD | Mean Score | Std. Dev. |
|---|----------------|------|------|------|------|---------------|--------------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| We are equal opportunity employers | 51.0 | 29.4 | 13.7 | 5.9 | 0.0 | 4.25 | 0.91 |
| We increase our awareness in relation to issues of equality and diversity | 47.0 | 27.5 | 21.6 | 3.9 | 0.0 | 4.18 | 1.18 |
| We have an equity policy | 48.1 | 28.8 | 7.8 | 11.5 | 3.8 | 4.06 | 1.18 |
| We are familiar with the terms of EEA | 40.0 | 20.0 | 20.0 | 12.0 | 8.0 | 3.7 | 1.33 |
| We regularly familiarize ourselves with legislation | 28.8 | 30.8 | 21.1 | 13.5 | 5.8 | 3.63 | 1.21 |
| We have written a bullying/harassment policy | 28.8 | 17.4 | 11.5 | 17.3 | 25.0 | 3.08 | 1.59 |

Most respondents (80.4%) reported that they were equal opportunity employers meaning that they considered applicants for employment without regard to age, race, colour, religion, sex, national origin, sexual orientation, and disability status. Further, 74.6% reported that they increased their awareness relative to issues of equality and diversity. Additionally 76.9% reported that they had an equity policies in place, whereas 60.0% were familiar with the terms of EEA. More than half of the respondents (59.6%) claimed that they regularly familiarized themselves with legislation. Less than half of the respondents (46.1%) reported that they had a written bullying policy in place. These findings suggest that contractors are familiar with the requirements of the EEA, and there is a measure of compliance. From Table 4.3 it is quite evident that most respondents (1st Ranked, mean = 4.25) are equal opportunity employers. Reasonably high number of respondents (2nd Ranked, mean = 4.18) reported that they have increased awareness of the issues of equality and diversity. Respondents (3rd Ranked,

mean = 4.06) reported that they had equity policies. Table 4.3 indicated that less respondents (4th Ranked, mean = 3.71) were familiar with terms of EEA. Few respondents (6th Ranked, mean = 3.08) reported that they had harassment policies. These responses indicate that contractors are now beginning to recognize the existence of disabled persons and the positive role they can play in construction.

Recruitment and Employment Practices

Respondents were asked to indicate on a 5-point Likert scale of agreement their responses to 7 statements concerning the recruitment and employment of disabled persons in construction. Their responses are presented in Table 4.4.

Most respondents (60.8%) reported that their recruitment forms had been analyzed to remove discriminatory or unnecessary language. Slightly less (59.7%) claimed that their workplaces were accessible for disabled employees. A third of respondents (33.3%) reported that they conducted exit interviews for disabled persons who left their employ to determine their reasons for leaving. Another third (30.5%) reported that they proactively recruited disabled persons. Less than a quarter of contractors (22.2%) reported that they monitored the career progress of their disabled employees. Even though most respondents reported that their recruitment forms were not discriminatory and that their workplaces were accessible it is evident that work opportunities for disabled persons were not created in their firms. Generally the findings suggest that contractors still undervalue the recruitment and employment of disabled persons.

Table 4. 4: Recruitment of disabled persons

| Recruitment and employment practices | TA | SA | N | SD | TD | Mean Score | Std. Dev. |
|--|----------------|------|------|------|------|------------|-----------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| Our recruitment forms have been analyzed to remove discriminatory or unnecessary language | 35.3 | 25.5 | 33.3 | 2.0 | 3.9 | 3.95 | 1.02 |
| Our workplaces are accessible for disabled employees | 25.0 | 42.3 | 13.5 | 9.6 | 9.6 | 3.48 | 1.23 |
| We have increased work opportunities for disabled persons in head office | 17.3 | 21.2 | 23.1 | 28.8 | 9.6 | 3.27 | 1.35 |
| When disabled employees leave our employ we conducted our exit interview to determine their reason for leaving | 18.0 | 8.0 | 44.0 | 22.0 | 8.0 | 3.16 | 1.22 |
| We proactively recruit disabled persons | 11.8 | 21.6 | 29.4 | 25.5 | 11.8 | 3.01 | 1.26 |
| We monitor the career progress of disabled persons in our employ | 5.9 | 15.7 | 45.1 | 21.6 | 11.8 | 3.01 | 1.17 |
| We have increased work opportunities for disabled persons on our sites | 9.6 | 21.2 | 28.8 | 30.8 | 9.6 | 2.93 | 1.23 |

Table 4.4 indicate that reasonably high number of respondents (1st Ranked, mean = 3.95) reported that their recruitment forms have been analysed to remove discriminatory or unnecessary language. They (2nd Ranked, mean = 3.48) reported that their workplaces were accessible for disabled employees. Table 4.4 also indicated that few respondents (3rd Ranked, mean = 3.27) had increased work opportunities for disabled persons in head office as compared to few (7th Ranked, mean = 2.93) that reported that they had increased work opportunities for disabled persons on their sites. Respondents (4th Ranked, mean = 3.16) reported that they conducted exit interview to

determine the reason why disabled employees leave while few (5th Ranked, mean = 3.01) reported that they proactively recruited disabled persons in their firms. These responses suggest that only few contractors are keen to recruit and employ disabled persons.

Procedural Issues Relating to Equality

Respondents were asked to rate their levels of agreement on the formal or informal procedures they had in place to address equality issues. The results are presented in Table 4.5.

Most respondents (59.6%) reported that they had formal procedures in place in their workplaces and more than a third (46.0%) reported that they had informal procedures in place to address these issues. Eventually most contractors have some forms of procedures in place, either formal or informal.

Table 4. 5: Procedures of addressing issues of equality in the work place

| Statement | TA | SA | N | SD | TD | Mean Score | Std. Dev. |
|--|----------------|------|------|------|------|---------------|--------------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| We have formal procedures in place designed to address equality issues | 32.7 | 26.9 | 25.0 | 11.5 | 3.9 | 3.79 | 1.21 |
| We have informal procedures in place designed to address equality issues | 16.0 | 30.0 | 24.0 | 14.0 | 16.0 | 3.16 | 1.39 |

From Table 4.5 it is quite evident that less respondents (1st ranked, mean = 3.79) were in strong agreement that they had formal procedures in place designed to address equality issues, while few (2nd Ranked, mean = 3.16) had informal procedures in place to address these issues. The responses suggest that not all contractors are having policies that address issues of equality.

Integration of Disabled Persons

To determine the perception of construction about the participatory role of disabled persons, respondents were presented with several statements relative to the integration of disabled persons into construction. The results are presented in Table 4.6.

Table 4. 6: The integration of disabled persons

| The involvement of disabled persons in construction | TA | SA | N | SD | TD | Mean Score | Std. Dev. |
|---|----------------|------|------|------|------|------------|-----------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| Disabled persons have a role to play in construction | 46.1 | 23.1 | 23.1 | 5.8 | 1.9 | 3.98 | 1.07 |
| Disabled persons could contribute positively to the construction process | 45.1 | 25.5 | 21.6 | 5.8 | 2.0 | 3.87 | 1.11 |
| Disabled persons should be included in the construction process | 39.6 | 25.0 | 22.9 | 10.4 | 2.1 | 3.83 | 1.10 |
| Disabled persons should be included in the construction process, but ideally should not | 8.2 | 18.4 | 22.4 | 24.5 | 26.5 | 2.90 | 1.29 |

The responses in Table 4.6 showed that 69.3% reported that disabled persons had a role to play in construction. Slightly more than a quarter (26.6%) reported that disabled persons were not currently included in the construction process and that they should be. Less than three-quarter of the respondents (70.6%) reported that given a chance, disabled persons could contribute positively in construction process. The findings of this table indicate that contractors are aware that disabled persons have a role to play in the construction process even though they do not include them.

The responses suggest that slightly high number of respondents (1st Ranked, mean = 3.98) were in strong agreement that disabled persons had a role to play in construction. Almost the same equal number of respondents (2nd Ranked, mean = 3.87) argued that given a chance disabled persons could contribute positively to the construction process.

They argued that disabled persons should be included in the construction process. Few (4th Ranked, mean = 2.90) reported that disabled persons should be included in the construction because are ideally not. These findings suggest that respondents believe that disabled persons are labour pool that can be used in construction and therefore they should be included in construction process.

The Placement of Disabled Persons

With respect to the positions that disabled persons could fill in the construction industry, respondents were presented with two statements. Their responses are represented in Table 4.7.

Table 4.7: The placement of disabled persons

| The possible positions of disabled persons in construction | TA | SA | N | SD | TD | Mean Score | Std. Dev. |
|--|----------------|------|------|------|-----|------------|-----------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| Disabled persons are more suited to perform: On-site administrative functions | 51.9 | 32.7 | 7.7 | 5.8 | 1.9 | 4.00 | 1.18 |
| Disabled persons are more suited to perform: On-site auxiliary services e.g. flag person | 29.4 | 33.3 | 19.6 | 11.8 | 5.9 | 3.43 | 1.28 |

Most respondents (84.6%) reported that disabled persons would be more suitable to perform on-site administration functions while 62.7% reported that they were more suitable for on-site auxiliary services such as being a flag person. It is therefore evident that most respondents (1st Ranked, mean = 4.0) support the statement that disabled persons are more suited to perform on-site administrative functions.

Discussion of findings

Contractors' Perspectives and Experiences

Most contractors that were interviewed claimed to have equal opportunity policies and understand the terms of EEA. However, the depth of knowledge varied widely, as did definitions of disability, with contractors in recruiting and employing disabled people tending to take a more narrow view of disability. Contractors felt fairly well informed about any disabilities or health conditions amongst their staff, although there were differences between visible and hidden disabilities. They reported that they would usually learn of a person's disability or health condition during the application process, either through a question on the application form (e.g.Z83), or as a result of adjustments needed to enable the candidate to attend an interview. They reported that recruitment assistance, particularly pre-selection, was an important benefit of involvement. Several contractors commented that it was the provision of suitable candidates for the job, rather than the fact that it helped them to recruit a person with health conditions and disabilities. Others wished to promote diversity in their organisation, or were using the programme as an additional route to employing disabled persons. Several contractors had employed just one disabled person, but others had employed three or more, with recruitment seeming to be potentially ongoing.

In terms of accessibility of their work places, which is a key principle in organisational transparency and accountability, contractors claimed that their workplaces were free from any barriers that could have prevented capable physical disabled persons from accessing them. It should be borne in mind that their responses were not referring to on-site employment but head office employment.

Compliance with Legislation

Respondents were asked to indicate whether they were compliant with the provisions of the EEA. Their responses are shown in Table 4.8

Table 4. 8: Compliance with legislation

| Question | Frequency of Respondents | | |
|--|--------------------------|------|--------|
| | PERCENTATGE (%) | | |
| | Yes | No | Unsure |
| Have you encountered any specific issues regarding equality and diversity in your workplace? | 25.0 | 54.2 | 20.8 |
| Have you encountered any discrimination against disabled persons in their workplace? | 2.0 | 86.0 | 12.0 |
| Have you been subjected to any claim under the EEA or related legislation? | 2.0 | 88.0 | 10.0 |

More than half of contractors (54.2%) reported that they had not encountered any specific issues regarding equality and diversity in their workplaces. The majority of respondents (86.0%) reported that they had not encountered any discrimination against disabled employees in their workplaces and fewer respondents (10.0%) were not sure that they had been subjected to any claim because of being non-compliant with legislation.

The findings of this study revealed that even though contractors did not employ or include disabled persons in the construction process they had not encountered any claim or penalty because of being non-compliant to the EEA. It is quite clear that disabled persons still suffer from extraordinarily high level of unemployment due to lack of compliance of many firms. The EEA has not played an important role in removing the barriers of entry for disabled persons into the labour force and into key positions in the labour market. The interviewed contractors claimed that the under-representation of the disabled persons was largely attributed to a lack of experience in

the labour force and not because of their non-compliance to the EEA. Some felt that this issue would be solved as more qualified candidates from this group appeared in the labour pool. They indicated that these individuals would automatically be hired and promoted alongside other groups of workers.

Sample of disabled persons

Questionnaires were distributed to groups of disabled employees of the Department of Transport and Public Works in Western Cape Province of South Africa and Cape Peninsula University of Technology disabled class. Table 4.9 indicates the extent to which respondents concur with the various statements in terms of percentage (%) responses ranging from 'strongly agree' to 'strongly disagree', and in terms of a mean score ranging between 1 and 5. The scale indicates that the larger mean is, the greater the level of agreement with the statement.

In order to determine the views of disabled persons and their inclusion in the construction process, disabled respondents were presented with three statements. Their responses are presented in Table 4.9.

Table 4. 9: Inclusion of disabled persons

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia |
|--|----------------|------|------|------|------|------------|-----------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| Disabled persons should be included in the construction process | 65.0 | 15.0 | 20.0 | 0.0 | 0.0 | 4.45 | 0.83 |
| Disabled persons have a role to play in construction | 70.0 | 20.0 | 10.0 | 0.0 | 0.0 | 4.25 | 0.72 |
| Disabled persons should be included in construction process, but ideally not | 15.0 | 5.0 | 20.0 | 10.0 | 50.0 | 2.57 | 1.50 |

Inclusion of Disabled Persons in the Construction Process

Most respondents (90%) reported that disabled persons have a role to play in the construction process while 80% argued that they should be included in the construction process.

From the responses presented in Table 4.9 it is evident that most disabled respondents (1st Ranked, mean = 4.45) believed that disabled people should be included in the construction process. Most of them (2nd Ranked, mean = 4.25) reported that they had a role to play in construction. Surprisingly few respondents (3rd Ranked, mean = 2.57) argued that they are ideally not included in the construction processes. Therefore their responses suggest that disabled people want to be a part of the construction in order to play their role.

Although progress has been made in the enactment of basic laws concerning the equalization of opportunities for disabled persons in South Africa, these findings revealed that there has been little or no progress from the construction industry side in terms of reviewing substantive laws, such as those pertaining to the involvement of disabled persons in the key issues of construction. The study revealed that disabled persons have no means to move freely around sites and to participation fully in the mainstream development process of the construction.

Identification of jobs suitable for Disabled Persons

In order to obtain the views of disabled persons on the possible jobs they could perform in construction and how their impairments would affect their performance,

respondents were presented with four statements. Their responses are shown in Table 4.10.

Table 4. 10: The placement of disabled persons

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia | Rank |
|--|----------------|------|------|------|------|------------|-----------|------|
| | PERCENTAGE (%) | | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | | |
| Disabled persons are more suited to off-site function | 55.0 | 25.0 | 10.0 | 10.0 | 0.0 | 4.25 | 1.02 | 1 |
| Disabled persons are more suited to on-site auxiliary services e.g. flag person | 30.0 | 30.0 | 25.0 | 5.0 | 10.0 | 3.65 | 1.27 | 2 |
| Disabled persons are more suited to on-site administrative function | 35.0 | 15.0 | 25.0 | 15.0 | 10.0 | 3.50 | 1.40 | 3 |
| Certain physical impairments preclude fulfill functions such as: On-site supervision, site management etc. | 40.0 | 5.0 | 15.0 | 15.0 | 25.0 | 3.20 | 1.70 | 4 |

Most respondents (80%) reported that disabled persons were more suited to off-site functions, which 50% believed that they were more suited to perform on-site administration functions. Further 60% reported that they were more suited on-site to performing auxiliary services. Slightly less than half of the respondents (45%) indicated that certain physical impairments preclude disabled persons from fulfilling on-site managerial duties.

The findings of Table 4.10 suggest that most disabled respondents (1st Ranked, mean = 4.25) believed that disabled persons were more suited to perform off-site functions. Slightly less (2nd Ranked, mean= 3.65) argued that they were more suited to perform on-site auxiliary services. Almost the same amount of respondents (3rd Ranked, mean = 3.50) reported that disabled persons were suited to perform on-site administrative functions. Slightly less (4th Ranked, mean = 3.20) reported that certain

physical impairments preclude them from fulfilling functions like on-site supervision, site management, etc. These responses suggest that disabled persons are more comfortable to perform off-site functions as compared to on-site functions.

Impact of Disabled Persons on Construction

Respondents were presented with seven statements relative to the treatment of disabled persons in construction. Table 4.11 presents the responses of disabled persons relative to the contribution that can be done by disabled employees in construction.

Table 4. 11: Treatment of disabled persons

| The stigma attached to disabled persons | TA | SA | N | SD | TD | Mean Score | Std Devia | Rank |
|---|----------------|------|------|------|------|------------|-----------|------|
| | PERCENTAGE (%) | | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | | |
| Accommodating the needs of disabled persons is problematic | 50.0 | 25.0 | 0.0 | 15.0 | 10.0 | 3.20 | 1.71 | 1 |
| Disabled persons are a threat to the H&S of their fellow workers | 0.0 | 5.0 | 20.0 | 10.0 | 65.0 | 2.35 | 1.46 | 2 |
| Disabled persons are difficult to adapt to changes | 10.0 | 10.0 | 15.0 | 25.0 | 40.0 | 2.25 | 1.37 | 3 |
| Employing disabled persons is cost prohibitive | 0.0 | 10.0 | 15.0 | 15.0 | 60.0 | 2.15 | 1.39 | 4 |
| Disabled persons are less productive than able-bodied persons | 0.0 | 5.0 | 30.0 | 10.0 | 55.0 | 2.10 | 1.45 | 5 |
| Disabled persons do not apply for jobs in construction | 10.0 | 15.0 | 25.0 | 35.0 | 15.0 | 2.70 | 1.22 | 6 |
| Disabled persons affect the profitability of an organisation | 0.0 | 5.0 | 30.0 | 0.0 | 65.0 | 1.75 | 1.07 | 7 |
| Disabled persons will offend other workers | 0.0 | 5.0 | 25.0 | 15.0 | 55.0 | 1.80 | 1.01 | 8 |
| Employing disabled persons will create a negative image among clients | 0.0 | 0.0 | 10.0 | 20.0 | 70.0 | 1.40 | 0.68 | 9 |

Table 4.11 indicates that slightly less number of respondents (1st Ranked, mean = 3.20) were in strong agreement that accommodating the needs of disabled persons was problematic. Few respondents (2nd Ranked, mean = 2.35) agreed that disabled persons were a threat to the health and safety of their fellow workers. Almost the same amount of respondents (3rd Ranked, mean = 2.25) argued that employing disabled persons was cost prohibitive. Slightly less number of respondents (5th Ranked, mean = 3.10) reported that disabled persons were less productive than able-bodied persons. Respondents (6th Ranked, mean = 2.07) argued that disabled persons did not apply for jobs in construction. Few respondents (7th Ranked, mean = 1.80) argued that disabled persons could offend other workers while almost the same amount (8th Ranked, mean = 1.75) reported that disabled persons affected the profitability of the organisation. Lastly very few respondents (9th Ranked, mean = 1.40) argued that employing disabled persons would have created a negative image amongst clients. These responses suggest that employing disabled persons does not negatively affect the organisation.

Enhancing the image

Most respondents (95%) strongly agree that employing disabled persons enhance the image of organisation. Gordon (1990) argues that a primary goal of every organization should be to create a greater and better image and recognition of its name as well as its products and services.

Loyalty of disabled employees

Table 4.12 indicates that respondents (75%) reported that disabled persons are more loyal to their organisation. This is supported by recent studies that showed that disabled persons took less time off due to being sick and were more loyal to their

employers than their able-bodied counterparts. They had abilities, skills and experience that could bring a fresh perspective that the organisation could benefit from.

Table 4. 12: Benefits of employing disabled persons

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia | Rank |
|--|----------------|------|------|------|------|------------|-----------|------|
| | PERCENTAGE (%) | | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | | |
| Employing disabled persons will enhance the image of the organisation | 60.0 | 35.0 | 0.0 | 0.0 | 5.0 | 4.45 | 0.94 | 1 |
| Disabled employees are more loyal to the organisation | 55.0 | 20.0 | 20.0 | 0.0 | 5.0 | 4.37 | 0.83 | 2 |
| Employing disabled persons can alleviate the skills shortage in construction | 60.0 | 20.0 | 0.0 | 10.0 | 10.0 | 4.10 | 1.41 | 3 |
| Employing disabled persons constitutes an organisation meeting its socio-economic responsibilities | 55.0 | 15.0 | 20.0 | 0.0 | 10.0 | 4.05 | 1.32 | 4 |
| The Employment Equity Act relative to employing disabled persons is unrealistic | 20.0 | 35.0 | 10.0 | 5.0 | 30.0 | 3.10 | 1.59 | 5 |

Alleviate shortage skills

Most respondents (80%) reported that the employment of disabled persons could alleviate the current shortage of skills in construction. Respondents who were interviewed reported that disabled persons still continuing to struggle to share in the social and economic mainstream of society. They believe that the construction industry and South African government are all impacted by the costs that result from unacceptable unemployment rates and wasted human potential amongst disabled persons. They argue that contractors need to look to new and non-traditional sources for skilled employees as one source that has largely been overlooked.

Meeting the Socio-Economic Responsibilities of organization

Similarly, many respondents (70%) reported that employing disabled persons would help organisations to meet their socio-economic responsibilities, which are fundamental to making an organisation competitive and marketable.

Implementing the EEA

More than half of the respondents (55%) reported that the EEA was not realistic relative to the employment of disabled persons. Those who were interviewed said that it concentrated more on the issues of gender and race and less on the issue of disability. The response suggests that the construction industry continues to reflect vast inequalities in employment representation of disabled employees.

It is quite evident from Table 4.12 that there are benefits of employing disabled persons. Most respondents (1st Ranked, mean = 4.45) were in strong agreement that employing disabled persons will enhance the image of the organisation. Many respondents (2nd Ranked, mean = 4.37) agreed that disabled employees were more loyal to the organisation. They (3rd Ranked, mean = 4.10) argued that given a chance disabled persons could alleviate the shortage of skills in construction. Many (4th Ranked, mean = 4.05) argued that employing disabled persons constituted an organisation to meet its socio-economic responsibilities. Respondents (5th Ranked, mean = 3.10) reported that EEA was unrealistic to the employment of disabled persons. These responses suggest that organisations can benefit from employing disabled persons. Furthermore responses show that it is not cost prohibitive to employ disabled persons.

Knowledge of Potential Contribution

The disabled persons were presented with two statements pertaining to knowledge or lack of knowledge of employing disabled persons in construction. Table 4.13 represents their responses.

Table 4. 13: Employment of disabled persons

| Statement | TA | SA | N | SD | TD | Mean Score | Std Dev | Rank |
|---|----------------|------|------|------|------|------------|---------|------|
| | PERCENTAGE (%) | | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | | |
| Knowledge of the potential contributions by disabled persons will promote their employment | 50.0 | 35.0 | 10.0 | 5.0 | 0.0 | 4.30 | 0.84 | 1 |
| There is a general lack of knowledge relative to the employment of disabled persons in construction | 50.0 | 15.0 | 10.0 | 15.0 | 10.0 | 3.80 | 1.47 | 2 |

Table 4.13 showed that most respondents (1st Ranked, mean = 4.30) believed that knowledge of the potential contributions of disabled persons would promote their employment. Furthermore it showed that slightly less respondents (2nd Ranked, mean = 3.80) argued that there was a general lack of knowledge of the contributions that could be made by disabled employees in the construction.

Given that the mean scores are above the midpoint of 3.0 implies that respondents' support the fact that knowledge of the potential contribution disabled persons can make in construction will promote their employment. About two-third of respondents (65%) indicated that there was a general lack of knowledge relative to employment of disabled persons in construction.

Most disabled persons who were interviewed reported that they had experienced discrimination or unfair treatment in a work-related context. Most of them reported that

contractors had discriminated them against. The most common forms of discrimination reported included:

- assumptions at an interview that a disabled job applicant would not be able to do the job as well as a able-bodied person;
- job interviews which focus on the disability, rather than the applicant's ability to do the job; and
- cases where disabled persons have been dismissed because of their disability.

There were a number of factors discouraging disabled persons from seeking work on construction sites. Disabled respondents cited as reasons the temporary nature of construction jobs. They were afraid that taking this route would cause them to lose their income support grant. They argued that they did not get special training relative to construction activities. Contractors did not want to employ them because they might loose their profit. Many of disabled persons reported the lack of accessibility (transport, site layout, ect.) to workplaces. Nevertheless many of disabled persons report being broadly content with their current jobs, and the way they had been treated.

General workers sample

General demographics

Questionnaires were distributed to general workers in the Eden and Overberg municipalities. They were presented with 5 statements on compliance of firms with legislation. Table 4.14 presents their responses.

Table 4. 14: Compliance of construction firms

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia | Rank |
|---|----------------|------|------|-----|------|------------|-----------|------|
| | PERCENTAGE (%) | | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | | |
| We regularly familiarize ourselves with legislation | 31.4 | 42.9 | 20.0 | 2.9 | 2.9 | 3.97 | 0.95 | 1 |
| We increase our awareness in relation to issues of equality and diversity | 47.1 | 23.5 | 17.6 | 2.9 | 8.8 | 3.97 | 1.27 | 2 |
| We are familiar with the terms of Employment Equity Act No. 55 of 1998 | 45.7 | 25.7 | 14.3 | 5.7 | 8.6 | 3.94 | 1.28 | 3 |
| We have an Equity Policy | 44.1 | 23.5 | 14.7 | 8.8 | 8.8 | 3.85 | 1.33 | 4 |
| We have bullying/harassment policy | 47.1 | 17.6 | 11.8 | 8.8 | 14.7 | 3.73 | 1.50 | 5 |

Most respondents (74.3%) reported that they regularly familiarize themselves with legislation. They (64.7%) reported that they had a bullying policy in place in their firms. Respondents (67.6%) reported that they had equity policy. However, even though they claimed that they familiarized themselves with legislation; it is quite evident that they did not increase awareness of equality and diversity in their firms. The responses presented on Table 4.14 with a maximum mean less than four (mean <4) suggest that respondents were in leased agreement that they were compliant to legislation

Recruitment Procedures

Respondents were presented with 7 statements and were required to rate their level of agreement on a 5-point Likert scale. Table 4.15 presents the findings relative to the recruitment procedures of construction firms.

Table 4.15 presents the responses of workers relative to the recruitment of disabled persons

Table 4. 15: Recruitment of disabled persons

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia | Rank |
|--|----------------|------|------|------|------|------------|-----------|------|
| | PERCENTAGE (%) | | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | | |
| Our recruitment forms have been analyzed to remove discriminatory or unnecessary language | 44.1 | 26.5 | 23.5 | 5.9 | 0.0 | 4.08 | 0.97 | 1 |
| We have increased work opportunities for disabled persons on our sites | 17.1 | 17.1 | 34.3 | 8.6 | 22.9 | 3.98 | 1.38 | 2 |
| When disabled employees leave our employ we carry our exit interview to determine their reason for leaving | 20.0 | 28.6 | 28.6 | 8.6 | 14.3 | 3.31 | 1.30 | 3 |
| We monitor the career progress of disabled persons in our employ | 23.5 | 20.6 | 29.4 | 14.7 | 11.8 | 3.29 | 1.31 | 4 |
| Our workplaces are accessible for disabled employees | 12.9 | 35.5 | 22.6 | 19.4 | 9.7 | 3.23 | 1.20 | 5 |
| We proactively recruit disabled persons | 20.6 | 14.7 | 35.3 | 11.8 | 17.6 | 3.09 | 1.36 | 6 |
| We have increased work opportunities for disabled persons in head office | 35.3 | 23.5 | 17.6 | 8.8 | 14.7 | 2.97 | 1.44 | 7 |

Respondents (70.6%) claimed that their recruitment forms do not discriminate against disabled persons. Less than half respondents (48.4%) reported that their workplaces were accessible for disabled person. Slightly less than half respondents (48.6%) reported that they carry exit interviews when disabled persons leave to determine the reasons of leaving. Even though they claimed that their firms increased work opportunities for disabled person in their head offices, it is clear that they did not

increase work opportunities on their sites. Responses presented on Table 4.15 indicated that construction firms were in leased agreement that they usually recruit disabled persons and they had strategies in place addressing issues of recruitment of disabled persons. However responses (1st Ranked, mean = 4.08) suggest that construction firms analyzed their firms to remove discriminatory or unnecessary language.

Procedures of addressing issues of equality in the work place

Respondents were presented with 2 statements addressing issues of equality in the workplace. Table 4.16 presents their responses.

Table 4.16: Procedures of addressing issues of equality in the work place

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia | Rank |
|--|----------------|------|------|------|------|------------|-----------|------|
| | PERCENTAGE (%) | | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | | |
| We have formal procedures in place designed to address equality issues | 41.9 | 32.3 | 9.7 | 6.5 | 9.7 | 3.90 | 1.30 | 1 |
| We have informal procedures in place designed to address equality issues | 27.3 | 18.2 | 21.2 | 12.1 | 21.2 | 3.18 | 1.51 | 2 |

Table 4.16: illustrates the responses of general workers with regard to issues of equality in the work place. Respondents (45.5%) reported that their firms had informal procedures designed to address issues of equality even though the support was not so strong. This showed that they were less concerned about formal procedures to address the issues of equality.

The Participatory Role of Disabled Persons

Respondents were presented with 4 statements relative to the role of disabled persons in construction. Table 4.17 presents their responses.

Table 4. 17: The integration of disabled persons

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia |
|--|----------------|------|------|-----|------|---------------|--------------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| Disabled persons have a role to play in construction | 32.3 | 32.3 | 29.0 | 0.0 | 6.5 | 3.84 | 1.09 |
| Disabled persons should be included in the construction process | 31.4 | 25.7 | 31.4 | 8.6 | 2.9 | 3.74 | 1.09 |
| Disabled persons could contribute positively to the construction process | 26.5 | 23.5 | 41.2 | 0.0 | 8.8 | 3.59 | 1.16 |
| Disabled persons should be included in the construction process, but ideally not | 14.3 | 34.3 | 37.1 | 2.9 | 11.4 | 3.37 | 1.14 |

Above half of respondents (64.6%) reported that disabled persons had a role to perform in construction, while 57.1% indicated that they should be included in construction process. Half (50.0%) indicated that disabled persons could contribute positively to the construction process. Few respondents disagreed that disabled persons were not included in construction process. The maximum mean score =3.84 suggest that respondents were in leased agreement with the integration of disabled persons in construction.

Positions of Disabled Persons in Construction

To identify possible positions that can be filled by disabled persons in construction industry, respondents were presented with 2 statements. Table 4.18 presents their responses.

Table 4. 18: The placement of disabled persons

| Statement | TA | SA | N | SD | TD | Mean Score | Std Devia |
|---|----------------|------|------|------|-----|---------------|--------------|
| | PERCENTAGE (%) | | | | | | |
| | 5 | 4 | 3 | 2 | 1 | | |
| Disabled persons are more suited to perform: On-site administrative functions | 32.3 | 32.3 | 29.0 | 0.0 | 6.5 | 3.59 | 1.35 |
| Disabled persons are more suited to perform: On-site auxiliary services | 35.3 | 20.6 | 20.6 | 14.7 | 8.8 | 3.06 | 1.33 |

Above half of respondents (64.6%) reported that disabled persons were more suited to perform on-site administrative functions. Slightly above half (55.9%) reported that disabled persons were suited to perform on-site employment auxiliary services like being a flag man as opposed to 23.5% who do not support that. Based on the scoring system devised on Table 4.18 it is evident that most of respondents are in leased agreement with the employment of disabled persons under on-site auxiliary service as compared to on-site administrative functions.

Compliance with Legislation

Respondents were presented with three questions to rate their level of agreement relative to their compliance to EEA. Table 4.19 presents their responses.

Table 4. 19: Construction firms are not compliant to legislation

| Question | Yes | Unsure | No | Mean Score | Std Devia |
|---|----------------|--------|------|---------------|--------------|
| | PERCENTAGE (%) | | | | |
| | 3 | 2 | 1 | | |
| Have you encountered any specific issues regarding equality and diversity in their workplace? | 0.0 | 36.4 | 63.6 | 2.36 | 0.49 |
| Have you encountered any discrimination against disabled persons in their workplace? | 0.0 | 15.6 | 84.4 | 2.16 | 0.37 |
| Have you been subjected to any claim under the EEA or related legislation? | 3.2 | 77.4 | 19.4 | 2.16 | 0.45 |

Less than two-third of respondents (63.6%) reported that they had not encountered any specific issues regarding equality and diversity in their work place, while above two-third of respondents (84.4%) reported to had not encountered any discrimination against disabled persons in their work place. Two-third of respondents (77.4%) were not sure whether they had been subjected to any claim under the EEA or related legislation. The maximum mean less than three (mean score < 3.0) suggest that fewer construction firms were not compliant to legislation.

Comparisons of contractor and general worker's views

Having presented the views of contractors, general workers and disabled persons, the following subsections present a comparison of the findings between the Contractors and General Workers, Contractors and Disabled persons and finally between General Workers and Disabled Persons. The aim is to identify whether there is agreements and disagreements on the issues of employment pertaining to Disabled Persons in construction industry.

The following Table presents the mixed feelings of contractors and general workers relative to working with disabled persons.

Table 4. 20: Comparison of Aspects of Recruitment between Contractors and General workers

| Working with disabled persons | Contractors (N = 52) | | General Workers (N = 35) | |
|--|-------------------------|------|-----------------------------|------|
| | MS | Rank | MS | Rank |
| Our recruitment forms have been analyzed to remove discriminatory or unnecessary language | 3.95 | 1 | 4.08 | 1 |
| We have increased work opportunities for disabled persons on our sites | 3.48 | 7 | 3.98 | 2 |
| When disabled employees leave our employ we carry out exit interview to determine their reason for leaving | 3.27 | 4 | 3.31 | 3 |
| We monitor the career progress of disabled persons in our employ | 3.16 | 5 | 3.29 | 4 |
| Our workplaces are accessible for disabled employees | 3.01 | 2 | 3.23 | 5 |
| We proactively recruit disabled persons | 3.01 | 6 | 3.09 | 6 |
| We have increased work opportunities for disabled persons in head office | 2.93 | 3 | 2.97 | 7 |

The findings presented in Table 4.20 indicates that both contractors and general workers reported that their recruitment forms had been analyzed to remove discriminatory language. However less contractors (7th Ranked, mean = 3.48) were in least agreement that they have increased work opportunities for disabled persons on their sites compared to general workers (2nd Ranked, mean = 3.98). This findings show that contractors are not keen to recruit and employ disabled persons to work on the sites. It is also quite evident that few contractors (4th Ranked, mean = 3.27) who employ disabled persons conduct exit interview to determine the reason for leaving as compared to general workers (3rd Ranked with mean = 3.31). General workers (7th Ranked, mean = 2.97) were in least agreement that their firm increased work opportunities for disabled persons in head office compared to contractors ranked (3rd Ranked, mean = 2.93). Less general workers ranked (5th Ranked, mean = 3.23) agreed

that their workplace is accessible for disabled persons as compared to contractors ranked (2nd). Generally these responses make one to believe that construction still do not want employ disabled persons to explore their potential abilities.

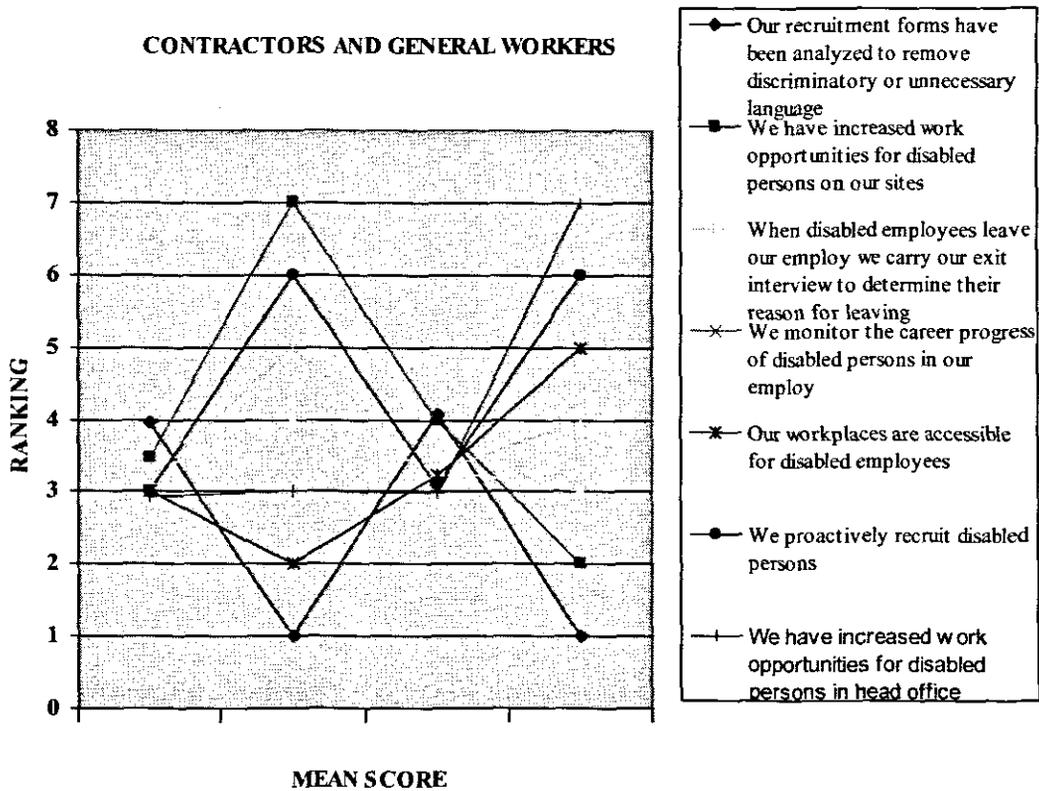


Figure 4. 1: Comparison of Aspects of Recruitment between Contractors and General workers

Figure 4.1 indicate the similarities and differences of the level agreement between statements in terms of rankings. Non-discriminately forms were regarded as the most important aspect of recruitment by both groups. Figure 4.1 shows that recruitment of disabled persons was given the third priority by both groups. It is shown that work opportunities of disabled persons both in head office and on sites were less regarded as the most important aspect by contractors and general workers. However there is a difference in terms of agreement to the statement that disabled persons were more

suites to perform on-site administrative functions. Contractors strongly supported this statement whereas disabled respondents were in least agreement to that.

Table 4.21 below presents the mixed feelings of contractors and disabled persons in relation to the involvement and the role of disabled persons in construction

Table 4. 21: The placement of disabled persons

| The involvement of disabled persons in construction | Contractors (N = 52) | | Disabled Persons (N = 20) | |
|--|-------------------------|------|------------------------------|------|
| | MS | Rank | MS | Rank |
| Disabled persons should be included in the construction process | 3.83 | 3 | 4.45 | 1 |
| Disabled persons have a role to play in construction | 3.98 | 2 | 4.25 | 2 |
| Disabled persons are more suited to perform: On-site auxiliary services e.g. flag person | 3.43 | 4 | 3.65 | 3 |
| Disabled persons are more suited to perform: On-site administrative functions | 4.00 | 1 | 3.50 | 4 |
| Disabled persons should be included in the construction process, but ideally should not | 2.90 | 5 | 2.57 | 5 |

It is quite evident from the responses ranked (2nd) presented in Table 4.21 that both contractors and disabled respondents believe that disabled persons have a role to play in construction even though the level of agreement differs. Fewer contractors ranked (3rd) indicated that disabled persons should be included in the construction process compared to high number of disabled respondents ranked (1st). Both contractors and disabled respondents ranked (5th) reported that disabled persons were not included in construction process. Majority of contractors ranked (1st) reported that disabled persons were suited to perform on-site administrative functions. Surprisingly less disabled respondents ranked (4th) supported this perception. Disabled respondents ranked (3rd) reported that disabled persons were more suited to perform on-site auxiliary services. However less contractors (4th Ranked, mean = 3.43) supported this perception. These responses showed that there was a paradigm shift from the old

perception that disabled persons were nothing other than a burden. Contractors were beginning to recognize the existence of disabled persons even though it was not enough. The findings highlighted some of the challenges that needed to be addressed to push back frontiers of discriminations against disabled persons in terms of their employment.

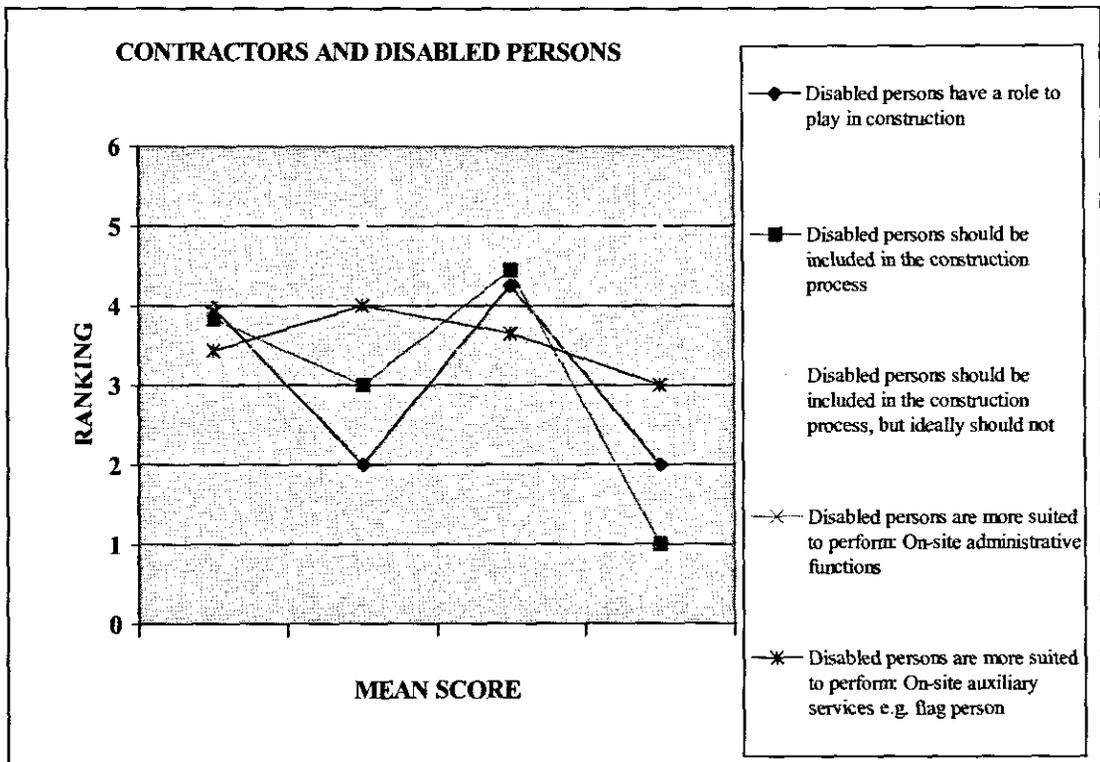


Figure 4. 2: Comparison of the placement of disabled persons between contractors and disabled persons

Figure 4.2 indicates the inclusion of disabled persons in construction process and their suitability to perform on-site administrative functions were given the first priority by both groups. The statement that disabled persons are ideally not included in the construction process was given a first priority by both groups.

Table below presents the mixed feelings of contractors and disabled persons in relation to the involvement and the role of disabled persons in construction

Table 4. 22: The placement of disabled persons

| The involvement of disabled persons in construction | General Workers (N = 35) | | Disabled Persons (N = 20) | |
|--|--------------------------|------|---------------------------|------|
| | MS | Rank | MS | Rank |
| Disabled persons have a role to play in construction | 3.84 | 1 | 4.25 | 2 |
| Disabled persons should be included in the construction process | 3.74 | 2 | 4.45 | 1 |
| Disabled persons should be included in the construction process, but ideally should not | 3.37 | 4 | 2.57 | 5 |
| Disabled persons are more suited to perform: On-site administrative functions | 3.59 | 3 | 3.50 | 4 |
| Disabled persons are more suited to perform: On-site auxiliary services e.g. flag person | 3.06 | 5 | 3.65 | 3 |

Table 4.22 indicates that even though majority of general workers as ranked (1st Ranked, mean = 3.84) reported that disabled persons had a role to perform in construction process, there were others who argued that they were capable of performing on-site auxiliary services. It was surprising to see that not all disabled respondents supported the statement that disabled persons have a role to play in construction process. Less disabled respondents (3rd Ranked, mean = 3.65) reported that disabled persons were suited to perform on-site auxiliary service. Table 4.22 showed that there was mixed reactions with regard to the statement that disabled persons should be included in construction process. These responses indicated that both general workers and disabled persons supported the inclusion and unlocking doors for disabled persons in construction process in order to allow them to play their potential role.

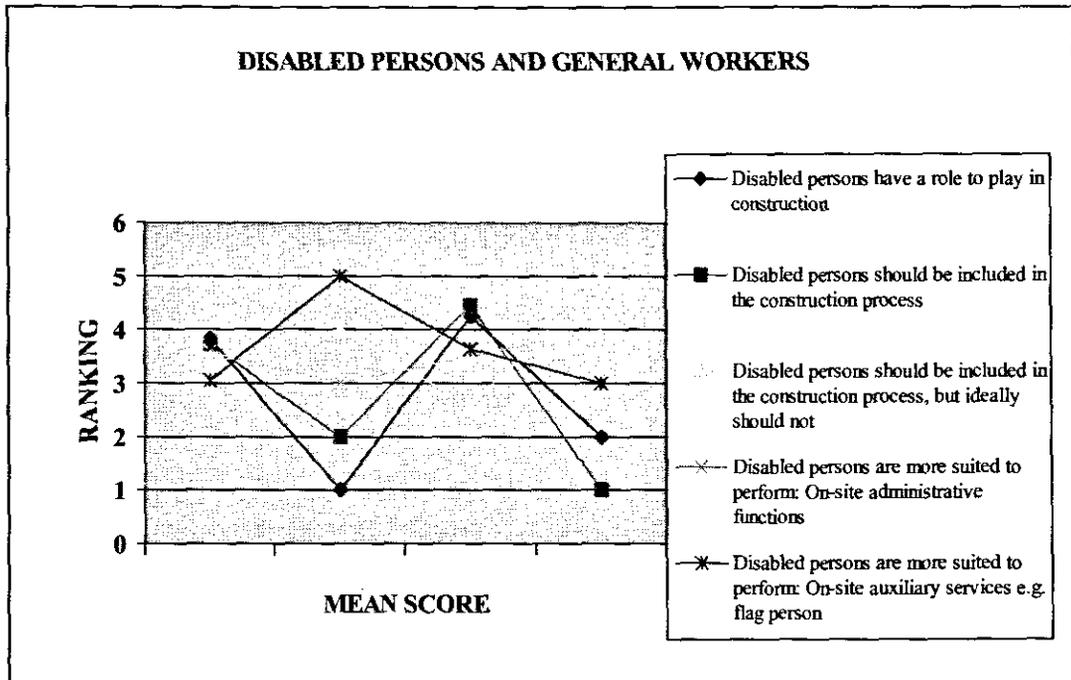


Figure 4. 3: Comparison of the placement of disabled persons between disabled persons and general workers

Figure 4.3 indicates the inclusion of disabled persons in construction process and their suitability to perform auxiliary services were given the last priority by both groups. Both groups first prioritized the statements that disabled persons had a role to play in construction and that they should be included in construction process.

What can we infer from these findings?

One can infer from these findings, that for whatever reasons, contractors still prefer to recruit able-bodied persons than disabled persons. It is quite possible that the construction firms could not find adequately trained disabled persons to appoint to the jobs available with them. It is quite evident that those who employ disabled persons they do that not for the right reason but rather use them as a marketing tool. This is the case, even though the focus of this study is to identify some employment opportunities

where disabled persons can contribute and play an equal potential role as partners in all stages of the construction project.

The question that arises here is whether the construction firms themselves lack the confidence in the potentials of disabled persons; or the education and training made available to the disabled by Government is of the type that the contractor does not find the disabled job applicant competent enough to deliver the goods.

How does these findings relate to other findings of other researches

It is quite clear that the treatment of disabled persons and the stigma attached to them is common and prevalent to many countries. The findings of the study done by Leonard Cheshire (2002) support these finding because it shows that there is generally a lack of the necessary facilities to accommodate the needs of disabled people on workplace. The research done by Daone and Scott (2003) also shows that there is still a great deal of ignorance about what constitutes an accessible environment in workplaces as more contractors are claiming. This study presents the same findings that discrimination against disabled persons is, unfortunately, alive and well, despite the legal prohibitions against discrimination through introduction of many pieces of legislations. The barriers that prevent disabled persons from being employed still exist in construction industry. These are the stark realities that need to be addressed. Mere shifting of the responsibility to change what needs to be changed may not lead us anywhere. In the next chapter 5 the findings of the study are summarized and compared against the literature reviewed, the study is concluded and suggestions offered for further research.

CHAPTER FIVE SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

Chapter four presented research results in table format according to the structure of questionnaires. This chapter presents the attainment of hypotheses in relation to the objectives of the study. The final part of this chapter offers some of recommendations of how to increase the number of disabled employees and overcoming the barriers identified. This final part also presents recommendations for further research. As outlined in chapter one, the purpose of this study is to identify the potential role of disabled persons in construction. The study was designed to test the following hypotheses:

- H1-**Construction industry participants do not have specific formal written policies in place that address the employment imbalances that negatively affect disabled people.
- H2-** Construction firms do not proactively promote the employment of disabled persons.
- H3-** Construction firms do not consider employing disabled persons to alleviate their shortage of skills
- H4-** Construction firms have employment practices and preferential policies that discriminate against disabled persons.
- H5-** Construction firms that employ disabled persons do so for reasons other than recognizing their productive worth.

The study was also directed at achieving the following objectives:

- To determine the extent to which construction firms have formal written policies in place that supports the employment of disabled persons in their organizations
- To examine the steps that construction firms take to promote the employment of disabled persons on their construction sites
- To establish what strategies construction firms adopt when faced with shortages of construction skills
- To investigate whether construction firms have in place employment practices and preferential policies that comply with the provisions of the Employment Equity Act No.55 of 1998
- To identify the factors that influence the employment of disabled persons by construction firms

First research hypothesis

The first hypothesis of the study was to test whether the construction firms have formal written policies in place that support the employment of disabled persons in their organisations. The results showed that majority of construction firms have equity policies even though there is no evidence that these policies are documented. For the mere fact that there are some of these firms which are still having harassment policies, it is right to say that construction industry participants do not have specific formal written policies in place that address the employment imbalances that negatively affect disabled persons. One can therefore state that this hypothesis is not rejected. However this cannot be extrapolated to all industries because the level of representation of disabled persons in work place might differ from one industry to the other.

Second research hypothesis

It is quite evident that construction firms are still ignoring the fact that disabled persons are part of labour resource that can be used on construction sites. Even though they claimed that they usually recruit disabled persons, there is no evidence that they have measures and incentives in place to attract disabled applicant in their firms. They claimed that their recruitment forms are analysed to remove discriminatory or unnecessary language, but this only cannot change the current level of representative. For this level to change there has to be a radical change in their strategy to attract disabled persons. To conclude one can therefore state that this hypothesis is not rejected.

Third research hypothesis

The third hypothesis was to establish what strategies construction firms adopt when face with shortage of construction skills. The study revealed that construction firms do not think of disabled persons as a pool of labour resource that can be used to overcome this problem of shortage of skills. They rather increase packages and benefits to attract retired labours or experienced labours from other firms to come and work in their firms. This makes one to conclude by stating that the hypothesis “Construction firms do not consider employing disabled persons to alleviate their shortage of skills” is no rejected.

Fourth research hypothesis

The hypothesis was to determine whether construction firms have in place employment practices and preferential policies that comply with provisions of the Employment Equity Act No.55 of 1998. The study revealed that most construction firms are not familiar with the terms of EEA; hence they are still having harassment policies that discriminate against disabled persons. However it was also revealed that few construction firms had formal procedures in place that could be linked to EEA designed to address equality issues. One can therefore state that the hypothesis “Construction firms have employment practices and preferential policies that discriminate against disabled persons” is not rejected.

Fifth research hypothesis

The hypothesis was to identify the factors influencing the employment of disabled persons by construction firms. The study revealed that there are many negative factors that work against the employment of disabled persons in construction firms. The

attitudes of employers that employing disabled persons will create a negative image among clients and disabled persons will offend other workers were one of the factors that were revealed by study. The perception that employing disabled persons is cost prohibitive and that they are a threat to the health and safety of their fellow workers was also revealed. However the study also revealed that there some of construction firms that employ disabled persons for other reasons other than recognizing their productive worth. Their employment is just a window dressing. This makes one to conclude by stating that the hypothesis “Construction firms that employ disabled persons do so for reasons other than recognizing their productive worth” is not rejected.

Limitation

This study is subjected to number of limitations. The first limitation is due to the scope of the research. Data has been collected on disabled persons, general workers and contractors of within the construction industry in the Western Cape Province of South Africa. This limits in a sense the generalizability of the findings to the construction industry. The second limitation is due to the fact that some other important constructs might have a more significant impact on the employment of disabled persons within the construction industry. A third limitation is that, due to logistic constraints, the research methodology had to be limited to a quantitative approach. Its acknowledged that a qualitative approach through case studies would have added more insights (Chileshe and Watson, 2005) and validated the findings.

Conclusion

The study shows that despite a high level of claimed awareness of the EEA, contractors have only a sketchy understanding of the Act’s provisions, and the

obligations they place on them. Most of them are not even sure whether or not they are covered, and many of those who think they know, get it wrong. Despite this, the vast majority, when the Act is explained to them, is in favour of the Act or, at worst, neutral about it. In line with the low levels of awareness, hardly any firms have changed policies and practices as a result of the Act, and most of those covered by the employment provisions since the EEA's inception say they have had no impact on their business. Most of those firms, which came into scope of the employment provisions in 1998, are not aware of having done so, and none of them have seen any impact of the Act on their business. It is notable that the actual impact on those covered is much less than the impacts which currently exempt firms anticipate.

It should be stressed, however, that a key reason for the apparently low impact of the EEA is that so few firms are aware of its obligations or, if aware, have taken no steps to comply (typically because they believe they do not discriminate, or that the Act is not 'relevant' to them because disabled persons do not apply to work in their business). Where anxieties were expressed about the costs of compliance, these typically related to the costs of physical adjustments. These anxieties were not borne out, however, by the experience of those small firms who had disabled employees already, over half of whom pointed out that they had disabled employees for whom no adjustments whatsoever were necessary. Where adjustments were made moreover, they commonly related to changes in working hours or arrangements, and most cost the employer nothing. Finally, it is worth noting that the study revealed a significant and widespread need among contractors for better information, advice and support on the Act and on the implications of Act towards employing disabled persons.

Though additional research would be helpful in more fully drawing the links between employment equity and economic performance of disabled persons, much of the current literature provides compelling evidence of the case for diversity. The need for this evidence, however, may lessen in the future as the combined forces of demographic change and globalization come to bear on the issue of diversity. Construction firms will no longer be able to ignore the reality of diverse society. Those that embrace this new reality will be best positioned to succeed in a global economy.

Recommendations

To foster the inclusion of disabled persons in construction industry, barriers that prevent them from participating in construction have to be addressed simultaneously in ways that facilitate their passage through all the stages of integration. This requires robust disability strategies based upon comprehensive and integrated combinations of inclusion and empowerment to facilitate their active participation in construction industry. All poverty alleviation programs should include disabled persons and address their rights and needs. There is a need to take all appropriate measures to promote fair opportunities for disabled persons in the field of employment and to uproot the negative discriminatory treatments against disabled persons.

The measurement instrument utilized in this study could further be developed and shortened, for use by managers and policy makers in issues impacting the employment of disabled persons within the construction industry.

The study could be replicated in other contexts, to further develop knowledge on the disability issues and factors impacting on employment within other industries and Countries, taking the cultural issues into account.

APPENDIX A: PERMISSION OF THE USE OF INFORMATION



Cape Town
Campus

CAPE PENINSULA UNIVERSITY OF TECHNOLOGY

OFFICE OF THE RESEARCH COORDINATOR: FACULTY OF ENGINEERING



Belville Campus
P O Box 1906

2005-08-18

To Whom It May Concern:

Dear Sirs

CONSTRUCTION AND DISABILITIES

David Tshobotlwane is currently reading for a M.Tech degree in Construction Management at the Cape Peninsula University of Technology and is investigating the potential role of disabled persons in construction.

His study forms part of a major research project being undertaken by the South African Built Environment Research Centre (SABERC) to improve the H&S culture and performance of the South African construction industry.

Your participation in this study is pivotal to its success. The attached questionnaire will take about 10-15 minutes to complete. Your confidentiality and anonymity is assured.

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

Should you have any questions about the study you may contact Dr Theo Haupt or David Tshobotlwane on the numbers provided.

Yours faithfully,

Dr. Theo Haupt

Research Co – Ordinator

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APPENDIX B

DISABLED PERSONS AND CONSTRUCTION

(DISABLED PERSONS' PERCEPTIONS)

Indicate to what extent you agree with the following statements (1= totally disagree, 2= slightly disagree, 3= neutral, 4= slightly agree, and 5= totally agree).

| 1. Statement | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| 1.1 Disabled persons should be included in the construction process | | | | | |
| 1.2 Disabled persons could be included in construction process, but ideally not | | | | | |
| 1.3 Disabled persons could contribute to the construction process | | | | | |
| 1.4 Disabled persons have a role to play in construction | | | | | |
| 1.5 Disabled persons are more suited to: | | | | | |
| 1.5.1 • On-site administrative function | | | | | |
| 1.5.2 • On-site auxiliary services e.g. flag person | | | | | |
| 1.5.3 • Off-site function | | | | | |
| 1.6 Certain physical impairments preclude fulfilling functions such as: | | | | | |
| 1.6.1 • On-site supervision e.g. concrete face | | | | | |
| 1.6.2 • Site management | | | | | |
| 1.6.3 • Production | | | | | |
| 1.7 Accommodating the needs of disabled persons is problematic e.g. access and ablutions | | | | | |
| 1.8 Disabled persons are a threat to the H&S of their fellow workers | | | | | |
| 1.9 Employing disabled persons is cost prohibitive | | | | | |
| 1.10 Disabled persons are less productive than able bodied persons | | | | | |
| 1.11 Employing disabled persons will create a negative image among clients/ customers | | | | | |
| 1.12 Disabled persons will offend other workers | | | | | |
| 1.13 Disabled persons affect the profitability of an organisation | | | | | |
| 1.14 Employing disabled persons can alleviate the skills shortage in construction | | | | | |
| 1.15 Employing disabled persons constitutes an organization meeting its socio economic responsibilities | | | | | |
| 1.16 Employing disabled persons will enhance the image of an organisation | | | | | |
| 1.17 Employment Equity Act relative to employing disabled persons is unrealistic | | | | | |
| 1.18 Knowledge of the potential contributions by disabled persons will promote their employment | | | | | |
| 1.19 There is a general lack of knowledge relative to the employment of disabled persons in construction | | | | | |
| 1.20 Disabled persons do not apply for jobs in construction | | | | | |
| 1.21 Disabled employees are more loyal to the organisation | | | | | |
| 1.22 Disabled persons are difficult to adapt to changes | | | | | |

*THANK YOU FOR CONTRIBUTING TO A MORE EQUITABLE AND DISABILITY FRIENDLY
CONSTRUCTION INDUSTRY*

STATISTICS OF DISABLED PERSONS

| | Disabled persons should be included in the construction process | Disabled persons could be included in construction process, but ideally not | Disabled persons could contribute to the construction process | Disabled persons have a role to play in construction | Disabled persons are more suited to: *On-site administrative function | * On-site auxilliary services e.g. flag person | * Off-site function |
|----------------|---|---|---|--|---|--|---------------------|
| N Valid | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 4.4500 | 3.7500 | 4.2500 | 4.6000 | 3.5000 | 3.6500 | 4.2500 |
| Median | 5.0000 | 4.5000 | 4.0000 | 5.0000 | 3.5000 | 4.0000 | 5.0000 |
| Mode | 5.00 | 5.00 | 4.00 | 5.00 | 5.00 | 4.00(a) | 5.00 |
| Std. Deviation | .82558 | 1.51744 | .71635 | .68056 | 1.39548 | 1.26803 | 1.01955 |
| Minimum | 3.00 | 1.00 | 3.00 | 3.00 | 1.00 | 1.00 | 2.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

| | Disabled person will offend other workers | Disabled persons affect the profitability of an organisation | Employing disabled persons can alleviate the skills shortage in construction | Employing disabled persons constitutes an organisation meeting its socio-economic responsibilities | Employing disabled persons will enhance the image of an organisation | Employment Equity Act relative to employing disabled persons is unrealistic | Knowledge of the potential contributions by disabled persons will promote their employment |
|----------------|---|--|--|--|--|---|--|
| N Valid | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 1.8000 | 1.7500 | 4.1000 | 4.0500 | 4.4500 | 3.1000 | 4.3000 |
| Median | 1.0000 | 1.0000 | 5.0000 | 5.0000 | 5.0000 | 4.0000 | 4.5000 |
| Mode | 1.00 | 1.00 | 5.00 | 5.00 | 5.00 | 4.00 | 5.00 |
| Std. Deviation | 1.00525 | 1.06992 | 1.41049 | 1.31689 | .94451 | 1.58612 | .86450 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 |
| Maximum | 4.00 | 4.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

| There is a general lack of knowledge relative to the employment of disabled persons in construction | Disabled persons do not apply for jobs in construction | Disabled employees are more loyal to the organisation | Disabled persons are difficult to adapt to changes |
|---|--|---|--|
| 20 | 19 | 20 | 20 |
| 0 | 1 | 0 | 0 |
| 3.8000 | 2.7000 | 4.3684 | 2.2500 |
| 4.5000 | 2.5000 | 5.0000 | 2.0000 |
| 5.00 | 2.00 | 5.00 | 1.00 |
| 1.47256 | 1.21828 | .83070 | 1.37171 |
| 1.00 | 1.00 | 3.00 | 1.00 |
| 5.00 | 5.00 | 5.00 | 5.00 |

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Yours faithfully,

Dr. Theo Haupt

Research Co – Ordinator

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APPENDIX D

DISABLED PERSONS AND CONSTRUCTION (CONTRACTORS' PERCEPTIONS)

Please answer the following questions as fully as you are able. The information that you provide is extremely important for the future development and improvement of the role of disabled persons in construction industry.

Indicate to what extent you agree with the following statements (1= totally disagree, 2= slightly disagree, 3= neutral, 4= slightly agree, and 5= totally agree).

| 1. Statement | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| 1.1 We are familiar with the terms of the Employment Equity Act No. 55 of 1998 | | | | | |
| 1.2 We are Equal Opportunity employers | | | | | |
| 1.3 We regularly familiarize ourselves with legislation and developments relating to equality and diversity | | | | | |
| 1.4 We increase our awareness in relation to issues of equality and diversity (e.g. gender, racial, etc.) | | | | | |
| 1.5 We have an Equity Policy or equivalent in place | | | | | |
| 1.6 We have a written Bullying/ Harassment Policy or equivalent in place | | | | | |
| 1.7 We have formal procedures in place designed to address equality issues | | | | | |
| 1.8 We have informal procedures in place designed to address equality issues | | | | | |
| 1.9 Those responsible for recruitment have been given specific training in relation to the Employment Equity Act | | | | | |
| 1.10 Our recruitment forms have been analysed to remove discriminatory or unnecessary language or questions | | | | | |
| 1.11 We proactively recruit disabled persons | | | | | |
| 1.12 We have increased work opportunities for disabled persons on our sites | | | | | |
| 1.13 We have increased work opportunities for disabled persons in head office | | | | | |
| 1.14 We monitor the career progress of disabled persons in our employ | | | | | |
| 1.15 Our workplaces are accessible for disabled employees | | | | | |
| 1.16 When disabled employees leave our employ we carry our exit interviews to determine their reasons of leaving | | | | | |
| 1.17 Disabled persons should be included in the construction process | | | | | |
| 1.18 Disabled persons could be included in construction process, but ideally should not | | | | | |
| 1.19 Disabled persons could contribute positively to the construction process | | | | | |
| 1.20 Disabled persons have a role to play in construction | | | | | |
| 1.21 Disabled persons are more suited to perform: | | | | | |
| 1.21.1 • On-site administrative functions | | | | | |
| 1.21.2 • On-site auxiliary services e.g. flag person | | | | | |
| 1.21.3 • Off-site function | | | | | |

| | | | | | | |
|------|---|--|--|--|--|--|
| 1.22 | Certain physical impairments preclude fulfilling functions such as: | | | | | |
| | • On-site supervision e.g. concrete face | | | | | |
| | • Site management | | | | | |
| | • Production | | | | | |
| 1.23 | Accommodating the needs of disabled persons is problematic e.g. access and ablutions | | | | | |
| 1.24 | Disabled persons are a threat to the H&S of their fellow workers | | | | | |
| 1.25 | Employing disabled persons is cost prohibitive | | | | | |
| 1.26 | Disabled persons are less productive than able bodied persons | | | | | |
| 1.27 | Employing disabled persons will create a negative image among clients/ customers | | | | | |
| 1.28 | Disabled persons will offend other workers | | | | | |
| 1.29 | Disabled persons affect the profitability of an organization | | | | | |
| 1.30 | Employing disabled persons can alleviate the skills shortage in construction | | | | | |
| 1.31 | Employing disabled persons constitutes an organization meeting its socio economic responsibilities | | | | | |
| 1.32 | Employing disabled persons will enhance the image of an organization | | | | | |
| 1.33 | The Employment Equity Act relative to employing disabled persons is unrealistic | | | | | |
| 1.34 | Knowledge of the potential contributions by disabled persons will promote their employment | | | | | |
| 1.35 | There is a general lack of knowledge relative to the employment of disabled persons in construction | | | | | |
| 1.36 | Disabled persons do not apply for jobs in construction | | | | | |
| 1.37 | Disabled employees are more loyal to the organization | | | | | |
| 1.38 | Disabled persons find it difficult to adapt to changes | | | | | |

| | | | | |
|----|---|-----|----|--------|
| 2. | Have you encountered any specific issues (positive or otherwise) regarding equality and diversity in the Workplace? | Yes | No | Unsure |
|----|---|-----|----|--------|

| | |
|----|------------------------|
| 3. | If yes, describe these |
| | |
| | |
| | |
| | |

| | | | | |
|----|---|-----|----|--------|
| 4. | Have you encountered any discrimination against disabled persons in your workplace? | Yes | No | Unsure |
|----|---|-----|----|--------|

| | |
|----|----------------------------------|
| 5. | If yes, describe these incidents |
| | |
| | |
| | |
| | |

| | | | |
|--|-----|----|--------|
| 6. Have you been subjected to any claims under the Employment Equality Act or related legislation? | Yes | No | Unsure |
|--|-----|----|--------|

| |
|----------------------------|
| 7. If yes, provide details |
| |
| |
| |
| |

THANK YOU FOR CONTRIBUTING TO A MORE EQUITABLE AND DISABILITY FRIENDLY CONSTRUCTION INDUSTRY

STATISTICS OF CONTRACTORS

| | Our recruitment forms have been analysed to remove discriminatory or unnecessary language | We proactively recruit disabled persons | We have increased work opportunities for disabled persons on our sites | We have increased work opportunities for disabled persons in head office | We monitor the career progress of disabled persons in our employ | Our workplaces are accessible for disabled employees |
|----------------|---|---|--|--|--|--|
| Valid | 51 | 51 | 52 | 52 | 51 | 52 |
| Missing | 1 | 1 | 0 | 0 | 1 | 0 |
| Mean | 3.8627 | 2.9608 | 2.9038 | 3.0769 | 2.8235 | 3.6346 |
| Median | 4.0000 | 3.0000 | 3.0000 | 3.0000 | 3.0000 | 4.0000 |
| Mode | 5.00 | 3.00 | 2.00 | 2.00 | 3.00 | 4.00 |
| Std. Deviation | 1.25485 | 1.19935 | 1.14206 | 1.26563 | 1.03355 | 1.23715 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

| | We are familiar with the terms of the Employment Equity Act No.55 of 1998 | We are equal opportunity employers | We regularly familiarize ourselves with legislation | We increase our awareness in relation to issues of equality and diversity |
|----------------|---|------------------------------------|---|---|
| Valid | 50 | 51 | 52 | 51 |
| Missing | 2 | 1 | 0 | 1 |
| Mean | 3.7200 | 4.2549 | 3.6346 | 4.1765 |
| Median | 4.0000 | 5.0000 | 4.0000 | 4.0000 |
| Mode | 5.00 | 5.00 | 4.00 | 5.00 |
| Std. Deviation | 1.32542 | .91309 | 1.20504 | .91007 |
| Minimum | 1.00 | 2.00 | 1.00 | 2.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | We have equality policy | We have written bullying policy | We have formal procedures in place designed to address issues of equality | We have informal procedures in place designed to address issues of equality |
|----------------|-------------------------|---------------------------------|---|---|
| Valid | 52 | 52 | 50 | 52 |
| Missing | 0 | 0 | 2 | 0 |
| Mean | 3.0769 | 3.7308 | 3.1600 | 3.6154 |
| Median | 3.0000 | 4.0000 | 3.0000 | 4.0000 |
| Mode | 5.00 | 5.00 | 4.00 | 5.00 |
| Std. Deviation | 1.59467 | 1.15666 | 1.31491 | 1.25485 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | When disabled employees leave our employ we carry our exit interviews to determine their reason for leaving | Disabled persons should be included in construction process | Disabled persons should be included in construction process, but ideally not | Disabled persons could contribute positively to the construction process |
|----------------|---|---|--|--|
| Valid | 50 | 48 | 49 | 51 |
| Missing | 2 | 4 | 3 | 1 |
| Mean | 3.0600 | 3.8958 | 2.5714 | 4.0588 |
| Median | 3.0000 | 4.0000 | 2.0000 | 4.0000 |
| Mode | 3.00 | 5.00 | 1.00 | 5.00 |
| Std. Deviation | 1.16776 | 1.11545 | 1.29099 | 1.04712 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | Disabled persons have a role to play in construction | Disabled persons are more suited to perform: On-site administrative functions | On-site auxiliary services e.g. flag person | Off-site functions |
|----------------|--|---|---|--------------------|
| Valid | 52 | 52 | 51 | 50 |
| Missing | 0 | 0 | 1 | 2 |
| Mean | 4.0577 | 4.2692 | 3.6863 | 4.0600 |
| Median | 4.0000 | 5.000 | 4.0000 | 4.0000 |
| Mode | 5.00 | 5.00 | 4.00 | 5.00 |
| Std. Deviation | 1.05558 | 0.97247 | 1.19147 | 0.95640 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | Accommodating the needs of disabled persons is problematic | Disabled persons are a threat to the H&S of their fellow workers | Employing disabled persons is cost prohibitive | Disabled persons are less productive than able-bodied persons |
|----------------|--|--|--|---|
| Valid | 52 | 51 | 50 | 51 |
| Missing | 0 | 1 | 2 | 1 |
| Mean | 3.2885 | 2.1961 | 2.6400 | 2.3137 |
| Median | 4.0000 | 2.0000 | 3.0000 | 2.0000 |
| Mode | 4.00 | 1.00 | 3.00 | 1.00 |
| Std. Deviation | 1.3338 | 1.16653 | 1.10213 | 1.27264 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | Employing disabled persons will create a negative image among clients | Disabled persons will offend other workers | Disabled persons affect the profitability of an organization | Employing disabled persons can alleviate the skills shortage in construction |
|---------|---|--|--|--|
| Valid | 52 | 51 | 51 | 52 |
| Missing | 0 | 1 | 1 | 0 |

| | | | | |
|----------------|---------|---------|---------|---------|
| Mean | 1.6538 | 1.6863 | 1.7647 | 3.1346 |
| Median | 1.0000 | 1.0000 | 1.0000 | 3.0000 |
| Mode | 1.00 | 1.00 | 1.00 | 3.00 |
| Std. Deviation | 1.10053 | 1.02937 | 1.03128 | 1.26845 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 4.00 | 5.00 |

| | Employing disabled persons constitutes an organisation meeting its socio-economic responsibilities | Employing disabled persons enhance the image of an organisation | The Eea relative to employing disabled persons is unrealistic | There is general lack of knowledge of employment of disabled persons |
|----------------|--|---|---|--|
| Valid | 52 | 50 | 50 | 52 |
| Missing | 0 | 0 | 2 | 0 |
| Mean | 3.5577 | 3.9808 | 2.6200 | 3.9615 |
| Median | 4.0000 | 4.000 | 3.000 | 4.000 |
| Mode | 4.00 | 5.00 | 3.00 | 4.00 |
| Std. Deviation | 1.16170 | 0.99981 | 1.08590 | 1.2826 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| | 5.00 | 5.00 | 5.00 | 5.00 |

| | Disabled persons do not apply for jobs in construction | Disabled employees are more loyal to the organisation | Disabled persons find it difficult to adapt to changes |
|----------------|--|---|--|
| Valid | 52 | 51 | 52 |
| Missing | 0 | 1 | 0 |
| Mean | 3.11923 | 3.3137 | 2.7308 |
| Median | 3.000 | 3.000 | 3.000 |
| Mode | 3.00 | 3.00 | 3.00 |
| Std. Deviation | 1.12090 | 0.98975 | 0.97247 |
| Minimum | 1.00 | 1.00 | 1.00 |
| | 5.00 | 5.00 | 4.00 |

APPENDIX E: PERMISSION OF THE USE OF INFORMATION



Cape Town
Campus

CAPE PENINSULA UNIVERSITY OF TECHNOLOGY

OFFICE OF THE RESEARCH COORDINATOR: FACULTY OF ENGINEERING



Belville Campus
P O Box 1906

2005-08-18

To Whom It May Concern:

Dear Sirs

CONSTRUCTION AND DISABILITIES

David Tshobotlwane is currently reading for a M.Tech degree in Construction Management at the Cape Peninsula University of Technology and is investigating the potential role of disabled persons in construction

His study forms part of a major research project being under taken by the South African Built Environment Research Centre (SABERC) to improve the H&S culture and performance of the South African construction industry.

Your participation in this study is pivotal to its success. The attached questionnaire will take about 10-15 minutes to complete. Your confidentiality and anonymity is assured.

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

Should you have any questions about the study you may contact Dr Theo Haupt or David Tshobotlwane on the numbers provided.

Yours faithfully,

Dr. Theo Haupt

Research Co – Ordinator

David Tshobotlwane. B.Tech (Quantity Surveying), N.Dip. (Building)

M. Tech candidate (Construction Management)

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APPENDIX F

DISABLED PERSONS AND CONSTRUCTION (GENERAL WORKERS' PERCEPTIONS)

Please answer the following questions as fully as you are able. The information that you provide is extremely important for the future development and improvement of the role of disabled persons in construction industry.

Indicate to what extent you agree with the following statements (1= totally disagree, 2= slightly disagree, 3= neutral, 4= slightly agree, and 5= totally agree).

| 1. | Statement | 1 | 2 | 3 | 4 | 5 |
|------|--|---|---|---|---|---|
| 1.1 | We are familiar with the terms of the Employment Equity Act No. 55 of 1998 | | | | | |
| 1.2 | We are Equal Opportunity employers | | | | | |
| 1.3 | We regularly familiarize ourselves with legislation and developments relating to equality and diversity | | | | | |
| 1.4 | We increase our awareness in relation to issues of equality and diversity (e.g. gender, racial, etc.) | | | | | |
| 1.5 | We have an Equity Policy or equivalent in place | | | | | |
| 1.6 | We have a written Bullying/ Harassment Policy or equivalent in place | | | | | |
| 1.7 | We have formal procedures in place designed to address equality issues | | | | | |
| 1.8 | We have informal procedures in place designed to address equality issues | | | | | |
| 1.9 | Those responsible for recruitment have been given specific training in relation to the Employment Equity Act | | | | | |
| 1.10 | Our recruitment forms have been analysed to remove discriminatory or unnecessary language or questions | | | | | |
| 1.11 | We proactively recruit disabled persons | | | | | |
| 1.12 | We have increased work opportunities for disabled persons on our sites | | | | | |
| 1.13 | We have increased work opportunities for disabled persons in head office | | | | | |
| 1.14 | We monitor the career progress of disabled persons in our employ | | | | | |
| 1.15 | Our workplaces are accessible for disabled employees | | | | | |
| 1.16 | When disabled employees leave our employ we carry our exit interviews to determine their reasons of leaving | | | | | |
| 1.17 | Disabled persons should be included in the construction process | | | | | |
| 1.18 | Disabled persons could be included in construction process, but ideally should not | | | | | |
| 1.19 | Disabled persons could contribute positively to the construction process | | | | | |
| 1.20 | Disabled persons have a role to play in construction | | | | | |

| | | | | | |
|------------|---|--|--|--|--|
| 0 | | | | | |
| 1.2 1 | Disabled persons are more suited to perform: | | | | |
| 1.2 1.1 | <ul style="list-style-type: none"> On-site administrative functions | | | | |
| 1.2 1.2 | <ul style="list-style-type: none"> On-site auxiliary services e.g. flag person | | | | |
| 1.2 1.3 | <ul style="list-style-type: none"> Off-site function | | | | |
| 1.2 2 | Certain physical impairments preclude fulfilling functions such as: | | | | |
| | <ul style="list-style-type: none"> On-site supervision e.g. concrete face | | | | |
| | <ul style="list-style-type: none"> Site management | | | | |
| | <ul style="list-style-type: none"> Production | | | | |
| 1.2 3 | Accommodating the needs of disabled persons is problematic e.g. access and ablutions | | | | |
| 1.2 4 | Disabled persons are a threat to the H&S of their fellow workers | | | | |
| 1.2 5 | Employing disabled persons is cost prohibitive | | | | |
| 1.2 6 | Disabled persons are less productive than able bodied persons | | | | |
| 1.2 7 | Employing disabled persons will create a negative image among clients/ customers | | | | |
| 1.2 8 | Disabled persons will offend other workers | | | | |
| 1.2 9 | Disabled persons affect the profitability of an organization | | | | |
| 1.3 0 | Employing disabled persons can alleviate the skills shortage in construction | | | | |
| 1.3 1 | Employing disabled persons constitutes an organization meeting its socio economic responsibilities | | | | |
| 1.3 2 | Employing disabled persons will enhance the image of an organisation | | | | |
| 1.3 3 | The Employment Equity Act relative to employing disabled persons is unrealistic | | | | |
| 1.3 4 | Knowledge of the potential contributions by disabled persons will promote their employment | | | | |
| 1.3 5 | There is a general lack of knowledge relative to the employment of disabled persons in construction | | | | |
| 1.3 6 | Disabled persons do not apply for jobs in construction | | | | |
| 1.3 7 | Disabled employees are more loyal to the organisation | | | | |
| 1.3 8 | Disabled persons find it difficult to adapt to changes | | | | |

| | | | | |
|----|---|-----|----|--------|
| 2. | Have you encountered any specific issues (positive or otherwise) regarding equality and diversity in the Workplace? | Yes | No | Unsure |
| 3. | If yes, describe these | | | |

| |
|--|
| |
| |
| |

| | | | |
|--|-----|----|--------|
| 4. Have you encountered any discrimination against disabled persons in your workplace? | Yes | No | Unsure |
|--|-----|----|--------|

| |
|-------------------------------------|
| 5. If yes, describe these incidents |
| |
| |
| |

| | | | |
|--|-----|----|--------|
| 6. Have you been subjected to any claims under the Employment Equality Act or related legislation? | Yes | No | Unsure |
|--|-----|----|--------|

| |
|----------------------------|
| 7. If yes, provide details |
| |
| |
| |

THANK YOU FOR CONTRIBUTING TO A MORE EQUITABLE AND DISABILITY FRIENDLY CONSTRUCTION INDUSTRY

STATISTICS OF GENERAL WORKERS

| | Our recruitment forms have been analysed to remove discriminatory or unnecessary language | We proactively recruit disabled persons | We have increased work opportunities for disabled persons on our sites | We have increased work opportunities for disabled persons in head office | We monitor the career progress of disabled persons in our employ | Our workplaces are accessible for disabled employees |
|----------------|---|---|--|--|--|--|
| Valid | 34 | 34 | 35 | 34 | 34 | 31 |
| Missing | 1 | 1 | 0 | 1 | 1 | 4 |
| Mean | 4.0882 | 3.0882 | 2.9714 | 3.5588 | 3.2941 | 3.2258 |
| Median | 4.0000 | 3.0000 | 3.0000 | 4.0000 | 3.0000 | 3.0000 |
| Mode | 5.00 | 3.00 | 3.00 | 5.00 | 3.00 | 4.00 |
| Std. Deviation | .96508 | 1.35664 | 1.38236 | 1.43951 | 1.31494 | 1.20304 |
| Minimum | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

| | We are familiar with the terms of the Employment Equity Act No.55 of 1998 | We are equal opportunity employers | We regularly familiarize ourselves with legislation | We increase our awareness in relation to issues of equality and diversity |
|----------------|---|------------------------------------|---|---|
| Valid | 35 | 35 | 35 | 34 |
| Missing | 0 | 0 | 0 | 1 |
| Mean | 3.9429 | 4.1143 | 3.9714 | 3.9706 |
| Median | 4.0000 | 4.0000 | 4.0000 | 4.0000 |
| Mode | 5.00 | 5.00 | 4.00 | 5.00 |
| Std. Deviation | 1.28207 | .99325 | .95442 | 1.26695 |
| Minimum | 1.00 | 2.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | We have equality policy | We have written bullying policy | We have formal procedures in place designed to address issues of equality | We have informal procedures in place designed to address issues of equality |
|----------------|-------------------------|---------------------------------|---|---|
| Valid | 34 | 34 | 31 | 33 |
| Missing | 1 | 1 | 4 | 2 |
| Mean | 3.8529 | 3.7353 | 3.9032 | 3.1818 |
| Median | 4.0000 | 4.0000 | 4.0000 | 3.0000 |
| Mode | 5.00 | 5.00 | 5.00 | 5.00 |
| Std. Deviation | 1.32876 | 1.50371 | 1.30012 | 1.50944 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | Our recruitment forms have been analysed to remove discriminatory or unnecessary language | We proactively recruit disabled persons | We have increased work opportunities for disabled persons in our sites | We have increased work opportunities for disabled persons in head office |
|----------------|---|---|--|--|
| Valid | 34 | 34 | 35 | 34 |
| Missing | 1 | 1 | 0 | 1 |
| Mean | 4.0882 | 3.0882 | 2.9714 | 3.5588 |
| Median | 4.0000 | 3.0000 | 3.0000 | 4.0000 |
| Mode | 5.00 | 3.00 | 3.00 | 5.00 |
| Std. Deviation | .96508 | 1.35664 | 1.38236 | 1.43951 |
| Minimum | 2.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | We monitor the career progress of disabled persons in our employ | Our workplaces are accessible for disabled employees | When disabled employees leave our employ we carry our exit interviews to determine their reason for leaving | Disabled persons should be included in the construction process |
|----------------|--|--|---|---|
| Valid | 34 | 31 | 35 | 35 |
| Missing | 1 | 4 | 0 | 0 |
| Mean | 3.2941 | 3.2258 | 3.3143 | 3.7429 |
| Median | 3.0000 | 3.0000 | 3.0000 | 4.0000 |
| Mode | 3.00 | 4.00 | 3.00(a) | 3.00(a) |
| Std. Deviation | 1.31494 | 1.20304 | 1.30094 | 1.09391 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | Disabled persons should be included in construction process, but ideally not. | Disabled persons could contribute positively to the construction process | Disabled persons have a role to play in construction | Disabled persons are more suited to perform on-site administrative functions |
|----------------|---|--|--|--|
| Valid | 35 | 34 | 31 | 34 |
| Missing | 0 | 1 | 4 | 1 |
| Mean | 3.3714 | 3.5882 | 3.8387 | 3.5882 |
| Median | 3.0000 | 3.5000 | 4.0000 | 4.0000 |
| Mode | 3.00 | 3.00 | 4.00(a) | 5.00 |
| Std. Deviation | 1.13981 | 1.15778 | 1.09839 | 1.35104 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | On-site auxiliary services e.g. flag persons | Off-site functions | Site management functions | Accommodating the needs of disabled persons |
|-------|--|--------------------|---------------------------|---|
| Valid | 35 | 34 | 35 | 35 |

| | | | | |
|----------------|---------|---------|---------|---------|
| Missing | 0 | 1 | 0 | 0 |
| Mean | 3.0571 | 3.7059 | 3.5143 | 3.6286 |
| Median | 3.0000 | 4.0000 | 3.0000 | 4.0000 |
| Mode | 3.00 | 3.00 | 3.00 | 5.00 |
| Std. Deviation | 1.32716 | 1.14228 | 1.19734 | 1.37382 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

| | Disabled persons are a threat to H&S of their fellow workers | Employing disabled persons is cost prohibitive | Disabled persons are less productive than able-bodied persons | Employing disabled persons will create a negative image among clients |
|----------------|--|--|---|---|
| Valid | 35 | 35 | 33 | 34 |
| Missing | 0 | 0 | 2 | 1 |
| Mean | 3.2000 | 2.9143 | 2.9697 | 3.2941 |
| Median | 3.0000 | 3.0000 | 3.0000 | 3.0000 |
| Mode | 3.00 | 1.00 | 3.00 | 5.00 |
| Std. Deviation | 1.47129 | 1.57875 | 1.26206 | 1.54781 |
| Minimum | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | 5.00 | 5.00 | 5.00 | 5.00 |

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BIOGRAPHY OF DAVID MODISAOTSILE TSHOBOTLWANE

David Modisaotsile Tshobotlwane was born in 1971 in a small village called Motswedi (North West). He started his schooling at Marekwa Primary School in 1979 and completed his matriculation at Motswedi High School. Due to the socio-economic status of his family, he was forced to go and work at an early age. Having a dream of becoming a better person through education, he decided to go to Lehurutshe College of Education to pursue a teaching career. He completed his University Diploma in Education Secondary (UDES) in 1996. He was then employed in 1997 at Jangjo High School and later moved to Nkabari Middle School. While he was working, he was also studying Further Education and Training (FET) with Potchefstroom University and completed it in 1999.

Due to the transformation of the education system in South Africa his post was terminated because he was a temporary educator. He then went to Peninsula Technikon in 2000 to study building Science and completed it in 2002 with cum laude. He continued with his education at Peninsula Technikon doing a Bachelor of Technology Degree in quantity surveying and completed it in 2003 as a top student. Because he believes in what Anthony D'Angelo said: "Become addicted to constant and never ending self improvement" he went further with his education by enrolling with Cape Peninsula University of Technology to do Masters in Technology Degree in construction management in 2004. He was employed at Concor Building as a Junior Quantity Surveyor and later moved to Department of Transport and Public works at the beginning of 2005 as a Technical Facilitator. He is currently still working in Department of

Transport and Public Works. For those who will get hold of this document, remember never be afraid to do something new. Remember, amateurs built the ark, and professionals built the titanic.