Local economic development assessment on the construction sector's transformation approach through skills development in South Africa

by

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DECLARATION

I, **Nkosazana Agrennette Masiza,** declare that the contents of this dissertation/thesis represent my own unaided work, and that the dissertation/thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed **Date**

ABSTRACT

According to the Development Bank of South Africa (2007:4), local economic development (LED) cuts across municipal or provincial boundaries which places an inevitable role on capitalisation of non-local relationships. Skills development plays a vital role in ensuring the success of LED. The combinations of the various legislation and institutional coordination adopted in South Africa have created clear prospects to transform the construction sector through skills development. The study seeks to investigate whether a relationship exists between the construction sector's skills development programme and the construction sector's transformation. A quantitative research study was conducted within the construction sector in South Africa. A questionnaire survey was used as a research tool.

The research results reveal that 50% of the study's responses indicated that employees who attended skills training updated their existing knowledge and increased their productivity levels while 20% were able to advance their careers within their workplace. At least 10% of the respondents who attended the training indicated that their skills had not been recognised for career advancement within the company. Twenty per cent indicated that the process is a mere box ticking exercise, which lacks quantifiable results. These research results reveal that companies make different commitments to the training of employees and furthermore indicate why employees are keen to participate in skills training and development.

The research study concludes that training and skills development initiatives within the construction sector need to adopt a new paradigm which represents and addresses the current dynamics of low, semi-skilled and skilled workers within the construction sector. The recommendations emanating from the study suggest that training and skills development must be parallel to the development of the sector even though the sluggish economic growth of the sector is dependent on private and public infrastructure investment. Therefore, the construction building sector's stakeholders such as industry players and labour and regulating bodies must ensure that best practices exist to accelerate construction sector training and skills development and that these practices align with South Africa's transformation agenda in order to adequately contribute to local economic development.

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DEDICATION

This work is especially dedicated to my beloved late father, **Mthuthuzeli Alexander Masiza** and my son**, Babalo Owethu Masiza,** to whom I gave birth during the course of the study and lastly my employer, the National Union of Mineworkers (NUM).

My beloved late father, you have been instrumental in my purpose in life and this has given me the courage to continue to further my studies. Your values, vision and wishes for us to be better people have existed within me even in your absence.

I miss you, Tata.

My dear child, your birth was the best thing that has ever happened to me. You are my shining star, you give me strength to continue living and you have made me the happiest mom on earth.

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LIST OF ABBREVIATIONS/ACRONYMS

ABET	Adult Basic Education and Training
B-BBEE	Broad-Based Black Economic Empowerment
BIBC	Building Industry Bargaining Council
CEE	Commission for Employment Equity
CETA	Construction Education and Training Authority
CIDB	Construction Industry Development Board
CSCC	Construction Sector Charter Council
DHET	Department of Higher Education and Training
DOL	Department of Labour
EEA	Employment Equity Act
ETQA	Education and Training Quality Assurance
FET	Further Education and Training
GDP	Gross Domestic Product
GTZ	German Technical Cooperation Agency
HRD	Human resources development
ILO	International Labour Organisation
LED	Local Economic Development
MBSA	Master Builders South Africa
NEDLAC	National Economic Development and Labour Council
NQF	National Qualifications Framework
NSDA	National Skills Development Act
NSDS	National Skills Development Strategy
NSF	National Skills Fund
OECD	Organisation for Economic Cooperation and Development
PWC	Price Waterhouse Coopers
QCTO	Quality Council for Trades and Occupations
SADC	Southern African Development Community
SDG	Sustainable Development Goals
SETA	Sector Education and Training Authorities
SMME	Small Medium and Micro Enterprises
SPSS	Statistical Package for the Social Sciences
SSP	Sector Skills Plan
WSP	Workplace Skills Plan

CHAPTER ONE: GENERAL INTRODUCTION

1.1 INTRODUCTION

Local economic development is a process of strategic planning through partnerships between local government, business, communities and other stakeholders. The process aims to mobilise resources from within and outside communities to address their challenges in a systematic and organised manner which will stimulate and promote economic growth (ILO, 2006; Pike, Rodriguez-Pose & Tomaney, 2006; Nel & Rogerson, 2005). The programme is set to create new jobs, retain existing jobs and contribute to a broader, geographically balanced national framework to increase each province's competitiveness (Swinburn & Yatta, 2006a). LED activities impact economic viability of the entire province – taking cognisance of the local economy's value chain. The construction building sector is one of the growing sectors that immensely contribute to local economic development, especially where infrastructure development is concerned.

The construction sector is the main contributor to the South African Gross Domestic Product (GDP) to sustain the economy which includes the provision of employment opportunities despite the continued challenges such as layoffs, low wages and skills shortages (PWC Report, 2016). In South Africa, infrastructure development is still a major public capital expenditure item expected to contribute towards job creation. Steyn (2000:5) asserts that there is a link between transformation and democracy and, therefore, democratic values must reflect within the education sector. The construction sector remains one of the sectors that has a mix of highly educated, highly skilled, semi-skilled and general employees. To promote teamwork, each worker has to be acknowledged and be afforded an opportunity for upward mobility through skills attainment and the ability to perform the required duty. Opportunities of mobility introduce new learning techniques applied in both the workplace and educational institutions to prepare employees with the requisite skills needed within the evolution of production industries.

The Sector Education and Training Authority (SETA) was established in 2000 to enable every sector to devise its specified developmental skills plans for employees and interested individuals (Department of Labour, 2008:3). The SETA's objectives are to manage and introduce learnerships, internships, unit-based skills programmes

and apprenticeships within its specific jurisdiction (Blessinger & Ancham, 2015:25). This study was limited to a focus on the construction industry. The sector training and skills development strategies have a direct growth implication, such as an increase in production, and ensure that this imperative is maintained.

According to Kraak (2010:61), among the uniquely customised sector skills development initiatives, the differentiation between each sector will require a paradigm shift in the way in which skills development strategies are formulated by the government, which appraises implementation by intermediary agencies such as the SETAs. This study seeks to evaluate the impact of skills development in transforming the most vulnerable sector in South Africa. Construction forms part of the primary sector of the South African economy with its recorded Growth Domestic Product annualised at 0.7 per cent from the second quarter of 2016 (Trading Economics,2016). In order to grow the sector, South Africa needs to accelerate skills development with a particular focus on scarce skills.

This study explores alternative methods in which the translation of skills development can directly be linked to change and upward mobility within the workplace. The study will contribute to an impetus to alleviate poverty, ensure growth and accelerate the provision of good quality skills training aligned with the creation of a conducive environment (King & Van Hecke, 2006:7). During the National Economic Development and Labour Council Agreement's *(*NEDLAC*)* summit titled *Growth and Development Summit Agreement* (2003:3), the need for labour stakeholders to ensure that productivity drives the economy – through a skilled workforce, service delivery, system innovation of organisations and management – was recognised. Therefore, training and skills development are crucial tools for improving workplace productivity and for advancing the South African economy.

1.2 BACKGROUND TO THE PROBLEM STATEMENT

According to Nel and Rogerson (2005), since the democratic dispensation, LED has been elevated from isolated local development intervention to respond to the national mandate that tiers up all local authorities in terms of the spheres of government. LED offers opportunities to the province to counteract the inevitable forces of globalisation by maximising local potential (ILO, 2006). LED strategies seek to stimulate economic activity on specific conditions and assume comparative advantages to generate

employment. To enable economic participation of all the people, each company or institution is required to train its employees for retention and to be competitive in the world of work. Skills development is seen as a tool to advance development and is central for transformation.

The combination of the various legislation and institutional coordination has created clear prospects to transform the construction sector through skills development. Skills are understood to refer to both qualifications and experience – these are vital tools to ensure workplace diversity and to allow upward mobility for employees. The Skills Development Act (1998) successfully established the Sector Education and Training Authority (SETA), inextricably linking it to each sector's skills needs – including the enactment of The Employment Equity Act (55 of 1998) to ensure diverse opportunities are accessible to all ethnic groups within the workplace as well as the Broad-Based Black Economic Empowerment Act (53 of 2003) with a focus on developing the skills needed in each ethnic group. Both legislations place more emphasis on redressing economic imbalances.

The Construction Education and Training Authority (CETA) programmes were created to provide accredited training aligned with the expectations of the National Qualifications Authority of South Africa (NQF) and the service providers who are closely monitored and managed by the CETA. Kraak and Press (2008:46) place emphasis on the importance of aligning the education system with a productive economic system in such a way that they both relate to one another. The enactment of Broad-Based Black Economic Empowerment and the Employment Equity Act (55 of 1998) ensure an emphasis on diversifying the workplace and the economy at large through the creation of a balanced South African workforce. The CETA is the body that is established to ascertain the construction sector's skills needs to accelerate the training programmes, collaborate with an institution of higher learning and form partnerships to bridge the existing skills gap. Mbande (2010) points out that there is an existing correlation between an increase in community protests due to the lack of service delivery in South Africa and the shortage of skills in the construction sector. The CIDB Report (2004) states that the skills supplied to the market through the further education and training (FET) system were in many cases not appropriate to the needs of the construction industry, resulting in a skills gap. Van Wyk (2003) asserts that there is a high number of industry participants who have no education,

let alone a degree, and that this is a serious impediment to the development of the construction industry. Nel and Rogerson (2006) assert that LED strategies seek to stimulate economic activity of specific conditions and assume comparative advantage to generate employment. Labour relations and other related legislation in South Africa enforce employment of all ethnic groups to ensure diversified economic participation of all people. Skills development is seen as a tool to advance development and is central to the workplace transformation process.

The Skills Development Act (97 of 1998) successfully established the Sector Education and Training Authority (SETA) which is inextricably linked to each sector's skills needs. Furthermore, the enactment of the Employment Equity Act (55 of 1998) has been a vehicle ensuring diverse opportunities are accessible to all ethnic groups within the workplace and the Broad-Based Black Economic Empowerment Act (53 of 2003) – focused on developing the skills needed in each ethnic group – has placed greater emphasis on redressing economic imbalances.

The CETA programmes were created to provide accredited training aligned with the expectation of the National Qualifications Framework of South Africa. Kraak and Press (2007:46) place emphasis on the importance of aligning the education system with a productive economic system in such a way that they both relate to one another.

1.3 STATEMENT OF RESEARCH PROBLEM

The Construction Education and Training Authority neither do nor develop responsive training and educational programmes for the construction industry in order to transform the building sector to directly and indirectly contribute to local economic development. The recognition of the skills gap has placed more emphasis on ensuring fixed term employment of migrant labourers who are competent and can deliver on skills required to meet the specifications of the infrastructure project (Construction Industry Development Board, 2007:9). The collaborative report of the Department of Labour and the CIDB (2007) confirms the sector assertion that the country is short of skills and expertise within the construction industry for infrastructure delivery in South Africa.

1.4 RESEARCH QUESTIONS

- How effective are the Construction Education and Training Authority (CETA) programmes in providing the requisite skills in order to transform the construction sector in South Africa?

- What mechanisms are in place for the construction sector's skills development plan to address the skills required to meet the construction sector's projected infrastructure investment in South Africa?

- Are the skills provided through the Construction Education and Training Authority for the construction building industry sufficient to contribute to local economic development?

- Whether sector training and skills development outcomes contribute to the local economic development growth?

1.5 RESEARCH PURPOSE

The training and skills development initiatives provided to employees in the sector adequately responds to the sector skills needs, ensure upward mobility and create opportunities for advancement of the employees while contributing to diversifying the industry.

1.6 OBJECTIVES OF THE STUDY

The following objectives have been identified:

- to investigate the effectiveness of the Construction Education and Training Authority (CETA) training and development programmes transform the industry through skills development.

- to investigate whether employees participate in training and that the training programmes provided, contribute to the development of both the company and the employees.

- to establish whether the skills provided through learnerships, short skills programmes and apprenticeships within the construction sector are adequately NQF aligned to facilitate progression, mobility and promotions.

- to assess whether the skills provided through the Construction Education and Training Authority directly or indirectly contribute to local economic development.

1.7 SIGNIFICANCE OF THE RESEARCH

The study will provide broader measurable dimensions to the CETA and the construction sector' stakeholders in relation to the significant role that the CETA as an institution is playing through the provision of training and skills development within the construction industry. This study will also highlight possible interventions for consideration in order for a sector to transform through skills development and assess skills training and development growth within the construction building sector.

1.8 RESEARCH PLAN AND METHODOLOGY

A quantitative method was employed with an aim to present a report and manipulation of observations for describing and explaining responses from the study participants (Singh, 2007:58), highlighting the importance of skills development as an intervention to achieve transformation within the construction sector.

According to Kuthari (2004:5), the quantitative method involves the generation of data in the quantitative form which is measurable and can be subjected to rigorous quantitative analysis in a formal and rigid fashion. The qualitative method is concerned with the subjective assessment of attitudes, opinions and behaviour. The study employed an exploratory design to identify, describe and analyse skills development patterns and factors contributing to sluggish transformation through skills development processes within the construction sector. Exploratory design is casual or descriptive in nature (McNabb, 2015:26). The study also provides significant insight into whether or not a link exists between skills development and transformation for the construction building sector and its contribution to local economic development. The target population comprises the employees who attended training and skills development interventions from three level 9 construction companies (Company A, Company B and Company C) operating nationally in South Africa. The selected companies are rated at level 9 as per the industry regulator acquired from the CIDB grade list (1997) also listed in the annual construction indicators for the best performing companies in South Africa (PWC SA construction

report, 2016). The selected target participants work at different levels as artisans within the construction building sector.

The study employed stratified sampling to determine the participation in training of lower level employees to make a specified sampling frame which constituted workers who attended skills and training development interventions within the selected construction companies. In stratified sampling, the population is divided into non-overlapping subpopulations called strata in which a probability sample is selected in each stratum (Sarndal, Swensson & Wretman, 2003:100). Polit and Hungler (1999:37) describe the term 'population' as an aggregate or totality of all the objects, subjects or members that conform to set specifications. The eligibility criteria for the research was that participants must have been employees in the construction sector and beneficiaries of the CETA training programmes as described in the Skills Development Act (1998). The criteria affirm particular characteristics that must be presented by the study participants to enable participant eligibility (Polit & Hungler, 1999:278).

A survey was conducted by means of structured questionnaires and structured interviews. Pre-prepared questions were drawn to access further information through structured interviews designed for the three managers (Construction HR Manager, Training Service Provider Manager and CETA Programme Manager). The information gathered will assist the research in understanding the existing synergy in the processes of different institutions to provide skills development to ensure transformation. The process will not form part of the analysis through the SPSS. According to Singh (2007:69), a survey is classified into two categories, namely (1) questionnaires and (2) interviews. Paper-pencil questionnaires were sent to each company for the employees selected to participate in the study. It is a common knowledge within the research space that some of the participants might not return the questionnaires and those who return them might misrepresent the originally selected sample (Leedy & Ormrod, 2001:89). Structured interviewing ordinarily meant that each respondent was asked the same set of pre-established questions, in the same order by an interviewer who were well trained to ensure the credibility of the work (Goodwin & Goodwin, 1996:135). A training session was conducted for the field workers, who were trained to ensure their preparedness and quality assurance of the collected data.

The study used closed-ended (dichotomous) questions for the first part of the questionnaire to access employees' personal information to identify the diverse accessibility of skills training within the workplace as well as a multiple choice scale with five possible answers that varied from 'very effective' to 'ineffective' from which each employee in the construction building sector could select.

McNabb (2015:118) states that structured questionnaires are used as a warm-up, introductory, classification portion of a questionnaire while scales are more commonly found in the middle and towards the end of the instrument. A Likert scale or summated scale rating was applied as an attitude scaling technique to ascertain the understanding of training and skills development as one of the approaches for transformation in the construction industry. Likert scale items are useful for gathering respondents' subjective states such as feelings, opinions and attitudes and is regarded as the most commonly used scaled response questionnaire (Rasmussen, 1989:155).

The researcher experienced challenges from the participants' companies and, therefore, a decision to exclude an employee pre-test was reached. The similar characteristics to the study sample was conducted to determine the consistency of the response while reliability estimates are expressed in the form of a correlation coefficient, representing a measure of the correlation between the same group scores as. Content validity was chosen as a method of validating whether the researcher concentrated fully in all the study dimensions (Singh, 2007:78).
The external validity of the study entailed selecting a non-random, convenient sample of employees who work within the construction companies and were at work during the data collection phase. The study used numerical values for coding the collected information in each category so that numbers in each group of information could be counted. According to Singh (2007:82), in quantitative studies, it is essential that the collected information is coded quantitatively in the form of a measurement. Data analysis was generated from the statistical package of the Social Science (SPSS) Software Package.

1.9 DELINEATION OF RESEARCH

The researcher conducted an investigation in three construction building sector companies in South Africa. Three national operating companies were investigated to ascertain whether transformation approaches exist through skills development within the construction building sector in South Africa.

1.10 ETHICAL STATEMENT

Anonymity of participants were ensured. Participants in the study were referred to as 'participants'. Participants were requested to complete a consent form and were informed that their participation in the study would be voluntary and that there was no payment given to anyone who participated in the study.

Quality assurance was done with respect to the following aspects:

- The research instrument had undergone various checks for quality assurance and to ensure the relevance of the content of the study.
- A Likert scale was used to formulate quantitative results.
- Quality of data capturing was ensured and data was then encoded.
- Ethical consideration was attained from the Cape Peninsula University of Technology.

1.11 ORGANISATION OF THE STUDY

The study aims to measure the transformation in the building sector through skills development approaches in the workplace. An organisation of the study, outlined below, provides the summary of the main chapters.

Chapter 1: Introduction and background

This chapter presents an introduction and the background to the problem statement. The study investigates whether the training and skills development within the construction building sector positively contributes to transformation and what challenges, experienced by companies, hinder the successful implementation of workplace skills development programmes. The study's purpose and objectives are stated as measures to ascertain the construction building sector's training and skills development challenges and the research design is presented as a framework to enable responses to the research questions. Furthermore, the study's significance is

outlined as a contribution to the knowledge resource. Included is the ethical statement and the chapter outlines are discussed to ensure consistency.

Chapter Two: Literature Review

This chapter provides critical reviews of the existing empirical evidence on skills training and development as one of the interventions for workplace transformation and local economic development in South Africa. Furthermore, the literature correlates with skills development theories and learning theories as well as with workplace learning approaches to enhance productivity and ensure equitable access to skills while skills diversification remains central to the equality and transformation. The existing legislation and regulations place more emphasis on a diverse workplace, aligning with The Constitution's (1996) Bill of Rights. This is of particular importance in the construction building sector which has been labelled for many years as a male-dominated industry.

Chapter Three: **Research Design and Methodology**

This chapter describes the research design and methodology which is lengthily discussed to provide a more systematic, evidence-seeking process. It also outlines the method of data collection. The quantitative method has been adopted as a research approach for the study. The research strategy has been clearly outlined to ensure systematic research, including sampling techniques, sample size and the method of data collection conducted. The data analysis method, reliability, validity and balances were also discussed.

Chapter Four: **Research Results and Discussion**

This chapter discusses the data collected from the three construction-building sector companies with a population size of all the participants attended an artisanal skills training. The study seeks ascertain the approaches adopted by each company to provide training and development to its employees as well as to understand the discussion that took place between companies and the Construction Education and Training Authority as a Skills and Training sector advisory body. HRD is central to making sure that companies remain productive and in line with their strategic directions, therefore the HRD approach in devising the company skills needs is an important contribution to determine whether the existing alignment between the

company strategy and human resource strategy prove to be a sufficient source to ensure diversity, mobility and transformation of the construction sector workplaces.

Chapter Five: Recommendation and Conclusion

This chapter concludes the study by highlighting the limitations of the study, recommending further interventions to be explored and providing a contribution to the body of knowledge. Furthermore, the study has identified factors that contribute to successful training and skills development within the construction sector and highlights whether successful training and skills development in the construction sector has been affected by how the company has aligned its HR Strategy. The company's strategy must be aligned to the HR strategy as a concerted effort to ensure that compliance is not just a box ticking exercise but a quality exercise driven by a South African transformation agenda and the intention of securing a quantifiable contribution to local economic development.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews the literature relevant to the construction sector's transformation approach through skills development. The areas reviewed include legislation and regulatory frameworks relevant to workplace transformation. The study reviewed theories of learning relevant for workplace training and skills development to ascertain the aspects needed to provide a conducive environment to enable a culture of learning and a productive workforce. The approaches to workplace training and development with a particular focus on HRD strategies to retain and to attract talent are discussed in detailed. The study also reviewed an internationally acclaimed model relevant to construction skills training and development, particularly highlighting how these models address the existing skills gaps within the industry.

2.2 LEGISLATIVE AND REGULATORY FRAMEWORK

South Africa's complex history of unequal education and skills acquisition has compelled a policy paradigm be implemented post 1994 through legislative and regulatory development. McGrath and AKojee (2007:66) assert that the evolution of the focus towards skills has been informed by two major factors, namely (1) the skilled workforce has been racially segregated and (2) some ethnic groups within South Africa have been denied access to or acknowledgement of their on-the-job training. He also concludes that this rationale has been twofold in the sense that (1) globalisation has been a threat to most countries and (2) an internationally acclaimed training and skills development knowledge economy placed a much higher emphasis on the need to invest in human capital. Spencer (2000:226) acknowledges the importance of upskilling and deskilling workers to accommodate the changing world of work.

These notions have received political interest from the governing party and the education sector in South Africa as well as governments internationally since education and skills are considered core tools to increasing economic competitiveness and promoting social inclusion (Kozlowski, Gully, Brown, Salas, Smith & Nason, 2001; Akojee; Gewer & McGrath, 2005). A transformative agenda to improve structural racial equality for historically disadvantaged black South Africans has been an imperative for the government to realise the constitutionally

embedded principle of a non-racial and equal society. South Africa is regarded as a developing country with its triple challenges of poverty, unemployment and inequality which are ranked highly among countries such as Brazil and China. South Africa's Gini coefficient remained between 0.60 and 0.65 in 2014 with poverty estimated to fall at about 15.9 per cent in 2016. The Gini coefficient is the measure of income inequality ranging from zero (which indicates the nonexistence of inequality) to 1 as the highest unequal country in the world (Chitiga, Sekyere *&* Tsoanamatsie, 2015).

2.2.1 Skills Development

In Africa, skills development is seen as a tool to accomplish growth and social inclusivity (Tikly, 2003; Akoojee et al., 2005). Shortly after the new democratic dispensation in South Africa, the new legislation was enacted, inter alia, the Skills Development Act (97 of 1998) and the Skills Development Levies Act (9 of 1999) to promote the advancement of workforce skills, to enhance productivity, to enhance sector competitiveness and to address sector skills scarcity (Hammond, 2011:165). Training and education development initiatives have been established to reinforce the need to ensure a sustainable, skilled and capable workforce that supports South Africa's inclusive growth path (NSDS III Report, 2011-2016:6).

Groener (2013:733) addresses the different policy direction that government has taken to ensure the successful implementation of the NSDS which was launched in 2001. The strategy included a funding system to eliminate affordability challenges as well as increase access so that all people could benefit. There is evidence that skilled labour increases productivity which has a direct contribution to increased growth of the Gross Domestic Product (GDP) of a country (Meyer *&* Altman, 2005:66). According to McGrath and Bardroodien (2006:26), education and skills development serve as a shift towards the post-apartheid era and is central to the economic development of a country. Kraak (2004a:66) attests to the National Skills Development Strategy – that the document is a doctrine to redress the imbalances of the past and that it is also considered a programme of action.

The National Skills Development Strategy III (2011–2016:33) provides the framework for skills development and the direction for sector skills planning and implementation through SETAs. The introduction of the strategy has enabled the SETAs to deliver programmes such as learnerships, on-the-job training, apprenticeships and skills

programmes (Groener, 2013:723). The SETAs were established as part of the new skills development system identified to achieve faster economic growth and job creation (McGrath & Akoojee, 2007:427). South Africa introduced the concept to enable workers to assume different roles within the organisation and also to ensure employees are better equipped to find other jobs or to be entrepreneurs (Hammond, 2011:166).

2.2.2 National Qualifications Framework (NQF)

The South African Qualifications Authority Act (58 of 1995) was established to oversee the development and implementation of the National Qualifications Framework (NQF). The NQF is a quality assurance system of the higher education development sector – that regulates the registration and qualification standards – which forms part of the critical steps in implementing a quality education and training system in South Africa (SAQA, 2018). The NQF Act (67 of 2008) was enacted to provide for the further training and educational development, organisation and governance of the NQF among other important responsibilities is to create a single integrated national framework for learning achievements, to facilitate access, mobility and progression within education, training and career paths. The NQF clarifies all education and training qualifications on an explanatory scale of eight levels which are sub-divided into three bands as illustrated below in Table 2.1 (SAQA, 2010).

Table 2.1: The National Qualifications Framework in South Africa

NQF	Details	Qualification type
10	Higher Education Qualification	Doctoral Degree
		Doctoral Degree (Professional)
9		Master's Degree
		Master's Degree (Professional)
8		Bachelor Honours Degree
		Postgraduate Diploma
		Bachelor's Degree
7		Bachelor's Degree
		Advanced Diploma
6		Diploma Advance Certificate
5		Higher Certificate Occupational Certificate
4	General and Further Education and Training	National Certificate Occupational Certificate
3		Intermediate Certificate Occupational Certificate

2	(FET)	Elementary Certificate Occupational Certificate
1		General Certificate Occupational Certificate

(Source: SAQA www.saqa.org.za)

2.2.3 Sector Education and Training Authority (SETA)

The notion to move to higher skills levels for all was widely accepted across social groups, including the labour movement, and the matter was intensely debated to better understand the transition in labour processes and skills development (Koch & McGrath, 1996:338). This assertion has been seen as a tool to enable a working society and a productive workforce. Allias (2012:636) argues that there is a strong contrast between bundles of 'skills' usually called 'competences', which are frequent descriptions of task-related activities and processes.

A Skills Development Strategy Initiative study was commissioned and a green paper was introduced for a further discussion (GTZ & DoL, 2007:5; DoL, 2001a:10). One of the important reasons for the establishment of the SETAs was to encourage improvement of even the technical skills as part of an integrated educational system. Technical occupations rely on systematic knowledge as well as operational experience while charters (Allias, 2012:636) regulate ability and professions. McGrath and Badroodien (2006:487) assert that three key apparatus drove the envisaged and transformed skills development system. Firstly, the levy-grant system filled the gap of a lack of funding – an incentive to both companies and labour and an investment into human capital for a productive future channelled through both the SETAs and the National Skills Fund (NSF). Secondly, SETAs were established to promote equitable skills acquisition in each sector. Thirdly, learnerships, apprenticeships and skills programmes were introduced (Groener, 2013:733).

The skills development system was introduced in 2001. However, there are various reasons that vary from the management of the institutions and the systems. The enrolment target decreased gradually from 125 000 in 2010, to 18 390 in 2013/14, to 13 770 in 2014/15 with a slight increase to 14 050 in the 2015/16 financial year. The SETA institutions experienced challenges administratively (McGrath & Akooje, 2007:430). Groener (2013:737) argues that the completion rates of the unemployment enrolment could be attributed to structural and pedagogical barriers. According to the NSDS III Report (2011–2016:261), SETAs have reached their goal

of 85 per cent Black learners enrolled in the programme. Groener (2013:736) provides a successful background to the skills development programmes and its drive to reducing inequality in access to skills development opportunities for the employed and unemployed. Transformation is central in all skills development activities – it provides women, youth and people with disabilities with an opportunity to participate economically while ensuring equity remains an essential part the progress (NSDS III, 2011–2016:245).

2.2.4 Construction Education and Training Authority

The Construction Education and Training Authority (CETA) was established in 2007 and was one of the first SETAs to be operational. Their objectives were mainly to ensure workplace training and development and facilitating and coordinating a sector skills plan (Hamann, Khagram & Rohan, 2008:24). The sector's skills drivers are complex and vary from unskilled, to semi-skilled to a highly skilled workforce. Some may even be illiterate or may have migrated from the neighbouring countries (Sector Skills Plan, 2009–2010:6; Shakantu & Kajima-Shakantu, 2007; Keengwe, Onchwari & Wachira, 2008; Hammond, Bowen & Cattell, 2016:1989). The South African training and skills development system, with its recognised challenges, has been widely welcomed (McGrath et al., 2006; Collins & Smith, 2006). The Portfolio Committee on Public Works and the Public Works Committee in Parliament applauded the performance of the CETA (Portfolio Committee on Public Works Report, 2017).

2.2.5 Broad-Based Black Economic Empowerment (B-BBEE)

Significant inroads have been made in South Africa to alleviate poverty and to close the unequal distribution of skills in the country. The Broad-Based Black Economic Empowerment Act (2003) is among many enacted legislations to address the legacy of the past. Among other concerns was the discrimination and distortion in skills development, access to training and unequal opportunities (Horwitz, 2013:2435). The B-BBEE Act is a transformation tool used to address the racial injustices of the past and ensure equal economic participation of all ethnic groups. Maclean and Ordonez (2007:125) assert that workplace transformation that is informed by a transition necessitates educating a new type of a worker as well as how this environment is regulated (Regulska, 1998; Smith & Pickles, 1998).

The dual transitional imperative in South Africa compelled the country to simultaneously enhance its competitiveness and ensure economic growth globally (Horwitz, 2013:2436). Transformation through training and education development had, among many other strategies, been implemented by the government for growth and productive workforce (Horwitz, 2013:2436). Transitional economies are countries that experience a high level of turbulence and complexity in a transformation process from centralised command and control political economies to market-oriented economies (McCord & Bhorat, 2003:24). The two notions acknowledge that, in the presence of the other in a transition, transformation is central as part of the ensuring the balance. In any transition, training and development is an appropriate approach to enhancing development (McCord & Bhorat, 2003:26).

The Act is seen as a holistic approach to skills development. The study does not dismiss the predominant challenges presented since the implementation phase of the legislation. However, it remains an important part of South Africa's skills development agenda for the future (Horwitz, 2013:2439). The Act introduced sector codes in terms of section 9 (1) to monitor empowerment and transformation progress (CSCC Report, 2009–2013:8). South Africa acknowledged the Act as an effective initiative that aims to address social and economic transformation equitably to meet the goals of sustainable economic and social development goals. Maclean and Ordonez (2007:125) argue that the transformation of the workplace that accompanies the transition from the industrial to the information age necessitates a new type of paradigm shift in policy development (ILO, 2005:25; World Bank, 2017:56).

2.2.6 Construction Charter

In 2007, the Department of Trade and Industry introduced the Construction Sector Charter on Black Economic Empowerment as a policy imperative to transform the sector (PWC South African Construction Report, 2016:15). The construction sector accounts for around 10 per cent of the world's GDP. In South Africa the sector is regarded as one of the most job-intensive primary sectors with an estimated growth of 18.9 per cent from 2011–2013 (National Treasury Budget Review, 2011:44). Moreover, it is relatively important globally, that in South Africa, the building construction sector has contributed to around 8 per cent of the total employment, including informal employment (CIDB Construction Monitor, 2017:2).

Transformation in the construction sector is crucial and has the potential to expand the sector to new heights inclusive of social responsibility, social engagement and promoting diverse construction growth through development and empowerment (Friedmann, 1992; Berdhan, 1997). However, there are contesting views on social democratic strategies' abilities to fulfil the promise of a direct and immediate solution to poverty and inequality (Roberts, 2006:120). According to the first baseline report of the Construction Sector Charter Commission (2009–2013:32), the construction sector has increased the levels of transformation as per the element presented by the charter to the sector. This is a commendable improvement to the most vulnerable sector of the economy.

The B-BBEE Act establishes sector codes to enable each sector to contribute immensely to the transformation process. Either a council or a department governs the sector codes. The Construction Charter is implemented and monitored by the Charter Sector Council to measure and report on the impact of empowerment and transformation of the sector (Construction Sector Charter Council Baseline Report, 2009–2013:9). The charter introduces seven key elements with targets (Table 2.2). Amongst those are employment equity to enable diversification of the workforce and skills development to ensure critical skills are equitably addressed (PWC SA Construction Report, 2016:19).

Table 2.2: Elements of the Construction Charter (2009)

Element	Description	Measure	Target %
Ownership	HDSA participation in the sector	Shareholding voting rights, economic participation and ownership	25
Control	Executive and Board diversified and appropriately represented by all ethnic groups	Black people, women in particular, represented at both board and executive management level	10
Employment Equity	Workplace diversification to reflect SA's demographics	Black people, women in particular, represented at senior, middle and junior management	10
Skills Development	Skills acquisition to address skills scarcity within the sectors as well as making sure that the skills represent the country's demographics	Training budgets vs cost, learnership provision and mentorships	15

Procurement	Procurement budget for the BEE entities	Procured services vs the company turnover	20
Enterprise Development	Development of small and micro businesses within the sector	Input, total turnover ratio and the output	15
Corporate Social Investment	Community and social development contributed by the industry	Total contributed vs company turnover	5

(**Source: PWC Construction Report, 2016:19)**

These transformational charters are reviewed every five years. The first baseline report has indicated progress towards achieving most elements of the charter. However, skills development and skills scarcity in the building sector are still considered barriers to the sector's growth and are yet to be addressed by the sector's stakeholders (African Construction Trends Report, 2014:20). Transformation is a tool for development as well as a socially viable project to ensure equitable access to economic participation.

2.2.7 Employment Equity

The Employment Equity Act (55 of 1998) is a highly rated progressive form of legislation, enacted post 1994, to achieve equity in the workplace by promoting equal opportunity and fair treatment in employment. The EEA Act is also used as a tool to eliminate unfair discrimination and implement affirmative action measures to redress the disadvantages in employment experienced by designated groups, in order to ensure equitable representation in all occupational (Horwitz, 2013:2437). Employment equity is the process of employing candidates fairly in a manner that is transparent, consistent and not biased prejudiced (Saha, O' Donnell, Patel & Heneghn, 2008). Implementation of the EEA in South Africa has been problematic to the extent that it has been reduced to an HR unit of focus rather than a strategic issue which should involve the leadership, the executive and the entire institution (Thomas, 2002).

There has been a serious concern that focusing on implementing the EEA, without considering the abilities of individuals' skills and development, could hinder the achievement of the transformation that South Africa needs (Coetzee & Bezuidenhout, 2011; Thomas, 2002). Best practice, to implement and diversify the workforce, has been identified. However that requires commitment from management to align the EE as a business strategy to promote inclusivity and a diversified workforce (Cropanzano, Slaughter & Bachiochi, 2005; Kidder, Lankau, Chrobot-Mason, Mollica & Friedman, 2004). Employment equity decisions may sometimes need to be explained and motivated where there is a dire need to consider other ethnic groups for a particular skill and this may leave employees who benefit from the process open to insurmountable violation (Nowakowski & Conlon, 2005). Therefore, a much-needed open discussion, to explain the need to transition into a diversified workforce and the benefits thereof, could eliminate many unintended consequences and result in a well-managed, smooth transition and productive teamwork.

The question of justice and fairness become a central point of decision making – this will prevent workers to explode on unsettling decisions or changes (Kickul, 2001). According to the EE Report (2015:1), the additional regulation of equal pay for the work of equal value supports the amendments by providing measurement and the tool to further access the implementation of the act. Groener (2013:741) asserts that women and youth are the most vulnerable groups affected by the unemployment rate. South Africa has placed employment equity as an area of development. Van Ransburg and Roodt (2005: 39) suggest that employment equity must be integrated with human resource strategies for optimal implementation, as suggested by Human's conceptual framework (Figure 2.1 below), as an integrated employment equity workplace strategy.

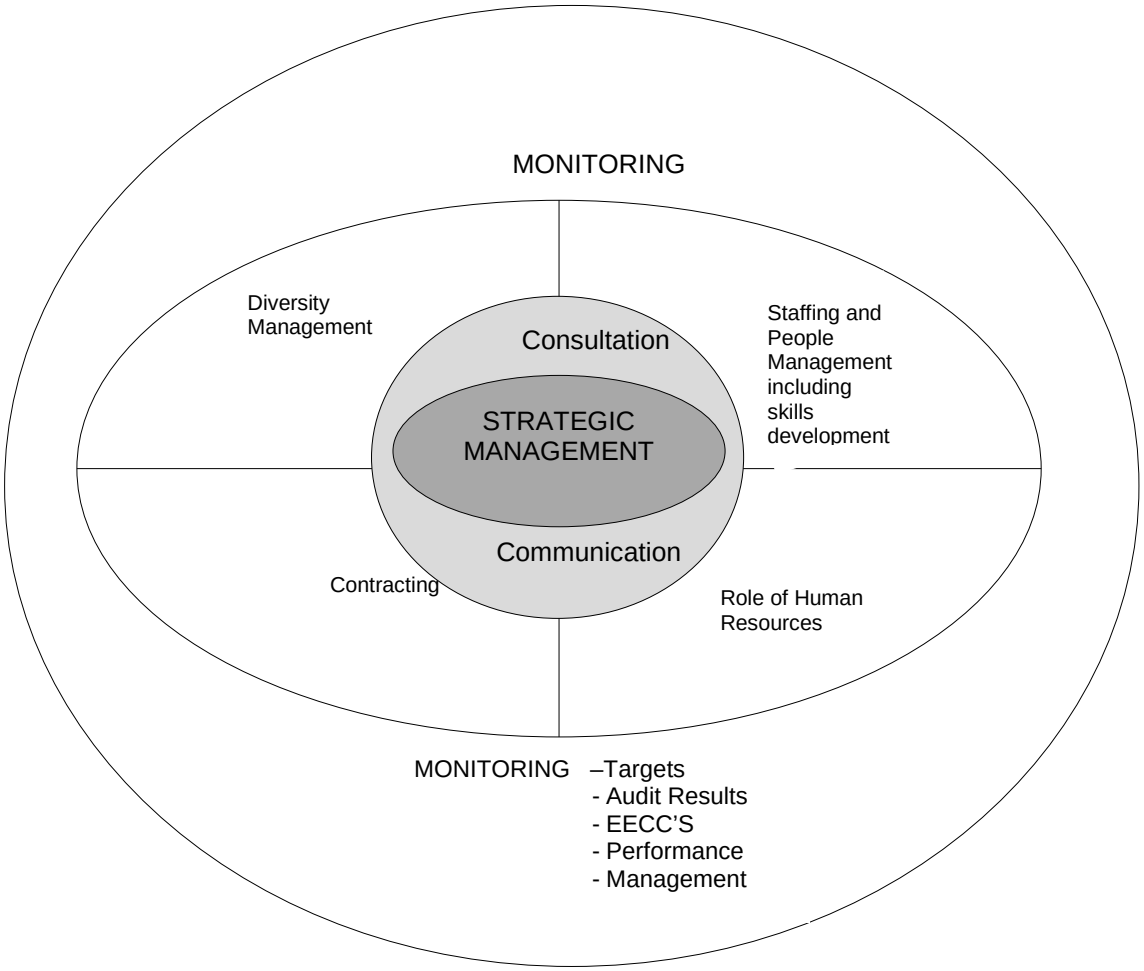

Figure 2.1: A Conceptual Framework for an Integrated Employment Equity Strategy (Source: Van Ransburg & Roodt, 2005)

The figure illustrates the integration of employment equity into holistic strategic planning and management of a company in order to be effectively implemented. The research concludes that employment equity needs to consider other elements such as soft skills, hard skills and competencies to enable the incumbent to complete the tasks successfully. The figure highlights three elements to ensure successful diversity management, namely monitoring, consultation and communication. The whole diversity management process is regarded as a strategic issue which requires continuous updating in the form of monitoring, consideration of employees' views on some of the matters pertaining to their futures within the company and sharing of information to keep employees abreast of compliance and direction.

2.2.8 South African National Human Resource Development (HRD) Strategy

Human resource development has been identified as a critical component of transformation in South Africa and is recognised by legislation such as the Employment Equity Act, the B-BBEE Act and the Skills Development Act. To ensure diversification and equity within all workplaces, skills training and development are necessary tools to build capabilities and sustain the current workforce. This will increase production which will create opportunities for others (Peterson, Pillay, Reddy, Juan & Twalo, 2014:442). It is common among developing countries to pursue education and training and skills development to advance economies, especially when confronting poverty, inequality and unemployment. The challenge with this approach is that those who have developed through skills training continue to develop further, widening the gap between advanced and developing countries (Friedman, 1992). The International Labour Organisation (ILO) has been at the forefront of addressing labour challenges and has ensured that each member state has developed its own national strategy for education and training (Mercer, Barker & Bird, 2010:31). The process has been achieved through the development of the ILO recommendation on HRD of 1975 which was replaced by recommendation 195 later in 2004 (ILO Report, 2004:7).

> *The need to adapt politically and institutionally to respond to the new needs and take advantage of the new opportunities involve increasing agreement as regards the fact that acquisition of competencies and investment in education and training are the key to economic and social development (ILO Report, 2004:5).*

Training and development is a fundamental right for every citizen as part of access to education as enshrined in chapter two of the RSA constitution. The ILO (2004: 26) advocates for the promotion of access to education, training and lifelong learning for people with nationally identified special needs. Included in the list are people with disabilities, low-skilled people, migrant workers, older workers and indigenous people. Ethnic minority groups and socially excluded individuals, including workers in small and medium-sized enterprises, are also considered people who do not have access to training and skills development in the informal economy, in the rural sector and in self-employment (ILO, 2004:27). This can only be achieved through intersectoral cooperation and stakeholders' effective, meaningful participation (Kraak,

2010:64). Effective implementation, monitoring and evaluation of skills development are central to achieving governmental commitment to ensure equality, diversification and economic participation of all citizens (Peterson, Pillay, Reddy, Juan & Twalo, 2014:449). The success, or failure, of policy implementation is associated with a number of factors which includes policy development, accumulation and mobilisation of the necessary resources (Brinkerhoff & Crosby, 2002). HRD must be continuously evaluated to prepare human capital to effectively implement the operations and strategy of any institution.

2.3 THEORIES OF LEARNING

Learning is a process which requires systemic methods that are designed specifically to assist learning which involves an adult person. Behaviourist theory asserts that learning positively contributes towards a conducive environment (Reddy, Ankiewicz & Swardt, 2005:16). The aforementioned theory also suggests that learning theory supports equally the mechanical process of learning and the effects of active responses while there is an assertion that human abilities evolve gradually (Thorndike, 1949; Ernest, 2006). A conceptual framework for more understanding of workplace learning to effectively take place may be sought in for an appropriate learning theories' including relevant content, as an essential feature of adult education must be considered to occur in circumstances other than educational institutions (Billett, 2004:313). On the other hand, it is evident that people learn because someone praises them when they do something right (Coetzee, Botha, Kiley & Truman, 2007:57)

Thorndike theory believes that the purpose of learning is to align knowledge and ideas and this forms the basis of programmed instruction where correct responses are reinforced (Erasmus & Van Dyk, 2003:120). Classification of learning outcomes has proved that the learning theories are appropriate for different types of learning that occur within workplaces (Johnson, Dixon, Daugherty & Lawanto; 2011: 58). The construction building sector employs a mixture of illiterate, low-skilled, skilled, semi-skilled workers and professionals. In order to address the skills needs of this type of workforce one has to group them differently in order to implement an effective learning outcome. Such an outcome could closely be associated with the behaviourist learning theories where a learning outcome assists learners to remember important information to develop their skills in using and operating tools

and equipment (Royer, 1996, cited in Johnson, 1997:49). The humanistic theories of McGregor and Maslow assert that the learning process itself is the focal point because learners must achieve their full potential independently and set their own objectives (Erasmus & Van Dyk, 2003:121). The humanistic perspective says that individuals have a natural aptitude for learning and have control over their own learning outcomes (Coetzee, Botha, Kiley & Truman; 2007:57). Experiential learning theory (Figure 2.2) introduces a method of the learning process consistent with the structure of human cognition and the stages of human growth and development which is perceived as a four-stage cycle (Meyer, 1995:5).

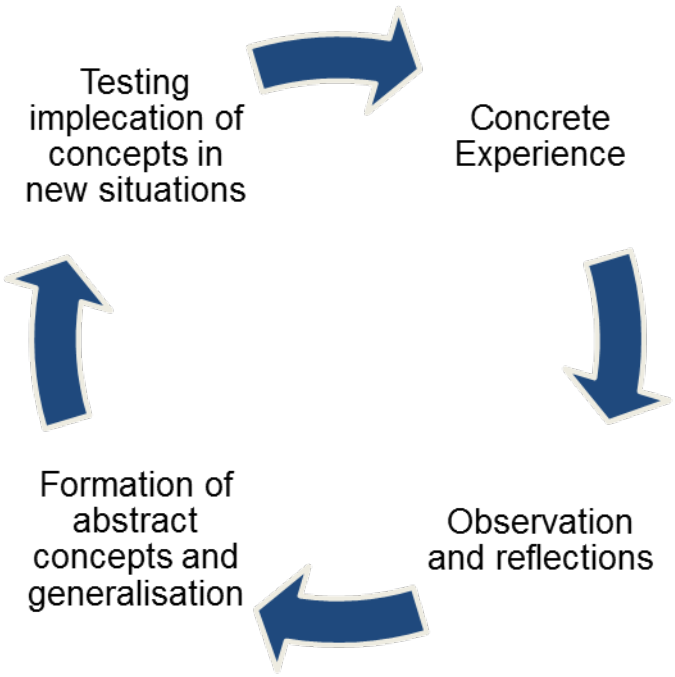

Figure 2.2: The Experiential Learning Theory: Four Stages of Learning (Source: Kolb, Boyatzis & Mainemelis, 2001).

An effective learner is acknowledged by asserting the four dimensions of experiential learning abilities. The above-mentioned cycle does not need to be followed in a certain sequence – the cycle process will still be recognised as a complete way of learning that evolves as the individual grasps the knowledge and experience. Experiential learning theory provides a holistic model of the learning process and a multilinear model of adult development, both of which are consistent with what we know about how people learn, grow and develop (Kolb, 1976; Stabell, 1978; & Meyer, 1985; Sternberg, Zhang & Rayner, 2011). Transformational learning theory ensures opportunities for the workforce to address their perceptions such as experience, critical reflection, reflective discourse and action (Mezirow, 2003:60).

This type of learning theory helps the workforce realise the gap in learning and encourages the application of particular training and skills development initiatives. The research distinguishes three elements of learning which are relevant to workplace learning and recognises these as social activity – taking cognisance of the importance of the tools employed during the learning session and the interaction that takes place during the learning process (Wilson, 1993:78). However, Harvey and Knight (1996:8–8) assert that the focus of workforce learning should not only be about enhancing skills but more about producing people who are able to analyse and introduce innovative problem-solving skills.

Gestalt Theory perceives learning as a cognitive process involving the holistic personality while also recognising it as a process of gaining or changing insights, outlooks, expectations and thought patterns (Erasmus & Van Dyk, 2003:122). It focuses on how people concentrate, reason and analyse information and, at the same time, acknowledges that people do not always learn by being actively involved in a task nor by learning theory processes but by encouraged participation (Coetzee, Botha, Kiley & Truman, 2007:57). Experimental theory accepts that humans have the freedom to choose and to act – they use their energy to initiate rather than to react impulsively. Cooperative learning focuses on learning competencies rather than the learning content (Erasmus & Van Dyk, 2003:119). Table 2.3 below provides explanatory information on how each theory is different from the other and how the theories respond to a learning process.

Table 2.3: Theories of Learning of Evaluation

Theory	Description
Thorndike's Connection	Making an association between what makes sense, the impression that creates and the response (Connectionism).
Pavlov's Classical Conditions	An existing connection leads to knowledge and knowledge to represent information on a matter.
Gestalt Theory	Gestalt is a German word, which means configuration; this theory focuses on addressing perceptions and solving challenges.
Kinner's operant conditions	This theory recognises two different kinds of learning (1) respondent behaviour (2) Operant Behaviour. identify activism of learners
Common Theory for	This theory makes two basic distinctions between formal

Learning	classroom instruction and acquisition occuring in a natural setting. Places an emphasis on a conducive learning space for workers.
Freud's Pleasure Principle of Learning	This theory supports the control of learning through reward and punishment e.g. workplace mobility
Information Processing Theory of Learning	The theory asserts that learners go from controlled to automated processing while restructuring of knowledge continues.
Ausubel's Meaningful Learning Theory	The theory emphasises meaningful learning which takes cognisance of existing systems and welcomes innovations.
Humanistic Theory	Also known as personality theory which stresses the goodness of people and the need to achieve their full potential.

(Source: Kumar & Nazneen, 2016)

Theories have assisted many disciplines with analysing human patterns, whether it is through learning a different language, understanding a situation or performing an environmental scanning. The research study outlines theories, including transformative learning and skills development theories, that are relevant to adult learning. These important tools enable the study to analyse the current learning within the construction sector, to address challenges in workplace learning as well as to assess whether a link exists between training and skills development attained by workers within a company. The existing empirical knowledge reaffirms the assumption that transformation through skills impartation exists, taking cognisance of the varieties of learning (Young, 2009; Beard, 1970; Gagne, 1985; Klein, 2002; Gonzalez, 2012; Tudor, 2001; Jones, 1997 cited in Kumar & Nazneem, 2016:218–234).

2.4 TRAINING APPROACH

A training approach recognises stakeholders' commitment to invest in training as a collective sector decision undertaken by employer associations and employee representatives (trade unions) together with Government. However, it is well known that a production approach enhances internal labour markets' productivity while training methods enhance occupational labour markets' employability and retention (Clarke & Hermann, 2007:510). A production approach is the process undertaken to achieve a company's goals. The process involves the employees who are part of the

development stages of production. In South Africa, training and development approaches should directly be linked to the country's economic growth in order to meet the demand while also responding to the need to fulfil the skills deficit in response to the current industrial strategy. This will ensure an effective mechanism to address the country's need for a skilled workforce, economic growth and sector expansion. Erasmus and Van Dyk (2003:48) outline a generalised approach and methods in training interventions and enterprises. For the study, the researcher discusses five approaches.

The educational approach involves a long-term planning process through attendance and correspondence teaching. This approach is a determinant of growth, an advocate of experiential learning and invokes concerted efforts of knowledge management. The systematic method is regarded as a set of unique modules that form a unit. The training and development function receives its input from the internal and external environment of the enterprise and the transformation process represents the training and development function and relates to those activities such as the development of a curriculum, training and development activities, methods and techniques. The action learning method focuses on managers who studied real-life challenges and provide solutions within a similar environment. The action method will ensure that each team or unit aligns their skills development plan to the organisational strategy in order to attain transformational diversity. The analytical method is associated with the assessment of training needs in an organisation with the analysis of the knowledge, skills and attitudes required for specific jobs. The training process or procedural approach requires each company to have a skills training and development policy, aligned with training responsibilities in job descriptions, regular and periodic training needs, plans, resources, implementation plans and assessment of development results. Mentoring and coaching programmes have growing popularity as learner-centred developmental tools and these could be formal or informal.

2.5 SKILLS DEVELOPMENT THEORIES

HRD is a discipline concerned with the training and development of expertise, competence and skills with the goal of developing interventions that have an impact on an individual, processes, work teams and organisational performance (Swanson, 2007:8). Adult education, skills training and development are designed in such a way

that learning is considered the most appropriate method to develop an individual within a specific age (De Guess, 1999:56). South African training and development initiatives have focused on yielding results that are driven by a transitional political and economic landscape, where education stimulates growth and is central to societal development (Almendarez, 2013:1).

The perception was that higher skills levels would increase employability, access to employment and access to higher waged jobs (Groener, 2013:733). Human capital put an emphasis on the significance of education and training as a driver to participation in the new global economy (Almendarez, 2013:1). However, research asserts that the institutional and structural arrangements within education, the labour market, the production system and other social and economic institutions do not always facilitate appropriate responses to addressing skills and training needs (Kruss, Wildschut, Van Rensburg, Visser, Haupt & Roodt, 2012:xii). According to King and Van Hecke (2006:14), skills theory provides a framework for understanding the challenges students face when making new connections or learning new ways to align the old connections. Almendarez (2013:3) places an emphasis on intervention to increase education productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capacity. The construction building sector has always been known internationally as accepting individuals who are entering employment as unskilled workers wo would do the manual work. Often these labours are illiterate or some might be migrants (Hammond, Bowen & Cattell, 2015).

The CIDB report (2007:33) states that construction workers are all persons involved in physical construction work. It is perceived as a job of low and middle-income workers, noting that the sector is lacking attractiveness because of its physical demands, long hours, layoffs and remote work sites. Organisational development must include, but not be limited to, skills training and development. Industrial firms, large or small, cannot afford to be without skilled personnel in the properties sector who make use of the materials, tools and techniques to manufacture some of the equipment (O'Donnell, Karallis & Sandelands, 2008:60). The research focuses on the skills priorities of the construction sector as an intervention to transform the sector and thus observes the efficiency, effectiveness, quality and quantity of the applicable methods to train and develop construction workers (CIDB Report 2011; CIDB Report, 2015) as categorised per contractor, sector demand and as per the requisite for

infrastructure delivery in South Africa. The CIDB Report (2015:45) indicates that workers are still trained by observation and experience in the workplace and that workers prefer this to formal training as there is no loss of earnings.

Figure 2.3: Kirkpatrick Evaluation Model – Four Levels of Evaluation
(Source: WatershedLRS.com)

The Kirkpatrick model provides one technique for appraisal of the evidence for any reported training programme. Companies could use the model to evaluate whether a training programme is likely to meet the required strategic needs of both the organisation could use the model. The model serves as a tool to implement the training activities and assess the staff who will learn, participate and practice that the knowledge received from the skills development training is sufficient for them to perform the expected tasks.

2.6 INTERNATIONAL BEST PRACTICE: BRIDGING THE SKILLS GAP

The skills and training development activities improve both workforce capabilities to work. It also offers mobility at work as well as more scope for creativity and satisfaction at work. However, coordination is crucial to effectively link skills and training development activities with employment and productivity growth (ILO Report,

2011:32). It is important that South Africa ensures that countries invest in infrastructure to deliver on economic and social returns while considering the quantity and quality of skills in African countries (Bashir & Long, 2015:1229). According to OECD (2010:62), a common notion is that in a world of skill-biased growth, South Africa has failed to improve education and training sufficiently to allow for the skills of the labour force to keep pace with demand. The skills shortages are becoming an impediment for sustained growth and countries are seeking to upskill the labour force through workplace training (OECD LEED Report, 2013:37).

Any skills problems that the sector is experiencing inevitably have an impact on the company's human resource policies and the recruitment and retention strategies that the company pursues, in particular on their training and development activities (Clarke & Hermann, 2007:509). Challenges with skills development emanate from the delivery of the basic education that an individual acquired at primary level. In recent years, education dominated international discussions which led to conclusions that there is a need for an integrated system to address skills for work, including enhancement of productivity. The fundamental part of the discussions was to enhance education as the importance of redesigning and implementing the national qualification framework and standards for skills, which place workplace training as an essential and crucial part of development (ILO, 2013; Leclerc, 2014).

Despite the concerted efforts made internationally through policy development to enhance education, there has been a growing disconnect between the interest and investment in adult education and learning opportunities (World Economic Forum Report, 2017:2; Valiente, 2014:44). The skills deficit impedes the development agenda and it also hinders sustainability which highlights the challenges around the education value chain. The international community is concerned with the lack of emphasis by the international community on skills development in the emerging global agenda (McGrath & Powell, 2016:14; McGrath & Akoojee, 2007:431). The two-tier education system (primary and post-education) has been seen as challenging, with much effort redirected to primary post education which lagged behind for so many years (Palmer, 2006; Palmer, 2007). The experience of African countries has been described as overshadowed by weak capacity, which has a different meaning for each SADC member (Commission for Africa, 2005:135). Promoting better access to good quality education and training skills has to be accompanied by policies that

are friendly to private investment. The private sector can participate effectively in the provision of services to enhance access and quality, invest in job training, work with education and training providers to ensure programmes are aligned with their needs and engage in national social dialogue to prioritise skills development and reform (World Bank, 2017: 43). The training and development fragmentation within the supportive institution requires immediate remedial action, among other initiatives, to advocate for private-public partnerships in education and training.

Despite all the challenges, the international community has acknowledged that training and education are among the critical drivers of development and that for it to be effective it requires capacity building and an enabling environment (Commission for Africa, 2005; World Bank, 2017). The Sustainable Development Goals (SDG), dimension 4.4 set an international target that by 2030 each country must ensure equal access for all its citizens to affordable and quality technical, vocational and tertiary education which include colleges and universities. These goals follow a post 2015 agenda themed 'A life of dignity for all'. The commitment places more emphasis on quality education and lifelong learning, is inclusive of vocational education and training and the 2014 Global Education for All meeting emphasised the significance of skills for decent work and life through technical and vocational training (Global Education Monitoring Report, 2017). The empirical knowledge reveals that education systems should evolve to meet the needs of the present day as well as provide modern solutions. It is important for workplace skills to be updated constantly to address productivity challenges.

2.7 CONCLUSION

This chapter detailed the theoretical framework that guides the findings reported in the study. Sections of the study were developed to respond to the objectives and the study questions. The aforementioned sections were able to redirect the study towards the basic research approach to provide a background of the existing literature. The process has assisted in establishing the inventory of questions that guided the assessment of population validity including the study's conclusion validity.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The research design and the methodology are outlined in this chapter. The chapter will include the research design setting, the population and sample and the data collection instrument.

3.2 STUDY DESIGN

De Vaus (2001:11) asserts that the function of the research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible. Research design introduces logic to the problem-solving mechanism and not the logistics of the problem (Yin, 1989:29). Research design includes obtaining relevant information and relevant evidence to respond to specific research questions to enable the researcher to test a theory, to evaluate a programme or to accurately describe some phenomenon (De Vaus, 2001:11). The process, therefore, enables the researcher to widen the perspective of the study while also highlighting new phenomenon that surface.

3.3 RESEARCH APPROACH

The study employed an exploratory design to identify, describe and analyse skills development patterns and provides significant insight into whether a measure between skills development and transformation exists within the construction industry. Kuthari (2004:5) asserts that there are two basic approaches to research, namely the quantitative approach and the qualitative approach. This study employed a quantitative approach, to gather quantifiable data and perform statistical, mathematical or computational techniques. The research approach determines the research strategy. Furthermore, the inferential approach refers to an establishment of the database from which the researcher will infer the characteristics or relationships of the study population. The experimental approach recognises the researcher's control over the research environment to the extent that some variables are manipulated to observe their effect on other variables and simulation approach which involves creation of an artificial environment within which relevant information and data can be generated (Kuthari, 2004:5). A quantitative approach was employed to highlight the importance of training and skills development as an intervention to achieve transformation within the construction sector. According to Kuthari (2004:5),

a quantitative method involves the generation of data in a quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion while a qualitative method is concerned with the subjective assessment of attitudes, opinions and behaviour.

3.4 DELINEATION OF THE STUDY

The study investigates the construction sector's transformation approach through skills development in South Africa. The data for the study was collected in three national companies (Company A, Company B and Company C) within the areas and or sites where training had been done and completed.

3.5 POPULATION

The target respondents were selected from the three (Company A, Company B and Company C) level 9 construction companies. The companies were selected from the Construction Industry Development Board (CIDB) grade list (1997) and the PWC SA construction report (2016) – operating nationally, but concentrating on the Western Cape Province. The construction company's employees are appointed at different levels as artisans working within the construction building sector and lastly skills facilitators of each of the service providers. The target population for the study was the employees who attended the skills training and who were working for the three construction companies. Pilot and Hungler (1999:37) describe the research population as an aggregate or totality of all the objects, subjects or members that conform to set specifications. The eligibility criteria for the research is that participants must be employed in the construction sector and be a beneficiary of the CETA training within the prerogatives contained in the Skills Development Act (97 of 1998). The criteria affirm particular characteristics that must be presented by the study participant to enable one to be an eligible participant (Pilot & Hungler, 1999:278).

Table 3.1: Data Collection Methods

Stakeholder	Instrument	Medium/Technique
Building Construction Companies (employees)	Structured Questionnaire	Group session, Telephonic & Emailed
Company A	Questionnaire	Interviews
Company B	Questionnaire	Small group interview
Company C	Questionnaire	Telephonic

Table 3.1 illustrates how information was gathered from respondents in each of the companies. The researcher emailed the questionnaire because the company had most of the projects and trained employees in Johannesburg rather than Cape Town. Company B was able to have the trained respondents in one room to enable a group session during intervals until the desired number of available respondents was reached. Lastly, Company C's respondents were all based in the Johannesburg area and interviews had to be set up after hours, guided by the list provided by the company of respondents who attended training within the period stipulated in the study and sample specification.

3.6 STRATIFIED PURPOSIVE SAMPLING

The study employed a stratified sampling strategy and further employed purposive sampling within the three companies to extract participants who attended training from the rest of the employees and ensure participation of all artisans, women, youth, and people with disabilities in the study. The specified sampling frame was selected from all the employees who attended and completed training within the three construction companies. Purposive sampling sample units were chosen because they have particular features or characteristics that will enable detailed exploration and understanding of central themes and questions which the researcher wishes to study (Bryman, 2012).

Eligibility criteria for inclusion in the study were:

- An employee must have undergone skills training between the year 201/17.
- An employee must have been working as an artisan.
- An employee must have completed the training and still work for the same company that sent him/her to training.

3.6.1 Building Companies

The construction building sector is known for the employment of low skilled and unskilled workers, yet the sector remains an important player in job creation of both direct and indirect jobs (CIDB, 2017). According to CETA Report (2016), the building industry has far fewer employees than the civil and road construction industry. The existing dynamics in the target-orientated building projects continue to hinder the capacity and training of the workforce.

Table 3.2: Construction Sector

Category	SIC Codes	Employers
Building Construction	13	10 461
Built Environment Professionals	16	7 300
Roads and Civil Construction	27	27 553
Materials Manufacturing	16	3 847

(Source: CETA , 2016) **SIC – Standard Sector Classification**

The valid Standard Industrial Classification (SIC) codes are used for Employment Tax Incentive (ETI) purposes. The latest SIC coding system for the construction building industry has listed that the building industry per sector has more than 50 000 employees with more than 100 companies operating. Therefore, transformation is important and equally important is that the sector must contribute towards growth through local economic development.

3.6.2 Sample Size

A purposive sample technique was applied in the study to select trained participants within the three building sector companies in the construction industry – it was the researcher's discretion to determine the participants' criteria (Struwig & Stead, 2001:111). Eligibility criteria were considered (Fox & Bayat, 2007:60), as per the below formula.

$$n = \frac{Z^2\, p\, q\, N}{e^2\,(N-1) + Z^2\, p\, q}$$

The formula was used as a statistical method to determine a sample size of how many employees need to complete the questionnaire and how many the researcher required to get the desired number of respondents.

Table 3.3: Employee Sample

Company	Trained Employees	Sample
Company A	18	18
Company B	81	81
Company C	120	120

3.6.3 Limitation of the Sample

The questionnaire was sent only to those who had undergone training in the two-year period 2016/17. However, the existing dynamics and challenges within the building sector presented a different number including employees who are no longer within the employ of the companies for various reasons. According to the PWC SA Construction Report (2016), the construction sector has declined over the years. This has led to retrenchment and layoffs of workers. Some of the challenges were brought about by government programmes such as sub-contracting which, according to the CETA report (2016), is because the sector is characterised by a number of small and medium enterprises. Limitations presented during the study compelled the researcher to work with what the companies offered as available participants for the study.

3.6.4 Summary of the Sample Structure

The study concentrated more on employee development after the training had taken place, to assess whether mobility is considered after the training, hence there is not much stakeholder participation.

Table 3.4: Overall Sample Structure

Stakeholder	Population	Medium	Sample size =n
Employees	219	Questionnaire	N= 100

3.7 DATA COLLECTION METHOD

A survey was conducted by means of structured questionnaires and pre-prepared questions drawn to access further information through structured interviews mainly designed for the three managers (the Construction HR manager, the Training Service Provider manager, BIBC training and development for members and the CETA Programme manager). The information gathered will assist the researcher in understanding the existing synergy in the processes of different institutions that provide training and skills development to ensure transformation and that this process will not form part of the analysis through the SPSS. According to Singh (2007:69), a survey is classified into two categories, namely (1) questionnaires and (2) interviews. A paper-pencil questionnaire was sent to each company for the employees selected to participate in the study. Structured interviews were scheduled for the all the respondents. Structured interviewing ordinarily means that each respondent is asked the same set of pre-established questions, in the same order by an interviewer who is well trained to ensure the credibility of the work (Goodwin & Goodwin, 1996:135). The study made use of field workers, who were trained to ensure their preparedness and quality assurance of the collected data and a negotiated assistant from each construction company was used to reach out to a memorable number of participants.

The study made use of closed-ended questions (dichotomous) for the first part of the questionnaire – where employee information could indicate the diverse accessibility of skills training within the workplace – as well as amultiple choice scale with five possible answers that varied from ‘very effective’ to ‘ineffective’ responses. McNabb (2015:118) states that structured questionnaires are used as the warm-up, introductory and classification portion of a questionnaire, while scales are more commonly found in the middle and towards the end of the instrument.

3.7.1 Measuring Instrument

A questionnaire was developed to obtain the data from the construction employees (respondents). The questionnaire was validated and its reliability was checked to ensure that it provides responses to the research questions.

3.7.2 General Questionnaire Design

The questionnaire presented to all respondents consisted of the following sections:

Section A: Employee Information

Section B: Training and Development

Section C: Growth and Development

Section D: Expectation and Impact

Section E: Experience

Different section responses were based on a five-point Likert type of scale. This has allowed respondents to carefully choose their responses aligned with how they find the situation.

Section A: Employee Information: This section measured employee diversity in the workplace to ascertain gender balance within entry-level and artisan levels. The construction sector is known for its male dominance. The introduction of Act, such as employment equity was enacted to address such challenges. Section A proposes optional responses to the questions presented.

Section B: Training and Development: Section B measured the implementation of the Workplace Skills Plan (WSP) at company level, more importantly, the relevance of the training and the attitude of the employees towards the training technique used to enable them to better understand the programme. Some of the trained employees last attended classes many years ago, hence the importance of a learning technique specifically if the learner is a working individual. It is also very important to seek active participation with the material and activities applied during a learning session. Responses were based on a 5-point Likert-type intensity scale ranging from (1) effective, (2) Effective, (3) Moderately Effective, (4) Somewhat Effective to (5) Ineffective as the lowest point. In a group session held with some respondents by the researcher, they were able to explain their rating choice.

Section C: Growth and Development: This section measured the company's support toward employee learning such as policies on training and development, management of employee expectations after the training and provision of a conducive environment for development and upward mobility. Among the measures included were the importance of companies to ascertain employee development goals and align them with those of the company, as well as the learning impact after the programme. Responses were based on a 5-point Likert-type intensity scale ranging from (1) Effective, (2) Effective, (3) Moderately Effective, (4) Somewhat Effective, and (5) Ineffective as the lowest point. In a group session, I held with some responded they were able to explain their rating choice.

Section D: Expectation and Impact: Section D measured the overall feeling of the employees of the availability of career advancement opportunities within the company, satisfaction with job-related training as well as the proactiveness of employees after participating in training and development. The section also explores the changes in employee and employer communication, teamwork and performance incentives. This part of the questionnaire balances the employer production targets as well as the employee efforts towards the achievement of the workplace targets. Responses were based on a 5-point Likert-type intensity scale ranging from (1) Effective, (2) Effective, (3) Moderately Effective, (4) Somewhat Effective, and (5) Ineffective as the lowest point. In a group session, I held with some responded they were able to explain their rating choice.

Section E: Experience: Section E measured the overall confidence and the satisfaction with the training that the employee has received, this section is expected to give the researcher competing for views depending on the of training the employee had done some would have been trained to enhance their skills, some are trained to explore new job opportunities within the company and some are trained to maintain the level of performance within the workplace. Responses were based on a 5 point Likert-type intensity scale ranging from (1) Effective, (2) Effective, (3) Moderately Effective, (4) Somewhat Effective, and (5) Ineffective as the lowest point. In a group session, I held with some responded they were able to explain their rating choice, refer to annexure C.

3.8 DATA COLLECTION TECHNIQUE

A Likert scale or summated scale rating was applied as an attitude scaling technique to ascertain the understanding of training and skills development as one of the approaches for transformation in the construction industry. Likert scale items are useful for gathering respondents' subjective attitudes such as feelings, opinions and attitudes. This scale is regarded as the most commonly used scaled response questionnaire (Rasmussen, 1989:155). Communication was sent via HRD email to distribute and coordinate group sessions with the employee supervisors at a plant yard or on a site. If group data collection methods are utilised of more than enough despondence response rates of 50% are poor, values around 90% are normal (Dunham & Smith, 1979; Borg, 2003). However, the limitation in this regard was that trained employees were either retrenched or went through job losses, hence the research had no expected response rate in this study. Difficulties encountered included time taken by HR to respond and the challenges of gathering the data of the trained individuals within the two-year study period which was more challenging as a constraint. A further difficulty was experienced through trying to gain access to the site because of project timelines and target-oriented projects. Furthermore, setting up the time to meet with the respondents was difficult both for the researcher as well as HR. From those who were emailed, one would either a questionnaire with missing information or one would get the information very late. It was difficult to set up a submission time.

3.9 DATA ANALYSIS AND INTERPRETATION

The study made use of numerical values for coding the collected information in each category so that numbers in each group of information could be counted. Coding is an analytical process in which data, in either quantitative form (such as questionnaire results) or qualitative form (such as interview transcripts) are categorised to facilitate analysis (Singh, 2007:72). The purpose of coding is to transform the data into a form suitable for computer-aided analysis. The data collected from all the respondents were recorded in an excel file template and then transferred into the SPSS system. The transfer process was thoroughly checked to ensure that there was no distorted information due to typing errors or omitted information. According to Singh (2007:82), in a quantitative study it is essential that the collected information is coded quantitatively in the form of a measurement. Making a distinction between these levels of measurement is important because the type of analysis a researcher can

perform on the data from the questionnaire depends on the type of data (Pete, 2007:8). Data analysis was generated from the analysis software statistical package of the social science (SPSS). The quantitative analysis applied in this study is descriptive and a survey method was applied. According to Pete (2007:7), descriptive statistics provide summary information about data and there are three distinct types of data that are important for statistical analysis, namely (1) interval or ratio, (2) ordinal and (3) categorical or nominal data. Descriptive statistics include the use of tables and graphs and the measures of central tendency (mean, median and mode) and variability (Sheskin, 2003:1). Calculating the mean is never appropriate for categorical variables, while the median is the middle number when all values for a variable are listed from lowest to highest and the mode is the most frequently occurring value for any variable (Sims, 1999: 20). For the purpose of the current study, tables and graphs were used to present the data. The frequencies were used to summarise and to distinguish differences between respective respondents. Pickard (2007:286) states that one of the first stages in analysing one's data is to calculate and present the frequency distribution of one's dataset. Frequency distributions are often seen as data processing, sorting data and saying very little about any relationship between the variables.

3.10 RELIABILITY AND VALIDITY

Reliability and validity are essential tools rooted in a particular perspective. They are equally important in quantitative research to address clearly-defined processes and procedures. A quantitative scale data would require validity and reliability checks (Strang, 2015:33).

3.10.1 Reliability

Reliability is defined as the extent to which results are consistent over time and ensure an accurate representation of the total population under study (Joppe, 2000:1; Reinard, 2006:10). An employee pre-test excluded from the actual research, with similar characteristics to the study sample, was conducted to determine the consistency of the responses. Reliability estimates are expressed in the form of a correlation coefficient, representing a measure of the correlation between the same group scores. The study applied Cronbach's coefficient alpha to measure and indicates the consistency of multiple-item scales (Leech, Barrett & Morgan, 2012:52).

The Likert scale used in the study was calculated through the Cronbach coefficient alpha to test attitudes for internal consistency reliability and, therefore, the data is considered reliable. Kirk and Miller (1986, 4–42) identify three types of reliability in quantitative research, namely (1) the degree to which a measurement, given repeatedly, remains the same, (2) the stability of a measurement over time and (3) the similarity of measurements within a given time period. According to Alder and Clark (2014:139), another common way to check the reliability of a measurement strategy is to compare results obtained by one observer with results obtained by another using the same method and the method is called interobserver reliability or the interrater reliability method. The alternate forms procedure or parallel-forms procedure is another way of measuring reliability (Alder & Clark, 2014:139).

3.10.2 Validity

Strang (2015:33) is of the view that epistemological differences impact a researcher's thoughts, participant verification of interview comments is an accepted form of validity in phenomenology while triangulation generally is common in business and management. The external validity of the study entailed selecting a non-random, convenient sample (of trained employees who work within the construction company and were at work during the data collection phase). Content validity was chosen as a method of validating whether the researcher concentrated fully in all the study dimensions (Singh, 2007:78). The validity of the measure is the degree to which the measure can be shown to measure what it claims to measure (Reinard, 2006:11).

3.10.2.1 Content Validity

Validity is an important first step in the construct validation process and should be assessed immediately after a measure has been developed but prior to utilisation in a research study (Schriesheim, Powers, Scandura, Gardiner & Lankau, 1993:5). Process validation is defined as the collection and evaluation of data, from the process design stage throughout production, which establishes scientific evidence that a process is capable of consistently delivering quality products. The process was to ensure that the measuring instrument reflects all the aspects of the model selected to respond to the research questions. According to Glynn and Robinson (2014:99), validation of a given clustering involves a series of procedures that determine the robustness of a present solution for making predictions while external validation employs multivariate techniques.

3.10.2.2 Internal and external examiners

External examiners were used to further review the results of the study. The first draft document was shared amongst the three internal examiners to verify and validate the recommendations and conclusions of the researcher. According to Remenyi and Money (2012:159), the appointment of the internal examiner is an important matter, even though it is frequently said that the external person is the important person to impress with the quality of the research.

3.11 CONCLUSION

In this chapter, the researcher discussed in detail the methodology, approach and research strategies used to collect data and the measuring instruments to ensure that the data collected responded to the research question presented in the study. In conclusion, the study provides a detailed report of the data collection procedures and the techniques used to analyse the data. Reliability and validation were explained. Detailed analyses of the results are presented in the next chapter of the study.

CHAPTER FOUR: RESEARCH RESULTS AND DISCUSSION

4.1 INTRODUCTION

The chapter will present the results of the statistical analysis of respondents' data in each company. The results were discussed in response to the research objectives and the research question presented at the beginning of the study. Quantitative results and findings were compared across companies to ascertain the relations and differentiation of the companies in employing strategies to ensure transformation through skills development is possible within the construction industry. The study has acknowledged limitations that had been encountered throughout the study – this also had an impact on the small size of the samples of trained employees within the construction companies

4.2 CHARACTERISTICS OF RESPONDENTS

The study's respondents are the construction building sector employees working as artisans (the lowest paid) within the building sector hierarchy of skills. Respondents were selected from the list of employees trained within each of the companies that participated in the study.

4.2.1 Company characteristics

The participants were selected from three companies (Company A; B and C) which are level 9 construction companies acquired from the CIDB grade list (2016) and PWC SA Construction Report (2016). The construction companies' employees work as different levels of artisans in the construction building industry.

Companies: These are level 9 construction companies, listed at the JSE with a turnaround of about more than five billion rand annually and are registered with the Construction Industry Development Board (CIDB Grade List, 2017).

Table 4.1: Response Rate per Company

Company	Number of employees	Trained Employees (two-year period)	B-BBEE
A	8 472 (All–2017)	18 (Building)	Level 2
B	4 675 (All–2017)	81 (Building)	Level 3
C	12 358 (All–2017)	120 (Building)	Level 3

(Source: Company annual reports, 2017)

Table 4.1 illustrates the number of employees in each company (A, B, C) in the year 2016–2017 and the number of people trained within the building sector of all three companies. The B-BBEE status shows how much each company contributes towards development and its compliance to transformation. Business that falls into category 2 (level 2) have a turnover that falls below R10 million per annum. It automatically qualifies as a 100% contributor towards BEE. Businesses must have a Black Shareholding of more than 51% to qualify as Level 2 BEE contributors while Level 3 status constitutes a business that has a score between 90 and 95 on the BEE scorecard. Skills development in Categories B and C, as set out in the learning programme matrix (LPM), contributes 25% of the overall BEE scorecard (B-BBEE Act, 53 of 2003).

4.2.2 Employees' Characteristics

The study focused on building sector artisans working at different fields, for example, plumbers, bricklayers, mixers, labourers and general workers who had undergone training in their relevant fields or any other. The construction sector is known for being male dominant. Therefore, since the dawn of democracy, the Constitution of the Republic of South Africa Act (108 of 1996) and other legislation have enabled a way to change the face of most industries including the construction industry. A limitation encountered was that companies distributed questionnaires to various levels of employees, even to office-based workers and to experts while one of the companies distributed to the experiential learners (learnership students) who are not employees.

4.3 ANALYSIS OF THE STUDY

The study made use of SPSS software to process and analyse data collected by the researcher from Companies A, B and C. This exploratory factor analysis is one method of checking dimensionality, frequencies of factor analysis in order to ensure that they respond to the objectives of the study.

4.3.1 Response Rate of Questionnaire Survey

The study was conducted in Company A, B and C. The questionnaires were emailed to companies prior to holding group interviews and telephonic interviews with some of the participants. There were limitations in the participation in that only participants who had undertaken training in their respective companies in a two-year period (2016/17) and, therefore, the outcome could not meet the expected 100 participants in all the companies. The researcher received 219 filled questionnaires. In Company A only 18 (8%) of employees attended training during the period stipulated above while in Company B 81 (37%) attended and Company C managed to train 120 (54.8) which remains as the highest number of trained employees within the three building construction industry.

Table 4.2: Response Rate of Questionnaire

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	AG	120	54.8	54.8	54.8
	BR	81	37.0	37.0	91.8
	GF	18	8.2	8.2	100.0
	Total	219	100.0	100.0	

4.3.2 Description of Participants' Characteristics

Table 4.2 illustrates the gender distribution within the construction building industry. The construction sector has always been one of the male-dominated industries in most countries including South Africa, due to unfavourable conditions in the construction industry. However, the 41% female representation is commendable. While male representation remains at 58%, the sector is making an effort to comply with some of policies that encourage female economic participation.

Table 4.3: Description of Participants by Gender

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Female	90	41.1	41.3	41.3
	Male	128	58.4	58.7	100.0
	Total	218	99.5	100.0	
Total		219	100.0		

Table 4.3 illustrates the age group participation in workplace skills and training development. Employees within the age group 25–34 equate to a 50% rate which showing much more interest in workplace development than the age group 45–54 at 14%. This age group is referred to as baby boomers – they are more experienced, are reluctant to learn new things and are considering retirement. The least interest is found in young people of the aged 18–24 at 11%. This is merely because there might be fewer artisans working at this age. The youth is followed by the age group 35–44 at 23% and seemed to be a group much keener in being trained and developed.

Table 4.4: Description of Participants by People living with Disability

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Yes	8	3.7	3.7	3.7
	No	209	95.4	95.4	99.1
	Total	219	100.0	100.0	

Table 4.4 illustrates the rate at which the construction sector is able to employ people living with disabilities. The policy on the rights of people living with disability requires companies in South Africa to at least employ 2% of the people in any sector as part of diversifying the workplace (DoSD White Paper, 2016). Only 3% of the people living with disabilities are represented within the three companies while people without a disability remain at a high rate of 95%. The construction building sector still has a long way to go in addressing employment of people living with disabilities in the industry.

Table 4.5: Description of Participants by Age Group

		Frequency	Per cent		Valid Per cent	Cumulative Per cent
Valid	18–24	24	11.0		11.0	11.0
	25–34	111	50.7		50.7	61.6
	35–44	52	23.7		23.7	85.4
	45–54	32	14.6		14.6	100.0
	Total	219	100.0		100.0	

Table 4.5 illustrates the age groups of participants in the workplace skills and training development programmes. Employees within the age bracket of 25–34 equate to (50%) showing a lot more interest in workplace development than the age group 45–54 (14%), possibly because this age group is more experienced or reluctant to learn new things. The older generation often thinks about retirement. The least interest is found in young people within the age bracket 18–24 (11%). This is merely because there might be fewer artisans working at this age. The age group 35–44 (23%) is much keener to be trained and developed.

Table 4.6: Description of Participants by Race

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	African	150	68.5	68.5	68.5
	Coloured	27	12.3	12.3	80.8
	White	34	15.5	15.5	96.3
	Indian/Asian	8	3.7	3.7	100.0
	Total	219	100.0	100.0	

Table 4.6 sought to establish the race distribution of the participants as part of assessing whether the training and skills development programmes are vastly distributed by companies even to the lowest wage groups in construction. Africans at 68% are found to be the most dominant group within the artisanal space followed by White at 15% Coloured at 12% and, lastly, Indians at 3%. Respondents were provided with the following choices to choose from in the questionnaire – artisan, skilled artisan, technical expert and office worker. The study's focus was the artisans' access to training in order to become experts in their respective fields.

4.3.3 Type of Work and Participants' Employment History

The next two tables illustrate the participants' type of work within each company. This includes employment history – how many years within the company – and whether the skills training attended was formal or informal.

Table 4.7: Description of Participants by Type of Work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Artisan	57	26.0	26.5	26.5
	Skilled artisan	93	42.5	43.3	69.8
	Technical expect	53	24.2	24.7	94.4
	Office worker	12	5.5	5.6	100.0
	Total	215	98.2	100.0	
Missing	System	4	1.8		
Total		219	100.0		

Table 4.7 illustrates the level of qualification that the participants acquired or already had prior to the skills development training programmes conducted by their respective companies. Skilled artisans dominate at least 43%, with the artisans at 26% followed by the technical experts at 24% and, lastly, office workers at 5%. One per cent was represented by respondents who attended an accredited short course within a period not stipulated in the data collection instrument.

Table 4.8: Description of Participants by a Number of Years Worked

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	0–5 years	169	77.2	77.2	77.2
	6–10 years	30	13.7	13.7	90.9
	11–15 years	9	4.1	4.1	95.0
	16 years or more	9	4.1	4.1	99.1
	Total	219	100.0	100.0	

Table 4.8 illustrates that participants with 5 years or less years of employment in the company are more enthusiastic to develop themselves through training and skills development offered by companies. The group with 0–5 years received training at a rate of 77% while those with 6–10 years within the company (13%) attended the training followed by the groups with 11–16 or more years (4%) in terms of responding to training and development within the company.

4.3.4 Type of Employee Training and Skills Development

The study sought to establish the type of skills training and development provided within the construction sector and whether these types of training are sufficient to provide upward mobility, diversify the working environment as well as to ensure transformation in the construction building industry. Training considered in the study were short skills, trade testing and certification, learnerships or apprenticeships, in-

house training and adult basic education and training programmes as categorised as the Beginners' Programme within the CETA Programme classification. Table 4.8 illustrates that 50% of respondents had gone through the short skills programme.

Table 4.9: Description of Participants who attended the Short Skills Programmes

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid		111	50.7	100.0	100.0
Total		219	100.0		

Table 4.9 illustrates that only 50% of the respondents had gone through the short skills programme.

Table 4.10: Description of Participants who completed Trade Tests

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid		60	27.4	100.0	100.0
Total		219	100.0		

Table 4.10 illustrates that 27% of participants attended trade tests. This could either mean that the participant had formal education on the trade without the trade test certificate to certify his knowledge of the trade and companies required them to have the trade test to meet the standard requirement.

Table 4.11 Description of Participants who completed Learnerships or Apprenticeships

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid		79	36.1	100.0	100.0
Total		219	100.0		

Table 4.11 illustrates that 36% of participants completed their learnership programme while 63% could be spread across short skills, trade testing and certification, in-house training and adult basic education and training programmes.

Table 4.12: Description of Participants who completed In-house or On-the-Job Training

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	1	98	44.7	100.0	100.0
Missing	System	121	55.3		
Total		219	100.0		

Table 4.12 illustrates that 44% of the training attended by the participants was conducted within the company premises – in-house or on-the-job training activities are designed to sharpen employees' existing skills.

Table 4.13: Description of Participants who completed the Adult Basic Education and Training

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	1	32	14.6	100.0	100.0
Missing	System	187	85.4		
Total		219	100.0		

Table 4.13 illustrates that the participants who did not finish their basic education to enable them to be enrolled into the next level of education system attended 14% of the training.

Table 4.14 Description of Participants who completed NQF-aligned Training and Development

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	107	48.9	56.0	56.0
	Effective	65	29.7	34.0	90.1
	Moderately effective	5	2.3	2.6	92.7
	Somewhat effective	2	.9	1.0	93.7
	Ineffective	12	5.5	6.3	100.0
	Total	191	87.2	100.0	
Missing	System	28	12.8		
Total		219	100.0		

Table 4.14 illustrates that 48% of the participants agreed that most of the skills training and development programmes provided were able to lead participants' progression or mobility in terms of task level, salary and allocation of more responsibilities. While 29% felt that the skills training and development programmes were effective in a way participants did not experience much changes, Two per cent

were moderately effective while 0.9% was somehow effective and lastly 5% were ineffective while 12% did not respond at all to the question. The study sought to establish if the skills provided through learnerships, short skills courses and apprenticeships within construction are adequately NQF aligned to facilitate progression, mobility and promotion.

Table 4.15: CETA Training and Development

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	114	52.1	59.4	59.4
	Effective	64	29.2	33.3	92.7
	Moderately effective	2	.9	1.0	93.8
	Somewhat effective	3	1.4	1.6	95.3
	Ineffective	9	4.1	4.7	100.0
	Total	192	87.7	100.0	
Missing	System	27	12.3		
Total		219	100.0		

Table 4.15 illustrates that 52% of the training and skills development attended by participants were CETA accredited, 29% concluded that the training and skills development was accredited while 0.9% was moderately effective. Five per cent of participants had no knowledge of whether the training was accredited or not.

Table 4.16: Training and Skills Development updated within Construction Industry

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	118	53.9	58.4	58.4
	Effective	73	33.3	36.1	94.6
	Moderately effective	3	1.4	1.5	96.0
	Ineffective	8	3.7	4.0	100.0
	Total	202	92.2	100.0	
Missing	System	17	7.8		
Total		219	100.0		

Table 4.16 illustrates the relevance of the training provided to the participants to the sector as well as their line of work within the construction industry. Fifty-three per cent of participants acknowledged that the training was very effectively updated within the industry, 33% felt it was effective while 1% felt it was slightly effective and, lastly, 3% did not find any alignment of the training with the real construction world.

Table 4.17: Types of Training attended by the Participants

		Count	Column N %	Column Count % (Base: Responses)
What type of training or learning development did you participate in?	Short skills programme	111	51.4%	29.2%
	Trade Testing and Certification	60	27.8%	15.8%
	Learnerships or Apprenticeships	79	36.6%	20.8%
	In-house or on-the-job training	98	45.4%	25.8%
	Adult Basic Education and Training	32	14.8%	8.4%

The study sought to establish whether there is a relationship between the training and skills development and transformation within the construction sector. Table 4.17 illustrates the type of training and skills development programmes attended by the participants in order to ensure effective transformation in the workplace. Fifty-one per cent of participants attended short courses to sharpen their skills while 45% attended in-house or on-the-job training, 36% attended learnerships or apprenticeships, 27% revealed that they had attended trade testing and certification and, lastly, 14% attended Adult Basic Education and Training initiatives.

Table 4.18: Participants' Training and Skills Development Duration

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	3–4 weeks	79	36.1	38.7	38.7
	up to 3 months	7	3.2	3.4	42.2
	4 months	7	3.2	3.4	45.6
	6 months to a year	111	50.7	54.4	100.0
	Total	204	93.2	100.0	
Missing	System	15	6.8		
Total		219	100.0		

Table 4.18 illustrates the duration of the training provided to participants. Fifty per cent of the participants attended training with a duration of 6 months–1 year while 36% attended a 3–4 week course, 6% of the respondents attended a 1–4 months course and 6% was unaccounted. The construction sector is known to be a project target-oriented sector and some of the challenges with training emanate from the time constraint pressures to complete a project rather than focusing on the training of employees.

Table 4.19: Types of Training Institution

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	At the company	76	34.7	35.3	35.3
	Colleges	58	26.5	27.0	62.3
	CETA	59	26.9	27.4	89.8
	University	9	4.1	4.2	94.0
	Private Institution	13	5.9	6.0	100.0
	Total	215	98.2	100.0	
Missing	System	4	1.8		
Total		219	100.0		

Table 4.19 illustrates the type of training institutions which provided the training to the participants to ascertain the credibility of the institution and the courses which are intended to enhance the participants' workplace skills. Thirty-four per cent attended their training at a company, 26% attended both the CETA and a college, 4% attended a university and 5% attended a private institution.

4.3.5 Distribution of the Participants' Perception of the attended Training and Skills Development

Employee development is legislated in South Africa. It is imperative that employers train their employees to enhance productivity and to enable individual employability. Participant perception outlines the responses of the participants to question in relations to the training outcomes.

Table 4.20: Training and Skills Development Knowledge Transfer

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	1	183	83.6	100.0	100.0
Missing	System	36	16.4		
Total		219	100.0		

Table 4.20 indicates the progress made by participants after completion of the training – whether they had been given any recognition within the company in terms of mobility, wage or salary negotiations or increased responsibilities. Eighty-three per cent of the participants acknowledge that their companies have allowed them to use the knowledge they have acquired during training at work to improve their productivity levels.

Table 4.21 Training Relevance

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	1	168	76.7	100.0	100.0
Missing	System	51	23.3		
Total		219	100.0		

Table 4.21 shows that 76% of participants attended training that is related to their jobs in the workplace.

Table 4.22: Improved Performance

	Frequency		Per cent	Valid Per cent	Cumulative Per cent
Valid	184		84.0	100.0	100.0
Total	219		100.0		

Table 4.22 shows that 84% of the participants' performance improved since attending the training.

Table 4.23: Reviewed Responsibilities

	Frequency		Per cent	Valid Per cent	Cumulative Per cent
Valid	155		70.8	99.4	99.4
Total	219		100.0		

Table 4.23 illustrates that 70% of the participants attended the training were allocated more responsibilities after they have attended a training.

Table 4.24: Training and Skills Development Impact

	Frequency		Per cent	Valid Per cent	Cumulative Per cent
Valid	108		49.3	98.2	98.2
Total	219		100.0		

Table 4.24 illustrates the impact realised by the employee participants after attending skills training. Forty-nine per cent of the participants agreed that the impact had been exceptional and this includes employee participation in the workplace, improved performance as well as mobility prospects.

Table 4.25: Employee Achievement of Company Goal

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	138	63.0	66.7	66.7
	Effective	55	25.1	26.6	93.2
	Moderately effective	10	4.6	4.8	98.1
	Ineffective	4	1.8	1.9	100.0
	Total	207	94.5	100.0	
Missing	System	12	5.5		
Total		219	100.0		

Table 4.25 illustrates that companies who invest in training for their employees' benefit from the training. Sixty-three per cent of the participants agreed that the training was very effective in making sure that the participants are better prepared at work to achieve the company's goals, 25% of the participants felt it was effective, 4% felt it was moderately effective and, lastly ,1% felt it was ineffective.

Table 4.26: Upward Mobility and Promotion

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	81	37.0	41.5	41.5
	Effective	49	22.4	25.1	66.7
	Moderately effective	54	24.7	27.7	94.4
	Somewhat effective	4	1.8	2.1	96.4
	Ineffective	7	3.2	3.6	100.0
	Total	195	89.0	100.0	
Missing	System	24	11.0		
Total		219	100.0		

Table 4.26 illustrates the participants' promotion or upward mobility within the company after having to attend the training sessions. Thirty-seven per cent of participants confirm that they have been promoted to assume new positions after the training in all their respective companies. While 24% rate the question as moderately effective, some have been promoted while others have just received remuneration increases. Some believe that the training recognition is 22% is effective, 3% felt that it was ineffective and 1% rate the question as somewhat effective.

Table 4.27: Effectiveness of Training and Development

		Frequency	Percent	Valid Per cent	Cumulative Per cent
Valid	Very effective	108	49.3	56.5	56.5
	Effective	57	26.0	29.8	86.4
	Moderately effective	10	4.6	5.2	91.6
	Somewhat effective	13	5.9	6.8	98.4
	Ineffective	3	1.4	1.6	100.0
	Total	191	87.2	100.0	
Missing	System	28	12.8		
Total		219	100.0		

Table 4.27 illustrates that 49% of employees respond very effectively to training and development while 26% effectively participate, followed by the low percentage of 5% which are participants that feel somewhat effective, whereas 4% feels moderately effective.

Table 4.28: Company Retention Strategy

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	63	28.8	34.8	34.8
	Effective	73	33.3	40.3	75.1
	Moderately effective	33	15.1	18.2	93.4
	Somewhat effective	3	1.4	1.7	95.0
	Ineffective	9	4.1	5.0	100.0
	Total	181	82.6	100.0	
Missing	System	38	17.4		
Total		219	100.0		

Table 4.28 illustrates the abilities of companies to implement the employee retention strategies within the company. Twenty-eight per cent agree that this programme exists and that it is very effective, 33% felt that the programme is effective, 15% assert that the programme is moderately effective, 4% acknowledged the ineffectiveness of the programme and 1% were not sure and concluded that it is somewhat effective.

Table 4.29: Career Advancement Opportunities

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	87	39.7	43.5	43.5
	Effective	24	11.0	12.0	55.5
	Moderately effective	57	26.0	28.5	84.0
	Somewhat effective	18	8.2	9.0	93.0
	Ineffective	14	6.4	7.0	100.0
	Total	200	91.3	100.0	

Missing	System	19	8.7		
Total		219	100.0		

Table 4.29 shows that 39% of participants have moved to higher positions within their companies and the feeling is that this has been done very effectively. Twenty-six per cent assert that companies have responded moderately effective while 11% agree that in this regard companies have been very effective in advertising opportunities internally for employees to access career advancements. Eight per cent affirm that this has been somewhat effective while 6% feel that companies are not making concerted efforts to consistently provide these opportunities.

Table 4.30: Diversity and Inclusiveness

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	89	40.6	43.2	43.2
	Effective	75	34.2	36.4	79.6
	Moderately effective	31	14.2	15.0	94.7
	Somewhat effective	2	.9	1.0	95.6
	Ineffective	9	4.1	4.4	100.0
	Total	206	94.1	100.0	
Total		219	100.0		

Table 4.30 indicates the overall understanding of the participants on how companies are dedicated to ensure diversity and inclusiveness when they send individuals to training and development activities. Forty per cent have the knowledge of workplace diversity, 34% felt that the company diversity and inclusiveness is effective, 14% stated the existence of diversity and inclusiveness within the company is moderately effective, 0.9% felt that diversity and inclusiveness is somewhat effective and 4.1 felt it is ineffective.

Table 4.31: Job Shadowing and Workplace Learning

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	88	40.2	43.6	43.6
	Effective	56	25.6	27.7	71.3
	Moderately effective	37	16.9	18.3	89.6
	Somewhat effective	4	1.8	2.0	91.6
	Ineffective	17	7.8	8.4	100.0
	Total	202	92.2	100.0	

Missing	System	17	7.8		
Total		219	100.0		

Table 4.31 illustrates the support the company provides for training and skills development of participants in order for them to access new opportunities and learn new fields. Forty per cent of participants felt that companies do offer job shadowing and workplace learning, 25% agreed that in an effective way companies have job shadowing and workplace learning programmes, 16% of participants felt that this happens at a moderate levels, 7% declared that it does not happen at all while 1% asserted that this programme is somewhat effective.

Table 4.32: Project Targets and Performance Incentives

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	56	25.6	29.3	29.3
	Effective	44	20.1	23.0	52.4
	Moderately effective	26	11.9	13.6	66.0
	Somewhat effective	16	7.3	8.4	74.3
	Ineffective	49	22.4	25.7	100.0
	Total	191	87.2	100.0	
Missing	System	28	12.8		
Total		219	100.0		

Table 4.32 illustrates the benefits of training – that companies offer work performance incentives when project targets are reached. Twenty-five per cent of the participants confirmed that indeed performance is incentivised, while 22% declared this as ineffective, 20% felt that this effectively happens at times, 11% felt that this happens at moderately effective levels and 7% reported that it is somewhat effective.

Table 4.33: Participant Training Performance

		Frequency	Per cent	Valid Per cent	Cumulative Perc ent
Valid	Very effective	129	58.9	59.7	59.7
	Effective	76	34.7	35.2	94.9
	Moderately effective	11	5.0	5.1	100.0
	Total	216	98.6	100.0	
Missing	System	3	1.4		
Total		219	100.0		

Table 4.33 illustrates the empowerment provided to employees by companies when they offer training opportunities to them. Fifty-eight per cent of the participants felt that after attending the training, they were empowered and capable to perform their relative duties at work, 34 % felt the training versus performance is effective while 5% felt that it was moderately effective.

Table 4.34: Description of Participants' Satisfaction

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	141	64.4	65.9	65.9
	Effective	56	25.6	26.2	92.1
	Moderately effective	8	3.7	3.7	95.8
	Somewhat effective	3	1.4	1.4	97.2
	Ineffective	6	2.7	2.8	100.0
	Total	214	97.7	100.0	
Missing	System	5	2.3		
Total		219	100.0		

Table 4.34 illustrates individual evaluation of participation during the training. Sixty-four per cent of participants felt that their participation is satisfactory and are happy with how the training went, including the way they had conducted themselves to reach the levels of achievements, 25% regarded the training as effective, 3% felt it was moderately effective and 1% of participants felt that the training was somewhat effective.

Table 4.35: Participants' Learning Opportunities

		Frequency	Per cent	Valid Percent	Cumulative Per cent
Valid	Very effective	149	68.0	69.3	69.3
	Effective	55	25.1	25.6	94.9
	Moderately effective	4	1.8	1.9	96.7
	Somewhat effective	4	1.8	1.9	98.6
	Ineffective	3	1.4	1.4	100.0
	Total	215	98.2	100.0	
Missing	System	4	1.8		
Total		219	100.0		

Table 4.35 illustrates that 68% of the study participants confirmed that companies do offer an opportunity to individuals to practise what they have learned, 25% felt that even though companies offer the learning opportunity more could be done, 1.8% of

participants felt that moderately and somewhat effective and, lastly, 1% felt that this is definitely not happening.

Table 4.36: Training and Skills Development Certificates

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Very effective	114	52.1	54.0	54.0
	Effective	49	22.4	23.2	77.3
	Moderately effective	22	10.0	10.4	87.7
	Somewhat effective	9	4.1	4.3	91.9
	Ineffective	17	7.8	8.1	100.0
	Total	211	96.3	100.0	
Total		219	100.0		

Table 4.36 illustrates that the participants received their training certificate as an indicator that attended particular training. Fifty-two per cent of the participants agreed that the training was very effective and that all documents to prove that there was training were received, 22% felt that the receipt of all documentation regarding the training was effective, 10% of the participants felt that the process of providing everything after the training requires streamlining, 4% stated that it was somewhat effective and, lastly, 7% of the participants felt that providing documentation after the training was ineffective.

Table 4.37: Motivation for Participation

		Count	Column Count % (Base: Responses)	Column N %
Three important reasons why you decided to participate in the training programme	Skills improvement	203	30.4%	94.4%
	Promotion or advancement pursuit	134	20.1%	62.3%
	Enhanced performance	176	26.3%	81.9%
	Learning field change	111	16.6%	51.6%
	Other	44	6.6%	20.5%

Table 4.37 illustrates that 30% of participants asserted that they participated in the training to improve their skills. While 26% participants engaged in training to enhance their performance at work, 20% believed that part of their training expectation would be a promotion or advancement at work, 16% had an interest in pursuing new careers and 6% of participants were not really sure of the reasons for participation except that this was what the company wanted.

Table 4.38: Career Advancement

		Count	Column N %	Column Count % (Base: Responses)
Is your current employer the same employer where you did your training?	Are you using the knowledge or skills acquired from the training?	183	92.4%	22.9%
	Is your training related to your current job?	168	84.8%	21.1%
	Has your performance improved?	184	92.9%	23.1%
	Have you been allocated more responsibilities?	155	78.3%	19.4%
	Has the training added a positive impact except for your improved performance?	108	54.5%	13.5%

Table 4.38 illustrates whether participants are still working for the same company they worked for before the training took place. Ninety-two per cent of participants are still employed within the same company, 84% of participants attended their current job-related training, 92% of participants acknowledged that their performance has improved and 78% acknowledged that they had been allocated even more responsibilities.

4.4 VARIANCE IN EXPLORATORY FACTOR ANALYSIS

Levene's test was used to test inferential statistics used to assess the equality of variances calculated from two or more groups. Variation among and between groups is used to analyse the differences among group means in a sample. In this study there were six factors identified. These factors were grouped together, namely Short Skills Programmes, Trade Testing and Certification, Learnerships or Apprenticeships, In-house or On -the-job Training and Adult Basic Education and Training.

Table 4.39: Equality of Variances on Short Skills Programme

Applicable Factors	Short Skills programme	N	Mean	Std Deviation	Std Error Mean
F2: Skills development expectation	Yes	111	2.02	.889	.081
	No	108	1.82	.850	.084
F5: Enhanced Productivity	Yes	111	2.33	.864	.082
	No	108	1.91	.911	.088

Table 4.39 illustrates variance on short skills programmes. One hundred and eleven participants felt that the training played a pivotal role in enhancing productivity while 108 participants felt that the training did not do much to assist with their daily production targets.

Table 4.40: Equality of Variances on Learnerships and Apprenticeships

Applicable Factors	Learnerships and Apprenticeships	N	Mean	Std Deviation	Std Error Mean
F2: Skills development expectation	Yes	79	1.70	.927	.104
	No	140	2.04	.820	.069
F5: Enhanced Productivity	Yes	79	1.93	.983	.111
	No	140	2.23	.849	.072

Table 4.40 illustrates variance on learnership and apprenticeship training programmes. attended participants mean was high on two factors on the first one: skills development expectations One hundred and forty participants felt that the outcomes of the learnership or apprenticeship were not really met while 79 participants felt that the training expectation was satisfactory.

Table 4.41: Equality of Variances on Trade Test and Certification

Applicable Factors	Trade Testing and Certification	N	Mean	Std Deviation	Std Error Mean
F5: Enhanced Productivity	Yes	60	1.82	.715	.092
	No	No	2.24	.950	.075

Participants were asked whether attending a trade test and getting a certificate will enhance their productivity. Table 4.41 shows that response were 60 participants agreed while 159 disagreed that this is just a formality and the proof of a qualification has no impact on how the skill is imparted within the workplace.

Table 4.42: Equality of Variances on Adult Basic Education and Training

Applicable Factors	Short Skill programme	N	Mean	Std Deviation	Std Error Mean
F2: Skills development expectation	Yes	32	2.00	.989	.175
	No	187	1.91	.855	.063
F5: Enhanced Productivity	Yes	32	2.11	.959	.170
	No	187	2.13	.904	.066

Levene's Test was also used to test whether as part of training and skills development were there any participants who attended and completed the Adult Basic Education Programme as a step towards the formal qualification within the construction industry. Thirty-two participants attended the Adult Basic Education Training (ABET), the result present part of the training and education challenges in the sector that is well known for the low education levels (skilled and unskilled) employees. With regards to productivity of the employee and organisation, 32 participants felt that ABET impacted communication and improved their productivity at work while 187 felt that this type of training has no impact at on improving participants' work.

Table 4.43: Equality of Variances on Use of Knowledge Acquired

Applicable Factors	Are you using the knowledge or skill acquired from the training	N	Mean	Std Deviation	Std Error Mean
F5: Enhanced Productivity	Yes	183	2.13	.842	.062
	No	36	2.10	1.212	.202

Equality of variances was tested in six factors testing participants on knowledge or skills acquired from the training. One hundred and eighty-three participants felt that the knowledge and the skills acquired have assisted in enhancing productivity.

Table 4.44: Equality of Variances on Training related to Current Job

Applicable Factors	Is your training related to your current job	N	Mean	Std Deviation	Std Error Mean
F5: Enhanced Productivity	Yes	168	2.20	.812	.063
	No	51	1.87	1.147	.161

Table 4.44 illustrates the relationship of the participants' current jobs with the training they have attended and completed. One hundred and sixty-eight participants agreed that the training attended was aligned to their current jobs and that it had enhanced their skills and productivity within the workplace.

Table 4.45: Equality of Variance on Improved Performance

Applicable Factors	Has your performance improved	N	Mean	Std Deviation	Std Error Mean
F5: Enhanced Productivity	Yes	184	2.08	.805	.059
	No	35	2.34	1.328	.224

Table 4.45 illustrates a tested equality of variance among all six factors and factor five was significant showing a close mean, while more of the participants agreed that their performance had improved.

Table 4.46: Equality of Variance on more Responsibilities

Applicable Factors	Have you been allocated more responsibilities	N	Mean	Std Deviation	Std Error Mean
F5: Enhanced Productivity	Yes	155	2.23	.760	.061
	No	64	1.87	1.168	.146

Table 4.46 illustrates a tested equality of variance on trained participants' increased responsibilities. One hundred and fifty-five agreed that they had been allocated more responsibilities after they had undergone the training which translated to salary or wage scale changes and increased capacity.

Table 4.47: Equality of Variance on Promotion or Advancement

Applicable Factors	Promotion or advancement	N	Mean	Std Deviation	Std Error Mean
F5: Enhanced Productivity	Yes	155	2.23	.760	.061
	No	64	1.87	1.168	.146

Table 4.47 illustrates the participants' improvement after they had participated in the training. One hundred and fifty-five participants agreed that their companies acknowledged the skills acquired to the extent that they had been promoted or had advanced to the next level of their trade.

4.5 CRONBACH'S ALPHA RELIABLE ANALYSIS

The study sought to investigate the link between training and skills development initiatives and transformation within the construction sector – whether its success could contribute to the local economic development. Cronbach's Alpha Reliable analysis reviewed five factors of the research study to analyse their reliability and consistency. The participants' perception about their participation in training has been positive (0.505–1.063). Factor two highlights skills development expectations (0.426––0.956), showing that the notion has been widely accepted even though implementation and application differ from company to company. On enabling environment for training and skills development initiatives, the response is unimpressive (0.328–0.431). This was because most participants could not relate to the training itself or improve productivity. Factor four highlights employee skills and training development expected outcomes (0.41–0.472). Most of the participants agreed on the outcomes of the training programmes and that the training provided met their expectations. Factor five, highlighting enhanced productivity of the employee and the organisation, stood at (0.320–0.471). Most participants felt that the training interventions could not improve productivity mainly because of the training plan rather than the outcome of the training itself. Factor six shows improved teamwork and adopted company culture (0.321–0.439). It also shows that there was limited consensus as to whether or not the training and skills development interventions contributed positively to enhancing teamwork. The ún-factored' question on induction (0.320–0.328) shows that participants felt that induction processes were not structured or adequately coordinated to achieve the expected results. The 'un-factored' question on being empowered and capable to perform duties (0.310–0.494)

was carried out on the perceived task value scale, showing that participants felt that investment in empowering employees is still among the lower trades.

Table 4.48: Cronbach's Alpha Reliability Coefficient

Factor	Number of items	Cronbach's alpha internal consistence	Strength of association	Factor loading unidimensionallity
F1 Perception about training	12	0.945	Good	0.505–1.063
F2 Skills development expectations	8	0.936	Acceptable	0.426–0.956
F3 Enabling environment for training and skills development	7	0.902	Poor	0.328–0.431
F4 Employee skills and training development expected outcomes	7	0.898	Acceptable	0.410–0.472
F5 Enhanced productivity of the employee and the organisation	6	0.868	Unacceptable	-0.320–0.471
F6 Improved teamwork and adoptive company culture	2	0.856	Poor	0.321–0.439
I attended induction in my area of work	1	0.758	Unacceptable	-0.320–0.328
I am empowered and capable to perform my duties	1	0.758	Poor	0.310–0.494

4.6 DISCUSSION OF RESULTS

An exploratory study was conducted through a questionnaire survey in the nationally based companies in South Africa to gain more insight into whether training and skills development contributes towards transformation in the workplace. Chapter four has assisted the researcher to formulate the objectives and reframe factor analysis. The study analysed the following the distribution of the participants' characteristics, the distribution of participants by type of work, the distribution of participants' perceptions of the attended training and skills development programmes and participants' satisfaction of the training programmes. The study also tested validity and reliability analysis.

The study revealed that there is a possibility of diversifying and transforming the workplace through training and skills development. However, the lack of commitment

to training and skills development makes it impossible to ensure a smooth transformation, especially within the low-wage workers in the construction sector. It was revealed by the study that there is no particular formula applied to ensure that employees at different levels participate fully in training and skills development initiatives within the construction building sector companies.

The study reveals that gender distribution amongst the artisans remain unequal even though the country has progressive legislation in place to address gender domination in any economic industry. Workplace diversification is central to workplace transformation. Disability remains unrepresented while the dominant race remains the Africans in the artisanal field.

The legislation and regulations available serve as a framework to fast track workplace productivity, empower employees as well as ensure individual progress within the workplace. However, the study reveals that institutions that are mandated to enforce these legislations have little power to sanction those who do not comply. Instead, companies are willing to pay the sanction (penalties enforced by government for non-compliance) rather than have a proper project plan that includes capacitating employees. Some of the challenges realised during the study are that the sector is project target based and, therefore, this requires the Construction Education Authority (CETA) to hold regular stakeholder forums not only to offer skills and training solutions but to also offer sector holistic solutions to advance employees and transform the building industry.

The main data from the employee questionnaire survey were analysed. This was done using the Statistical Package for the Social Sciences (SPSS) and analysed using descriptive and group statistics. Cronbach's Alpha Coefficient was used to test reliability of the scaled participants' responses. Reliability and validity were confirmed and presented in a table for better understanding.

The study reveals that the age group 21–40 is more enthusiastic to learn new techniques and participate in training and development within the workplace. The older age groups are more resistant to any changes, including learning a new field. This is amongst the challenges that the management and training and skills institutions are unable to address. The Kolmogorov-Smirnov test was used in the

study to test normality and the correlation of variable identical distribution in six identified factors, namely perception about training, skills development expectations, employee skills and training development expected outcomes, enhanced productivity of employee and the organisation, improved teamwork and adoptive company culture. The results reveal that there is non-probability of obtaining such a correlation coefficient in all the factors.

Employees who participated in training in each company are treated differently. There is no standard set to ensure that training, whether it is formal or informal, is recognised through an incentive, promotion or mobility, or increased responsibilities. Therefore, participation in training and development is one thing and being recognised as a person with the knowledge is another issue which is not currently addressed within institutions that have a responsibility to ensure that the workforce is capacitated with the relevant skills to fully participate economically.

Levene's test was also used to test equality of variances amongst the factors using participants' responses. Participants were asked specific questions regarding the training or skills development attended on short skills programmes. One hundred and eleven participants felt that the training plays a pivotal role in enhancing productivity while 108 participants felt that the training does not do much to assist with their daily production targets. For learnership and apprenticeship training, the mean was high on two factors – one hundred and forty participants felt that the outcomes of the learnerships or apprenticeships were not really met while 79 participants felt that the training expectation was satisfactory. Levene's test was also used to test whether there were any participants who attended and completed the Adult Basic Education and Training initiative as a step towards the formal qualification within the construction industry.

Participants were asked whether attending a trade test and getting a certificate would enhance their productivity. Sixty participants agreed while 159 disagreed that this is just a formality and a proof of qualification and had no impact on how the skill is imparted within the workplace. Participants also responded to the question regarding promotion or advancement and increased responsibilities after they had attended the training. Factor five among the factors received the most positive answers where

participants agreed that the training had a positive impact on productivity and the morale of an employee.

The chapter also discussed the main finding of the study and compared it to the reviewed literature. The South African curriculum seems to lean more toward theory, not to providing technical skills to support industrial productivity. The study revealed that training and skills development initiatives play a pivotal role in changing an individual's life as well as increasing productivity to grow the economy. Technical skills play a significant role in industrial development. Such skills are significant to infrastructure development, mainly supported by the building and civil construction industries.

The study also revealed discrepancies in the current system, where employers seem to be addressing the skills needs differently within the same industry. However, the participants seem keen to improve their skills as well as participate in company strategies to reach and increase production targets. The current policies and systems are well placed but need to be communicated to the sector more and should be streamlined to address the real challenge of closing the gap between low-skilled and high-skilled employees. Transformation is an important tool, amongst many others, to ensure workplace diversification and mobility prospects to those who worked hard for many years in the industry.

4.7 CONCLUSION

The chapter presented data analysis methods, explored the study's results and presented a discussion of the findings. Findings from this study have been found to be consistent with the findings of several related publications on training and skills development. In addition, the dynamics of the industry have been highlighted with its interconnected challenges, the aim of keeping the momentum of growth has been acknowledged and has been explored in comparison with other developing countries. Data findings were described as correlations to the study variables and presented as tabulations. The limitations to this study have also been presented and acknowledged.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the summary of the findings, conclusions and recommendations based on the data analysed in the previous chapter. Some limitations have been identified. The effectiveness of the CETA programmes has been assessed by determining from the participants to what extent the accredited training has been industry certified and if it has contributed to development. The purpose of the study was to investigate the training and skills development effectiveness to positively contribute towards transforming the building sector within the construction industry and local economic development in South Africa. The objectives of the study were:

- to investigate the effectiveness of the Construction Education and Training Authority (CETA) skills and training programmes to transform the industry through skills development;

- to investigate whether employees participate in training and development programmes and that the training provided contributes to the development of both the company and the employees;

- to establish whether the skills provided through learnerships, short skills programmes and apprenticeships within the construction sector are adequately NQF aligned to facilitate progression, mobility and promotions; and

- to assess whether the skills provided through the Construction Education and Training Authority (CETA) directly or indirectly contribute to transformation and local economic development.

5.2 CONCLUSIONS

This section outlines the conclusions of the study drawn from the empirical knowledge collected.

5.2.1 Participants' Personal Information

The construction sector is known as a male dominant sector emanating from the way the sector has conducted its work over the years. However, with the world innovation changed the way of doing things in the sector, and it has improved drastically that it has introduced machines and technology to avoid some of the dangers that the sector formerly presented. The participant's personal information has assisted in finding out whether there is a gender balance across the artisanal field of the building sector within the construction industry. The study revealed that there are few women who are participating as artisans in the building sector within the construction industry. The study also revealed that selected age groups respond positively to learning opportunities than the older generation, which makes it impossible for companies to apply some of the training and skills development measures to the older generations. However, this should not be a hindering factor but should encourage companies to provide incentives to older employees to participate in sharpening their skills. The study sought to find out whether training and skills development programmes attended and completed by participants could translate to diversification of the workforce as well as transform the building sector within the construction industry. The study revealed that it is possible to transform the building sector through skills development and a contribution to local economic development is imminent if more opportunities for sub-contracting and entrepreneurial activities are created.

5.2.2 Participants' Training and Skills Development

The extent of training and skills development implementation within the workplace was investigated. Mainly, the study attempted to measure the impact of training and skills development on an employee as well as identify the benefits to the company. Employees participated in different forms of training. Those who participated in trade testing felt that the training did not contribute much to productivity other than provide them with experiential qualification to allow them to look for greener pastures. Participants who participated in learnerships or apprenticeships believed that the training had enhanced their performance and that companies provided incentives for their achievements, while those who participated in the short courses and in-house training felt that this was just a mere box ticking exercise for compliance purposes.

5.2.3 Participants' Growth and Development

The study investigated the participants' training and skills development perception – whether they hoped that it would present mobility, advancement or promotion as well as whether the participants' goals are aligned with those of the company in terms of training and skills development expectations. The study revealed that participants had hoped that the training and skills development programmes completed would translate to promotion, wage or salary increase or a different field of work within the company. Even though the current legislation and policies compel companies to comply, there is little effort made by Government to ensure that non-compliance results in punitive action and introduce a national system that recognizes employee training and skills development. Hence, transformation is moving slowly and it only happens if a company is committed to the country's development.

5.2.4 Participants' Expectations and Impact

The study investigated the effectiveness of the training and skills development programmes attended and completed by the participants and the impact the training had in the workplace. Participants acknowledged that the training completed had given them the skills they needed and it had increased productivity at work. Some participants have acknowledged that the training attended had allowed them to take on more responsibilities. The study revealed that participants' expectation varied based on the training attended even though the expectation of the impact was the same to enhance productivity to which on a normal situation is incentivized by companies.

5.2.5 Participants' Experience

The study investigated participants' experience regarding the relevance and intensity of the training and skills development completed and attended by participants. Participants confirmed that the training had been practical and relevant to their current jobs (for those who attended training similar to their current roles in the workplace). Participants' expectation regarding trade training was that trade training was supposed to be as practical as the job they were doing, bringing together theory and practice to accommodate even those artisans who cannot cope with theory. The study revealed that the current education system under the NQF outlines clear phases to ensure that the training undertaken in a private and government institution has been adequately accredited to provide effective workplace skills.

5.2.6 Skills Attained and Knowledge Gained

The study investigated whether there have been employees who attended the training and skills development programmes during the period 2016/17 within the three companies that were investigated. The outcomes were positive. It has been revealed that all the participants who attended and completed the training had sufficient skills and knowledge to perform their jobs. The participants and the company that provided the training opportunities welcomed both the outcomes. Participants were mostly satisfied with the practical part of the training and skills development. An added advantage was when the companies assigned more responsibilities to the artisans/ Mastering the tasks at hand and completing projects timeously were additional benefits.

5.2.7 Enhanced Productivity

The study investigated whether the company supported employee goals and if immediate supervisors support the development of employees. The study participants felt that the training attended and completed benefited them in terms of skills attained which increased productivity and this also benefited the company. Most participants agreed that the training attended and completed had enhanced workplace productivity, improved their morale, enhanced their team spirit and allowed them to have a different view on tasks or projects.

5.2.8 Career Advancement and/or Promotion

The study sought to determine whether the workplace training and skills development could translate to transformation. The study revealed that, depending on the type of training provided by the company, from short skills courses to learnerships or apprenticeships, training and skills development programmes can definitely diversify the workplace through promotion, incentives and allocation of more responsibilities. However, the current policies do not compel companies to incentivise individuals who have completed the training and skills development initiatives and, therefore, there is no clear link between training and skills attained with career advancement and promotion within the same employer. This part of responsibility is not even emphasised, let alone addressed in Human Resource Development in the HR office. The study revealed that it is the prerogative of a supervisor or a manager to translate the training acquired to career advancement or promotion.

5.3 SUMMARY OF CONCLUSIONS

The above conclusions revealed that mechanism to capacitate and advance the workforce to enable workplace transformation exists. However, the lack of coordination and aligned understanding to implement and enforce these mechanisms makes it difficult for the sector to translate training and skills development to tangible results. It is inferred from the findings that because of the low number of women and people with disabilities working as artisans in the construction sector, transformation may not be fully implemented. There is a correlation between training and skills development output which could possibly translate to tangible transformation of the construction sector and the workplace. Diversification within the companies happen, but a new paradigm is needed which requires company commitment as part of participation in the development in South Africa. Employees are enthusiastic about change and development and are even happier when they participate in decision making of a project or company. In this way, employees show commitment and eagerness to learn and share their field knowledge. The construction sector does not have a consolidated mechanism to address project-related development of employees. This includes managing the perception around training and development of employees. The economic factors that affect the investment in infrastructure hinder the retention of employees, and it becomes close to impossible to have a quantifiable number of trained individuals retained within the company.

5.4 LIMITATIONS OF THE STUDY

The study was based on employee training and skills development as part of the legislative compliance of companies to develop workers to enhance productivity as well as to transform the workforce and the workplace. It was difficult to get companies to commit to being part of the study because of the challenges that surround training and development of employees, specifically those who work as artisans within the building industry of the construction sector. Amongst these challenges are the continuous layoffs, retrenchments and restructuring emanating from the country's slow economic growth. The study was limited to national companies based in every province in South Africa. However, the response rate was not as expected since some companies who had their training institutions outside the Western Cape and, therefore, the researcher had to depend on the HRD office for the completion of the questionnaire survey. The sample size was limited because of the researcher's

specification to focus only on employees who were trained during the 2016/17 financial years.

5.5 CONTRIBUTION TO THE BODY OF KNOWLEDGE

This is the first study to investigate the effectiveness of training and skills development within the building industry of the construction sector, which could contribute to workplace transformation. The existence of Broad-Based Black Economic Empowerment, with one of the elements as skills development, has placed great emphasis on employee training and skills development in relation to transforming the workplace. The findings of the study suggest that there is a relationship between skills development and transformation. However, there is a systematic alignment that needs addressing in order to measure quantifiable results on outputs. The CETA needs to focus more on providing mechanisms to achieve these results through collaboration with the Construction Commission. The study could also influence publication development to measure both skills development and transformation by relevant government institutions. The publications could be used to assess whether skills and training development contributes to the growth of both the employee and the company. This growth must also serve as a contribution to local economic development.

5.6 RECOMMENDATIONS

Transforming the building sector of the construction sector through training and skills development is a pivotal role of all the stakeholders in the industry. Institutions such as Higher Education and CETA are crucial to introducing systems for measurable outcomes to ensure that transformation in the sector is not only written on paper but must be given a thorough focus, allowing companies to report measurable and quantifiable results. This must not only be a compliant requisite to the Department of Labour, the industry role players must drive it. There are certain barriers to the implementation of SDA such as finance and low employer participation but if effectively implemented, it will improve performance of construction projects through skills development of the workforce (Aigbavboa, Oke Ayodeji & Mokasha, 2016:53). Strategic HRD should be able to move beyond establishing implementable plans to enabling productive workforces and creation of systems to recognise every type of workforce training from short courses to the highest qualifications recognised by the National Qualifications Framework (NQF).

According to Aigbavboa, Oke Ayodeji and Mokasha (2016), a skilled workforce is an essential requirement for the growth of a country's economy and training, therefore, becomes increasingly significant. Education is also known as a development tool for human capital, thus every employee should have the right to develop himself or herself for the benefit of both the company and the individual. The complex nature of the building sector is acknowledged and a there is call for better coordination of resources to ensure that every system delivers expected outcomes.

There is, therefore, the need to increase stakeholder awareness of the importance of skills training and the improvement of training providers' accreditation systems. Training and skills development regulations should be developed for the building sector only, within the construction industry, to encourage employees to participate in and complete training as part of the project plan. This will enable every employee to participate in training and development initiatives.

5.7 FURTHER RESEARCH

The study investigated the effectiveness of the training and skills development in the building industry of the construction sector to contribute to transformation in South Africa. The company's compliance with all progressive legislation and regulations must be reported and be made accessible in the public domain to assist stakeholders in tracking results as well as identifying gaps as early as possible.

Further research is recommended to introduce mechanisms to streamline coordination of all the legislation that is supposed to be made public, report on workplace training and development and measure its impact on diversification, promotion and transformation.

Past research indicates the important of training and development of the workforce. Other studies place more emphasis on redressing past imbalances within the workforce to enable those who were prevented from accessing skills are afforded the opportunity. Also, emphasis is placed on the importance of changing training and skills education systems to respond to the challenges presented by economic changes. A comparative study could be done on women, youth and people with disabilities. Recruitment and retention strategies for the building industry within the

construction sector could be investigated, while other studies could look at strategies to diversify the workplace, specifically looking at HR and HRD strategies.

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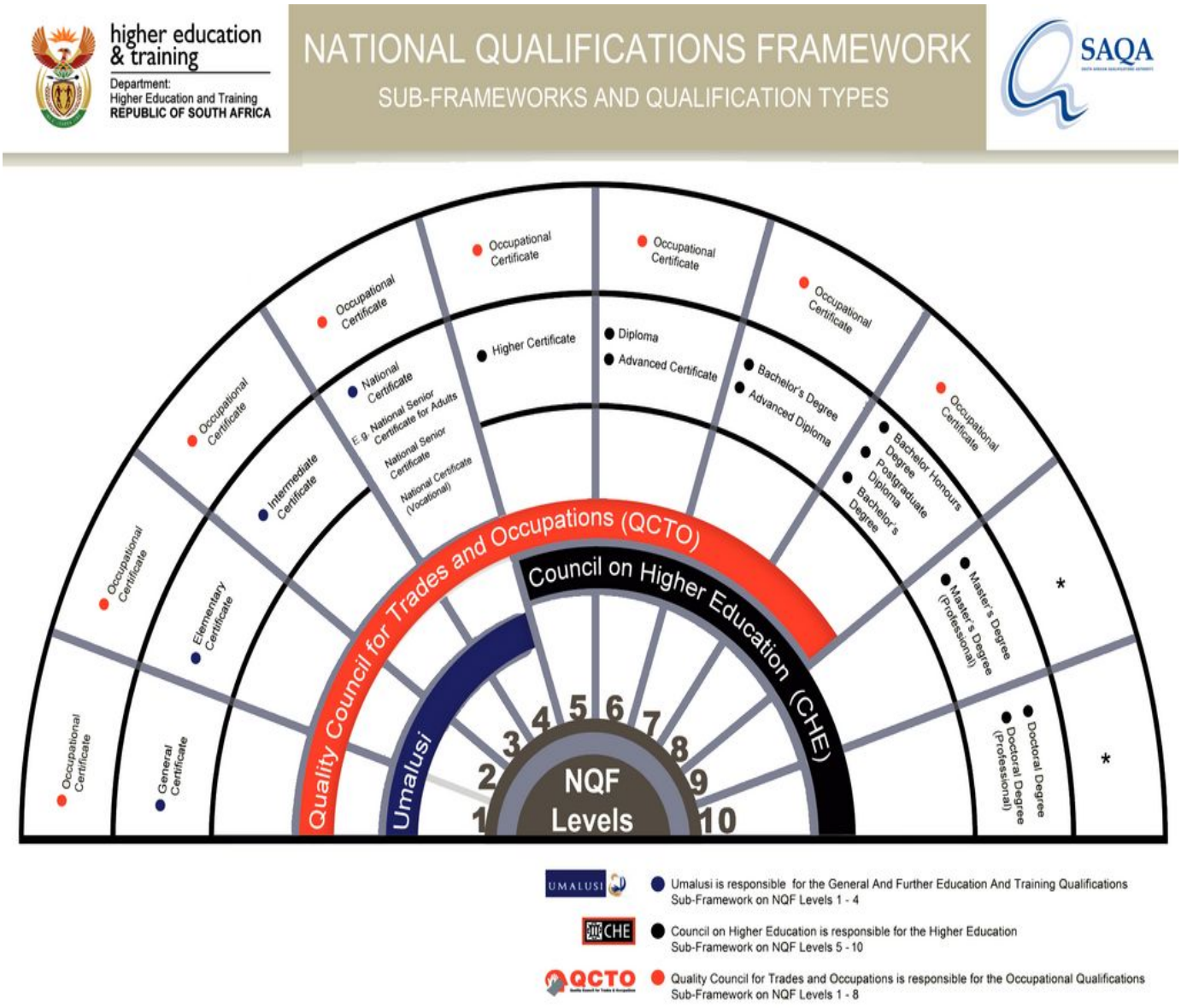
APPENDICES

APPENDICES ALPHABETICALLY	DETAILS OF APPENCES
APPENDIX A	NATIONAL QUALIFICATION FRAMEWORK
APPENDIX B	RESEARCH FRAMEWORK AND DATA COLLECTION SCHEDULES
APPENDIX C	BUILDING COMPANIES EMPLOYEE QUESTIONNAIRE
APPENDIX D	BASIL READ
APPENDIX E	GROUP FIVE
APPENDIX F	AVENG GRINAKER-LTA
APPENDIX G	CPUT ETHICS CLEARANCE CERTIFICATE
APPENDIX H	GRAMMARIAN CERTIFICATE
APPENDIX I	TURNITIN REPORT

APPENDIX A: NATIONAL QUALIFICATION FRAMEWORK



Source: www.dhet.gov.za & www.trainingreviews.co.za

APPENDIX B: RESEARCH FRAMEWORK AND DATA COLLECTION SCHEDULES

STAGE	TASK	PARTIES	INSTRUMENT APPLIED	PERIOD
1	Literature review to develop the topic and to ascertain the gap	Researcher Supervisor CETA Building Companies Accredited training Providers	Literature review Personal interview	Jan 2013
2	Constructing a research topic and research topic approval	Researcher Supervisor	Literature review	June - Oct 2013
3	Proposal Development and proposal approval	Researcher Supervisor	Literature review	Jan 2016 - Feb 2018
4	Designing the questionnaire	Researcher Supervisor Statistician	Approved proposal Literature review	May 2017
5	Conducting the Survey	Researcher	Structured group Interviews Telephone	June – Sept 2018
6	Analysing and interpreting the data	Researcher Statistician	Statistical Programme	Oct 2018
7	First Draft report	Researcher Supervisor	Report (Draft)	Oct 2018
8	Finalising report	Researcher Supervisor	Report	Nov 2018
9	Publishing the results	Researcher Supervisor	Report	Feb 2019

DATA COLLECTION SCHEDULES

DETAILS	COMPANIES	DATE OF INTERVIEWS OR SUBMISSION
Building Construction Employees	Company A	March 2018 (interviews)
	Company B	June 2018 (Group interviews)
	Company C	August 2018 (Electronic)

APPENDIX C: BUILDING COMPANIES EMPLOYEE QUESTIONNAIRE

Likert scale

1	2	3	4	5
Very effective	Effective	Moderately Effective	Somewhat Effective	Ineffective

Section A – Employee Information

This section of the questionnaire is designed to determine a diverse accessibility of skills training or education within the construction industry. We are aware of the sensitivity of the questions in this section; however, the information will assist the researcher to compare the groups of respondents.

NB: please note that the above scale is not relevant in this section.

1. Gender

Female	
Male	

Are you disabled? Yes/No

2. Age

Beween 18 and 24	
Between 25 -34	
Between 35-44	
Between 45-54	
Older than 55	

3. Race

Please tick the appropriate box to indicate your agreement to the following statements	
African	
Coloured	
White	
Indian or Asian	

4. What type of work you do? Yes/No

Please tick the appropriate box to indicate your agreement to the following statements	
Artisan	
Skilled artisan	
Technical expect	
Office worker	

5. Number of years with the company?

Please tick the appropriate box to indicate your agreement to the following statements	
0-5 years	
6-10 years	
11- 15 years	
16 years or more	

Section B: Training and development

6. Have you attended any training in the past two years? Yes/No

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
The training was informative and relevant to my work					
The goals of employee training or development program are clear					
The facilitator used practical examples and or activities during the session					
The material used was connected to my work experience					
The learning environment was conducive to my training (informal, safe and supportive)					

7. What type of training or learning development did you participate in?

Short skills programme	
Trade Testing and certification	
Learnership or apprenticeship	
In-house or on the job training	
Adult Basic Education and Training	

8. How effective was the training you attended?

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
Informative with practical examples					
NQF aligned					
CETA accredited					
Updated within construction industry					
Relevant within construction industry					
Have growth prospectus or upward mobility					
Participation in the training give me the skill I need to do my job					

9. State the duration of the training?

3 – 4 weeks	
Up to 3 Months	
4 – 6 Months	
More than 6 Months, less than 1 year	
1 year and more	

10. What type of institution did you attend the course at?

At the company	
Colleges (FET or NCV)	
CETA accredited training provider	
University	
Private institution	

11. Is your current employer the same employer where you did your training?

are you using the knowledge or skill acquired from the training	
Is your training related to the your current job	
Has your performance improved	
Have you been allocated more responsibilities	
Has the training added a positive impact except for your improved performance e.g. wages or salary increase	

12. What were the training and development outcome?

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
Employees are better prepared at work to achieve the company's goal					
Employees are more motivated and promoted (upward mobility)					
Staff are well trained and require less supervision					
Employees that are engage in continuous learning are able to meet the company challenges					
Employees are retained and are successfully attracted to join the company					

Section C: Growth and Development

13. Does the company have Work Skills Plan (WSP)?

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
Encourage learning at all levels					
Recognize that mistakes are learning opportunities					
Support the expectation of learning with resources for learning					
Have a policy on employee training and development					
Provide time for learning and allow for practice of new skills on the job					

14. Personal development plan

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
Employee development goals aligned with those of the company					
The organization culture support learning as a process					
The company recognize the training, incentivize success and offer mobility opportunities					
The company benefits from the workers development goals					
Immediate supervisor support the workers goals					
The company is dedicated to my professional development					
I am satisfied with my opportunities for professional growth					

15. Three important reason why you decided to participate in the training programme

Skills improvement	
Promotion or advancement pursuit	
Enhanced performance	
learning field change	
Other	

Section D: Expectation and impact

16. Are you satisfied with the job related training?

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
Career advancement opportunities are available to all employees					
I am satisfied with the job related training offered in the workplace					

I am offered an opportunities to apply my talents and expertise					
I am satisfied with the investment my organization makes in training and education					
I am inspired to meet my goal at work					
I adapt quickly to difficult situations					
I proactively identify future challenges and opportunities					

17. Employer recognizes strong job performance?

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
My work impacts with the overall business goal					
My company is dedicated to diversity and inclusiveness					
I am offered job shadowing in other responsibilities within the workplace					
I attended induction in my area of work					
I receive work performance incentives when my section reach targets					
My performance is evaluated constantly					
My employer consider our ideas to do the job better					

Section E: Experience

18. The training has empowered, gave me confidence and I have the knowledge to do my work better?

Please tick the appropriate box to indicate your agreement to the following statements	Very Effective	Effective	Moderately effective	Somewhat Effective	Ineffective
I am empowered and capable to perform my duties					
I am happy with my participation during the training					
I understood my course work					
I completed each and every task I was given during the training					
My facilitator was able to explain task for everyone to participate					
I am able to practice what I have learned in the training					
I received my certificate and I am happy					

Company name: _____

Date: _____

APPENDIX D: BASIL READ

BASIL READ

BUILDING **LEGACIES**

Dear Nkosazana Agrinnette Masiza

Basil Read hereby grants you permission to conduct your research studies at our company, Basil Read commits to the following:

1. Availing the training manager for an interview at an agreed time and date,
2. Providing you with the contact details of as many learners as we have that have

Completed CETA accredited programmes in the past two years. This list will be provided to you no later than 31 July 2017.

Please note that Basil Read will not drive the project and any questionnaire completed by employees will be done voluntarily. Thus, if an employee is not willing to complete a questionnaire^ we cannot force them to do so.

Fore queries relating to the above, please feel free to contact me.

Sincerely,

Ms. Sian Viljoen

Basil Read Training Manager

Basil Read Campus - 7 Ronwo Strict, Hughes ext., Bofeburg, 1459
Private Bag X170, Bedfordview 2008, South Africa
Tel: *27 11 4 W 6300 \ Fax: +27 11 418 6418

APPENDIX E: GROUP FIVE

23 May 2017

Miss Nkosazana Masiza
Email: nkosazang,masiza@gma_il.com

Dear Nkosazana

PERMISSION TO CONDUCT RESEARCH AT GROUP FIVE - COASTAL WESTERN CAPE

Herewith confirmation that we would like to assist in your research by providing employees (o be interviewed.

I will advise numbers soonest.

We trust the above is all In order. Should you require any further clarification please contact the undersigned.

Sincerely

NICCIACKER
HUMAN RESOURCES MANAGER
For and on behalf of Group Five Coastal (Pty) Ltd in his/her capacity as a duly authorized signatory

Five Coastal [Pty) Ltd
Reg No. 2002/911942/07 Action as an agents for Group
Five Construction Limited Reg No 1976/0003166/06

Directors: SP Ellion GB Heckly AG Jooste C May E van Rooyen RM Rundgren NA Smir
HM Soobramonay CM Teixerra RD Thomson QA Wamdack

KwaZulu-Natal Region: 41 Island Circle, Riverhorse Valley, Effingham, Durban 4051 Tel: +27 (0) 10 060 2800 Fax: +27(0) 86 299 7017
Western Cape Region: Plum Park 25 Gabriel Road, Plumstead 7800 Tel: +27 (0) 21 763 6100 Fax: +27 (0) 21 761 7081
PO Box 201219, Durban North 4016, South Africa
coastal@groupfive.co.za

Member of the Master Builders Associations

APPENDIX F: AVENG GRINAKER-LTA

Aveng (Africa) Proprietary Limited
Registration Number: 1931/003300/07

21 August 2017

Nkosazana Masiza
P/A Cape Peninsula University of Technology

Dear Nkosazana,

PERMISSION TO CONDUCT RESEARH WITHIN AVENG GRINAKER.LTA

Following your request to conduct research within Aveng Grinaker-LTA, I am pleased to inform that you have our permission.

Please note that we might not be able to assist with the 100 employees as requested. From your request, you have questionnaires that you need the trainees to complete. This should not be a problem as *we* can facilitate the completion of these with assistance of senior staff on sites. Please note that should you wish personal interviews, you will have to travel extensively to the various sites where these employees are based.

Please feel free to contact me should you need any additional information, or to arrange the rollout of the project.

Kind regards,

Gerda Botha
HR Manager: Learning and Development (OG)

APPENDIX G: CPUT ETHICS CLEARANCE CERTIFICATE

Cape Peninsula University of Technology

P.O. Box 1906 • Bellville 7535 South Africa •Tel: +27 21 4603291 • Email: fbmsethics@cput.ac.za
Symphony Road Bellville 7535

Office of the Chairperson Research Ethics Committee	Faculty: BUSINESS AND MANAGEMENT SCIENCES

At a meeting of the Faculty's Research Ethics Committee on **20 February 2018**, Ethics Approval was granted to **Nkosazana Masiza (204173787)** for research activities of **MTech: Public Management** at the University of the Cape Peninsula University of Technology.

Title of dissertation/thesis/project:	LOCAL ECONOMIC DEVELOPMENT ASSESSMENT ON THE CONSTRUCTION SECTOR'S TRANSFORMATION APPROACH THROUGH SKILLS DEVELOPMENT IN SOUTH AFRICA Lead Researcher/Supervisor: Prof H H Ballard

Comments:

Decision: APPROVED

	2 May 2018
Signed: Chairperson: Research Ethics Committee	Date

Clearance Certificate No | 2018FBREC517

APPENDIX H: GRAMMARIAN CERTIFICATE

Megan Alexander

English Language Editing
Constantia
Cape Town
7806
083 6011 596
meganalexander@mweb.co.za

11 July 2019

Dear Sir/Madam

LANGUAGE EDITING

This letter serves as confirmation that I have undertaken language editing of the Master's thesis titled *LOCAL ECONOMIC DEVELOPMENT ASSESSMENT ON THE CONSTRUCTION SECTOR'S TRANSFORMATION APPROACH THROUGH SKILLS DEVELOPMENT IN SOUTH AFRICA* authored by the researcher, Nkosazana Agrennette Masiza. The focus was on improving the document in areas related to language and minimally addresses issues concerning the overall structure, content and referencing. Language areas include:

- Grammar
- Punctuation
- Style
- Spelling
- Standardisation of terms
- Clarity
- Fluency
- Word choice
- General readability
- Logic
- Coherence

I have indicated all deviations from convention in English language usage and made alternate suggestions to better convey the researcher's intended message.

Thank you.

Yours sincerely

Megan Alexander

APPENDIX I: TURNITIN REPORT

Thesis

by Na Masiza

Submission date: 25-Nov-2018 09:36PM (UTC+0200)
Submission ID: 1044383556
File name: Theses_-_Nkosazana_Agrennette_Masiza_2018.doc (1.37M)
Word count: 29073
Character count: 169764

Cape Peninsula
University of Technology

LOCAL ECONOMIC DEVELOPMENT ASSESSMENT ON THE CONSTRUCTION SECTOR'S TRANSFORMATION APPROACH THROUGH SKILLS DEVELOPMENT IN SOUTH AFRICA

by

NKOSAZANA AGRENNETTE MASIZA

Thesis submitted in fulfilment of the requirements for the degree

Master of Technology/Doctor of Technology: Public Management

in the Faculty of Business and Management Sciences

at the Cape Peninsula University of Technology

Supervisor: Professor H.H. Ballard
Co-supervisor: Mr. Luvuyo Kakaza

Cape Town
Date submitted: December 2018

Thesis

ORIGINALITY REPORT

15%	12%	4%	8%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	ses.library.usyd.edu.au Internet Source	1%
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