



**IMPACT OF STRUCTURED TRAINING PROGRAMME ON EMERGING CONTRACTORS  
WITHIN THE WESTERN CAPE PROVINCE, SOUTH AFRICA**

**BY**

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**Date**

## ABSTRACT

Emerging contractors have relished greater privileges since the first democratically elected government in South Africa came into power in 1994 but are faced with numerous challenges. The government has placed numerous resources, ranging from training and development programmes, enabling legislative laws and regulations in an attempt to address these challenges and to turn emerging contractors to sustainable contractors. Knowledge transfer through training of emerging contractors, either from established contractors in a project set-up or training providers in a class room, has being recognised as the most effective mechanisms for development and growth of the emerging contractors. This study focuses on latter mechanism of emerging contractor development. The intended training outcomes of the structured training offered to emerging contractors by training providers in a class room set-up, remains and they experience several obstacles.

This research focuses on a particular contractor development programme to investigate the effectiveness Western Cape Contractor Development Programme training programme and subsequently to enhance the training programme. The study focuses on specific aspects of training which researcher feels that they were significant: to explore the nature of existing TNA offered at Western Cape Contractor Development Programme , to investigate the trainer's competences required in the WCCDP structured training, to examine the existing monitoring and evaluation indicators used to gauge the effectiveness of the Western Cape Contractor Development Programme structured training offered to emerging contractors and to explore the assessment strategies used at the Western Cape Contractor Development Programme, in order to measure the trainees' learning.

The study adopted a case study approach since it dealt with a particular contractor development programme in Western Cape, South Africa. A triangulation of both quantitative and qualitative methods was used to answer the research questions, achieve the research objectives and overcome matters with validity and bias. Semi-structured interviews were conducted with the programme coordinators, service provider trainer, service provider facilitator and service provider project manager. A total of 50 self-administered closed-ended questionnaires were distributed to gather data from trainees, only 35 were handed back to the researcher representing a response rate 70%.Therefore a purposive sampling was adopted. To corroborate empirical data collected an observation of the training was conducted. Content analysis was used to analyse qualitative data; descriptive and inferential statics using the SPSS software was used quantitative data.

The findings from the study revealed that the Western Cape Contractor Development Programme has lack of comprehensive managerial training needs analysis approach, no measurable indicators established for monitoring and evaluation; programme has no competency assessment or screening process and lack of adequate knowledge on assessment design and implementation.

Therefore, this is largely responsible for the problems at Western Cape Contractor Development Programme and has a negative impact on the programme.

It is evident from the findings of the study that Western Cape Contractor Development Programme must develop a comprehensive and formal training needs analysis process to identify the actual needs, design and implement a proper measurable indicators for the monitoring and evaluation system in order to monitor the progress of the programme, training policies and objectives must be revisited for amend, tighten seriously, implemented and monitored regularly with all the concerned stakeholders, develop a trainer competency screening process and appoint a training expert to ensure that relevant assessment strategies are used for assessing the trainees and ensure that desired training outcomes and objectives are achieved to enhance the programme.

**Keywords:** Emerging contractors, Western Cape Contractor Development Programme, training and development, training needs analysis, assessment strategies, monitoring and evaluation, trainer's competency,

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## **DEDICATION**

This research is dedicated to my late father Mr. T. Mahlobo and grandmother Mrs N. Ngqongisa who always believed in me even during times when I did not believe in myself. My late father taught me how to persevere even during difficult times. Without my mother's unconditional love and support I could not have made it this far, thanks Mommy. To my dearest son, Kumikani thanks for being the pillar of strength during my studies you were such motivation to reach the end. THANK YOU.

## LIST OF ABBREVIATIONS

**ANC:** African National Congress

**CDPs:** Contractor Development Programme

**CETA:** Construction Education Training Associate

**CIDB:** Construction Industry Development Board

**DPW:** Department of Public Works

**EPWP:** Expanded Public Works Programme

**GDP:** Gross Domestic Product

**GNP:** Gross National Product

**HDIs:** Historical Disadvantage Individuals

**M&E:** Monitoring and Evaluation

**NCDP:** National Contractor Development Programme

**SMME:** Small Medium and Micro Enterprises

**TNA:** Training Needs Analysis

**WC:** Western Cape Province of South Africa

**WCCDP:** Western Cape Contractor Development Programme

## GLOSSARY

**Assessment:** is the on-going process of gathering data through measuring, analyzing and interpreting any goal or outcome in any discipline or activity (Suskie, 2009:4).

**Contractor Development Programmes:** is the government programme in which stakeholders involved commit their resources to develop the previously disadvantaged contractors (CIDB, 2009:6).

**Emerging contractors:** is a person or enterprise working as a contractor but is facing constraints in the way of development or those operating in the informal sector as contractors, with a desire to enter the mainstream of the economy (Martin & Root, 2010:64-66; ECDP, 2005:1-2)

**Impact:** according to the Oxford Dictionary; impact means the effect or impression, for this study it is the effect of the structured training on emerging contractors.

**Structured training:** is a training systematic approach that comprises of collection of training methodologies, training material, training devices and instructional techniques in order to gain skills and knowledge (Akehurst, 2004:11; Campbell, Quinkert & Burnside, 2000:4).



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# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 Background

Small and Medium-size Enterprises (SMEs), in particular the contractors, in the construction industry have been seen as an important component of long-term growth and development of the economy of the country (Adendorff, Appels & Botha, 2011:41; Dlungwana, 2005:4209). As a result globally the developments of SMEs have been seen as a key strategy for economic growth, job creation and poverty reduction (Musara, 2010:1). SMEs account for nearly 60% of all employment in the economy and 40% of output in South Africa (StatsSA, 2014:15). The Statistics South Africa Quarterly Labour Force Survey shows total construction employment at 2014Q1 amounted to 1 199 000 in the formal and informal sectors – representing 10.7% of total employment in South Africa. However these SMEs also referred to as emerging contractors are faced with serious challenges (Ncwadi & Dangalazana, 2005:2, Thwala & Mvubu, 2009:1; Moss 2008:1; Thwala & Phaladi, 2009:3; Makhura, 2011:10; CIDB, 2011:iv). For instance, they lack several important factors such as technical and managerial skills, access to work opportunities and funding experience and lack of confidence in business by clients

As a result of the aforementioned challenges it is difficult for Small and Medium construction businesses to turn into sustainable contracting enterprises (Dlungwana & Rwelamila, 2005:4209; CIDB, 2011:5; Makhura, 2011:20; Ackah & Vuvor, 2011:1-2).

The South African government has put in place development plans and strategies to support the emerging contractors; particularly the Historically Disadvantaged Individuals (HDIs) (Martin and Root, 2010:64 Geurts, 2003:5; Thwala and Phaladi, 2009:533; Tshivhase & Worku, 2012:269). These HDIs comprise of non-whites, females and disabled citizens who were segregated from participating in any formal national economic activities during the apartheid regime in South Africa (Martin, 2010:1; Geurts, 2003:24-27). Post-1994 after the African National Congress(ANC) came into power through a fair majority election, the new government had to put strategies in place to redress the political, social and inequalities of the past (Mofokeng, 2012:1-4; Dlamini, 2010:1-3). One of the structural interventions

initiated by the government was to create an enabling environment for rapid development; as a result statutory body was appointed by the Department of Public Works (cibd, 2010:1; Hauptfleisch, et al., 2005:3). This statutory body is known as the Construction Industry Development Board (CIDB) which was mandated through the Construction Industry Development Board Act 38 of 2000 (CIDB 2012:1). Among other issues, CIDB was initiated by the government as a platform to establish a leadership framework for contractor development and skills development (CIDB 2009: 1).

Subsequently the national and provincial public partnered with the CIDB to create the National Contractor Development Programme (NCDP) (CIDB 2009: 1). The NCDP serves as a government programme framework to develop HDIs contractors and align with numerous strategies in the direction of contractor development in South Africa (CIDB, 2011a:1). The Contractor Development Programmes (CDPs) have an important role in supporting emerging contractors in terms of their development and sustainability within the construction industry and CIDB is accountable for 18 CDPs of several forms in South Africa (CIDB, 2009: i).

The Western Cape Contractor Development (WCCDP) is one of the CDPs, which according to the Western Cape government forms part of the Expanded Public Works Programme (EPWP) (CIDB 2009:57). The CDP aims to facilitate skills development and promote business sustainability for emerging contractors within the construction industry (CIDB 2009:57).

The main driver behind the CDP is the lack of technical, managerial and contractual skills development amongst emerging contractors within the Western Cape in infrastructure and construction projects (CIDB, 2009:8). The WCCDP offers training and advisory services; contractors undergo structured training programmes for 6 month duration in any field that they feel they have limitations, such as estimating and tendering (CIDB, 2009:59).

In light of this background, the WCCDP training programme has been experiencing several obstacles that they still need to overcome in order for the programme to achieve positive outcomes.

## **1.2 Overview of the industrial partner**

The research is specifically focused on the Western Cape Contractor Development Programme (WCCDP) which was established in 2008; it is led by the Minister of Public Works and the Provincial MECs (cidb, 2009:12). The programme is committed to the enhanced growth of the construction industry and also forms part of the Expanded Public Works Programme (EPWP) (cidb 2011:57-58). It aims to facilitate skills development and promote business sustainability for emerging contractors within the construction industry (CIDB 2011:57-58). The WCCDP, as part of their own aim is, the creation of suitable conditions for sustainable economy, employment growth through a proper, effective and efficient training of emerging contractors (cidb, 2011:4). The WCCDP makes use of a classroom style of training where a number of trainees (emerging contractors) which are passive as participants or recipients of information; attend the structured training that is conducted in a form of a lecture presentation provided by the service providers (Rass & Rubuluza, 2014). This manner of training or information presentation is efficiently inexpensive, least time-consuming way to present a large quantity of information (Noe, 2010:261). Emerging contractors are selected by the programme management based on the WCCDP criteria CIDB registered grade 2-6 contractors and 2-3 years' experience and the number of participants ranges from 20 to 40 (Rass & Rubuluza, 2014). For participants that are based outside Cape Town, funds are allocated by the management of the programmes for transport and accommodation (Rass & Rubuluza, 2014).

## **1.3 Problem statement**

Emerging contractors in the South Africa are faced with numerous challenges and barriers to turn into sustainable contractors (Thwala & Mvubu, 2009:1). In an attempt to address emerging contractors' challenges, the South African government has created agencies such as the National Contractor Development Programme (NCDP) (CIDB 2011:1-2). Particularly the aim of the NCDP is to enhance the performance of contractors, increase the number of HDIs, create sustainable contracting enterprises and develop the technical and management skills of these emerging contractors (CIDB, 2011:3). As a result, the WCCDP focuses mainly on structured training intervention, not only to address the challenges facing emerging contractors but also to turn emerging contractors into sustainable contractors (CIDB, 2011:4-10).

Despite the identified need for training and development of emerging contractors through CDPs and the good intentions to improve construction business environment of emerging contractors; it appears that the existing WCCDP experience several obstacles and weaknesses towards an effective programme implementation (CIDB, 2011:iv). It is therefore necessary to investigate and examine the training practices associated with the effectiveness of the programme. The problem is that the current training practices of the programme may not yield desired training outcomes.

#### **1.4 Research questions**

- What are the core elements that contribute towards the overall impact of the Western Cape Contractor Programme structured training?
- How are the training needs identified at the Western Cape Contractor Development Programme structured training?
- What competencies are required of trainers in a structured training intervention by the Western Cape Contractor Development Programme?
- What monitoring and evaluation indicators are used for measuring effectiveness of the structured training offered to emerging contractors?
- What assessment strategy is used measure the learning progress of emerging contractors in the Western Cape Contractor Development Programme to structured training?

#### **1.5 Aim of the study**

The aim of the research is to investigate the effectiveness of the WCCDP training programme by focusing on best training practices that have an impact if incorporated properly into their design and deliver of the programme. Subsequently, the study aims to improve this structured intervention.

#### **1.6 Research objectives of the study**

- To explore the nature of existing TNA offered at the structured training of the Western Cape Contractor Development Programmes
- To investigate the trainer's competencies required in the structured training by the Western Cape Contractor Development Programme.
- To examine the existing monitoring and evaluation indicators used to gauge the effectiveness of the Western Cape Contractor Development Programme structured training offered to emerging contractors.
- To explore the assessment strategies used at the Western Cape Contractor Development Programme, in order to measure the trainees' learning in the structured training.
- To examine the core elements that contribute towards that overall impact on the Western Cape Contractor Programme structured training.

### **1.7 Research methodology**

The study adopted a combination of both quantitative and qualitative research approaches in order to answer the research questions, achieve the research objectives and overcome matters with validity and bias. The mixed approach of quantitative and qualitative has constructed a broader view of the study as quantitative presented what is perceived as the gathering of 'facts' (Baxter, Hughe & Tight, 2006:64). While on the other hand the qualitative method has a tendency to focus on sightseeing, in as much detail as possible from lesser numbers of instances and targets to achieve 'depth' rather than 'breadth' (Baxter *et al.*, 2006:64).

The data for the study was collected in the Western Cape in South Africa from programme co-ordinators, trainers, facilitators, trainees and service project manager who are currently involved on the Western Cape Contractor Development structured training. Surveys were conducted among the trainees through distribution of closed-ended questionnaires. Semi-structured interviews were conducted with the programme co-ordinators, trainers, facilitators, trainees and service project manager. Participant observations were part of the data collection techniques adopted to observe the training.

## **1.8 Significance of the study**

The significance of this research study is to explore best training practices for enhancement of the structured training programme by the Western Cape Contractor Development Programme, as training is necessary for development and growth emerging contractors. The findings of the study will be therefore be useful in the improvement implementation strategies for the Western Cape Contractor Development Programme structured training and academic purposes. Since this research will be investigative in exploratory nature, it will make a significant contribution to scientific knowledge and provide deeper insight into the subject matter.

## **1.9 Scope of research**

The research will be limited to data gathered from the Western Cape Contractor Development Programme. The gathered information will be from the programme coordinators, trainer, facilitator, service provider project manager and trainees at the Western Cape Contractor Development Programme.

## **1.10 Key assumptions**

- It is assumed that all proposed samples will be able to contribute and provide the required data for the study.
- The study assumes that respondents on the survey will have sufficient language and comprehension skills to clearly understand and contribute to the survey.
- There is a need for continuous improvement in the structured training programme to make the programme more effective for emerging contractors.

## **1.11 Ethical statement**

In order to comply with internationally accepted ethical standards, participant's identity will be kept confidential; it will not be recorded on the research instruments. The study will eliminate the plagiarisms through the acknowledgement of the authors, reports and sources



utilized through the study. No compensation will be paid to any respondent in the study. Quality assurance will be conducted in respect of the following aspects:

- Quality of data to be captured
- Accuracy in calculations
- General conduct and competence
- Correctness and completeness of interviews and questionnaires, especially with open-ended questions

## 1.12 Chapter outline

**Chapter One- Introduction:** Introduces the study and comprises broad background to the study of impact of structured training to emerging contractor within the Western Cape South Africa and overview of the interested industrial partner. Then the study is narrowed down to the problem statement. This among others includes the research questions, aim of the study, research objectives of the study. Research methodology is presented which displays how the research questions are answered and research objectives achieved. Furthermore the significance of the study, key assumptions, ethical statement, chapter outline and chapter summary.

**Chapter Two- Literature review:** This chapter presents the relevant literature study relating to the effective training practices: how the training needs are identified, how to design and develop measurable indicators for monitoring and evaluation the progress of the programme, the required competencies of a trainer for the programme and the assessment strategies that can be used for assessing the learning of trainees.

**Chapter Three- Research methodology:** This chapter explains the research methodology that was adopted to answer the research questions and address the research objectives. This chapter also discusses research design, sampling processes chosen for the study, instruments that will be adopted for data gathering, reliability and validity are also discussed.

**Chapter Four- Data analysis:** This chapter reports the analysis and interpretation of the data gathered; research findings within the different sampling population and is represented in a form of tables. It then presents the findings discussion of the study.

**Chapter Five- Conclusions and recommendations:** This chapter is based on analysis; concludes the findings drawn upon study findings. Gives an overall conclusion and also makes of the recommendation.

### **1.13 Chapter summary**

This chapter displays the whole research study. The background of the study provided in-depth explanation of the impact of structured training to emerging contractor within the Western Cape South Africa. The goal of the study is to investigate the effectiveness of the WCCDP training programme by focusing on best training practices that have an impact if incorporated properly into their design and deliver of the programme. The ethical considerations for collection of data in this research will comply with assumed standards.

## **CHAPTER 2**

### **2. LITERATURE REVIEW**

#### **2.1 Introduction**

In South Africa there is a compelling need of removing the constraints affecting the development and performance of historically disadvantage individuals (HDIs) also known as the emerging contractors in the construction industry (cidb, 2009:6). The South African government has established the National Contractor Development Programme (NCDP) which has a critical role of supporting the development of the construction industry, growing small contracting enterprise and the development of emerging contractors (cidb, 2009:6). The NCDP has initiated various training programmes in the attempt to address these constraints and to create sustainable and self-sufficient contractors (cidb, 2011:16).

Great emphasis has being placed on emerging contractor training and development, largely due to the challenges faced by emerging contractors. This chapter will deal with a review of relevant literature on the following topics: purpose of Training Needs Analysis (TNA), importance of analysing the trainers' competency before selection of trainer, purpose and different assessment strategies of assessment of trainees during the training, importance of developing monitoring and evaluation indicators before the training.

Furthermore, chapter two seeks to review the following topics: TNA models and methods, examining mechanisms and relevant indicators for monitoring and evaluation (M&E), typical mechanisms instructional competencies required of trainers which are used for selection coordination and the assessment strategies used for assessing trainees.

#### **2.2 Training needs**

##### **2.2.1 Training needs concept**

Training needs is the gap between the actual performance and desired performance that often indicates the current abilities and job requirements that can be closed by the well-

targeted training (McConnell, 2003:66). CMI (2006:1) suggests that impact of training programme depends on knowing what the purpose of the programme is –for trainers, trainees and the entire organisation. Hence it is essential to identify the training needs before implementation of training. Revieve, Berkowitz, Carter & Ferguson (1996:1) argue that training programmes is likely to be successful and purposeful if the actual training needs of a particular group of individuals are identified.

In the South African construction industry there is a need for improving the overall performance of emerging contractors so that they can compete with international construction firms and became sustainable contractors (cidb, 2011:iv). Numerous contractor development programmes in South Africa adopts the structured training offered to emerging contractors by training providers (service provider) in a class room set-up. The service providers are required to understand the philosophy, goals and outcomes of these training programmes due to the higher quality demands of training service and rapid changes in the construction industry (Revieve *et al.*, 1996:1). Although, the CPDs are turning to external assistance for training; it is important that service providers target the key areas where training is needed for guaranteed returns on the investments due to limited resources and funds (CMI, 2006:1).

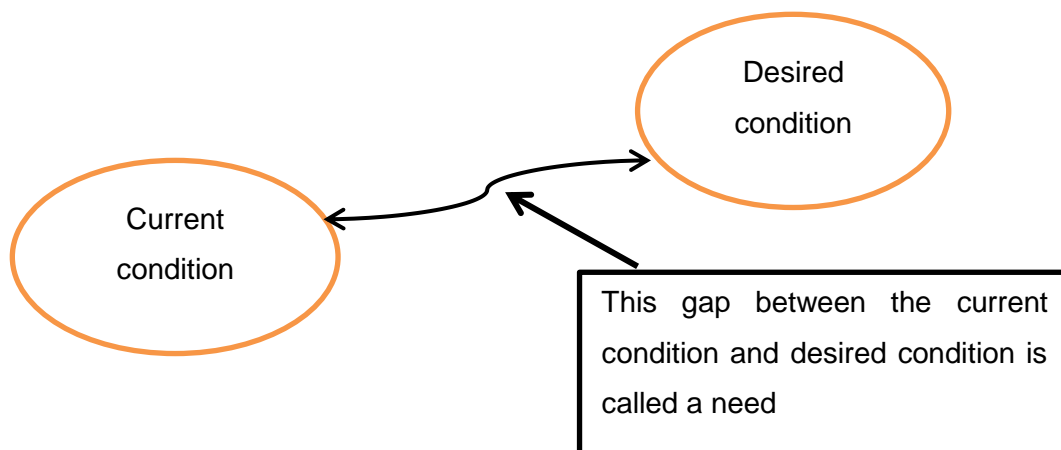


Figure 2.1: Performance gap

Source: Gupta, Sleezeer and Russ-Eft (2007:15)

Literature from several studies have identified that emerging contractors are faced with numerous challenges, ranging from lack of entrepreneurial skills to lack of managerial and technical skills which has been a common problem for emerging contractors (Ntuli & Allopi, 2014:573; Buys & Ludwaba, 2013:74-75). Skills development and shortage remains a

pressing responsibility for South African government to address these challenges by identifying the training needs for emerging contractors (Buys & Ludwaba, 2013:573).

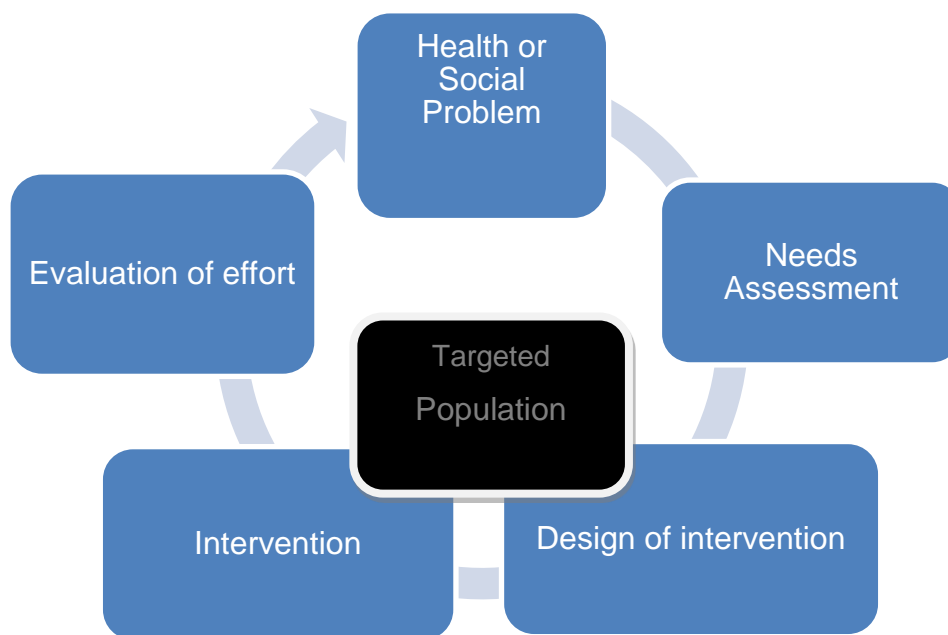
For a solid diagnosis it is crucial to determine the areas where training is needed; the identification of training needs is recognised as the primary step before a training process commence (Alkinani, 2013:54). Training should be framed based on the requirements and needs assessment of training once the needs have being identified. United Nations (1996:103) argue that content structure and delivery method to suit the nature of participant should be based on training needs identified. Broadly 'Identifying the training needs' step provides answers to questions such as where and why training is needed, what needs to be trained and who needs the training (Alkinani, 2013:54). A considerable amount of literature suggests that neglecting the training needs analysis step or having no solid diagnosis for the training undermines the critical key areas (CMI, 2006:4; Altschuld, 2010:4-5; Landy & Conte, 2010:325). It is therefore imperative that although there is an acknowledge of broader problems facing emerging contractors such as lack of managerial and technical skills, it is necessary to identify specific training needs before implementation of any structured training.

### **2.2.2 Training Needs Analysis (TNA)**

There is a large body of literatures that have studied the process of training needs identification and defines it as the systematic process of diagnosing gap between current performance and desired performance (Grundy & Brown, 2012:235). This definition confirms the tie between training needs analysis and training needs assessment; although both terms are mostly used interchangeably (Glenn, 2009:18). There is no clear distinction made between training needs assessment and training needs analysis, to extend that researcher such as Kubiak (2012:237) and Naik (2007:75) report that training need analysis is similar to training needs assessment or training requirements analysis.

There has been relatively little literature published on the distinction between training needs analysis and training needs assessments. However Barbazette (2006:5) defines training needs assessment as a process of collecting information to determine the needs of training. Reviere *et al.* (1996:12) states; training needs assessment are not conducted out in a vacuum i.e. 'thumb sucked'; some organisation that are faced with external and internal political pressures which need to be considered at all times as illustrated on figure 2.2. According to Royse, Station-Tindall, Badger & Webster (2009:3) these variations are a good

and brief description of training needs assessment: Training needs assessment is a tool used to estimate deficiencies, any effort that attempts to determine need and an activity that gages gaps and insufficiencies.



**Figure 2.2:** Needs cycle

Source: Reevie, Berkowitz, Carter & Ferguson, 1996

While on the other hand training needs analysis is a systematic process of collecting information to indicate the need for having training intervention (Barbazette, 2006:5). In this situation it is the anticipation to improve current emerging contractor performance or to correct deficiencies which are referred to as emerging contractor challenges. This view is supported by Tobey (2005:2) who argues that training need analysis is to identify problems and understanding them fully.

Training needs analysis is conducted ahead of the programme design and planning because it makes sense to understand the appropriate intervention before addressing the problems and needs of beneficiaries (Glenn, 2009:18). Therefore training needs analysis is just a superior way of saying skills diagnosis (Grundy & Brown, 2012:235; Landy & Conte, 2010:319). The reason for defining the terms is to prevent any misunderstanding between training needs analysis and training needs assessment as their may contribute confuse. Numerous studies have considered the relationship between training needs analysis and

training needs assessment; in order to understand the concept of training Needs Analysis (TNA) (Iqbal & Zain, 2011:447). Based on articles and research journals, Iqbal and Malik (2011:73-76) offered a broad theoretical framework of the TNA family definitions on Table 2.1.

**Table 2.1:** TNA family definitions

Definitions	Authors
1-Needs	
Need is the gap between current and desired (or required) results, or (stated another way) the gap in results between 'what is' and 'what should be'.	Kaufman (1994)
A learning or performance gap between the current condition and the desired condition is called a 'need'.	Gupta et al. (2007, p. 14)
In its simplest form, a need is a measured discrepancy between the current state (what is) and the desired one (what should be).	Kaufman (1994, p. 14)
2- Needs assessment	
Needs assessment is a process for identifying needs and placing them in order of priority on the basis of what it costs to meet the need versus what it costs to ignore it.	Altschuld & Lepicki (2010)
A means of determining the training and development systems and programmes needed by the organization, employee groups, or individual employees to make the organization competitive in its industry, improve productivity, build employee morale and job satisfaction, and improve promotion potential and foster career development. Needs assessment identifies gaps in capabilities, abilities, and on-the-job results (performance), and places the identified needs in an order of priority for resolution	Kaufman (1994, p. 14)
Needs assessment is a process of figuring out how to close a learning or performance gap. It involves determining what the important needs are and how to address them.	Tracey (2004, p. 457)
A needs assessment is a formal process to 'obtain information on the two states (current versus desired), compare them, identify gaps, and arrive at needs-based priorities for organizational actions'.	Gupta et al. (2007, p. 14)
Need Assessment is defined as 'an investigation, undertaken to determine the nature of performance problems in order to establish the underlying causes and the way training can address them'.	(Erasmus et al, 2000).
3-Need analysis	
The process of determining the reasons and causes for a need so that appropriate interventions may be identified and later selected.	
Breaking down a need to identify its causes and its relationships with other needs. This is one of the means of identifying current	Altschuld & Lepicki (2010)

or projected skills or deficits among employees. It may involve the use of assessment centres, individual interviews, psychological tests, and so on.	Kaufman (1994, p. 14)
4-Training needs assessment  'Training needs assessment involves the study of ways of designing and developing instructional and informational programmes and materials, after the performance analysis has determined that training or informational materials are indeed appropriate'.	Tracey (2004, p. 457)
'A systematic study of a problem or innovation incorporating data and opinions from varied sources, in order to make effective decisions or recommendations about what should happen next'.	Rossett (2009, p. 31)
'A training needs assessment identifies specific problems within an organization by using appropriate methods of gathering information (such as surveys, interviews or observations), determines which of the problems requires a training solution, and then uses the information to design training interventions that solve the original problem'.	Rossett (1987, p. 3)
Training needs assessment is dominated by senior management decision and supervisors' opinions. The skills inventory is the most widely applied formal technique. Organizations tend to pay more attention to customers and work groups when defining training needs. In general, objective and formal methods should be adopted more widely (e.g. training audits).	Mathews et al (2001)
5-Training needs analysis  The first step in the training process. Designed to identify performance gaps that can be remedied by training. It consists of surveillance, investigation, and data analysis.	Tracey (2004, p. 678)
Training needs analysis is the initial step in a cyclical process which contributes to the overall training and educational strategy of staff in an organization or a professional group. The cycle commences with a systematic consultation to identify the learning needs of the population considered, followed by course planning, delivery and evaluation	Gould et al (2004)

Source: Iqbal and Malik (2011:73-76).

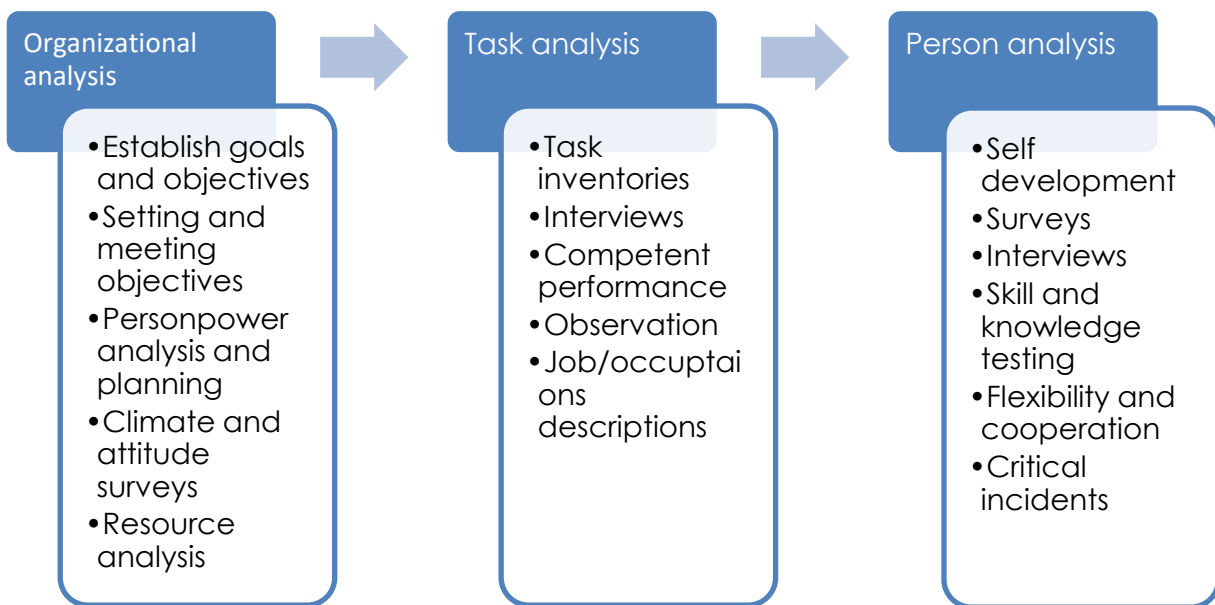
Training needs analysis (TNA) term will be used for the purpose of this study because it is reflected as the most commonly used, also most training practitioners and organisation understand it.



### 2.2.3 Levels of analysis

The most globally used method for examining the training needs is the three-fold approach known as; Organisational Analysis, Task Analysis, and Individual Analysis

Therefore, data must be collected from all three levels to design a training needs analysis. These analysis are shown and discussed on figure 2.3 (Furnham, 2010:46; Landy & Conte, 2010:319) below.



**Figure 2.3:** Three-fold approach of needs analysis

Source: Aamodt, (2010)

TNA must be thought as an intervention such as training; for it is procedure that interrupts organisation, task and individuals' needs and its success depends largely on the support of the organisation (Goldstein & Ford, 2002:37). The first step to TNA is to gain the support of the organisation; this suggests a give-and-take relationship between the training management and organisation (Goldstein & Ford, 2002:37). This also means that organisational conflicts and disputes must be resolved before training programme design and implementation; successfully interventions are characterized by highly motivated

individuals (Goldstein & Ford, 2002:37). It is suggested that early in the project a two-way communication must be encouraged and strived for (Goldstein & Ford, 2002:37).

### **2.2.3.1 Organisational analysis**

Organisational analysis is the examination of available resources, organisational goals and organisational environment to determine the nature and direction of the training (Landy & Conte, 2010:319). Furnham (2010:461) adds that organizational analysis examines where and what kind of training is needed in the organisation; where the training is mostly needed in the organisation and what it is needed for. Organisational analysis involves a systematically assessment of managers, training co-ordinators and the technological support for the training transfer; can also assist to ensure that training that follows the overall organisation strategy (Landy & Conte, 2010:319).

### **2.2.3.2 Task analysis**

Task analysis involves a systematic analysis of trainees, work task and conditions that constitute a task which are connected with the job (Waitoki, 2012:121). Task analysis methods can be distinguished on the basis individual's jobs and tasks in order to determine the content of training (Erasmus et al., 2006:128). The main purpose of task analysis is to detect the components of an assignment that can be utilised to develop training material (Waitoki, 2012:121). Which in the case of WCCDP, it is the skills development for emerging contractors.

Various studies have concluded that task analysis mainly examines the training content (Landy & Conte, 2010:319; Cekada, 2011:31; Alkinani, 2013:72), which can consists of developing the task statements, determining the homogenous task clusters (i.e. grouping of similar tasks) and identifying knowledge, skills, abilities (KSAs) required for the job.

There is a variety of methods that can be used to determine the skills, knowledge, attitudes and competences required to perform tasks, so once the skills, competences and task have being identified training may be based on the KSAs needed (Furnham, 2010:461).

According to Waitoki (2012:123) the training content reflects on knowledge, skills and abilities needed: Knowledge (K) of factual material that a trainee needs to learn, Skills (S) that a trainee needs to learn and Abilities (A) - the possession of basic abilities that can be developed through training.

### **2.2.3.3 Individual analysis**

Individual analysis needs identifies the gap between the individual's current competencies and those identified as being necessary or desirable and these needs can be either narrow or broad in terms of scope (Jackson, Schuler & Wermer, 2011:283). The broad approach involves matching actual performance and the least suitable standards of performance, which can also be used to determine the training needs for the training programme content (Jackson *et al.*, 2011:283). While on the other hand; narrow approach compares trainee proficiency on the skills needed with the proficiency level required for each skill (Jackson *et al.*, 2011:283).

This analysis, involves needs of individuals who information can be attained via appraisal, questionnaires, interviews, tests, and assessment centres (Furnham, 2010:46). Individual analysis is a process of identifying the characteristics of learners who will be trained, a number of learner aspects must be identified, prior to training assumptions can be made about the target population proficient (Labesse, 2008:25). Landy and Conte (2012:320) state that training providers should assess the future trainees by using variety of methods to identify their weaknesses so that training and development programme can be designed to address their weaknesses. This relates to identifying the gaps in the employees or entrepreneur of an emerging contractor.

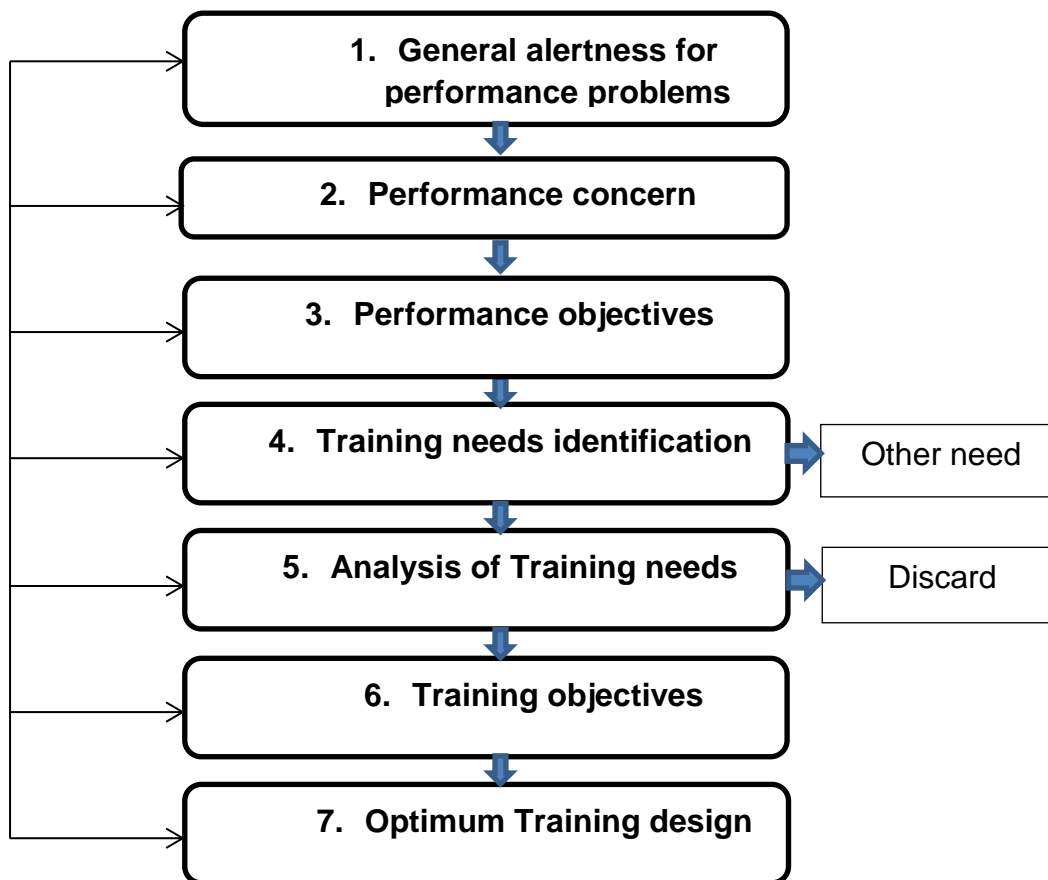
### **2.2.4 Training needs analysis models**

TNA models have an interdisciplinary in the fields of research as it comes in various applications and variety of professions; to determine the suitable TNA model trainers should be guided by their objectives and purposes of the organisation (Harris & Short, 2014:332). For determination of training needs Harris and Short (2014:333) suggests that systematic approach is more meaningful to have; as previously discussed that needs determination

component is essential for successful implementation of training needs. There's a variety of models, techniques and approaches that are utilised to establish needs and it is not possible for this study to investigate all the existing models. Therefore the study will focus on two models that can be utilised by the WCCDP, namely Peterson's TNA model and Goldstein & Ford's model. These models provide a direction and focus on the framework and analysis process within development programmes such as the WCCDP (Penfold, 2006:42). It is important to note that TNA models are not suitable for all situations, suitability of a TNA model is dependent on its purpose, goals and objectives of the analysis and the organisation (Penfold, 2006:42).

#### **2.2.4.1 Peterson's Training Needs Analysis model**

There is a great awareness that through training; individuals and organisation benefit greatly but this depends on the accurate analysis of the training programme which involves a programme planning and design to address the right issues (USAID, 2008:29). Before training design, issues and requirements must be carefully considered and it is important to develop a systematic understanding of what needs to be trained, where training is needed and who will be trained (Landy & Conte, 2010:319).



**Figure 2.4:** Training Needs Analysis Process

Source: Peterson (1998:11)

**Stage 1-** General alertness to performance problems

This step entails the awareness development of the current and anticipated performance problems although it is ideally known but it's required to look into great depth of the current performance problems (Peterson, 1998:9).

**Stage 2-** Performance concern

In the TNA there a need to identify the performance problems and discrepancies and that's when the TNA process takes a full swing; there's a difference organisation expectation and what it actually performance (Peterson, 1998:9, 76-77).

### **Stage 3- Performance objectives**

There's a need to establish the performance objectives which will provide the answers to questions such as what, when and how will the task be performed (Peterson, 1998:37).

### **Stage 4- Training Needs identification**

Training needs must be separated from non-training needs; identifying training needs is a critical activity for human performance improvement that can be met by some kind of intervention (Peterson, 1998:8-9).

### **Stage 5- Analysis of training needs**

Analysing training needs means to find an appropriate approach in identifying the training needs which answers the question of what kind of training is needed (Peterson, 1998:93).

### **Stage 6- Training objectives**

Training programme must develop training objectives which are defined as the statement describing as intended outcome rather than a process; specifying what trainees must be able to do after training (Peterson, 1998:42).

### **Stage 7- Optimum training design**

This entails selection of the appropriate training design; resource needed by the programme and who will deliver the training answering the how, when, why and where questions about the training programme (Peterson, 1998:65).

#### **2.2.4.2 Goldstein and Ford's TNA model**

Levels of analysis consists of three analysis : Organisational analysis, task analysis and person analysis but what makes Goldstein and Ford's model different is that it has of five levels (Blanchard & Thacker, 2007:107; Goldstein & Ford, 2002:35). The unique five analysis levels are; organisational support, organisational analysis, requirements analysis, task analysis and individual analysis (Goldstein & Ford, 2002:35).

#### **2.2.4.2.1 Organisational support**

Needs assessment must be thought as an intervention rather than a task as it interrupts organisational members' daily routines which are your programme facilitators and directors (Goldstein & Ford, 2002:37). It is important that training needs assessor must first gain trust of all the stakeholders involved for a successful analysis of the trainees' needs (Goldstein & Ford, 2002:37). For effective training system organisational conflicts need to be addressed and examined; interventions are branded successful if the highly motivated people are tangled (Goldstein & Ford, 2002:37). Organisational support comprises of two key factors: establishing a relationship with top-level management and establishing a relationship with members of the organisation (Goldstein & Ford, 2002:39-40).

#### **2.2.3.2.2 Organisational analysis**

Organisational analysis has a broader examination of whole system-wide components of organisation that might affect the training programmes (Goldstein & Ford, 2002:41). Such as the organisational goals, transfer climate for training, resources of the organisation and internal and external constraints present in the environment (Goldstein & Ford, 2002:41).

#### **2.2.3.2.3 Requirements analysis**

Requirements analysis is the examination of the whole assessment procedure to function properly; it consists of numerous specifications that must be completed prior to collection tasks and KSAs (Goldstein & Ford, 2002:50).

#### 2.2.3.2.4 Task and knowledge, skill and ability analysis

Task analysis are the how task are accomplished or how the work or activities operations are performed; it is not the description of workers but the description of tasks (Goldstein & Ford, 2002:59).

#### 2.2.3.2.5 Person analysis

The final step in the needs analysis is the individuals that require training; at this stage that assessor has already accomplished the organisational analysis which permits the understanding of the whole training system (Goldstein & Ford, 2002:75). The person analysis focuses on the assessment of how the trainees apply the KSA rather than determining the necessary KSAs (Goldstein & Ford, 2002:75).

### 2.2.5 Methods of collecting the training needs data

To assess the future training needs; needs must be analysed using different methods of gathering data and these methods vary from commonly used such as advisory committees, assessment centres, focus groups and interviews as explained on table 2.2 (Sims, 2006:71). During data collection a sample size and distribution should be carefully considered; it may not be economically or logistically practicable to interview every potential trainee but it's important to get data from a representative sample (Morrison, Ross & Kalman, 2011:39)

According to Tobey (2005:76) these are some of the factors the training management must consider when doing data collection: time needed for the progress, organisational resources, availability of data sources and location of data sources.

**Table 2.2:** TNA methods

Method	Explanation
1- Delphi Method	Delphi is a group discussion method which allows communication between participants who are distanced from each other. Basically, the method is based on an understanding of the concept of group dynamics. Firstly, it is recognised that each participant does not have the same information. This generates the need to make decisions as a group in order to produce better decisions. Secondly, some members may not have been encouraged to offer their opinions and may feel



	uncomfortable in doing so, especially to those members of the group in higher level positions. The Delphi method was created in order to address these needs. The use of Delphi in TNA is recommended as one of the tools to analyse training needs.
2-Questionnaires	Questionnaires are the most widely used method of data gathering for needs assessment. They are the most economical as they can be quickly distributed among a large group, are relatively simple to administer and are straightforward and easy to analyse.
3-Advisory	This is another form of group decision creating technique which involves employees at different levels in organizations who have information regarding an issue. The advantages of this method are that it builds management involvement and sponsorship in the TNA process, it is inexpensive to carry out and it involves key decision makers, thus making the task of implementing the results easier (McCoy, 1993). However, this method is time consuming and it is sometimes difficult to organize meetings involving all the members, and there is a tendency towards 'groupthink' syndrome in the group decision making.
5-Document reviews	There are many readily available documents which can provide data for TNA exercises like previous research and studies. Examples of these include those that give information on employees' productivity, absence rate, organizational charts etc. The advantages of the available data are that they can provide objective evidence regarding performance problems and analysts do not have to spend too many resources in gathering them. However, existing data must be treated with caution. They tend to be incomplete and do not show the background and causes of the problems, are usually quite old, and skilled data analysts are needed in order to examine and make sense of the data in the context of TNA.
5-Focus group	This method involves small groups discussing issues or problems to produce new ideas, solutions and proposals. The use of focus groups has become popular in the marketing profession because it is useful for gathering information on customer behaviour (McCullough, 2011). Focus groups are also useful for assessing training needs when used in conjunction with other data-gathering methods. This is regarded as the most effective method for teaching problem solving and decision-making skills. As such, it is probably more useful for management than staff level training.
6-Assessment Centres	After employees' selection and promotion, assessment centres are widely used to determine employees' training needs (Beck, 1983). Assessment centres involve the use of various combinations of measures to identify training needs. Examples of measures that can be used are psychometric inventories, interviews, observed performance on simulated tasks, written tests, peer ratings, role plays, in-basket exercises, business games and presentations (Osborne, 1996; Beck, 1983). Due to the variety of exercises and multiplicity of assessors the results of assessment centres tend to produce specific, reliable and valid information regarding employees' strengths and weaknesses. This allows the most suitable training needs for the

	employees to be determined. However, assessment centres may not be practical for all organizations as they can be quite expensive. They may only be suitable for large and well established organizations that can afford such complicated and comprehensive training systems. Thus, this method is normally used only for senior-level employees.
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Source: Jimal, (2006)

As illustrated in the table2-2 different methods suit different circumstances so there's no specific method that can be recognized as being the best, it's a matter of which method is appropriate for the training organisation (Alkinani, 2013:78).

### **2.3 Trainer's competency in construction**

There are numerous variables that potentially influences that success of a training programme and learning experience such as the course content, environment, assessment tools and of course the trainer (Conway & Cassidy, 2006). Gauld and Miler (2004:9) added that the effectiveness of trainer who delivers the actual training has significant returns on the training investments. Moreover, selecting the suitable trainer has become one of the major parts of the training programme management (Conway & Cassidy, 2006). Although the WCCDP programme employs use of a consultant training service provider delivery of the training; there is a need for a unified approach to qualifications and competence requirements for trainers in the WCCDP. Therefore, training management needs to be clear on the requirements which stipulates what trainers need to possess in order to deliver quality training (Barazette, 2008:151).

When designing and planning training programme often the skills, competencies and abilities of a trainer are overlooked (Buckley & Caple, 2007:278). This could comprehensively have a negative impact on training of emerging contractors because trainers are responsible for trainees' learning, training and for development. According to Maddocks and Yelon (1986:9) training programme managers must have some mechanism to specify the instructional competencies required of their trainers, which can be used for trainer selection. Hence the quality of training is placed heavily on trainers, who are involved in the actual delivery of the training (Buckley & Caple, 2007:278).

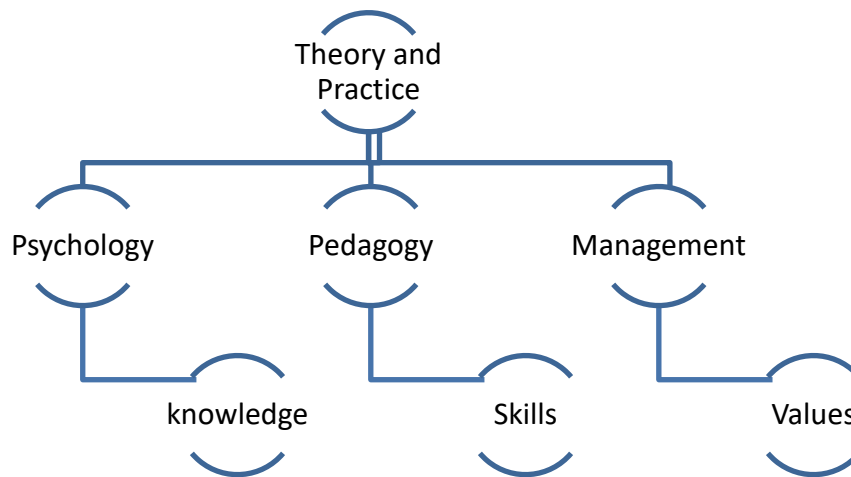
When investigating the trainer's competency, it is important to understand what a competency is. Competency is grounded on what an individual can do or does; if a person is competent then the results are possibly outstanding performance or effective performance

(Barabazette, 2005:14). Sanghi (2007:9) adds that competency refers to the behaviour by which is achieved meaning it describes what a person can do. The concept of competency is therefore concerned with the meaningful goals and content of learning to bring about personal development to trainees (Maddocks & Yelon 1986:9). Competency also embodies the ability to transfer skills, knowledge and abilities from one area to another (Sanghi, 2007:9). Turtorean (2012:801) defines competencies as the essential description of skills, knowledge, behaviours, attitudes and abilities that trainer must possess for the required effective performance.

### **2.3.1 Competencies of trainers in contractor development programmes**

The training programmes have become a monotonous activity; major benefit to trainees as it meant for upgrade and update emerging contractors' knowledge, skills and abilities(KSIs) (Narang & Mahmood, 2011:183). There has been an increase in the continuous research of training especially in the areas of managers and trainers who are responsible for the overall delivery of the training programme (Narang & Mahmood, 2011:183).

Trainers need to develop themselves skills, abilities and knowledge in order to improve their training styles; most studies of trainers focus on the trainers' roles rather than the trainers' competencies (Turtorean, 2012:801). The fundamental element of competency as defined above is to possess specific set of knowledge, skills, and abilities (KSIs). Turtorean (2012:802) adds that these KSIs are taken from Psychology, Pedagogy and management fields which are developed through theory and practice.



**Figure 2.5:** Structure of the competence

Source: Turturean (2012:802)

Galibraith (1998) cited in Gauld and Miller (2004:10) regarding questioning and feedback as the most influential training competency. In contrast, Goad (2010:10) points out the number of competencies that effective trainers must have and are not limited to the following; Managerial ability, Analytical and Problem-solving skills, Communications skills, Information literacy, and Computer Literacy.

**Table 2.3:** Current Competencies of Trainers

Business/Management	Interpersonal	Personal
Applying business acumen	Building trust	Demonstrating adaptability
Analyzing the needs and proposing solutions	Communicating effectively	Modelling the personal development
Thinking strategically	Leveraging diversity	
Driving results	Networking and partnering	
Planning and implementing assignments	Influencing stakeholders	

(Mitchell, 2006:2)

Lieb (2001:3) cited in Gauld and Miller (2004:11) considers motivation, reinforcement, retention, transference, creating comfortable learning environment to be the most important competencies because they allow trainers to redirect the trainees' thinking and attention.

### 2.3.2 Positive and negative qualities of trainers

In order to understand and decide on the selection criteria for the trainers, it's important that positive and negative qualities of the trainers are identified (Buckley & Caple, 2007:278). Buckley and Caple (2007:279) states the following as some of the poor trainer's characteristics observed;

- Adopting a highly directive style of teaching which does not allow participation or confirmation that learning has taken place;
- Making unrealistic assumptions about the trainees' level of knowledge or failing to establish their level of knowledge in the first place;
- Displaying impatience or intolerance when trainees fail to understand or are slow to learn;
- Lacking commitment to the subject being taught or to training as an important function in the organization;
- Lacking in verbal/oral skills;
- Trying to teach too much too quickly;
- Refusing to accept criticism or advice on teaching methods;
- Lacking in sociability and interest in the trainees;
- Having an untidy appearance;
- Creating dependency by either imposing solutions on the learner or being too quick to suggest ideas or ways forward;
- In giving feedback, placing too much emphasis on the learner's failures and weaknesses;
- Supporting a 'divide' and 'rule' policy amongst trainees; being too judgemental and not listening to the learner's views with an open mind and with respect;
- Trying to be too clever and win or score a point against the learner;
- Becoming involved in, or provoking an argument with the learner, thus creating a defensive and restrictive climate;
- Not remaining objective and becoming too embroiled or personally involved in the situation or problem

As we have identified some of the poor qualities above, the list below illustrate some of the good qualities of trainers (Buckley & Caple, 2007:279-280):

- Demonstrating technical competence in the area being taught;
- Showing a 'natural' ability to teach and gain satisfaction from it;

- Possessing a high level of interpersonal skills;
- Being good listeners and questioners;
- Having a genuine interest in people;
- Being flexible in the use of training strategies and tactics;
- Valuing the need for thorough planning and preparation;
- Accepting a share of accountability for the learners' future performance;
- Showing genuine concern for the learner to establish an effective and helpful relationship;
- Influencing the learner to develop greater autonomy;
- Positively reinforcing a learner's success to encourage him or her to be more proactive;
- Encouraging learners to think through issues to generate ideas;
- Demonstrating clearly that individual development is viewed as important by the organization;
- Giving due attention to the learner's weaknesses and exploring how they may overcome them;
- Allowing the learner to explore and expand the boundaries and limits of his or her abilities by agreeing objectives for new challenges and experiences that stretch them;
- Emphasizing the importance of teamwork and mutual support between trainer, coach or facilitator and learner.

### **2.3.3 Selection criteria for trainers**

The trainer assumes significant role in training programmes, this makes it clear that there is a demand for good trainers (Narang & Mahmood, 2011:184). Findings on a study conducted by Gauld and Miller (2004:18), conclude that training management appears to select unqualified trainers which might be the case of paying them less compensation. Gauld and Miller (2004:16) added those trainers who have formal qualification or have being certified as qualified trainer formally and have the competencies are deemed as effective trainer so they add value to the training. Boggs and McKenney (2004:120) argue that a key selection criterion for effective trainers is focusing:

- Experience

Most organization look for solid record of experience when choosing a trainer or training provider, it's required that training providers should provide list of references of previous clients and type of training providing. Letter of recommendation also comes in handy for training providers to assist training management to evaluate the quality of training providers.

- Appropriate training materials

Potential training providers can save themselves from misunderstanding and embarrassment by understanding the culture and objectives prior the training program. Understanding the culture, goals and objectives of an organization determines whether the training provider is a suitable match for programme.

- Attentiveness

The ability of motivating and getting the trainees to pay attention is a critical skill for effective training provider. For training providers to develop a functional training programme, training providers must be able to show that they understand and competent enough to deliver the needs of the client.

- Expertise

Training managers should put emphasize on the training provider's expertise, getting a training provider who specials in the expertise that client needs is advantageous. It's a must for training providers to emphasize on their expertise, by doing their homework and doing research on the organization and also being able to anticipate the outcomes that organization might expect.

- Resources

Organization must look at the resources that training providers has in terms of the training provider being able to supply the volume of training needed and also enough trainers available

- Ability to customize

Most training programme seeks for training providers who can customize to the needs of the programme. It's more likely that training provider that will be selected is the one that understands programme's goals, philosophy and objective. Also can address and create solutions to the programme's unique challenges and environment.

- Quality

Cutting on cost and getting reasonable cost in terms of consultation fee is one of the important criterions but not sole criterion used. Training providers must able to deliver quality

training that will have a greater impact on the trainees and the whole operation of the training programme.

## **2.4 Monitoring and evaluation**

Training programmes are faced with numerous challenges such as lack of monitoring and evaluation system or culture which is used to provide means of accountability, performance and performance of the programme (UNESCO) (2012:3). The CIDB (2011:6) study revealed that the WCCDP have no monitoring and evaluation processes in place to evaluate and gauge the impact of structured training offered to emerging contractors and this has been identified as one of the key challenges of the WCCDP. Majority of training programmes are notoriously ineffective because the programme impact and outcomes are not measured properly or not measured at all (Marr, 2015:259).

Majority of organization make use of the Kirkpatrick evaluation training model which considers of four levels (Lee, 2007:9; Esteves, Pastor & Casanovas, 2002:8; Ford, 2014:160). The trainee's reaction is the first level of the Kirkpatrick four-level model which is the most commonly used for evaluating the effectiveness of the training (Thackerway, 2013:17). However, the sole predictor of trainees' reaction to determine the effectiveness of training has being consistently questioned (Lee, 2007:10).

For the success of the programme, trainers need to work close with the programme managers to develop or understand the training goals and outcomes (Cepoi, 2002:15). And to achieve more trainers must measure the effectiveness of the training not only at the end of the programme but also during the process of the training. Training programmes such as the WCCDP need to have a proper M&E system in place to contribute to the strengthening of the programme, to improve overall capacity and for efficient programme management (Hunter, 2009:5). Therefore if the programme management decides to build an M&E system, the next step would be choosing and agreeing on the outcomes to monitor and evaluate which are derived from the goals and incorporating the M&E in the design stages of the programme (Kusek & Rist, 2004:56).

In order to locate and embed M&E system, stakeholders must be involved in the design and implementation of the process. To carry out this process, it is necessary for the concerned stakeholders to develop relevant indicators to monitor and evaluate the effectiveness of the programme (Iveta, 2012:117).



Before programme managers sets out indicators it is important to align the indicators to the ultimate impact they want to measure which are the training outcomes, goals and objectives (Kusek & Rist, 2004:56). Goals are broad aims of the programme, generally long term and significant changes that planners expect to occur as a result and outcomes have intermediate time frame( 5 to 10) years or generally are short term and resulting directly from the project outputs (Levinson, Rogers, Hicks, Schaetzel, Troy & Young, 1999:5). At this stage it is important to put emphasize on the outcomes and not to move directly straight to setting the indicators (Kusek & Rist, 2004:56).

#### **2.4.1 Monitoring and evaluation Indicators**

After identifying and examining the achievable and valuable outcomes agreed upon, the next step is the selection of the key indicators (Kusek & Rist, 2004:65). Indicators are the quantitative and qualitative variables that provide the questions that allow us to measure progress towards the programme objectives or outcomes (Hunter, 2009:24). Quantitative indicators focus on the output in terms of numbers and qualitative indicators define situations in depth understanding of issues of the output (Hunter, 2009:24-25). Indicators are measurable and generally relate to a change or impact that is very difficult to measure (Berghia, 2003:60). In addition indicators are helpful in terms of providing evidence of progress made towards the attainment of the outcomes (Hunter, 2009:24). Indicator are normally based on the relationship between the ultimate impact and indicators needed to be measured, indicators measure the programme impacts, outcomes, outputs and inputs (Mosse & Sontheimer, 1996:1).

Indicators are needed at all levels or stages, it's a continuous process of monitoring progress with respect to goals, outcomes, inputs, outputs and activities (Kusek & Rist, 2004:65). This allows feedback at all levels or areas of success and improvement if required meaning it allows one to identify problems along the way that can impede the achievement of programme outcomes (Kusek & Rist, 2004:65; Mosse & Sontheimer, 1996:1). Indicators are difficult to develop due to the diversity in trainees and training programmes; for training skills, tasks and abilities creates a tension between the training statuses as an applied field (Rowland-Jones, 2010:1).

## **2.4.2 Creating monitoring and evaluation from training outcomes**

First of all one cannot set indicators before training outcomes, training outcomes ultimately produce the benefits not the indicators and outcomes generally show the road to take meaning it will demonstrate whether success is achieved (Kusek & Rist, 2004:57). The measurement of outcomes has been considered as one of the most important activities in the process of assessing the effectiveness of an intervention and identifying need for improvement (Kleinpell, 2013:1). In the case of organisation creating M&E system it is essential that stakeholders and decision makers to set up the outcomes (Kusek & Rist, 2004:57). Process of monitoring outcomes can be a complex task so it requires time allocated for conducting the outcomes assessment (Kleinpell, 2013:3). Measurement of outcomes involves choosing and identifying the indicators and also the methodology to conduct the outcomes assessment (Kleinpell, 2013:3).

## **2.4.3 Function of monitoring and evaluation indicators**

Indicators allow programme managers to track the programme progress and also demonstrate results which if necessary enables corrective actions at early stages of a problem (Hunter, 2009:24). Indicators are sometimes referred to as an 'early warning system' (Hunter, 2009:24). Monitoring indicators involve a periodically measuring of programme progress towards explicit long and short term outcomes and giving feedback on the results (Mosse & Sontheimer, 1996:3). These results can be used by the decision makers or programme to find various ways to improve the programme. Without the appropriate results or feedback none of the parties' involved and concerned can make the informed and appropriate decision arrangements for the betterment of programme's performance (Mosse & Sontheimer, 1996:2).

In the programme M&E system, indicators serve as the tool to link daily actions to the critical success factors and measuring the flow of change (Parmenter, 2012:8). The benefits of indicators evolve from the state of measurability and that they are directly derived from the programme objectives, goals and outcomes (Parmenter, 2012:9). With indicators a greater sense of monitoring and evaluation system compelling is achieved because indicators are not based on personal judgement or pure description but are objectives of the programme (Mosse & Sontheimer, 1996:2).

#### **2.4.4 Development and selection of monitoring and evaluation indicators**

Before one develops and selects indicators it is important to identify what makes a good indicator. According to Hunter (2009:26) these are the characteristics of good indicators is SMART which stands for: Specific; Measurable; Attainable; Relevant; Trackable

Indicator selection and development is a complicated and complex process that demands time and relevant stakeholders need to be considered and involved when the process starts (Kusek & Rist, 2004:67). Warren (2011:7) adds that it is vital to involve all programme managers in that way it becomes easier and quicker to reach an agreement. Furthermore it is important also to have indicators that directly measure the desired outcome (Kusek & Rist, 2004:67). In the case of the WCCDP improving trainee learning, scores on tests or assignment achievement are the direct measurement indicator. Although an elemental indicator of written test or exam can alone is not sufficient to indicate effectiveness of training (IAEA, 2003:20).

Hunter (2009:26) suggests five steps to follow when selecting and developing indicators:

**Step 1** It's important to identify the problem situation meaning your baseline data and training needs assessments which are what the programme is addressing.

**Step 2** Develop the outcomes of the programme and based on the outcomes one can develop data which can give the indication of that needs to be achieved.

**Step 3** By now you should identify ways to achieve the outcomes and this activity should lead you to the progress indicators.

**Step 4** The next task would be to define the indicators for effectiveness such as the aims to improve the training programme by assessing trainers, conducting needs analysis and improving the training content.

**Step 5** The next step is to develop indicators that measure the efficiency of the programme. Such as whether the training ran within the planned time frame.

Kusek and Rist (2004:68) states that its essentially that the CREAM set of criteria aids to developing and selecting indicators for a specific programme, project or policy.

C: Clear	Precise and unambiguous
R: Relevant	Appropriate to the subject at hand
E: Economic	Available at a reasonable cost
A: Adequate	Provide a sufficient basis to assess performance
M: Monitorable	Amenable to independent validation

#### **2.4.5 Examples of monitoring and evaluation indicators**

Training impact evaluation is based on indicators developed by the stakeholders used for M&E and corrective actions; good and poor results are helpful for providing effective training (IAEA, 2003:21). These are examples of M&E indicators used for training programme which is a mix of both qualitative and quantitative indicators.

##### **2.4.5.1 Marketing indicators**

Marketing performance indicator is a concept mostly used in the tourism and travelling section; measuring the extent of marketing of the programme (Pike, 2008:321).

According to the IP academy (2011:4) structured training consists of the following examples of marketing indicators; size of contact database for particular sector, the number of participants, organisations (with indication of commitments of an organisation which attends), together with the total of new entrants, the number of participants subscribing, and number of 'multipliers' - supporting organisations who assist in marketing the programme

##### **2.4.5.2 Programme indicators**

The programme indicators are divided in to two parts namely inputs indicators and output indicators (Hunter, 2009:25). Input indicators are quantitative or qualitative data that can be obtained from management and accounting records, they measure utilization of resources used to implement the activities (Chaplowe, 2008:8). Input indicators is considered with the resources such as the human, financial and physical resources used in the support of training programmes, services and activities (Chalmers, 2008:4). Output indicators are also

quantitative or qualitative data obtained from surveying the programme beneficiaries' observations regarding the programme (Chaplowe, 2008:8). The output indicators can measure by means of completed or the state of activities (Chaplowe, 2008:8, Hunter, 2009:25).

IP academy (2011:5) structured training provides this sets of examples for programme indicators:

Feedback from participants about content, the delivery of the course material by trainer, the relevance thereof in the workplace and the ability to communicate in an audible and concise manner.

#### **2.4.5.3 Administration indicators**

Administration indicators cover a broad spectrum of administration tasks from budget, administrative modernisation, communication services and support services in line with standards (Hunter, 2009:26).

IP academy (2011:5) structured training provides this sets of examples for programme indicators.

Feedback from the participants coupled with input from trainers and managers on; Customer service, the setup and quality of facilities, training materials and the support from the trainers.

## **2.5 Assessment**

### **2.5.1 Assessment in general**

Among the numerous roles that trainers have, is the obligation to make important decisions regarding the gauging the learning of trainees (Brown, 2004:81). Assessment is one of the tools used, which occurs after completion of an instruction to measure and also promote learning (Herman, Aschbacher & Winters, 1992:2). There are various issues that must be taken into consideration before adopting an assessment strategy. Therefore it is important that we understand the need for assessment and what assessment is; what assessment promises; purpose of assessment; who needs to be assessed and give attention to other assessment strategy (Herman *et al.*, 1992:2). Assessment does not only serve the trainees

only but serves all levels of the training hierarchy; it helps trainers to set standards, provide diagnostic feedback to trainees and achievement of policymakers' mandate (Herman *et al.*, 1992:2). McAlpine (2002:4) also supports the statement above by stating that assessment is a form of communication to trainees for feedback on their learning, trainers to gather feedback on their training, and curriculum designers, and administrators or facilitators for feedback on the use of resources

### **2.5.2 Assessment in training programmes**

Assessment is a process of data gathering; it is the central element in a training process as the trainer will gather data to determine the effectiveness of a class session or seminar of trainees learning and engagement (Stronge, 2007:91). Sambell, McDonwell & Montgomery (2013) affirmed that aim of assessment is to identify what trainees can do and knows usually described in a form of mark or grade; it counts towards an achievement report or evidence.

Assessment is one of the important best practises of training as it will help learners to learn, it is likely that trainees will ignore training if they do not participate in an assessment process which leads to them getting a qualification (Brown, 2004:81). Farbham (2010:56) pointed out that assessment has two keys; the first is how we intend to use the results which could be applied to promote learning which *assessment for learning* is and in some instances it is utilised to verify if learning has taken place which is *assessment of learning*.

A considerable amount of literature has been published on the eight principles to assist in the fundamental understanding of the importance of assessing and having a good practice for assessing trainees, which are (Banta, Lundy, Black & Oblander, 1996:6):

- Assessment of student learning begins with educational values.
- Assessment of learning is most effective when learning is understood as multidimensional, integrated, and revealed in performance improvements over time
- Assessment should echo understanding by use of diverse methods.
- Assessment requires attention to outcomes but also an equally important attention to the experiences that lead to those outcome
- Assessment works best when it is on-going and not episodic
- Assessment fosters wider improvement when representatives from across the educational community are involved
- Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about

- Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote changes

In 1980s the South African educational focus shifted to mostly revolving around the assessment, where education policies had to change because of political and ideological reasons; once apartheid was defeated (Mogammat, 2014:73). This forced trainers, teachers, stakeholders, unions and education academics to develop not only a free democratic society but also to improve quality of education (Mogammat, 2014:73). Policy makers have observed that if one wants to change the student learning then it is critical that attention is not only concentrated on the study content or learning material but also to the assessment strategies (Botha, De Jager & Jonck, 2005:167).

### **2.5.3 Purpose of assessing trainees**

Assessment plays a critical role in the educational process as it enables the trainers to identify their own weaknesses and strengths in training and it aids diagnosis of learning difficulties (Mogammat, 2014:30). Moreover, assessment has a broad meaning with serve range of purposes; one of the common purposes is to provide numerical results which are used to provide learners with certificates (Black, Harrison, Lee, Marshall, & William, 2005:1). Also, assessment is complex and dynamic and is not a singular entity; therefore trainers need to think about the various purposes of assessment (Earl, 2013:19). Similarly, Lambert and Lines (2013:4) identified four purposes of assessment listed below:

- Formative role- to provide feedback to trainers and trainees about progress in order to support future learning
- Summative role- to provide information about the level of trainees' achievements at points during and at the end of school
- Certification role- to provide the means for selecting by qualifications
- Evaluation role- to contribute to the information on which judgments are made concerning the effectiveness or quality of individuals and institutions in the system as whole

Furthermore, over the years assessment has become one of the most important component for improvement of quality education because it assist in identifying problems in the most reliable way whether in training, school and individual system (Kellaghan & Greaney,

2001:7). Brown (2004:81) argues that trainers should not only consider what they assess or how they assess but also why they assess. However assessment has raised numerous questions such as what exactly should be measured or assessed and what should be done with the results (Kellaghan & Greaney, 2001:7). Hence it is essential that the WCCDP uses assessment strategies that support the learning and training of trainees because if trainers fail to select a suitable assessment strategy this will lead to programme failure- failure that could have being avoided.

#### 2.5.4 Assessment strategies

Numerous studies on assessment assert that to positively influence the trainee behaviour and ultimately the trainee learning, an appropriate assessment strategy must be used (Spurlin et al, 2008:5). Coetzee, Graaf, Heindricks and Wood (2007:223) defines assessment strategies as tools that are utilized by the assessor to gather data or evidence of trainees' performance. The thrust of the argument is that an appropriate assessment strategy must be selected by the concerned stakeholders during design stages because assessment is an integral part of the training. The term appropriate assessment can be interpreted in a variety of different ways but for this study it is the assessment strategy that will suit the purpose of the training programme (Newton, 2007:149).

Spurlin, Rajala, Levelle and Felder (2008:4) states that 'assessment is a bit like planning a road trip; one can't plot a route without knowing the eventual destination'. Assessment is all about the four steps of dynamic teaching-learning-assessment cycle on table 2.4.

**Table 2.4:** The four steps of the Teaching-Learning-Assessment cycle

1. Develop clearly articulated written statement of the expected learning outcomes.
2. Design learning experiences that provide intentional, purposeful opportunities for students to achieve those learning outcomes.
3. Implement appropriate measures of student achievement of key learning outcomes.
4. Use assessment results to improve teaching and learning.

Newton (2007:152) identifies three characteristics that we need to consider when choosing the appropriate assessment strategy namely; *Purpose*- expected uses to which the outcomes will be put(e.g. formative assessment focuses on helping the learner learn while summative assessment focuses on grading or certification), portion of course covered - *timing* (e.g. formative assessment tends to be more frequent, focusing on smaller units of



instruction and occurring during a course rather than at the end) and the level of *generalization* sought by items in the instrument used to collect data for the assessment (e.g. formative assessment focuses on testing for narrow components of proficiency while summative assessment focuses on testing for broad abilities)

#### **2.5.4.1 Summative assessments**

According to Knight (2002:275) summative assessment is a formal assessment process taken at the end of a semester or end of school year; which could be in a form of a test or examination to grade learners determine whether the learning goals and outcomes have been met. Therefore, summative assessment is used for diagnostic, evaluative purposes and to provide evidence about what learners have learned during the unit of study covering the overall picture of trainee progress (Knight, 2002:275; Regier, 2012:5). Regier (2012:5) further explained that summative assessment identifies whether the particular subject area curriculum outcomes have been met and to what degree were they attained.

#### **2.5.4.2 Formative assessment**

According to Brookhart (2010:3) formative assessment provides the ongoing process of evidence and feedback of the student and teacher engagement, which reflects focus on learning goals, takes stock of where current work is in relation to the goal and takes action to move closer to the goal

This entailed that formative assessments are used to improve instructional methods and also to provide feedback to both the teacher and the student throughout the learning process, it usually begins with the teacher who models to student the process using the concept of 'what good works look like' (Fisher & Frey, 2007:3). This concept involves the teachers describing and explaining skills to be taught or assign student with assignment and investigation making use of reading material to answer a question, doing task and activities meaning putting the content in the students' hands to enhances independence learning (Fisher & Frey, 2007:3). This type of assessment is entirely devoted to enhance the student learning and achievement but also assesses the teachers progress for example if a teacher observes the student don't grasp content then teachers might look at reviewing content or reinforce (Brookhart, 2010:4).

**Table 2.5:** Comparison of Formative and Summative Assessments

	Formative Assessments	Summative Assessments
Purpose	To improve instruction and provide student feedback	To measure student competency
When administered	Ongoing throughout unit	End of unit or course
How students use results	To self-monitor understanding	To gauge their progress toward course or grade-levels goals and benchmarks
How teachers use results	To check for understanding	For grades and promotion

Adapted from: Fisher and Frey (2007:4)

#### **2.5.4.3 Outcomes-based assessment**

After 1994 with the change in educational policies, it was required of institutions to prepare for change, not only because of the change in legislation but the also the diversity of learners coming from different societies (Van Den Berg & De Boer 2000:107). Great emphasis focused on the shift from traditional assessment, which focuses on the teacher-centered and one-directional transmission of knowledge to outcomes-based assessment (Van Den Berg & De Boer 2000:107). The traditional perspective of assessment consisted either examination or written tests where students were assessed according to a set criteria and memoranda; the learner would be passed or failed according to the results which indicated how much the learner mastered the knowledge (Van Den Berg & De Boer 2000:109). And that doesn't mean that traditional tests and examinations are no longer used but they are functional and should be complemented by other forms of assessment (Botha, De Jager & Jonck, 2005:182).

Out-comes based assessment implies a process of a learner accepting responsibility of his/her own actions, thoughts and beliefs; this process doesn't assess only the knowledge and skills but also the implementation and application (Botha, *et al.*, 2005:177). With this assessment the teacher becomes a facilitator of knowledge rather than transmitter of knowledge (Kotzé, 1999:32). What's vital about integrated assessment is that it must offer evidence that the determination to succeed in the completion of the course or module has being achieved (Rhodes University 2012:2). Outcomes-based assessment has become an

integrated assessment process which makes use of both summative and formative assessment (Botha, *et al.*, 2005:182).

The purpose of using both formative and summative assessments is to enable the learners to demonstrate practical and reflective competence while attempting to gain a qualification, skill and knowledge to contribute to their own success (Van Den Berg & De Boer 2000:109). According to Rhodes University (2012:2), for learner's progress towards achieving specific outcomes to become competent, formative assessment charts are used. Botha, *et al.* (2005:182) gives more insight on the various use of formative assessment in the outcomes-based assessment which formative assessment is used for assisting learners/trainees to learn, provide feedback of learning, diagnosing and, correcting misunderstandings and assisting learners/trainees to evaluate learning processes

While on the other hand summative assessment is the formal assessment that is taken at the end of the unit of study to make judgments, which summative assessment is used for (Botha *et al.*, 2005:182): Indicating whether a learner/trainee has achieved course/module objective, the competency achievement and assigning grades based on level of achievement

What makes outcomes-based assessment different from other assessment strategies or methods is that it makes use of continuous monitoring of learners development towards attaining a certain outcome (Botha *et al.*, 2005:183). According to Van Den Berg and De Boer (2000:109) assessments focuses on using frequent assessment techniques and continuous activity to build up a portfolio of evidence of learners' or trainees performance, knowledge and skills to guide learners towards achieving the outcomes.

There are various types of instruments or evidence that can be used in relation to work that has being assessed in the joint venture between the learner and trainer to assist the learner to compilation of the portfolio (Mogammat 2014:97). According Botha *et al.* (2005:182) the following techniques are used essay/assignment presentation at a seminar, practical work, interpretation tasks, creativity tests, study interviews, oral testing and multiple choice tests.

## **2.6 Chapter summary**

This chapter reviewed literature conducted by numerous researchers on topics that are relevant to training and development, namely training needs analysis, trainer's competency,

monitoring and evaluation indicators and assessment strategies. There is, however, little research on contractor development programmes within South Africa.

The research study extracted best training practises linked with the effective training programmes from other sectors. It is important the needs of the targeted population are identified to strength the programme; this was covered through definitions of training needs, training needs assessment, training needs analysis, levels of training needs analysis, data models of TNA and data methods determining the training needs of emerging contractors. The study responded to the trainer's competency which shelters the utilisation of competent, qualified and experienced trainers to deliver high quality training; this was covered through trainer's competency required in contractor development programmes, selection criteria for trainers, positive and negative qualities of trainers.

The research study also incorporated monitoring and evaluation indicators which are a very important component of a monitoring and evaluation system; which was concealed under M&E indicators linked with outcomes, functions of indicators, development and selection indicators and examples of M&E indicators in a training programme. The research study also included the assessment strategies which are used for assessing the training and learning of trainees; this was covered assessment for training of contractors, assessment in training programmes, purpose of assessment and various assessment strategies. An understanding of these best training practices may lead to improving the impact of contractor development programmes positively and high-quality programmes which could be upscale emerging contractors, but the identification of scaled-up successfully.

## CHAPTER THREE

### 3. RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter illustrates a detailed discussion of the research design and methodology used for the study. The chapter emphasis on framing appropriate research methods utilised to allow data to be collected, analysed, interpreted and achieve the objectives of the study. Jonker and Pennink (2010:22) argue that a researcher should provide a justification to the reason why the particular research approach is chosen. A detailed theoretical background of different research methodologies are presented and also explained why a particular research approach and methods were selected to collect data that was required to answer the research questions.

The research questions focus on four best training practices. Firstly Training Needs Analysis (TNA) which is used to provide clear guidelines to which skills, knowledge and abilities deficiencies needs to be remedied. Secondly, trainer's competency needs to be evaluated as the effectiveness and role of the trainers who facilitate the training constitutes significant return on the training investment and potential to impact the learning (Buckley & Caple, 2007:278). More also the indicators for monitoring and evaluation which form part of tracking the progress of the training programme and performance (UNESCO, 2012:3). Finally assessment strategies which are used to enhance and add value to trainees' learning by determining if the intended learning outcomes are being achieved during the training using assessments strategies (Stronge, 2007:91).

Furthermore it is extremely important for the researcher to be spending a great deal of time thinking about the study to avoid spending energy on inappropriate methods (Dawson, 2009:4). Similarly, Sahu (2013:25) and Dawson (2009:5-9) argued that the following questions must be made clear before the formation of the research methodology and design:

- Where the study should be carried out?
- What kind of data required?
- Who will be your participants?
- What should be the methods of the data collection?

- What should be the sampling design?
- What are the possible analytical techniques that can be used?

### **3.2 Research methodology**

Research methodology solves the research problem through a systematic way; this may be understood as the scientific way of how to carry out research (Kothari, 2004:8). Likewise, Dawson (2002:14) added that research methodology is the philosophy which will guide the research and is the overall approach to the study. Sahu (2013:2) further commented that research methodology comprises of various steps adopted by the researcher in studying the research problems in a logic way. As research a systematic approach, research methodology chosen is considered as the vital element in a research study since the objective of research is to discover new facts and test important facts (Wedawatta, Amaratange & Ingririge, 2011:1).

In construction management research the application of a research methodology can create new opportunities and unique challenges for researchers and is categorized as the intersection of natural science and social science (Taylor & Jaselskis, 2010:1). Abowitz and Toole (2010:108) argue that construction is a 'social' process as it is considered to be the *'application technology by people developed by people to achieve goals established by people'*. Erection and building of infrastructure involves people who play different roles; this suggests that in order to understand human or social factors proper use of social science research methods are required (Abowitz & Toole, 2010:108). The choice of research approach depends on the nature of problem in construction but it is important that concepts are clearly defined and that method's limitations are transparent and defensible (Raftery, McGeotge & Walters, 1997:294).

#### **3.2.1 Qualitative research**

Qualitative research provides a depth of understanding because it comprises of richer, more informative knowledge about the subjects of study and also offers enhanced understandings compared to that which can be obtained through quantitative research (Tewksbury, 2009:38). Leedy and Ormrod (2014:142) expressed that qualitative serves one or more purposes such as interpretation approach where researcher seeks to discover problems that

exist within a phenomenon. As a result according to Fellows and Liu (2008:26) qualitative research is used to study a real-world setting where the researcher is interested to understand the people's perceptions of the world by capturing the contextual through behaviours, beliefs, opinions, personal view and experiences.

Jonker and Pennink (2010:77) argues that qualitative research transpires from the term 'quality' which in this case it refers to the development of knowledge, the kind of data and corresponding attitude and the behaviour of the participants. Qualitative research allows researcher to obtain phenomenal data from the viewpoint of those involved and makes an effort to understand a reality of the specific organisation (Jonker & Pennink, 2010:77). In principle qualitative research is concerned with the meaning behind the words rather than measuring the frequency appearance of the subject under investigation as a result it explores questions such as how, why and what (keegan, 2009:11). There are different methods used to collect qualitative data. To name just a few such as the focus group, in-depth interviews, observation and document review that can be used to as to collect data (Flick, 2009:147). For this study, a qualitative research was adopted together with a semi-structured interview and observation as means to collecting qualitative data. The use of the qualitative research method provided broader and rich understanding of the structured training by investigating M&E indicators used, training needs analysis, choosing adequate assessment strategy and identifying the trainers' competencies.

The advantages and disadvantage of qualitative research as identified by Tracy (2013:2), Flick (2014: 5-7) Include:

#### **3.2.1.1 Advantages of qualitative research method**

- The main strength about the qualitative research is that it allows researcher to gain an in-depth of the research problem and is useful to address research objectives that are difficult to quantify or cannot be quantified at all.
- Interpretation of results is much easier and has the ability to study new phenomena.
- It is useful in describing a complex phenomena

#### **3.2.1.2 Disadvantages of qualitative research method**

- The analysis of data usually requires time and the results are easily influenced by researcher's personal prejudices which make the results more subjective than objective.
- The results produced are not broadly generalizable, meaning findings might be unique to the relatively few participants
- Limits the scope for the study due to the in-depth comprehensive approach

### **3.2.2 Quantitative research**

Several researchers (Dawson, 2002:14, Koshy, 2008:86, Kothari, 2004:3) concur that the quantitative research method is based on the measurement of quantity or amount; meaning data that can be reflected by numerically. According to Fellow and Liu (2015:26) a quantitative research approach inclines to relate to seek to gather factual and positivism data through use of statistical inferences. Koshy (2008:86) added that when a researcher wants to handle a large amount of data either from questionnaires or survey, quantitative method is useful since it counts things and analyses data in statistically. Quantitative research comprises of different methods such as exploratory, descriptive studies and experimental studies (Dawson, 2009:15). Quantitative research tends to focus on generalisation of findings from a subgroup in the universe (Dawson, 2009:15). This research has followed the quantitative approach to gather data from the learner contractors as it is cost-effective and time-consuming (Creswell & Clark. 2011:12).

The strengths and weaknesses of the quantitative research are presented by Fellow and Liu (2015:29) and Dawson (2009:15).

#### **3.2.2.1 Advantages of qualitative research method**

- Quantitative approach have better clarity, reaches large number participants and can be clearly defined and recognised
- The study findings have a high degree generalisation to the entire population under the study.
- In quantitative research; researcher can obtain results without allowing their personal bias to influence

#### **3.2.2.2 Disadvantages of qualitative research method**

- Participants may interpret questions differently
- Limits participants to answer what the researcher asks, it limiting the answers.
- The distance between researcher and the population under the study is quite wide; researcher's theories might not reflect population's constituencies' understandings.



### 3.2.3 Mixed methods research

Over the past few centuries there has been a great focus on either qualitative or quantitative research (Dominguez & Hollstein, 2014:3). Mixed method research is an approach that makes use of both quantitative and qualitative data; as a result it allows the researcher to employ deductive and inductive reasoning techniques to answer the research questions (Hesse-Biber, 2010:3; Creswell, 2014:4). This has led researchers to miss important parts of the story because of the use of one technique alone (Dominguez & Hollstein, 2014:3). Creswell (2014:4) however, pointed out that numerous studies 'tend' to be more quantitative than qualitative or vice versa; mixed method research nest in the middle because it combines the elements of both qualitative and quantitative approaches. The reason for using both quantitative and qualitative strategies allows the researcher to balance strengths and weaknesses for each approach and also improve the validity of the research findings (Abowitz & Toole, 2010:108; Dominguez & Hollstein, 2014:3). Sreejesh and Mohapatra (2013:47) argue that there are primarily three reasons for the employing mixed methodical design rather than traditional research designs:

- Firstly, the research purpose and research questions require a combination of both quantitative and qualitative methods
- Secondly, Research questions formulated in the study require the exploration and integration of attitudinal and behavioural dimensions (qualitative) and empirical validation (quantitative).
- Thirdly, where there is insufficient data accessible in the literature regarding the role of attitudinal and behaviour dimension in construction training programme, this requires a detailed understanding by making use of qualitative and quantitative methods.

Hesse-Biber (2010:4-5) adds other reasons why researchers should consider using mixed methods:

- Triangulation- making use of more than one method for the study to examine the same research problem from different dimensions and also enhance the credibility of the research findings.
- Complementarily- allows the researcher to gain full understanding by examining numerical, visual and narrative explanation and secures validation of the study.

- Development- whereby the results from the other method helps to develop and inform the method, for an example statistical data from questionnaires can develop interview questions.

### **3.3 Research design**

Research design is the process of formidable problem that plots the task of defining the research problem which involves a set decision regarding the purpose of the research, and topic to be studied (Kothari, 2004:31). Rugg and Petre (2007:60-61) adds that research design is more like map making as supposed to treasure, in order words it is a systemic way of finding out things. It is no surprise, that the research design is the important part of any research study. Research design clearly explains the steps taken to reach the particular research objectives for a research project, meaning the advance planning of methods to be adopted at various steps in research (Sahu, 2013:25). Rugg and Petre (2007:60-61) argue that once the researcher has formed clear research questions then researcher will consider a suitable research design which can be classified: experimental, quasi-experimental and non-experimental.

#### **3.3.1 Survey research**

Ruggs and Petre (2007:64) defined survey research as a data collection process to find out by asking a various questions on widespread of individuals through a questionnaire. Blaxter, Huges and Tight (2006:89) argue that a survey is a collection of data using the '*same information about all the cases in a sample*' it involves a systematic observation or interviewing. This form of research heavily relies on asking questions that researcher wants answers so the researcher is required to select the kind of population that best suits the investigation of the study (Fellow & Liu, 2015:25).

### 3.3.2 Action research

Koshy (2005:1) described action research as “*an enquiry undertaken with rigour and understanding so as to constantly refine practice; the emerging evidence-based outcomes will then contribute to the researching practitioner’s continuing professional development.*”

The fundamental purpose of action research is to learn from experience, to suggest and test solutions to a specific problem and enable changes (Fellows & Liu, 2015:23). Blaxter *et al.* (2006) states that action research is a complex and dynamic knowledge-generation process; it is directed towards producing and improving practical solutions by identifying areas of interest and experimenting with a new approach.

### 3.3.3 Case study

Fellows and Liu (2015:25) defined a case study as in-depth empirical inquiry investigation of exact instances within a research subject. Case study provides the deep understanding of the particular participants’ self-perceptions, process and concept variables by using multiple methods. The use of mixed approach of quantitative and qualitative in the case study constructs a broader view of the study as quantitative will present what is perceived as the gathering of ‘facts’ (Baxter *et al.*, 2006:64). While on the other hand the qualitative method has a tendency to focus on sightseeing, in as much detail as possible from lesser numbers of instances and targets to achieve ‘depth’ rather than ‘breadth’ (Baxter *et al.*, 2006:64).

Case study is rather a research approach than a method as it is a wrapper of different methods; it concentrates on one thing in detail to provide rich and in depth data from different angles (Thomas, 2011:9, Rule & John, 2011:1). The case study may focus at a particular event, person, organisation, group or institutions (Rule & John, 2011:1). Somekh and Lewin (2005:33) add that a case study involves studying of a pathologies such as pupil focusing on the social construction of the case and assumes a policy focus such as the ‘case’ of innovative training, ‘case’ of curriculum and training at a particular site. Thomas (2011:3) explains that a case study focuses on the particular in detail rather than the general using different data sources and multiple methods rich description.

Case study seem to be exceedingly relevant to industries that are project driven, to businesses and organisations which however in the construction management its application in the research community is relatively increasing (Knight & Ruddock, 2008: 99). Woodside

(2010:2) added that marketing, psychological and management research highly concentrates on the individual's and group's behaviours and decisions. Below listed are uses of a case study in the construction management research (Fellows & Liu, 2015:93):

- As a source of insights and ideas,
- To describe a phenomena,
- Project-biography and
- Illustrative anecdotes

### **3.3.4 Experimental designs**

An experimental design requires an investigator to carefully manipulate an independent variable also known as an experimental to determine the impact on the dependent variable (Blaxter *et al.*, 2006:75). Sahu (2013:29) defines experimental design as important step to in establishing causality through rigorous and controlled search cause and effect. The experiment consists of goal-directed acts performed under systematically investigation and unders conditions that are identical (Sahu, 2013:29).

## **3.4 Chosen research methodology for the study**

### **3.4.1 Research design for the study**

A mixed research design was adopted to examine the training needs, assessment strategies, key indicators and trainers' competency at the Western Cape Contractor Development Programme. Mixed research can be referred to as the 'multimethods' which combines two or more qualitative methods in singular research study such as in-depth interviewing and participant observation or using two or more quantitative methods such as a survey and experiment (Hasse-Biber, 2010:3). The purpose of combining the two research design was to achieve the aim and objectives of the study. The use of multiple methods for this study was used for its nature to allow balance of the strengths and weaknesses of each research design (Abowitz & Toole, 2010:108). Mixed research was also used to gain reliable data to enhance the reliability and validity of the results of the study (Abowitz & Toole, 2010:108). The study seeks the participant's point of view of who are individuals involved in the WCCDP on different levels.

### **3.4.2 Research approach for the study**

The purpose of the study is to examine a distinct problem at the specific organisation in a specific province known as Western Cape, South Africa. Therefore case study was adopted as the research approach for the study and the researcher made use of both quantitative and qualitative data gathering tools to answer the research questions and objectives of the study.

The study has examined particular 'case' where a study of individuals involved in the WCCDP, seeking the participant's point of view. Case study will be looked at from the 'case' of training facilitators, trainers and trainees which has aspired to tell it like it is from the participant's point of view.

### **3.5 Population**

Population is a set of particular individuals whose composition meet the specific criteria that researcher will collect data from (Moule & Goodman, 2009:265). Sahu (2013:450) add that population is the collection of well-defined entities such as persons, plants, objects and animals. The target population for this study were the programme managers, programme facilitators and programme trainers who are currently involved in the Western Cape Contractor Development Programme (WCCDP) structured training. It also includes trainees who are receiving contractor development and business growth training in the WCCDP. The targeted population was residing Western Cape, South Africa which made it convenient to contact for interview and also to distribute the questionnaire.

### **3.6 Sampling**

Sampling is the technique used for selecting the certain portion that is a representative of the population or universe. According to Tracy (2013:134) sampling is the design for how to precisely select sources of data chosen and also selecting the specific time, date, location and actions to observe in fieldwork. Rubin and Baddie (2009:132) add that sampling is choosing a smaller and manageable number of participants to take part in a study. The main objective of sampling is to provide a good representation of the population to enable the data

collection and processing components of research to be carried out (Fellows & Liu, 2015:162). There are two main methods of sampling namely probability and non-probability sampling.

### **3.6.1 Probability sampling**

According to Neuman (2007:148) probability sampling relies on random selection process to truly represent the population through calculation of the relationship between sample and the population. Probability sampling assists the researcher in the projection of the size to which the sample statistics are likely to adhere to the population parameters (Sahu, 2013:48). Cohen, Manion and Morrison (2007:110) argue that this sampling is also known as 'choice sampling' or 'random sampling' every item of the universe in this sampling design has an equal chance of being included in the sample. Probability sampling involves drawing randomly from a wide population not deliberately but using mechanical process (Rubin & Baddie, 2009:132).

### **3.6.2 Non-probability sampling**

Non-Probability sampling is when the participants in the sample selected deliberately and purposively (Rubin & Baddie, 2009:132). Researcher selects a particular items for sampling which is based on a small number that is selected from a wide population which a representative of the whole population (Cohen *et al.*, 2007:110). Given the nature of the study and the required data to be collected from field and snowball and purposive sampling were the methods used for selection of participants which is non-probability sampling method was judged to be the most suitable.

#### **3.6.2.1 Purposive sampling**

Purposive sampling was appropriate for the study which means purposefully chosen data suitable for the reaching the objectives, aims and goals of the study (Tracy, 2013:134). Abowitz and Toole (2010:109) add that approaching the suitable individuals to agree participate in your study enhances the response rates. Purposive sampling is sampling done with a purpose and is very valuable where the targeted sample is needed to be reached quickly (Singh, 2007:108). The research adopted a purposive sampling technique for

collecting quantitative data from trainees. The unit of study was known; these participants are attending training in the WCCDP and this was done in order to give the chosen population a representative chance.

### **3.6.2.2 Snowball sampling**

Snowball sampling consists of selecting a small number of participants who have the characteristics which the researcher is interested in; these participants are also known as the informants (Cohen *et al.*, 2007:116). Neuman (2007:144) adds this method of sampling is also known as referral or reputational sampling where a researcher uses participants who qualify for inclusion. In the first stage the researcher identified and interviewed person possessing the requisite characteristics which were the coordinators of the WCCDP. These people then identified others who were later also included in the sample by the researcher. These were the programme facilitators, project manager of the programme, training service provider who were contacted and interviewed in the following stage.

## **3.7 Data collection**

Research is the process of knowing the unknown by exploring different sources of information, researcher always search for suitable mechanism or tools for data collection (Sahu, 2013:63). Data collection is the gathering of information in order to come to a conclusion about some issue the way data is collected depends on the issue investigated (Walliman, 2011:65). Data collection comes in two main forms primary data and secondary data (Walliman, 2011:69). The study used both secondary and primary terminology for data collection.

### **3.7.1 Secondary data**

Secondary data are data that have already being collected and published by someone but are being used by some other users meaning data that has obtained from published sources such as data collected from journals, books and articles (Sahu, 2013:63). The quality of secondary data depends on the sources and the method of presentation (Walliman, 2011:71). The secondary data was reviewed on the literature review which is chapter 2 of the study. In the literature review the relevant topics of the study were discussed; role and different types of training needs analysis, importance of analysing the trainers' competency before selection of trainer, purpose and different assessment strategies and the development of indicators for monitoring and evaluation. The sources of data for compiling literature review were gathered from journal papers, textbooks, articles, theses, conference proceedings and government publications.

### **3.7.2 Primary data**

Primary data are data collected afresh and first time as original which are collected by the researcher for a specific purpose or analysis (McNabb, 2013:147). Sahu (2013:63) argues that this kind of data is data that is raw in its nature. The study employed a triangulation data collection technique to collect from the programme facilitators, trainers, programme coordinators and trainees. Johnson, Onwuegbuzie and Turner (2007:115) expressed that use of triangulation ‘the bias inherent in any particular data source and particularly method will be cancelled out when used in conjunction with other data sources and methods.’ Domingues and Hollstein (2014:18) add that triangulation contributes to the enhancement of both quality and explanatory power of data because of the depth and broader understanding of the phenomena.

#### **3.7.2.1 Observation**

Observation is research method where researcher gather data ‘live’ meaning researcher collects data while the phenomenon is directly occurring in nature (Cohen *et al.*, 2007:396). Koshy (2005:98) adds that observation is a natural process where the researcher observes the people and incidents and makes a judgement based on the observations. The researcher observed the training sessions which date from 18 to 22 August 2014 and 19 to 22 August 2015; this helped to gain some insight, visual perception and realistic data because researcher got first-hand experience of the training and also complemented the discussions.

#### **3.7.2.2 Interviews**

Interviews are a data collection method which is more personalized than questionnaires since its main theme behind the method is oral communication (Bhattacharjee, 2012:78). Cohen *et al.* (2007:352) opined that there are number of different types of interviews namely standard interviews, in-depth interviews, ethnographic interviews, focus groups or group interviews, structured interviews and semi-structured interviews.

##### **3.7.2.2.1 Semi-Structured Interview**

For this study a semi-structured interview was used for gathering data from the programme facilitators, trainers, trainees and programme coordinators. This semi-structured interview allowed interviewer to steer the discussion to a fruitful direction and to gain the opinions, experience and knowledge of participants. Tracy (2013:139) adds that semi-structured are more depth and flexible; it encourages the interview to be creative and stimulate the discussion rather than dictate it. The semi-structured interview further ensured that the



defined answers were obtained. The method was also used for validating the quantitative data.

### **3.7.2.3 Questionnaire**

Questionnaire is a data collection tool that is widely used for collecting survey information; it forms a media of communication between the researcher and respondents (Cohen *et al.*, 2007:317). A questionnaire is the ideal gathering tool since they are time-consuming and cost-effective for gathering data from a larger number of respondents than face-to-face data collection (Gray, 2009:338). Similarly, Knight and Ruddock (2008:121) argue that although they seem to be an easier option of collecting data but in reality they also require careful pre planning and design. Questionnaires eliminate researcher bias since it is self-administered (Andrew & Halcomb, 2009:69). The purpose for using the questionnaires was to gather data from the trainees using closed-ended questions to obtain trainees opinions and perceptives relating to emerging contractor development and training. The design of a research instrument according to Singh (2007:68) is influenced by various dynamics such as the aims, the objectives that need to be achieved, nature of data needed, the research problem and questions were developed based on the research question and data from the literature review.

#### **3.7.2.3.1 Closed-ended questionnaire**

Closed-ended questions are designed to enable the respondents to answer but constrain the responses because respondents are asked fix responses to a set of questions pre-determined by the researcher (Fellows & Liu, 2015:157). Closed-ended questionnaires can be administrated by post, in face-to-face and telephone and each question in the questionnaire generates a variable which is usually coded with a number (Knight & Ruddock, 2008:122). Closed-ended questions were framed from the research objectives of the study; respondents were asked to respond to fix responses. An unbalanced five-point Likert scales was used to rate the questionnaire.

#### **3.7.2.3.3 Open-ended questionnaire**

In the open-ended questionnaire respondents can answer fully with their views, opinions and experiences; such questions can be easy to ask but difficult to answer and analysed because answers are likely to be unique (Fellows & Liu, 2015:157). Similarly, Sahu (2013:67) describes that open-ended questions are applicable and suitable if the researcher intends to explore the respondents' own words but researcher is required to have a sequential order of the questions if not this may lead to misunderstanding of questions.

### **3.8 Data analysis**

Data analysis is the process of making raw data into meaningful and understandable to the reader which could be through statistical treatment and interpretation of the collected data (Singh, 2006:222). According to Gibson and Brown (2009:1) data analysis is the central stage of a study: the success of study probable very much on the analysis of data; data collected forms the outcomes of the research and decisive the way. Data was analysed in both quantitative and qualitative analysis.

#### **3.8.1 Qualitative analysis**

For qualitative data researchers primarily rely on human perception and understanding (Stake, 2010:11). Flick (2014:5) describes qualitative analysis as the classification and interpretation data to meanings or representations. Qualitative data analysis is applied to describe a phenomenon in greater detail, to identify and explain the conditions and to also develop a theory of the phenomenon under study (Flick, 2014:6). Neuman (2007:328) adds that qualitative data come in different forms namely; written words, photos, describing people, actions and events in social life.

##### **3.8.1.1 Content analysis**

According to Elo and Kyngäs (2007:107) content analysis is a method used to analysis verbal, written and visual communication text used for both qualitative and quantitative data. Prasad (2008:1) argues that content analysis is the study of content communication where the basis of drawing inferences and conclusions is done through content of the messages. Content analysis conforms to objectivity, systematic and generalizability which are the principles of scientific; it is done in the form of human communication such as radio, newspaper, documents, letters and transcripts of conversations (Neuendorf 2002:1). Furthermore, Prasad (2008:1) adds that content analysis also falls in line with document analysis and observation. Content analysis allows that researcher to test theoretical issues by distilling the words into fewer content related categories to enhance the understanding of data (Elo & Kyngäs, 2007:107). Researcher used content analysis for the training weekly reports from the service provider, face-to-face semi-structured interviews and observations of the training because of their qualitative nature.

### **3.8.2 Quantitative analysis**

In order to move from data to information we need to analysis the data; quantitative analysis involves a mathematical operation to discover and describe patterns in your data (Daniel & Russell, 2012:154). Kothari (2004:130) adds that the difference between quantitative and qualitative data is the output; quantitative data is measured to give a meaningful numerical results. Singh (2007:124) expressed that quantitative data consists of variables from which start from a research question, hypothesis or a concept. Quantitative data was extracted from the closed-ended questionnaire and encoded by using Statistical Package for the Social Science (SPSS).

#### **3.8.2.1 Inferential analysis**

According to Kothari (2004:131) inferential is concerned with generalisation of the findings from a sample and that the task of interpretation to make inferences and conclusion is performed. Walliman (2011:116) argues that inferential statistics make the inferences about the population based on a random sample.

#### **3.8.2.2 Descriptive statistics**

Marczk *et al.* (2005:209) stated that descriptive statistics describes summarized data collected with the purpose of describing what occurred in the sample. Singh (2007:134) added that researchers use descriptive statistics in the case of data counts, proportions, rates and ratios as a way to get a first-hand feel of the data. Supino and Borer (2012:207) argue descriptive statistics are results obtained from the random variables which maybe quantitative and qualitative. Descriptive statistics are used to measure the central tendency: mode, median and mean and frequencies distribution (Walliman, 2011:116). For this study once the questionnaires were collected a code value was allocated, the answers were coded by using descriptive analysis on the Statistical Package of the Social Science (SPSS) to interpret the data.

### **3.9 Reliability and validity of the data**

According to Neuman (2007:115) the central issues of measurement of establishing credibility, believability of findings and truthfulness in research study are achieve through reliability and validity. Adowitz and Toole (2010:110) expressed that most engineering terms have a standard method for measuring a value but in construction management the measurement of concepts can be neither difficult to measure or uniformly defined. Neuman (2007:115) adds that perfect reliability and validity are practically difficult to achieve

especially in social research since social theory can often be not directly observable, diffuse and ambiguous. Bhattacharjee (2012:55) argues that a measure can be valid but not reliable if measuring the same construct but not doing so in a consistent manner and measure can be reliable but not valid if measuring with same instrument but do not get the same results.

### **3.9.1 Reliability**

Neuman (2007:115) defines reliability as the dependability or consistency of measure of a construct. Bhattacharjee (2012:55) suggests that reliability is achieved if the same construct is measured repeatedly under the same or similar condition and same results are produced every time. Fellows and Liu (2015:265) adds the measurement error in a respondent's score can never be known by the researcher if it is certainly precise or reflects the really true score. Fellows and Liu (2015:265) argue that the researcher can estimate the reliability of measures through three commonly ways namely: test-re-test reliability, inter-item reliability and inter-rater reliability. The main purpose of reliability is to measure how much error is contained in a respondent's score and to minimise the errors and biases in a research study (Neuman, 2007:115). Fellows and Liu (2015:265) suggested that internal consistency can be used to ensure that the consistent scores are achieved in the various items measuring the different constructs. The Likert-scaled questions on the questionnaire were tested with the Cronbach's alpha co-efficient which measures the internal reliability ranging from 0 to 1.0; adequate reliability in Cronbach alpha co-efficient is 0.7 or greater. In this study the reliability was kept in mind throughout the whole process, reliability tests were performed on the Likert scale questions by using Cronbach's alpha co-efficient. The consistency of the results was reliant on the respondent's abilities understanding of the questionnaire.

### **3.9.2 Validity**

Validity is the measurement of truthfulness or credibility referring to how well the research finding real fits in with actual reality (Neuman, 2007:115). Cohen *et al.* (2007:133) adds that validity is the vital key to research since invalid research is worthless. Validity of research has taken many forms, in qualitative research data validity might be transmitted through scope of data, depth, richness, participants, extent of triangulation and honesty achieved (Cohen *et al.*, 2007:133). To achieve validity researcher used the same set of questions for interviewing appropriate respondents and the questionnaires were given to the right respondents; to obtain true information the names of respondents were kept anonymous. To ensure validity for the study data from the interviews were transcribed and transcribed data was given to the respondent to check and resolve any discrepancies that may have arisen and also to eliminate interviewer bias and misunderstanding.

### **3.10 Chapter summary**

This chapter reflected on the research methodology used for the study. Various types of methodologies were defined and further explained precisely why the selected methodology was selected. Mixed methods design (combination of quantitative and qualitative) was used but biased somehow towards qualitative to achieve the objectives of the study. A case study approach was adopted for the study using interviews, questionnaires, observations and document review to collect the primary data for the study. Methods for data analysis were also explained. Furthermore reliability and variability explanation on how these aspects were achieved for the study were stated clearly.

## CHAPTER FOUR

### 4. DATA ANALYSIS

#### 4.1 Introduction

This chapter aims to present analysis, interpretation and discussion of the relevant data gathered. The data was gathered through questionnaires, observations, semi-structured interviews and questionnaires; in order to clarify the investigation of training needs identification of the programme, qualities and competencies that need to be evaluated before selection of trainers, assessment strategies used at the programme and indicators used to monitor and evaluate the programme. The discussion of findings obtained is organised according to the research objectives.

#### 4.2 Profile of the respondents

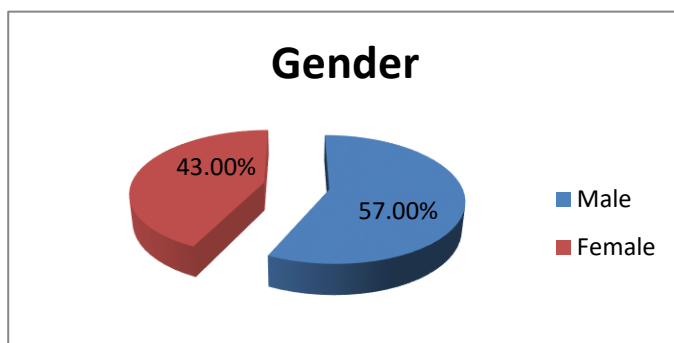
Quantitative research approach was used to collect data from trainees through questionnaires. A total of 50 questionnaires were distributed to trainees at Western Cape Contractor Development Programme (WCCDP) of which 35 (70%) questionnaires were returned. The questionnaires were processed by coding and entering data using software package used for statistical analysis SPSS.

##### 4.2.1 Demographics of the respondents

###### 4.2.1.1 Gender

Figure 4.1 shows the rationale for gender information; it indicates that there were 20 (57%) males and 15 (43%) females. There was a higher male respondent than female, shows a true reflection of the construction industry which is mainly dominated by males. However this clearly indicates a there is an increase in the number of females who are joining this male dominate industry.

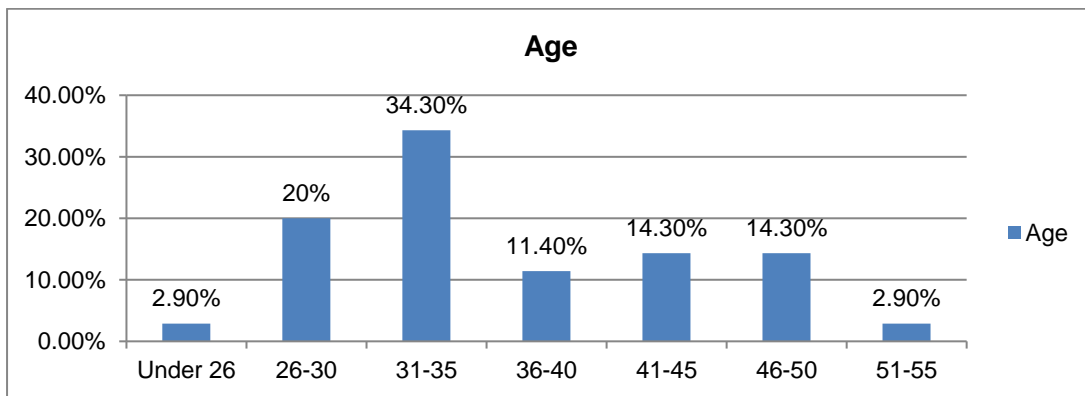
**Figure 4.1** Gender distribution of the sample



#### 4.2.1.2 Age

Figure 4.2 shows that age distribution of trainees: 1% was under 26, 20% were between the ages of 26 and 30, 34.3% were between the ages of 31 and 35, 11.4% were between the ages of 36 and 40, 14.3% were between the ages of 41 and 45, 14.3% between the ages of 46 and 50, and 2.9% were between the ages of 51 and 55.

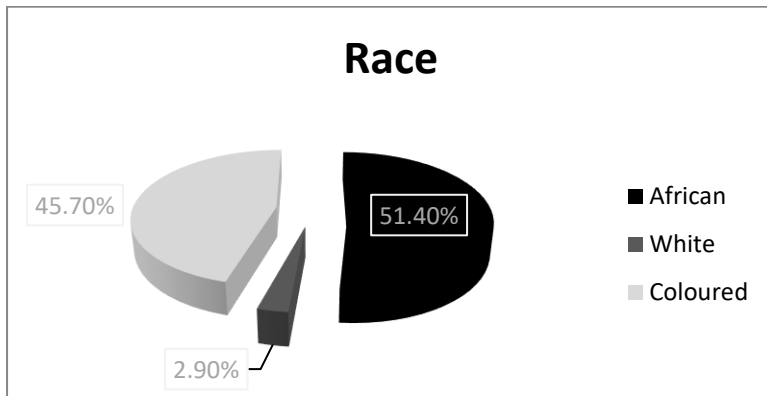
**Figure 4.2** Age distribution of respondents



#### 4.2.1.3 Race of trainees

The races of respondents are indicated on Figure 4.3; it illustrates that the African respondents dominated the sample with 18 (51.4 %), the whites being the minority 1(2.9%) and coloureds at 16(45.7%). This indicates that such training programme focus on historical disadvantage individuals.

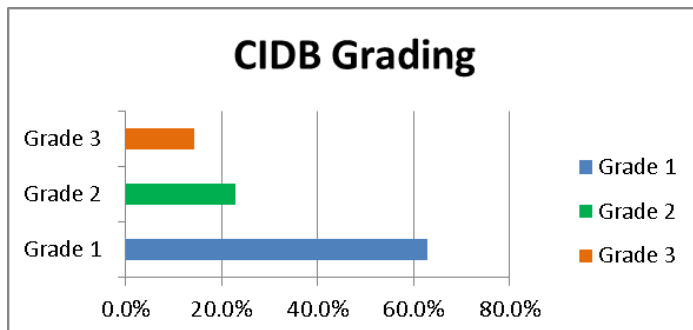
**Figure 4.3** Distribution of respondents by race



#### 4.2.1.4 CIDB grading

Figure 4.4 presents the cidb grading of the respondents and the finding indicate that 62.9% of the respondents are registered under Grade 1, 22.9% of the respondents are registered under Grade 2 and 14.3% of the respondents are registered under Grade 3.

**Figure 4.4** cidb grading of the respondents

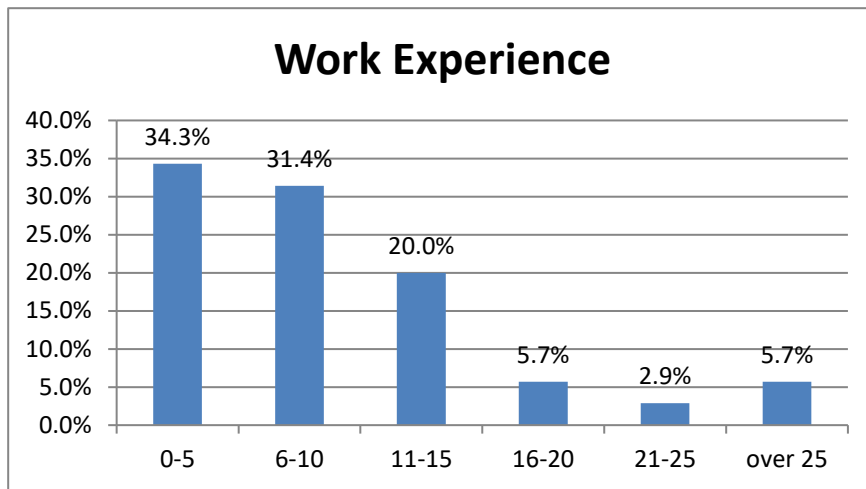


#### 4.2.1.5 Construction work experience of respondents

The years of experience of respondents in the construction industry is shown the table below Table 4.5 which indicates that 34.3% were between 0 and 5 years, 31.1% were between 6 and 10 years, 20% were between 11 and 15 years, 5.7% were between 16 and 20 years, 1% were between 21 and 25 years and only 2% were over 25 years. This illustrate that there is a high number of contractor in grade 1. The majority of the respondents fell into the category of 6 -10 years of experience. This is shows that the respondents had fairly reasonable experience in the industry and their responses could be trusted.



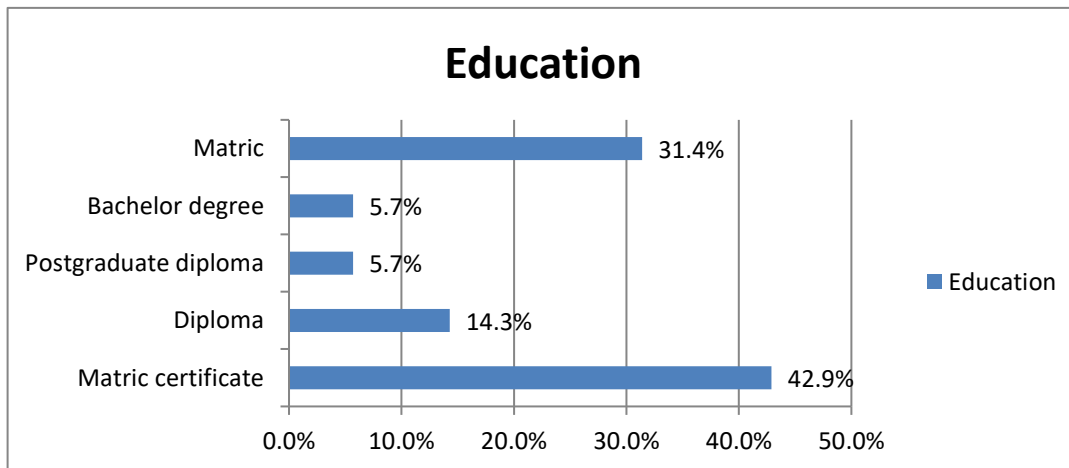
**Figure 4.5** Work experience in construction



#### 4.2.1.6 Formal qualification of the respondents

Figure 4.6 reflects that 42.9% of the respondents had matric certificate, 14.3% had a diploma qualification, 5.7% had a postgraduate diploma and bachelor degree and while the other had a matric plus certificate. This means that the vast majority of the respondents understood the research questions and were able to answer them correctly.

**Figure 4.6** Education distributions of the respondents



#### 4.2.2 Training Needs Analysis

##### 4.2.2.1 Training needs

A TNA is conducted before training, in order to identify the needs of the trainees. A 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Table 4.1

shows that training facilitators stated the current training needs before trainees enter the programme with a mean score 3.37, training facilitators clearly stated the desired outcomes with a mean of 3.5, training provided is linked to the needs most respondents with a mean score of 3.6, skills and knowledge obtaining during training are relevant to needs of the respondent's company with a mean of 3.5 and training needs emphasized in organisation's training practices to ensure training effectiveness with a mean 3.2. The major findings show that the training facilitators do communicate desired outcomes, the current training needs, link the training to the needs of respondents and that skills and knowledge gained is relevant assist respondents in operating their company efficient.

**Table 4.1** Training needs

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
Training provided is linked to respondents' needs	35	5.7	5.7	31.4	34.4	22.9	3.6	1.09	1
Training facilitators clearly stated the desired outcomes	35	8.6	2.9	31.4	31.4	42.9	3.5	1.07	2
Skills and knowledge obtaining during training are relevant to respondents' company needs	35	5.7	8.6	28.6	42.9	14.3	3.5	1.04	3
Training facilitators stated the current training needs of trainees before entering the programme	35	8.6	8.6	31.4	40.0	11.4	3.4	1.09	4
Training needs emphasized in organisation's training practices to ensure training effectiveness	35	5.7	14.3	42.9	28.6	8.6	3.2	0.99	5

#### **4.2.2.2 Process for determining needs for training**

The survey requested that the respondents assess the process of determining the needs of training. A 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Table 4.2 indicates the extent that training facilitators conducted a formal training needs assessment before respondents entered the programme, whether respondents had an input to express their needs interests and expectations, extent that training addresses the key issues and needs of respondents and the extent to which training programme has so far increased current skills and knowledge of respondents. Findings on table 4.2 indicate that training facilitators conducted a formal training needs analysis before entering the programme with a mean score of 2.7; respondents had an input to express their needs interests and expectations with a mean 2.8; so far the training addresses

respondents' key issues and needs with mean of 3.3; training programme has so far increased respondents' current skills and knowledge with a mean of 3.3. After assessing the means obtained, the programme had no formal Training Needs Analysis and respondents did not express their needs and interest as the mean scores were less than 3. Mean scores for addressing the programme their issues and needs and the programme increase their current skills and knowledge were greater than 3.

**Table 4.2** Training Needs Analysis

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
Training programme has so far increased respondents' current skills and knowledge	35	11.4	14.3	20.0	40.0	14.3	3.3	1.23	1
So far the training addresses respondents' key issues and needs	35	8.6	11.4	34.3	31.4	14.3	3.3	1.13	2
Respondents had an input to express their needs interests and expectations	35	22.9	17.1	22.9	34.3	2.9	2.8	1.24	3
Training facilitators conducted a formal training needs analysis before entering the programme	35	17.1	25.7	28.6	22.9	5.7	2.7	1.17	4

#### 4.2.2.3 Levels of Analysis

Table 4.3 shows the level at which analysis of training needs took place. The respondents are at a person analysis which means analysis of the trainees, this assessed by a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Respondents identified their involved in the need analysis range of different people; necessary people were consulted in the needs analysis process and were their involvement made clear why they had to participate in the needs analysis. The findings indicated that the level of needs analysis was not analysed at the level of respondents, with mean scores 2.46, 2.66 and 2.91.

**Table 4.3** Levels of Analysis

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
It was made clear why respondents were involved to participate in the needs analysis	35	25.7	11.4	22.9	25.7	14.3	2.9	1.42	1
The necessary people were consulted in the needs analysis process	35	31.4	14.3	25.7	17.1	11.4	2.7	1.45	2
Respondents were involved in the need analysis range of different people	35	37.1	11.4	25.7	20.0	5.7	2.5	1.34	3

#### 4.2.2.4 Data collection method for identifying the training needs

Table 4.10 reflects that 22.9% data for training needs of respondents was collected using a questionnaire, 20% using direct observation, 8.6% using skill, knowledge and abilities test, 2.9% using personal face-to-face interviews facilitators, 14.3% using determination through special committee, 2.9% using group interviews with facilitators and trainers and 28.6% other had idea how or when data for training needs was collected.

**Table 4.4** Data collection method used to identify training needs

	<b>Frequency</b>	<b>Percentage</b>
Questionnaire	8	22.9
Direct observation	7	20.0
Skills, Knowledge and Abilities tests	3	8.6
Personal face-to-face interviews facilitators	1	2.9
Determination through special committee	5	14.3
Group interviews with facilitators and trainers	1	2.9
Other	10	28.6
Total	35	100.0

### 4.2.3 Trainer's competency

#### 4.2.3.1 Communication skills

Table 4.5 presents the communication skills competency of a trainer, respondents were required to assess the communication skills of the trainer using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Findings on table 4.11 represents the trainers' demonstrate of good communication skills while delivering the training, trainers create opportunities for question and answers and use questioning to engage participation, trainers demonstrates effective delivery of the quality training, trainer's presentation of the work course was well paced and clear, trainers have the ability to provide positive and constructive feedback, trainers responds to questions with a balanced understanding of the teachings and trainers communicate clearly and effectively in written and visual forms. The findings showed mean scores of the 3.86, 3.86, 4.25, 3.91, 4.23, 3.86 and 3.86. This signified that respondents agreed that trainers communicated well during the delivery of the training.

**Table 4.5** Communication skills

Significant	N	1	2	3	4	5	Mean	Std. D	Rank
Trainers demonstrates effective delivery of the quality training	35	2.9	5.7	17.1	40.0	34.3	4.3	1.46	1
Trainers have the ability to provide positive and constructive feedback	35	5.7	5.7	14.3	37.1	37.1	4.2	1.55	2
Trainers responds to questions with a balanced understanding of the teachings	35	8.6	0	17.1	42.9	31.4	3.9	1.13	3
Trainer's presentation of the work course was well paced and clear	35	5.7	2.9	22.9	31.4	37.1	3.9	1.12	4
Trainers communicate clearly and effectively in written and visual forms.	35	3	0	17.1	45.7	28.6	3.9	1.12	5
Trainers create opportunities for question and answers and use questioning to engage participation.	35	5.7	11.4	11.4	57.1	25.7	3.9	1.02	6
Trainers' demonstrate good communication skills while delivering the training	35	5.7	2.9	14.3	51.4	25.7	3.9	1.02	7

### 4.2.3.2 Training skills

Respondents were asked to assess training skills of a trainer using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Table 4.6 findings indicates that trainer shows strong technical knowledge of the subject by use by applying construction industry examples, trainers displays competency in the delivery training, trainers encourages questions during the training, trainers demonstrates keenness in supporting with the course work, trainers appear confident and well prepared to teach and deliver the teachings in an understandable and clear manner, trainers have the able to maintain a clear, strong, kind, and effective presence when training, throughout the entire course and trainer understands the outcomes of using experiential exercises inappropriately. The findings showed mean scores ranging between 3 and 4 respectively. This signified that respondents agreed that trainers had good training skills to deliver the training.

**Table 4.6** Training skills

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
Trainers encourages questions during the training	35	5.7	2.9	20.0	31.4	40.0	4.00	1.12	1
Trainer shows strong technical knowledge of the subject by use by applying construction industry examples	35	5.7.	0	20	37.1	37.1	4.00	1.06	2
Trainers demonstrates keenness in supporting with the course work	35	5.7	0	11.4	54.3	28.6	4.00	0.97	3
Trainers appear confident and well prepared to teach and deliver the teachings in an understandable and clear manner.	35	5.7	2.9	20.	42.9	28.6	3.9	1.06	4
Trainers have the able to maintain a clear, strong, kind, and effective presence when training, throughout the entire course.	35	5.7	2.9	14.3	51.4	25..7	3.9	1.02	5
Trainer understands the outcomes of using experiential exercises inappropriately.	35	5.7	0	22.9	45.7	25.7	3.9	1.00	6

Trainers displays competency in the delivery training	35	5.7	5.7	14.3	54.3	20.3	3.8	1.03	7
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#### 4.2.3.3 Problem solving skills

The survey requested that the respondents assess the problem solving skills of trainers using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Table 4.7 indicates whether trainers identifies a problem that exists, take timely and appropriate action with a mean score of 3.66, trainers Inspire others on the team to contribute to the problem-solving process with a mean of 3.57, trainers have the ability to handling difficult situations and has basic knowledge of potential problem areas with a mean of 3.66, trainers are able to spot potential problems and refer respondents to appropriate resources with a mean of 3.57, trainers gave me enough individual help with my problems with a mean of 3.67 and trainers have the ability to deal with crisis and conflict with a mean of 3.60. This signified that respondents agreed that trainers have a great problem-solving that erupted during the delivery of the training.

**Table 4.7** Problem solving skills

Significant	N	1	2	3	4	5	Mean	Std. D	Rank
Trainers Identifies a problem that exists and take timely, appropriate action	35	8.6.	2.9	25.7	37.1	25.7	3.7	1.16	1
Trainers have the ability to handling difficult situations; Has basic knowledge of potential problem areas.	35	8.6	2.9	20	48.6	20	3.7	1.11	2
Trainers gave me enough individual help with my problems	35	5.7	8.6	20	42.9	22.9	3.7	1.11	3
Trainers have the ability to deal with crisis and conflict	35	5.7	8.6	28.6	34.3	22.9	3.6	1.12	4
Trainers are able to spot potential problems and refer trainees to appropriate resources	35	8.6	2.9	28.6	42.9	17.1	3.6	1.09	5
Trainers Inspire others on the team to contribute to the problem-solving process	35	8.6	2.9	25.7	48.6	14.3	3.6	1.07	6

#### 4.2.3.4 Qualities of the trainer

The survey findings were recorded in table 4.8 using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. These results indicated that trainers influence the development of respondent to be independent with a mean score of 3.7, trainers encourage respondents to think through issues to generate ideas with a mean of 3.7, trainers are good listeners and questioners with a mean of 3.8, trainers are flexible in the use of training strategies and tactics with a mean score of 3.7, trainers are positively reinforcing our success to encourage respondents to be more proactive with a mean of 3.69, trainer show genuine concern for the respondents to establish an effective and helpful relationship with a mean of 3.4 and trainers demonstrating technical competence in the area being taught with a mean of 3.65. The respondents agree that trainers who deliver the training show good qualities and that delivery of the training were delivered at a good quality.

**Table 4.8** Qualities of the trainer

Significant	N	1	2	3	4	5	Mean	Std. D	Rank
Being good listeners and questioners	35	5.7	2.9	28.6	31.4	31.4	3.8	1.11	1
Positively reinforcing our success to encourage us to be more proactive	35	8.6	2.9	31.4	25.7	31.4	3.7	1.21	2
Encouraging learners to think through issues to generate ideas	35	8.6	2.9	28.6	28.6	31.4	3.7	1.20	3
Being flexible in the use of training strategies and tactics	35	5.7	5.7	31.4	25.7	31.4	3.7	1.15	4
Influencing our development to be independent	35	8.6.	22.9	48.6	0	20	3.7	1.07	5
Demonstrating technical competence in the area being taught	35	5.7	8.6	22.9	40	22.9	3.6	1.11	6
Shows genuine concern for the trainees to establish an effective and helpful relationship	35	8.6	5.7	31.4	42.9	11.4	3.4	1.07	7



## 4.2.4 Assessment strategy

### 4.2.4.1 Purpose of assessment

Assessment forms vital element in training, it serves as a feedback for the learning for the respondents so it's important that they understand the purpose of assessment. As shown in table 4.9, respondents were requested to indicate to what extent they agreed with the given statements using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. The findings showed mean scores ranging between 3 and 4 respectively. This signified that respondents agreed assessment does form an important part of their training, influence and provide feedback on their learning.

**Table 4.9** Purpose of assessment

Significant	N	1	2	3	4	5	Mean	Std. D	Rank
Respondent get helpful feedback on how respondent does after every assessment (in a form of a mark)	35	5.7	2.9	14.3	34.3	42.9	4.1	1.11	1
Assessment provides problem-solving feedback	35	8.6	0	22.9	34.3	34.3	3.9	1.17	2
Trainer always makes it easy to know the standard of work expected	34	8.6	0	22.9	37.1	31.4	3.9	1.16	3
Assessment identifies what respondents' know about the trained course work	35	8.6	2.9	20	37.1	31.4	3.8	1.18	4
The assessment influences respondents' learning positively	35	5.7	2.9	22.9	40	28.6	3.8	1.07	5
Assessment is an important part of respondents' training	35	5.7	2.9	22.9	40	28.6	3.8	1.07	6

### 4.2.4.2 Summative assessment

Summative assessment is a formal assessment strategy used to assess the learning at the end of lesson or module. Table 4.10 presents the factors of summative assessment, respondents indicate to what extent they agreed with the given statements using a 5-point

Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. These indicated that formal assessment was done through an assignment or projects, tests or examination or both after completion of course work with a mean 3.63, assessment results were recorded in scores or grades with a mean of 3.86, assessment provides me with the opportunity to demonstrate what the respondents have learned with a mean of 3.71, assessment allows respondents to transfer what I have learned to specific and real-life tasks with a mean 3.66 and assessment are carried out from time-to-time with a mean 4.66.

**Table 4.10** Summative assessment

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
Assessment are carried out from time-to-time	35	5.7	2.9	25.7	37.1	28.6	4.7	1.05	1
Assessment results were recorded in scores or grades	35	8.6	5.7	14.3	34.3	37	3.9	1.24	2
Assessment allows me to transfer what I have learned to specific and real-life tasks	35	8.6	5.7	22.9	37.1	25.7	3.7	1.19	3
Assessment provides me with the opportunity to demonstrate what I know	35	8.6	2.9	20	45.7	22.9	3.7	1.13	4
Formal assessment was done through an assignment or projects, tests or examination or both after completion of course work	35	11.4.	2.9	25.7	31.4	28.6	3.6	1.26	5

#### **4.2.4.3 Formative assessment**

Formative assessment is a formal assessment strategy used for on-going process of evidence and feedback during training. Table 4.11 presents the factors of formative assessment, respondents indicate to what extent they agreed with the given statements using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Findings signified that trainers uses in-class and task activities to assess my work with a mean of 3.71, trainers provides feedback and information during while training is taking place with a mean of 3.71, trainers provide feedback and where respondents went wrong corrections were made with a mean of 4.09, questions and answering are sometimes

informal with a mean of 3.49, assessment carried out while the learning is in progress day-to-day with a mean of 3.66 and trainers are interactive when assessing my work with a mean of 3.69.

**Table 4.11** Formative assessment

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
Trainers provide feedback and where respondents went wrong corrections were made	35	5.7	2.9	11.4	37.1	42.9	4.1	1.09	1
Assessment carried out while the learning is in progress day-to-day	35	8.6	0	34.3	31.4	25.7	3.7	1.14	2
Trainers are interactive when assessing my work	35	8.6	31.4	0	34.3	25.7	3.7	1.13	3
Trainers uses in-class and task activities to assess respondents' work	35	8.6	0	37.1	37.1	25.7	3.7	1.13	4
Trainers provides feedback and information during and while training is taking place	35	5.7	5.7	22.9	42.9	22.9	3.7	1.07	5
Questions and answering are sometimes informal	35	14.3	2.9	28.6	28.6	25.7	3.5	1.31	6

#### **4.2.4.4 Outcomes-based assessment**

Outcomes-based assessment is a formal assessment strategy which combines both formative and summative assessment. Table 4.12 presents the factors of outcomes-based assessment, respondents indicate to what extent they agreed with the given statements using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. The foremost factors identified had a mean score ranging between 3 and 4. Findings included that trainers were clear on what they were expecting for my success, trainers provide a portfolio for all our tests, class activities and participation in group classes, assessments objectives are linked with training outcomes, assessment shows evidence of respondent's level of achievement and assessment helps respondents to improve their work.

**Table 4.12** Outcomes-based assessment

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
Trainers provide a portfolio for all respondents' tests, class activities and participation in group classes	35	5.7	2.9	11.4	37.1	42.9	4.1	1.09	1
Assessment helps me to improve my work	35	5.7	2.9	17.1	51.4	22.9	3.8	1.01	2
Assessment shows evidence of my level of achievement	35	8.6	5.7	14.3	45.7	25.7	3.7	1.17	3
Trainers were clear on what they were expecting for my success	35	5.7	0	42.9	20	31.4	3.7	1.10	4
Assessments objectives are linked with training outcomes	35	11.4	0	28.6	34.3	25.7	3.6	1.21	5

#### **4.2.4.5 Indicators of sound classroom assessment**

Table 4.13 shows the indicators of classroom sound assessment using a 5-point Likert scale determined to what extent the respondents agreed with the given statements, namely 1- Strongly disagrees, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree. Respondents identified time was given for completing my knowledge assessment (written test or class activities) with a mean of 3.71, if respondents get nervous or stressed out while carrying out an assessment with the current assessment strategy with a mean of 3.02 , trainers involve respondents in setting goals for our learning with a mean of 3.31, trainers design assessment that serve the intended purposes with a mean of purpose 3.60, Assessments process fits the purpose with a mean of 3.49, assessment and scoring are standard-based with a mean of 3.57, assessment guides and focuses on my professional development and assessment is done in a fair manner with a mean of 3.71 and not bias with a mean of 3.89.

**Table 4.13** Indicators of classroom sound assessment

<b>Significant</b>	<b>N</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std. D</b>	<b>Rank</b>
Assessment is done in a fair manner and not bias	35	8.6	2.9	17.1	34.3	37.1	3.9	1.21	1
Enough time was given for completing knowledge assessment (written test or class activities)	35	8.6.	8.6	20	28.6	34.3	3.7	1.27	2
Assessment guides and focuses on respondents' professional development	35	8.6	5.7	22.9	31.4	31.4	3.7	1.23	3
The instruction, assessment and scoring are standard-based	35	5.7	5.7	40	22.9	25.7	3.6	1.12	4
Trainers design assessment that serve the intended purposes	35	5.7	11.4	20	42.9	20	3.6	1.12	5
Assessments process fits the purpose	35	8.6	11.4	20	42.9	17.1	3.5	1.17	6
Trainers involve us in setting goals for respondent's' learning	35	8.6	11.4	34.3	31.4	14.3	3.3	1.13	7
Respondents get nervous or stressed out while carrying out an assessment with the current assessment strategy	35	17.1	11.4	40	14.3	17.1	3.0	1.29	8

### 4.3 Validation of results

The purpose of this interview section is to validate the quantitative data obtained from the trainees. Three trainees were selected for conducting the interviews. The interview was semi- structured, and interview questions formed its basis and were formulated using the results of quantitative data after the data analysis.

#### 4.3.1 Interview with respondent A

The first interview was conducted with a trainee (emerging contractor) on 02 March 2016. The respondents indicated that the programme does not have a TNA, they just attended the training. The respondent further stated the programme seems like it is not properly organised and that trainee felt that they really wasted their time because the programme has not deal with trainee's challenges. The respondent stated that their needs at the programme

are not catered for since the training content was not aligned with their needs. Respondent indicated that the programme has trainees who are repeating the training which shows that the programme is not effective at all and that these trainees who are repeating the training are taking other potential trainee's spot since the programme is limited to a number of trainees. The respondent explained that the reason these trainees came back again was because they felt that the programme did not equip them with the necessary skills to run their businesses. The respondent indicated that the programme does not help them at all, even looking at the current number of trainees it has decreased; at first there were about 60 trainees but looking at the number now it is less than 30 trainees. The respondent added that their complaints are not dealt with and that the training is problematic.

The respondent indicated that they have numerous trainers who have been coming to the programme so far they had two, one happens to be a good trainer; shows competent, displays that he has construction and training experience and that at college trainer studied construction studies. The respondent further stated the trainer demonstrates that he knows what he is talking about. The respondent added that they have a problem with the trainer who happens to be a facilitator, his comments and the way he conducts the training is unprofessional and has a racist element which has angered the trainee. The respondents indicated that he could not concentrate or listen to any word coming from other trainer and went to a point where he stopped attending the training. The respondent further stated that overall the training was not planned properly and was very hasty. The trainee described that when it comes to the communication, training and problem-solving skills of trainers, he was two-sided since not all the trainers demonstrated good communication, training and problem-solving skills.

The respondent explained that the training makes use of formative and summative assessment. Respondent added that he was not happy with both formative and summative assessment. The summative assessment did not add value to trainees' learning because he felt like it was always rushed and that also formative assessment was also rushed. The respondent further stated that trainees could not finish the assessments within the stipulated time and were expected to finish the assessments at home where by some of them have businesses and family to take care of. He added that they do not have time because the training takes the whole day and they do not get enough time to do them. The respondent added that them by being at the training was already putting strains in their business and projects. The respondent indicated that most of the time he felt that assessments activities are not really adding any value to his learning. Respondent added that training management must really look at assessment strategies that will work for them.

### **4.3.2 Interview with respondent B**

The second interview was conducted with a second trainee on the 03 March 2016. The respondent stated that the programme did not conduct a TNA on them. The respondent stated that they were required to just fill in an application form to be part of the programme, got inducted for training, signed in an agreement form and started the training. The respondent further stated that they were told that the contractor development programme was going to assist them with their challenges. Respondent indicated that training did not really assist them with most challenges but the practical element where trainees go to site, of the programme kind of helped. The respondent stated that the programme was not effective at all and he never got a competence certificate or qualification which was promised by the training provider. Hence he decided to attend another contractor development programme which took place in Khayelitsha.

The respondent indicated that trainers showed competency especially while when they were doing the practical skills but overall all the trainers they had in the programme were not bad. The respondent added that one particular trainer showed a lot of competency and his delivery of the training was effective and that he was always prepared for class.

The respondent indicated that trainers never allocated time enough time for the assessment. Respondent stated that they never had time for assessment and that they were rushed. Respondent further stated that the assessment strategies used were not proper for the training, first of all trainees are not students we are businessmen and businesswomen, and trainees have other things to do besides training. Respondent stated trainee was not comfortable with the assessment strategy because of the time pace and the expected outcomes were not properly stated. The feedback was also not good at all. Respondents expressed that they were sometimes trainees behind on their work because they took time to finish the assessments and it was always difficult to catch up. Respondents stated that sometimes the feedback was not good at all; trainees did not know what you did wrong or where to improve. Respondent further stated that that were just given deadline of submitting the assessments and cannot even track their progress. Respondent expressed that they were nervous and stress out when according an assessment and that the assessment strategies at the programme was not enhancing their learning instead they are just draining and add more unnecessary pressure on them.

### 4.3.3 Interview with respondent C

The third interview was conducted with the third trainee on 05 March 2016. The respondent indicated that if the programme had a TNA process, trainees were never part of the process which by the look of the currently situation at the programme if the programme did have one; it did not work because their problems and challenges were not dealt with. The respondent stated that they applied for being part of the programme which we get the information from the internet that such contractor development programmes were available. The respondent further stated that programme does not accommodate their needs and that the training content looked like a 'copy and paste'; as if it has being copied from the internet. Trainee indicated that no proper research or analysis of needs of emerging contractors was conducted. The respondent described that even the building and measurement standards are not from South Africa. The trainee added that most of the training content is irrelevant to the challenges that they face as emerging contractors. The respondent also indicated that programme also lacked the practical component and which is essential for construction training. The respondent recommended that the training management should have divided the training to classroom training and practical learning for them to be able apply whatever they learn during classroom into practise.

The respondent explained that not all the trainers were competent; only one trainer demonstrated competency, expertise, could capture the trainees' attention. The respondent further stated that trainer and show experience because he could deliver the training effectively and showed that he has studied a construction course. The respondent stressed out that other trainers were not effective in the training delivery and not competent. The training material had too many errors which other trainers couldn't rectify.

The respondent indicated that assessment strategies used did influence trainees' learning but negatively due challenges with summative the questions asked were totally different from the formative assessment. Since formative assessment is the build-up to summative assessment trainee had difficulty in doing the summative. The respondent added that formative assessment did not prepare trainee enough to be able to answer the summative assessment; there was no correlation between summative and formative assessments. The respondent stated that some of the questions that were asked were not deal with in the learner guide which made it extremely difficult to answer. The respondent further stated that time allocation given for assessment was not adequate for completion of the assessments.



## **4.4 Interviews**

In the study five participants were interviewed to obtain data from programme trainer, programme coordinators, service provider project manager and programme facilitator on different days. A semi-structured interview was used to allow interviewees to have freedom to express their views and allows the interviewer to obtain defined answers through probing. For research questions 1 to 4, participants were interviewed to shed light on the method of identifying the needs of the trainees, the assessment strategies used for assessing trainees, the key indicators used for monitoring and evaluating the programme and the competency assessment of trainers. The interview was tape recorded, after the interview data was transcribed. These questions are documented in the Appendix C, D and E semi-structured interview.

### **4.4.1 Interview with trainer (service provider)**

#### **4.4.1.1 Training needs analysis**

The trainer was asked about how the training needs were identified. The interview revealed that the trainers are not involved in the training needs analysis but however before the start of the programme the trainer is only given the standard units that need to be trained. Trainer also shed some light that there is a possibility that training needs analysis is not executed at the programme instead the management of the programme focuses on the general contractor problems.

The trainer also stated that there is a necessity of executing a training needs analysis before the training content design and plan because some of the problems that the trainees have are not part of the training content. The trainer made an example of literacy and numeracy challenges of trainees and also stated that most of the trainees did not have site experience making it difficult for them to relate to construction examples given in class. Trainer also stated that the unit standards used for the training form part of the National Qualification Framework (NQF) and that sometimes trainer finds the training content covered by the unit standard does not cover the needs of the trainees or the coverage is shallow.

#### **4.4.1.2 Trainers' competency**

The trainer was inquired about trainer competency screening before being selected for the programme. The trainer indicated that no competency evaluation or screening was done on them but there is a requirement for trainers to be qualified trainers, qualified assessor and qualified facilitator. Trainers are also need to be registered with either Construction Education and Training Authority (CETA) or Skills Education Training Authority (SETA). Trainer does training in construction so the trainer is registered with the CETA. Trainer revealed that had he had to attend the training-a-trainer course, assessor course and facilitator course in order to obtain his qualifications. Trainer also indicated the trainers in the programme are required to have construction experience and then he mentioned the names of the construction companies that he has worked for and also revealed that he owns a construction company.

#### **4.4.1.3 Assessment strategy**

Trainer indicated that the programme do assess the learning of the trainees through assessment strategies, namely summative assessment and formative assessment. The trainer revealed that the service provider selects the assessment strategy and that the training assesses the outcomes of the unit standard. Trainer also noted that assessment does influence the learning of trainees positively because it shows that the trainee understands what they have being taught in class. However trainer highlighted that trainees encounter numerous problems when carrying out the assessments; problem such as language barrier, trainees not able to write and read properly. Trainer pointed out that formative assessment assists in identifying those trainees with learning difficulties and additional precaution assistance has being placed to assist the trainees with learning difficulties.

#### **4.4.2 Interview with facilitator (service provider)**

##### **4.4.2.1 Training Needs Analysis**

Facilitator indicated that training needs are assessed through pre-assessment progress where the management will look at the trainees' qualifications and focus on what they really need in order to further their education. Facilitator indicated although they do not have a formal training needs analysis; the unit standards that they use focus on the fundamentals of starting a business in construction. They also engage with trainees during the training to inquire about their issues with training; which has assisted in the identification of their training needs. Facilitator pointed out that they do experience problems such as language barrier but they deal with such issues by placing the trainees in groups.

##### **4.4.2.2 Trainers' competency**

Facilitator revealed that they do not screen the competencies of trainers but they have fixed trainers who are experts in different fields. Facilitator made an example of herself; she has business experience meaning if the programme needs any business experts for training she will train that unit standard or section. However trainers must be registered with CETA or SETA and also qualified assessor and facilitators. Facilitators pointed out that trainer must have experience in that field they intend to train.

##### **4.4.2.3 Monitoring and evaluation indicators**

Facilitators indicated that they use the assessment feedback as it forms part of the monitoring and evaluation of the programme. Facilitator adds that assessment feedback formulas as a remediation in assisting the learners and assessing if they did grasp what was taught in class. Facilitator revealed that they have monthly meeting with the programme coordinators and also draft a monthly report of issues they have such as trainees who do not attend the training, progress of the trainees and challenges that the trainees have. Facilitator also added that the trainees also contribute to the formulation of the report and trainees are

given any opportunity to voice out their challenges. Facilitator pointed out that they have a course evaluation; trainees fill in the evaluation after every month's training.

#### **4.4.2.3 Assessment strategy**

Facilitator revealed that they use both summative and formative assessment to assess the learning of trainees. Facilitator pointed out that the most important assessment strategy is the summative assessment due to the fact that summative assessment feedback is used for getting trainees accredited by the both CETA and SETA. Facilitators added that the summative assessment is marked by trainers then goes through to assessor then internal moderator for moderation then finally sent to the external moderator for final moderation. Facilitators also pointed out that assessment used do improve the standard of learning for the trainees. The facilitator further stated that the assessment strategy used is chosen by the service provider; which is part of the policies of the service provider and not based on the trainee behaviour or suit the purpose of the programme.

#### **4.4.3 Interview with programme coordinators (WCCDP)**

##### **4.4.3.1 Training Needs Analysis**

The first interviewee revealed that they never had formal training needs analysis; they started with an adult training for contractors which was designed and planned with what the programme coordinators thought would assist the contractors. He pointed out that they would do an evaluation after every training session; they would hand in evaluation forms to trainees to evaluate the training. They used that information from the evaluation form to identify the training needs. The second interviewee revealed that she was not involved in the initial stage of the programme but what they have done is that they have extended the training from six months to twelve months; they have added new modules (unit standards) with the assistance of the evaluation form from the previous group of trainees.

All interviewees explained that although they do not have a formal training needs analysis due to financial constraints, they do have a way of identifying the needs of the programme which is through observation, informal focus groups and feedback from the service provider and trainees. They added that mostly they rely on trainees' feedback which is an individual

analysis level and indicated that they do have challenges with regarding a formal identification of needs such as financial constraints, time constraints, the red tapes in government and some of the trainees have difficulties with reading and writing.

#### **4.4.3.2 Trainers' competency**

The interviewees revealed that due to the fact that they do not have internal trainers; they rely on service providers to provide the training. After they are done with identifying the needs of trainees; they advertise on the open market for a service provider in an open tender. Interviewees added that they chose from respondents on the advertisement who responded by sending their quotations, their company profile information and they are required to present their training material. Interviewees stated that they have selection criteria of more than five years' experience training in the built environment training, lowest bidder and presentation. Interviewees indicated that they do not have any competency evaluation of the trainers due to the fact that they recruit service providers (company) not individual trainers.

However although they recruit a service provider (company) only, they do request that service providers must submit Curriculum Vitae (CV) of the trainers and they look at their qualifications and experience.

#### **4.4.3.3 Monitoring and evaluation indicators**

Interviewees indicated that since the training is outsourced to the service providers, service providers do the monitoring and evaluations of the training programme which it is a requirement for the service provider to submit a report every end of the month. One the Interviewee noted that they do not have the experts in the monitoring and evaluation process but they do visit the facility where training is taking place to observe and also to engage with trainees. Interviewees revealed that trainers and facilitators who are part of the service providers are required to monitor and track the progress of the trainees by visiting the trainees' companies and reporting the challenges that they still have when they go back to their companies or work place after the training.

Interviewees indicated that they also use the summative assessment as part of monitoring and evaluation of the training programme due to the fact that they also indicate the progress of the trainees since the whole training relies more on the classroom training. Interviewees also pointed out that they do have an evaluation sheet that is divided into four sections namely the training, transportation, catering and accommodation.

#### **4.4.3.4 Assessment strategy**

Interviewees indicated that they have nothing to do with the type of assessment strategy the service provider use but they do require the results from the summative assessment. Interviewees added that although they are not part of the assessment but they do check if trainees are assessed and that the assessment strategy used is accredited by the CETA.

#### **4.4.4 Project manager (service provider)**

##### **4.4.4.1 Training Needs Analysis**

The project manager revealed that needs of the programme were presented to them by the programme coordinators. Project manager indicated that they worked with the programme coordinators to identify the needs of the training based on the reports from the previous year training and also some of the problems were pinpointed. The project manager stated that they have no knowledge of the formality of TNA but the programme coordinators are extreme passionate about the addressing the challenges and assisting the contractor trainees.

##### **4.4.4.2 Trainers' competency**

Project manager revealed that selection of trainers is based on their experts in the particular subject matter in order to be part of the training; such as trainers in business unit standards must be expert in the business field. The programme also selects trainers who are multilingual because of the diversity of the trainees and to overcome the challenge of language barrier. Project manager also noted that trainers must have an Entrepreneurship Development Programme (EDP) certificate, assessor qualification, facilitator qualification

and must be accredited by either CETA or SETA. Project pointed out that the CETA or SETA does an evaluation competency on the trainers before they are accredited and also trainers must have minimum of two years in the subject matter before they can train in the programme.

#### **4.4.4.3 Monitoring and evaluation indicators**

Project manager revealed that they monitor the trainees' progress once they go back to their companies; one of their facilitators will go to the trainees' project to monitor if the trainees use the skills, knowledge and abilities gained at the training. Project manager further revealed that trainees have a log book which the facilitator will sign off once they observed the trainees. Project manager indicated that their key indicators are based on the deliverables which are documented by the programme coordinators before commencement of the contract between the Department of Transport and Public works and the service provider. The project manager further indicated that payment is only made once this deliverables of the training are achieved. However for trainees they use the assessments to monitor and evaluate the learning and also trainees are given an evaluation form every week after the training. Project manager pointed out that during the training she conducts a focus group with the trainees for articulation of their issues and suggestions for betterment of the training. Furthermore there is a meeting every month between the service provider and programme coordinators to discuss the issues and challenges of the trainees and training.

#### **4.4.4.4 Assessment strategy**

Project manager indicated that they use outcomes-based assessment which is a combination of summative and formative assessment. Further pointed out the summative assessment assesses the everything that was done for that cluster and that summative assessment is marked by the assessor then to internal moderator for moderation then 25% of the marked scripts go to CETA for external moderation. Project manager highlighted the importance of assessment which she states that it serves as a measuring tool to measure if the knowledge and skill transferred by the trainers to trainees is grasped. Furthermore it indicates the areas where trainees are battling with and also guides the trainees in a corrective and construction manner. Indicates areas where training content needs to be

improved so that it can work for the trainees. The service provider issue certificate to trainees upon completion of the training. However they are working hard to get CETA to provide them with a certification of accreditation which will form a NQF level 4 qualifications.

#### **4.5 Observation of the training**

Observation of the training was made to complement the data provided by the programme coordinators, service provider project manager, facilitator, trainer and trainees. Observations are discussed under the following variables: the trainer and the trainees. Observations of the training were carried out from the 17<sup>th</sup> of August to the 21<sup>st</sup> of August 2015. The observation assisted to gain insight into some of the probable issues and to develop understanding of the problems from a different perspective of what is being studied. Researcher informal interviewed the trainees and trainer during the observation periods.

##### **4.5.1 Trainers**

The focal point of the observation was the trainer's delivery of the content and the instructional activity in the classroom. The trainer has a pivotal role in the programme since his primary role concerned with the actual training and helping the trainees to learn and provides feedback about their learning. The trainer was in his late 30s whose mother tongue is Xhosa. Researcher noted that the trainer was successful in engaging with trainees and the first impression that he made was creating a positive classroom atmosphere. The observation of the researcher starts with the trainer introducing himself to the trainees and providing a brief historical background of him.

Thereafter makes a request to the trainees to also introduce themselves; then gave the researcher the opportunity to introduce himself, the purpose why the researcher is visiting and also to brief them about the study being conducted. This eased uncertainties as the researcher could hear a sigh of breather from the trainees. Trainer had the ability to successfully introduce the lesson of the day to the trainees. The trainer made emphasis of the diversity of the class and raised that language could be a communication barrier but requested that whoever does not understand the work being taught must raise their hand for assistance.



The trainer started the unit of standard with an icebreaker in a custom of a joke that to the researcher showed experience in training because it helps trainees to overcome some fears, to relax and to focus. Later the trainer continued with the lesson which he appeared confident and prepared for the lesson. During the lesson trainer encouraged question and answer sessions and made visual examples on board to explain the course work. During the training the researcher came to this following conclusion based on the observation:

- The delivery of the training was properly structured and the class sessions were prepared but the training material sequential was poorly selected as he had a tendency to skip and correct inappropriate content on the notes. In one instance the measurement of the drawings were in American units of measurement.
- At times the training content lacked focus and not in align with the objective of the standard unit. However the trainer cleared out the confusion in the training content and would use his site experience to transfer superior knowledge and skills to the trainees. However to his defence he was not the one who designs and develops the training material.
- The trainer used numerous construction examples and training aids which was very effective strategy, even the researcher learned few construction tips and tricks.
- Assessments were carried out both in class and as homework; trainees did not show any difficulty in doing the assessment because the overall outcomes for the activity in the unit standard were clearly stated.
- Assessments were divided into two assessment strategies namely summative and formative assessment. Trainees started with the formative assessment first which comprises of activity tasks, group discussions and assignments. Thereafter the formative assessment would be marked and corrections were given to the trainees before moving to the summative assessment which was in form of tests.
- Enough time was allocated for each assessment and trainees got a feedback on the assessment.
- During the training the trainer could link the course work to what actual happens in the construction site.

During an informal discussion between the researcher and trainers; trainer mentioned that regarding his qualification he attended a technical college, attended a training-of-trainers course, and is a qualified assessor and facilitator. He has worked for numerous construction firms and has his own construction firm. He is currently working for the service provider and is recruited on a full time basis. He does most of the construction related training for the service provider. During the observation researcher noticed that they use expert facilitators

for other unit of standards. For instance on the business course work they had a business expert to train the accounting practise, entrepreneurial development and marketing.

#### **4.5.2 Trainees**

The programme has a total of 50 students who come from different parts the Western Cape South Africa. Trainees who live outside Cape Town, accommodation is provided during the duration of the training and also transports from their hotel to the training venue and back is provided. When a researcher is doing observations they cannot ignore the behaviours and the social setting participants because they play a vital role in the provision of insight data (Dawson, 2009:106). The training took place in city centre once a month for a week. Trainees are emerging contractors; attendance is sometimes poor which is a major concern whether consideration has been given that these trainees are contractors who have projects running while on the training when designing the curriculum and duration of the class sessions.

Trainees were much focused and displayed the eager to learn as a result during the informal discussion with the trainees they stated that they were happy with the training but had few issues which they thought that the training does not address their entrepreneurial development and socioeconomic needs. Some trainees revealed that the training content or material were inappropriate for their level and wanted more construction exposure and advanced training. The researcher noticed that trainees from a previous group had attended the training again so the researcher engaged with those trainees in an informal discussion and they revealed that the programme had added few new modules. This revealed that the programme does not analyse the needs of the trainees which result in training not catering the educational and development of trainees.

## **4.6 Discussion of findings**

This section presents the discussion and interpretation of findings obtained from questionnaires, semi-structured interviews and observation of the training in order to clarify the investigation of training needs identification of the programme, qualities and competencies that need to be evaluated before selection of trainers, assessment strategies used at the programme and key indicators used to monitor and evaluate the programme. The discussion of findings obtained is organised according to the research objectives.

### **4.6.1 Training Needs Analysis**

#### **4.6.1.1 Training needs**

A considerable amount of literature suggests that missing the TNA process leads to negligence of the critical training areas due to the fact that TNA provides answers to questions such as what needs to be trained and why training is needed (Landy & Conte, 2010:325; Alkinani, 2013:54; Altschuld, 2010:4-5; CMI, 2006:4). Emanating from the interviews, it is evident that training needs were pin-pointed and that the training management do not have sufficient expertise and funds to do the TNA activities. Omer (2013:159) in support, claimed that before one starts with a training programme training needs should be analysed in order to assess whether there is a need for training or not. During the interviews, one respondent when articulating this issue said:

We would love to have a formal training needs analysis but are faced with challenges such as the red tapes in the government, financial constraints and time constraints.

This statement is an indication that the respondent understands the full usefulness of a training needs analysis and that challenges such as the financial and time constraints hinders the non-existence of a formal training needs analysis.

Table 4.2 shows that the training needs were discussed before the training with a mean score above 3.4 and that might have happened during the induction stage of trainees which is after the training content and material have being planned and designed. Glenn (2009:18)

argues that training needs analysis must be conducted ahead of the programme design and planning because it makes sense to understand the appropriate intervention for addressing the problems and needs of beneficiaries before enrolling an intervention.

From the interviews conducted with the facilitator and trainees, it was deduced that the training needs analysis is not executed at the programme instead the programme coordinators focuses on the general contractor problems pin pointed by them.

A conclusion drawn from the above results reveals that training programme does not have a formal training needs analysis.

#### **4.6.1.2 Process for determining the needs of training**

Altschuld and Lepicki (2010:1) cited in Iqbal, Malik and Khan (2012:75) argue the process of determining the needs of the training is the need to identify its causes which involves the use of assessment centres, psychological tests, and individual interviews. Erasmus *et al.*, (2006:128) add that the process of determining the training needs should be in a systematic approach for more meaningful and also is an essential element for effective training.

Results shown in table 4.3 indicate a mean score less than 3 which imply that the trainees' needs are not identified. Considering the study, it can be deduced from the feedback that the programme does not identify the weaknesses which training can focus on to assist the trainees with their challenges and deficiencies.

#### **4.6.1.3 Levels of analysis**

According to Furnham (2010:46) training needs analysis is compiled at three levels: organisational analysis, task analysis and person analysis. Landy and Conte (2010:325-326) in support, claimed that the process of identifying the needs must be linked with the individual performance, knowledge and skills required and the organisation's goals and objectives. Findings from the interviews conducted revealed there is no strict or actual analysis based on person (trainees) level, level of performance on their tasks and organisational analysis. None of the interviewees revealed how the process of the analysis was conducted; it became clear that they are not familiar with the process and this indicated

that they are not able to conduct the process. However the programme coordinators, facilitators and programme manager make use of the trainee evaluation form and observation to identify the needs of the trainees. Which could be categorised under person analysis; this level of analysis may not be useful alone due the fact that trainees generally do not know what the organisational objectives are and often report 'wants instead of needs'.

As indicated on table 4.3 trainees revealed the level of analysis was not analysed on their level meaning not at person analysis with mean scores of less 3.

Despite the significance of a formal training needs analysis; from the responses obtained from the interviewees and questionnaires in this study, the following can be concluded that the process of identifying the training needs of organisational, person and task are non-existent.

#### **4.6.1.4 Data collection method for identifying the training needs**

Literature affirms that they are different types of methods used to collect the needs identification data, there is no specific method that can be recognized as the best but it is a matter of which method is appropriate for the training programme (Alkinani, 2013:78).

In the light of the above literature on process of determining the needs of training, the results in this study revealed that they make use evaluation forms from the trainees, observation and also informal focus groups with the trainees to identify the training needs. However Sisson (2003) and Toa *et al.*, (2000) cited in Omer (2013:151-152) largely criticised observation, evaluation and focus group for being incapable of gauging the true needs for trainees as they are limited to work condition only.

When the questionnaires were hand collected, most respondent indicated that they had no clue how the training needs data is collected as illustrated on table 4.4.

#### **4.6.2 Trainers' competency in training programme**

According to Conway and Cassidy (2006:7) there are numerous variables that potentially influence a training programme and one of them is selecting a competent trainers by screening the competency and skills of a potential trainers. This is further supported by

Buckley and Caple (2007:279) who explains that training programmes are more likely to be implemented successfully if the trainers are skilled and competent as well as have experience in that field of training.

#### **4.6.2.1 Communication skills**

According to Goud (2010:10) in order to establish an effective training; trainers must be screened of their communication skill which is the ability to make use of training methods and material effectively, convey messages throughout training and the ability to motivate the trainees. The major findings discovered in this study are that trainer demonstrate good communication skills while delivering the training, trainer created opportunities for question and answers session to engage participants, trainer demonstrated effective delivery of the quality training, trainer's presentation of the work course was well paced and clear, trainers had the ability to provide positive and constructive feedback, trainers responded to questions with a balanced understanding of the teachings and trainers communicated clearly and effectively in written and visual forms.

All the statements identified for effective communicate skills in this study are significant statements to be considered for trainer selection as they all rank above the mean of 3. This implies that the respondents agreed that trainers communicated well during the training. However during the observation the researcher noticed that content was uncovered fully and lacked focus and not in aligned with the objectives of topic although the delivery was properly structured and trainees got confused with other topics but lucky the trainer cleared out the confusion with use of site experience.

The results confirmed that a trainer communication skill is vital competency for the effectiveness of the programme and that the trainers of the programme demonstrated effective communication skills. In light of the above, it is clear from programme coordinators must have a standardized formal screening process before selection of trainers. However interviews from conducted with the trainees, most of them disagreed to agree with the statement that trainers were effective.

The respondent indicated that they have numerous trainers who have being coming to the programme so far they had two, one happens to be a good trainer; shows competent, displays that he has construction and training experience and that at college he was studied construction studies. The respondent further stated the trainer demonstrations that he knows

what he is talking about. The respondent added that they have a problem with the trainer who happens to be a facilitator, his comments and the way he conducts the training is unprofessional and has a racist element which has angered the trainee.

#### **4.6.2.2 Training skills**

The literature reviewed for this investigation indicated that the trainer assumes significant role in training programmes, this makes it clear that there is a demand for trainers with a good training skills and delivery (Narang & Mahmood, 2011:184). This denotes the reason to investigate the training skills of the trainers.

Results obtained in this investigation include trainer showed strong technical knowledge of the subject by use by applying construction industry examples; trainers displayed competency in the delivery training; trainers encouraged questions during the training; trainers demonstrated keenness in supporting with the course work; trainers appeared confident and well prepared to teach and deliver the teachings in an understandable and clear manner; trainers had the able to maintain a clear, strong, kind and effective presence when training, throughout the entire course and trainer understood the outcomes of using experiential exercises appropriately.

Results shown from the table 4.6 indicated that respondents agreed with the above investigation statement identified have a mean score above 3. These results revealed that training was delivered effectively and the trainers nurture their training skills in order to provide an effective training. Narang and Mahmood (2011:185) argue that the success of training programme hinges on the perceptions, competency and attitude of the trainers. This statement is supported by Lucas (1994) cited in Narang and Mahmood (2011:183) who indicates that trainers are there to enhance the performance of trainees through good feedback; that trainees must be criticized in private and praised in public. However interviews conducted with the trainees revealed that not all the trainers were competent and/or had good training skills.

#### **4.6.2.3 Problem-solving skills**

According to Goad (2010:10-11) problem-solving skills are an on-going requirement analysis of training that involves critical thinking and trainers being able to locate and solve problems enhance the learning of trainees. This study investigates the critical skills and competency of the trainer due to the fact that trainers are at the forefront of training.

The findings include the following: trainers identified a problem that exists, take timely and appropriate action; trainers inspired others on the team to contribute to the problem-solving process, trainers had the ability to handle difficult situations and had basic knowledge of potential problem areas; trainers were able to spot potential problems and referred respondents to appropriate resources; trainers gave me enough individual help with my problems and trainers had the ability to deal with crisis and conflict. These statements were ranked with a mean score above 3.

The study revealed that the not trainers knew what they were talking about and were willing to assist the trainees solve their problems, demonstrated a effective questioning skills and techniques and respond appropriately to learners' needs for clarification and feedback.

#### **4.6.2.4 Qualities of the a trainer**

Literature review explain that the most important factor in training; is that trainers should be of a high calibre so that they can contribute to make the training effective and in order to decide what criteria should be used for selection it is important to identify the good qualities found in trainers (Buckley & Caple,2009:279).

Findings revealed the following qualities: trainers influenced the development of respondent to be independent; trainers encourage respondents to think through issues to generate ideas; trainers were good listeners and questioners; trainers were flexible in the use of training strategies and tactics, trainers were positively reinforcing trainees' success to encourage respondents to be more proactive; trainer showed genuine concern for the trainees to establish an effective and helpful relationship and trainers demonstrated technical competence in the area being taught. All the qualities identified have a mean score of 3, signifying that the respondents agreed that the trainers demonstrated good qualities of trainers.



In order to structure an effective training it is important to have assessment instruments and screening tools developed before selection of trainers in order to find the best trainers. However due to the fact that the programme outsources the training; it still remains that the programme must develop their own assessment instruments to screen the trainers directly involved with the training.

Findings from the interviews strongly emphasise that the trainers were experts in the field of training, qualified facilitator, assessor, and have experience in the field of training or subject matter. Furthermore trainers had attended a training of trainer's course, trainers needed to be registered and accredited by the either Construction Education and Training Authority (CETA) or Skills Education Training Authority (SETA). However the programme coordinators and project manager do not screen the competencies of trainers but they use fixed trainers who are experts in different fields.

Findings from the programme coordinators revealed that they do not screen trainers due to the fact that they outsource training to a service provider who has won the tender to provide training for the programme. However revealed that they focus on the tendering quotations made by the different service providers who responded to their advertisement and that they do look at the company profile information and that service providers are required to present their training material. Furthermore the selection criteria was the lowest bidder, best presentation, service provider is required to submit the curriculum vitae of their trainers for the programme coordinators to look at their qualifications and experience and service provider is required to have more than five year experience in training in the built environment.

It was found from the Interview with the service provider project manager their trainers must be multilingual and same cultural demographics with the trainees due to the diversity of the trainees to overcome language barrier and so that trainers are more credible and approachable. It is important to communicate with trainees in a language that they feel comfortable with. Certain competencies are not to be overlooked at when selecting trainers for training and development which are: communications skills, training skills and problem-solving skills (Barazette, 2008:151; Buckley & Caple, 2007:278).

### **4.6.3 Monitoring and evaluation Indicators for the training intervention**

The literature reviewed indicated that majority of training programmes are notoriously ineffective due to impact of the programme and outcomes which are not properly measured or not measured at all (Marr, 2015:259). This predicament is mostly linked with the absence of tools to collect data and relevant indicators to monitor and evaluate the effectiveness of the programme (Marr, 2015:259). This denotes the reason to investigate the indicators that are used in the programme to gather data on how well the programme is meeting its goals.

Questions in a semi-structured interview, literature review and observation were used to capture the perception of the respondents. The questions were captured under the following sub headings:

- Tools in place for monitoring and evaluation
- Evaluation of the programme by trainees

#### **4.6.3.1 Tools in place for monitoring and evaluation**

According to Hunter (2009:4-5) developing the culture of evaluation in a training programme enables the management of the programme to continuously improve performance and the success of the programme. During the interview, one interviewee who articulating this issue said:

Since the training is outsourced to the service providers, service providers do the monitoring and evaluations of the training programme which is a requirement for the service provider to submit a report every end of the month.

This statement is an indication that the respondent recognises the importance of monitoring the processes throughout the duration of the programme. Unfortunately, there was an absenteeism of this culture of monitoring and evaluation within the programme management.

However findings from the interviews with the programme coordinators revealed that they do not have the experts in the monitoring and evaluation process but they do visit the facility where training is taking place to observe and also to engage with trainees. Nonetheless, this approach of monitoring is largely criticised for not capable of measuring the reflection of changes connected to an intervention (Kleinpell, 2013:4).

In light of the above results, interview with the facilitators (service provider) indicated that they use the assessment feedback for monitoring and evaluation of the programme which assessment feedback formulas as a remediation in assisting the trainees and assessing if they do grasp what is taught in class.

Findings from project manager (service provider) revealed that they monitor the trainees' progress once they go back to their companies; one of their facilitators will go to the trainees' project to monitor if the trainees use the skills, knowledge and abilities gained at the training. Furthermore a meeting is held every month between the service provider and programme coordinators to discuss the issues and challenges of the programme and also focus group is conducted with the trainees for articulation of their issues and suggestions for betterment of the training. Wessels (2012:82) argue that this technique may lead to participants providing untruthful programme feedback due to social desirability response bias and facilitators may misinterpret the feedback.

Conclusion drawn from the interviewees indicates that there is a need for a standardised and comprehensive monitoring and evaluation system not only to track the expenditure of the money invested but to identify mistakes and learn from them. Furthermore without a proper and effective monitoring system in place basic management tasks of the on-going operation the programme is not possible.

#### **4.6.3.2 Evaluation of the programme by trainees**

The literature review indicate that the Kirkpatrick evaluation training model is the commonly used evaluation model amongst training programme which consists of four levels namely learner's reaction, transfer of knowledge, change in behaviour and return on investment (Thackerway, 2013:17). According Chang and Lee (2007:157) learner's (trainees') feedback plays an important role in the evaluation of a training programme; this is due to trainees who become more critical of the quality of the training.

Findings from the interviews with the facilitator revealed that trainees also contribute to the formulation of the report and that trainees are given any opportunity to voice out their challenges through a focus group and also have a course evaluation; trainees fill in the evaluation after every month's training. Furthermore use the summative assessment as part of monitoring and evaluation of the training programme due to the fact that assessment results also indicate the progress of the trainees since the whole training relies more on the

classroom training. However the sole predictor of the learners' reaction to determine the effectiveness of the programme is not sufficient to monitor and evaluate a programme (Lee, 2007:10).

#### **4.6.4 Assessment strategies**

Literature has recognised the importance of assessment in the enhancement of trainees learning; one of the primary research questions of this study was 'what assessment strategies experienced by the trainees in the Western Cape Contractor Development programme?' In the literature review chapter I described the various assessment strategies that are commonly used including the purpose of assessment and indicators of sound classroom assessment. From the data collected on this topic, three assessment strategies emerged and captured as follows:

- Summative assessment
- Formative assessment
- Outcomes-based assessment

##### **4.6.4.1 Purpose of assessment**

Assessment has a broad meaning with serve range of purposes; one of the common purposes is to provide numerical results which are used to provide learners with certificates (Black *et al.*, 2005:1). Emanating from the interviews, it was revealed that the purpose of assessment was to measure if the knowledge and skill transferred by the trainers to trainees was grasped. This finding is supported by Lambert and Lines (2000:56) who identified that assessment enhances the trainees' learning and provide feedback to trainers and trainees about progress in order to support future learning also provides information to be used as feedback to modify the learning.

This statement is an indication that respondent know the role and purpose assessment due to the fact assessment is the important component in the training system. However it is important to know what they assess, how they assess and who is involved in the assessment progress.

The results obtained from the findings investigated the following factors about purpose of assessment: assessment influences my learning positively, respondent get helpful feedback on how I am doing after every assessment (in a form of a mark), assessment is an important part of my training, trainer always makes it easy to know the standard of work expected, assessment provides problem-solving feedback and assessment identifies what the respondents know about the trained course work. All these factors identified have a mean score of 3, signifying that the respondents seemed to be sharing a culture of excellence assessment towards trainees. Furthermore indicates that trainers and trainees are working as a team towards one goal to achieve the trainees' success. This statement is supported by Kellaghan and Greaney (2001:7) who argue that assessment needs to be integral learning process that involve both trainees and trainers; gives feedback to the trainees and gives feedback to trainers about their training.

#### **4.6.4.2 Summative assessment**

Literature reviewed conducted for this investigation indicated that trainers need to consider not just what needs to be assessed but also how the assessment is done particularly the approaches, type and strategies of assessment. Assessment strategies are tools that are utilized by the assessor to gather data or evidence of trainees' performance (Coetzee *et al.*, 2007:223).

Findings from the interviews conducted with facilitator and programme coordinators revealed that they do use summative assessment due to the fact that summative assessment feedback is critical and is used getting trainees accredited qualification from CETA. Furthermore the facilitator explained that summative assessment is marked by trainers then goes through to assessor then internal moderator for moderation then finally sent to the external moderator for final moderation. Findings were supported by William and Black (1996:537) and confirmed that summative assessment is a formal assessment process summarizes trainee achievement; which could be in a form of a test or examination to determine whether the learning goals and outcomes have been met.

The results obtained from the findings investigated the following statements about summative assessment: formal assessment was done through an assignment or projects, tests or examination or both after completion of course work, assessment results were recorded in scores or grades, assessment provides me with the opportunity to demonstrate

what the respondents have learned, assessment allows respondents to transfer what I have learned to specific and real-life tasks and assessment are carried out from time-to-time. The statements identified rated above a mean score of 3, indicating that respondents identified the intended assessment approach although there is no explicit information about the types of assessment used at the programme. However interviews with the trainees indicated that they were not comfortable with the summative assessment.

Respondent added that he was not happy with both formative and summative assessment. The summative assessment did not add value to trainees' learning because he felt like it was always rushed and the also formative assessment was also rushed.

The respondent indicated that assessment strategies used did influence trainees' learning but negatively due challenges with summative the questions asked were totally different from the formative assessment.

#### **4.6.4.3 Formative assessment**

The literature reviewed for this investigation indicated three commonly used assessment strategy and one of them is the formative assessment which is regarded as the cornerstone of trainee learning. According to Furbham (2010:56) it is good practice to use both formative and summative assessment in determining the whether learning has occurred; this denotes the reason to investigate the also formative assessment. Formative assessment is used to assess during a course study; carried out while training and provides feedback to both the trainer and the trainee (Fisher & Frey, 2008:3).

Emanating from the interviews, it was evident that that formative assessment assists in identifying those trainees with learning difficulties and additional precaution assistance is placed to assist the trainees with learning difficulties. However, it was also established trainers use summative assessment more than formative assessment and this was result of summative assessment results being used for overall moderation of the trainees' achievement.

It was observed from the training that trainees started with the formative assessment first which comprises of activity tasks, group discussions and assignments. Thereafter the

formative assessment would be marked and corrections were given to the trainees before moving to the summative assessment which was in form of tests.

The results shown in Table 4.11 reveal the following factors about formative assessment: trainers used in-class and task activities to assess the work; trainers provided feedback and information during while training was taking place; trainers provide feedback and where trainees went wrong corrections were made; questions and answering were sometimes informal; assessment carried out while the learning is in progress day-to-day and trainers were interactive when assessing my work with mean score of 3.

Conclusion drawn from the interviews, questionnaire and observe is that formative assessment is used to improve the standard of learning for the trainees and that formative assessment prepares that trainees for summative assessment. However interviews conducted with trainees indicated that formative assessment was rushed and did not prepare them for summative assessment. Furthermore formative assessment is more relaxed than summative assessment which increases the confidence of trainees and also motivates them. Fisher and Frey (2008:3) argued that formative assessment emphasises trainee progress rather than on setback or failure.

The respondent added that formative assessment did not prepare trainee enough to be able to answer the summative assessment; there was no correlation between summative and formative assessments.

#### **4.6.4.4 Outcomes-based assessment**

Literature reveals that out-comes based assessment implies a process of a learner accepting responsibility of his/her own actions, thoughts and beliefs; this process doesn't assess only the knowledge and skills but also the implementation and application (Botha *et al.*, 2005:177).

Findings from the interviews conducted with project manager indicated that they use outcomes-based assessment which is a combination of summative and formative assessment and also pointed out the summative assessment assesses everything that was done for that cluster and that summative assessment is marked by the assessor then to internal moderator for moderation then 25% of the marked scripts go to CETA for external

moderation. Furthermore both formative and summative assessments serve different purposes for the training programme. Findings supported by Rhodes University (2012:2) described that outcomes-based assessment is repeatedly due to the use of variety of assessment practices; it makes use of both formative and summative assessment.

The results obtained from Table 4.12 showed following factors about outcomes-based assessment: trainers were clear on what they were expecting for my success; trainers provided a portfolio for all our tests, class activities and participation in group classes; assessments objectives were linked with training outcomes; assessment showed evidence of my level of achievement and assessment helped the trainees to improve their work. All factors identified of outcomes-based assessment in this study ranked above the mean of 3. This implies that the respondents agreed that the outcomes-based assessment was used for assessment of their learning.

#### **4.7 Validity assurance of the research outcome**

Research validity is used for testing if the instruments used to measure the phenomenon are correct and creditable for the use in order to achieve the research objectives and answer the research questions (Hesse-Biber, 2010:85). Golafshani (2003:599) pointed out that validity determines whether the study accurately measures what was proposed to measure.

The following steps were taken to ensure that this research outcome is valid and reliable:

- a) Population: sampling of population is considered in order to achieve reliable results. The population considered for this study was comprised of stakeholders involved in the WCCDP.
- b) Participants: experienced stakeholders who are directly involve in the facilitation of the programme.
- c) Time: the researcher took reasonable length of time to do the data collection
- d) Instruments: researcher adopted the most accurate data collection tools
- e) Cronbach's alpha coefficient: Cronbach's alpha coefficient was used to test for the reliability of all the scale questions in this study.
- f) Purposive sampling approach: the use of a purposive sampling approach technique for collecting data because the participants were known and are involved in the WCCDP



- g) Triangulation methods: for the research triangulation was used to ensure validation.
- h) Recording Instruments: Instruments used for recording and analysis of data collected included the statistical package software analyses version 22, and the digital voice recorder which features two omnidirectional microphones that provide a stereo and best quality recording.

**Figure 4.7** Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
0.980	0.984	77

#### 4.8 Chapter summary

This chapter discussed and interpreted the research findings obtained interviews, questionnaires and observation. The quantitative data gathered was disaggregated into three sections focusing on the following three training elements: Training Needs Analysis (TNA) of trainees, evaluation of trainer's competency, qualification and experience, assessment strategies used for assessing the trainees after the work course and. Interviews were conducted with the various stakeholders to answer questions regarding key indicators for monitoring and evaluation of the programme, Training Needs Analysis (TNA), assessment strategies used for assessing trainees and evaluation of trainer's competency, qualification and experience.. This was done using the research objectives which the study addressed. This study considered the results from observation, questionnaire and interviews

and in light of literature review was combined as it addressed the same issues and explained what the findings meant.

The results obtained from the findings show that There is a need for a formal training needs analysis to identify the needs of trainees, desired and the actual performances and extent of the gaps to address in order to turn emerging contractors to sustainable contractors. Trainer's competency screening is often overlooked but it is one of the important steps; without qualified, certified and experienced trainers training programmes will be ineffective. Training programmes such as the WCCDP need to have a proper M&E system in place to contribute to the strengthening of the programme, to improve overall capacity and for efficient programme management. The absence of standardized indicators of monitoring and evaluation remains a huge challenge in the programme. It emerged from findings of the study that the service provider does have assessment strategy in place namely outcomes-based assessment which balances the summative and formative assessment. However it is critical that management of the training to standardize the assessment strategy used at the programme and also to be part of their policies which the selection of assessment strategy should be trainee-centred. The next chapter provides an overview of recommendations and conclusion which should allow for future growth and success at the Western Cape Contractor Development Programme. The validity of the questionnaire was validated through semi-structured interview with the trainees. Trainees were asked to confirm if these findings identified were actually the real problems confronting the training at the Western Cape Contractor Development Programme.

## **CHAPTER 5**

### **5. CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This is the final chapter of the thesis which provides the conclusion to the study and reassesses the findings to meet the research objectives and contains recommendations made by the researcher in relation to the study conducted at the WCCDP. Finally, there is a discussion of the limitations of this study followed by suggestions for future of the research avenues on the topic.

#### **5.2 Conclusion**

This study was set out to provide a holistic investigation and exploration of the design and evaluation of the structured training at the Western Cape Contractor Development Programme by focusing on the best training practises that have impact on training. Since such training programmes need to be effective in order to assist emerging contractors to enhance their skills, knowledge, abilities and to cope with the dynamism of the construction industry. It should establish a purposeful and effective training. Through questionnaires completed by trainees, observation of the training and semi-structured interviews with the programme coordinators, trainees and service provider personnel (trainer, facilitator, project manager), it was possible to gauge the extent to which WCCDP incorporates the best training practise. These best training practises were discussed throughout this study was extracted from the literature review on training programme. The aim was achieved through specific research objectives on chapter 1.

### **5.2.1 Training needs analysis**

The review of existing literature on asserted that the TNA process plays a vital role in identifying the actual needs of the trainees. The results of the study show that TNA of the WCCDP is unsystematic and informal; relying heavily on programme coordinators' and service provider's judgements to make training decisions which are very general and shallow. Consequently ignoring the TNA deficient and defects the whole training cycle this makes the programme vague, incompatible and training is not responsive to the actual trainees' need. There is a need for a systematic and comprehensive TNA in the WCCDP training programme in order to identify the needs of the emerging contractors. Thus, this will assist with the design, planning, allocating training to the areas where training is needed and developing the appropriate training programme that will serve the needs of emerging contractors. This will provide positive impact on the emerging contractors and positive returns on the investment made by the government. However the WCCDP makes use of observation, focus group with trainees and evaluation feedback from the trainees which could be seen as an informal way of identifying the needs, which does not always reflect the 'true picture' of the needs of the trainees.

The second major finding indicated that programme coordinators are experiencing barriers in conducting a formal TNA process due to lack of funding and inadequate expertise. This could be caused by lack of support from management of the programme, lack of relevant knowledge and qualifications of the people in charge of handling the planning and training. Lack of funds for the training programme, indicates an absence of consideration of involvement of the stakeholders in the programme. Furthermore this informal training needs identification approach is based on one level of analysis which is the person or individual analysis neglecting other levels like organisational and task analysis; this shows there is no participation at all from the concerned stakeholders.

### **5.2.2 Trainer's competency**

Alignment of data from different data collection instruments and participants indicated that WCCDP relies heavily on external trainers (service providers) for training; who are selected through a tendering process. The service provider has their own trainers who provide the actual training. The service provider makes use of expert trainers who are qualified

facilitators, registered with CETA, assessor and have experience in the field of training. Furthermore responses from the trainees indicated that the current trainers demonstrated effective communication, effective delivery of the training, willing to assist with the problems of trainees during training and also demonstrated good qualities of a trainer. It became clear that not all trainers were competent in the delivery of the training. This finding is backed by the Barazette (2008:151) who claimed that the likelihood of implementing a successfully training programme is increased if trainers are qualified and demonstrate competence required.

However the WCCDP do not have subsidising competence screening mechanisms for trainer selection reason that they outsource the training. Nonetheless WCCDP need to assess or screen the trainers directly involved with the training. Since the government is the funding agent of the WCCDP; government expect high quality training and that the training objectives of WCCDP are met. One of the ways make sure that the objectives are met and the training is effective; is to establish a competence screening processes, a set of requirements or selection criteria for trainers, certification, qualifications that trainers should have and make them mandatory before the delivery of the training (Cedefop, 2013:12). In addition the programme coordinators and management need to design and develop a screening system for trainers and include it on their programme training policies.

### **5.2.3 Monitoring and evaluation indicators**

The study examined whether the WCCDP training programme has adequate quantifiable monitoring and evaluation indicators to measure the effectiveness of the programme which form a significant aspect of a monitoring and evaluation system. It emerged from the study that the monitoring and evaluation indicators are non-existence in the programme and measurements of trainees' reaction, outcomes of the training and programme impact have not been undertaken systematically. This suggests that proper monitoring and evaluation indicators must be established at the planning and design stages of the programme and must be directly linked to the programme objectives, training outcomes and goals of the WCCDP. Kusek and Risk (2004:57) confirmed that it is critical to link the development of indicators to measurable and understandable organisation goals, training outcomes and programme objectives.

The second major finding indicated in light of not having a monitoring and evaluation system and indicators; the programme has a course evaluation process that comprises of learning assessments, focus group for the trainees and evaluation reports for service provider and trainees. IAEA (2003:20) and Lee (2007:10) heavily criticised assessment of learning as the only tool for evaluation, stating that is not sufficient enough to indicate the effectiveness of the training by virtue of indicating number of trainees passed or failed but not the whole programme. Focus group is also greatly criticised as an evaluation tool, since it may led to participants providing untruthful programme feedback due to social desirability response bias and trainers may misinterpret the feedback (Wessels, 2012:82). This advocates that little or nothing is done to develop indicators for monitoring and evaluating the quality of the delivery of the training to improve skills and knowledge acquisition and investigating the factors that impart the programme. This finding is backed by Kleinpell (2013:1) who claimed that likelihood of an effective programme depends merely on identification and analysis of the factors that have hindered and improved training during the development and implementation of the training programme.

#### **5.2.4 Assessment strategy**

The study highlighted the fact that assessment plays important role in the enhancement trainees' training in contractor development programmes, such as the WCCDP. Drawing from the participants' perceptions; there were numerous assessment strategies used and these were found to be authentic. Foremost it is important that trainers assess what needs to be assessed and not what is easy to assess; to confirm that assessment strategy used ensures that trainees find the skills, knowledge and tasks set manageable, relevant and developmental. A major finding is that assessment strategies used at the WCCDP training programme are not governed, designed and chosen by the training management but by the service provider. Brown (2004:81-83) explained that assessment as the measurement of trainees performance cannot be in isolated; assessment needs to integral part of overall training programme and standard training policies package. Fundamentally, assessment strategies prescribed should be designed to allay all concerns and anxieties of trainees and trainers to assure assessment results are credible, deliver precise information about trainees and this can only be done through cautious design and implementation that involves all the stakeholders.

However before the design and selection of assessment strategy relevant stakeholders should have possessed an adequate subject matter to design and select an assessment strategy because the assessment strategy need to be reliable, valid and assist trainees' with their learning and not hinder the learning. This finding is backed by Brown (2004:81) who claimed that there are multiple and complex problems when it comes to assessment system; hence the need of professional practitioners to take the lead in ensuring the suitable assessment strategies are designed and implemented. Further, Spurlin *et al.*(2008:4-5) explained that assessment strategy should be 'fit-for-purpose' which means assessment strategy used should be able to evaluate the extent of which trainees have learned and seek to measure how trainees can apply into practise what they have achieved through learning.

### **5.3 Recommendation**

In this section the researcher gives some recommendations that may contribution in the improvements and ensuring effective implementation of the WCCDP training programme.

#### **5.3.1 Training needs analysis**

With respect to the absence of appropriate TNA activities designed to develop the skills, knowledge, abilities and identify the exact training needs in the WCCDP; researcher recommends the establishment of an effective, properly designed and administered TNA process. This in turn permits the programme to allocate funds in areas where training is needed the most in order to turn the emerging contractors to sustainable contractors. Therefore the training management must involve all the concerned stakeholders during the design and implementation because without such wide-ranging involvement of the stakeholders it will likely be impossible to create a systematic and comprehensive TNA. Since TNA requires a high degree of preparation, planning, commitment, financial support and analysing from all concerned stakeholders.

First of all the TNA process should never be ignored but taken seriously since the results of the TNA can be used to identify the actual training needs, target the problems and challenges of emerging contractors, development of programme objectives and outcomes and establishing training content and material. The approach of formulating a TNA process

should be carried out without biasness and as a stand-alone activity or subject to the training management personal aspects. TNA should be systematic and linked to the programme strategies, plans and training policies. Suitable methods and models must be used to determine TNA to ensure valuable results from organisational level to individual level as suggested on chapter 2. Furthermore training managers and staff providing TNA must be well-educated and experienced, as they have the responsibility to improve the training situation and change the views of their organizations about the importance of TNA. Once again stakeholders need to be committed to, and supportive of TNA activities, by being involved in the formulation of training and development strategies, plans and objectives.

### **5.3.2 Trainers' competency**

In order to ensure the relevance and quality delivery of training, WCCDP must ensure that they have developed mechanisms to assess and certify trainer's competences. By virtue that trainers have the responsibility of improving training, assume greater responsibilities training trainees, which make trainers the forefront of trainees' learning and delivering effective training. Therefore trainers are required to be well qualified, experts in the training field and have the necessary competences. Findings indicate that the WCCDP depend heavily on external trainers for the delivery of the actual training. Furthermore majority of trainees perceived that the current trainers were very effective in most of their roles and demonstrated effective communication skills, training skills, problem-solving skills and good qualities of a trainer.

However the programme lacks a concrete set of standards and assessments that will assure that highly skilled and effective trainers are placed. The researcher recommends that WCCDP training management must develop a potent tool for assessing and evaluating trainer's competences and qualifications during recruitment and selection of trainers. Nevertheless designing and implementing a comprehensive framework for competence assessing entails a range and aspects, and can be a complex task. Therefore the framework needs to be clearly defined, clear understanding of the responsibilities of required trainers and also include a continuous monitoring and evaluation of the trainer during the delivery of the training.



### 5.3.3 Monitoring and Evaluation

Although assessment of learning, trainee evaluation and programme observation is conducted during and at the end of training; it is imperative that the programme must have a monitoring and evaluation indicators which form part of the monitoring and evaluation system.

M&E indicators are quantitative and qualitative variables used for measuring change and impact that is difficult to measure in a training programme; in the M&E system indicators serve as the tool to link daily actions to success factors and flow of change (Parmenter, 2012:9; Kusel & Rist, 2004:65). Furthermore the inclusive of indicators allows the programme to be improved at each stage of the whole training programme; trainees' performance, training course, effects of training on the trainees' company, return on the investment and effects of the training on the society (Moss & Sontheimer, 1998:1).

The study result displays adequacy and effectiveness of M&E was severely troubled by challenges such as the critical lack of expertise in monitoring and evaluation of training programme and lack of involvement and capacity of the concerned stakeholders in the participation of planning, designing and development of the M&E indicators in the WCCDP training programme management and coordinators. The researcher makes the following recommendations to address key results of the study:

- There is a need for an expert in M&E to conduct workshop to train the training managers on planning, development and design of related M&E indicators linked with WCCDP training objectives and training policy which must be measurable, feasible, realistic, cost effective and understandable. Additionally it may be beneficial for WCCDP to include higher educational and research institutions to assist with the planning, design and development of the M&E indicators.
- Planning, design and development of indicators can be a complex and challenging process; there is a need for the WCCDP to involve all concerned stakeholders in the plan, design and development of M&E indicators and M&E system. An active involvement of all concerned stakeholders won't only mitigate the challenges but also a possibility of more funding and resources to train and retain the critical skills for development of indicators. With insufficient funds and resources; M&E system are often seen as a luxury or no benefit to the programme which is not true.

### **5.3.4 Assessment strategy**

It is recommended that the WCCDP training managers and coordinators to engage in structured planning, design and selection of assessment strategies for the training programme to ensure sustainability of assessment strategies. Assessment is probably the most critical endeavour to assist trainees with their training and learning (Brown, 2004:81). Assessment should be seen as a fundamental part of the training process rather than an evaluation tool which is just ‘tacked on’ for selection and certification but also monitoring, diagnosis and improvement of the training (Mogammat, 2014:30-31).

Looking at the findings, it is imperative that training management and coordinators must take responsibility of the assessment design and planning not the service provider; in order to maintain consistency in the conduct of assessment practice. It is also recommended that assessment design to be incorporated into the WCCDP training policies and since there are different purposes of assessment. It is also important that during assessment design and planning; training management and policy makers must establish the primary purpose of the assessing in order to determine optimal design characteristics for assessment strategy that will enable the trainers to draw sufficiently fair, valid, transparent and relevant results.

Since there is a lack of assessment design expertise, there is a need to involve a training practitioners to assist with the assessment design to make informed choices about the assessment strategies to be used and assessment design.

### **5.4 Limitations**

- Unit of analysis: data collection was limited to trainer, programme coordinators, facilitator, and service provider project manager currently participating in the Western Cape Contractor Development Programme structured training programme.
- Geographic area: the study Western Cape South Africa within the construction industry
- Time and budget: researcher is also limited by budget and time constraints.
- Scope: the study will not attempt to develop a training needs analysis system, key indicators for the monitoring and evaluation and trainer’s competency screening system.

## 5.5 Further research

Possibilities for future research in this direction could be the following:

- Designing and evaluating a training programme using Goldstein and Ford's model.
- Designing a monitoring and evaluation system for WCCDP.
- The researcher recommends further detailed research study on the designing a TNA model for the WCCDP
- To determine empirically the actual impact on the performance of the training programme
- To investigate the training design and planning practises of contractor development programme

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## APPENDICES

### Appendix A: Acknowledgement letter



Keith Rass  
Regional Coordinator – EPWP  
Email: keith.rass@pgwc.gov.za  
tel: +27 21 483 2412 fax: +27 21 483 7198


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#### To whom it may concern:

This is to confirm that Musawenkosi Ngqongisa (student number: 209218223) was granted permission to contact and conduct interviews with Building Contractors on the Department's Contractor Development Programme (CDP).

The Contractor Development Programme is part of the National Expanded Public Works Programme (EPWP) geared towards poverty alleviation and job creation.

Regards

 04/08/2016

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**Jo-Anne Beukes**

Deputy Director (Manager)

EPWP Contractor Development Programme

Western Cape

## **Appendix B: Questionnaire**



Dear Sir/Madam

### **QUESTIONNAIRE SURVEY**

### **IMPACT OF THE STRUCTURED TRAINING ON EMERGING CONTRACTORS WITHIN THE WESTERN CAPE PROVINCE, SOUTH AFRICA**

#### **STUDY PURPOSE**

The aim of the research is to establish the core elements of training that contributes to the overall impact of structured training offered by the Western Cape Contractor Development Programme, to emerging contractors and improve improvement modalities. It is a research study in the Department of the Construction Management and Quantity Surveying at the Cape Peninsula University of technology. The completion of this questionnaire forms part of my thesis which is needed for completion of the degree.

Please provide feedback about your learning at the Western Cape Contractor Development Programme by completing the questionnaire. Your comments are valuable and would greatly assist with the further development and enhancement of this or similar programmes.

All information gathered will be strictly kept anonymous and confidential. A copy of the results will be made available to you through the programme circulating mail.

Once the questionnaire has been completed, should be returned to:

Musawenkosi Ngqongisa

Cape Peninsula University of Technology

Telephone: 0219536783

Email: [musanmc@gmail.com](mailto:musanmc@gmail.com)

Mobile number: 0738268269

Thank you for your friendly assistance and support

#### **Section A: Background information**

Please read carefully and indicate your response by placing a tick in the appropriate column per question

1. Please indicate your gender

Male  Female

2. Age

Under 26       26-30       31-35       36-40  
 41-45       46-50       51-55       56-60  
 61-65       over 65

3. Ethnicity

Black  White  Coloured  Indian

Other  (specify).....

4. Construction Industry Development Board (CIDB) grading

1	Grade 1
2	Grade 2
3	Grade 3
4	Grade 4
5	Grade 5

5. Number of years you have worked in the Construction industry

1	2	3	4	5	6
0-5	6-10	11-15	16-20	21-25	25+

6. Please indicate your highest formal qualification

Matric certificate  Diploma  Postgraduate diploma  Bachelor degree

Honours degree  Master's degree  Doctorate

Other (Please specify).....

**Section B: improved Training Needs Analysis**

7. **Instructions:** Please read each statement carefully and indicate how strongly you agree or disagree. Rate them on a scale 1-5 by using a thick (√) or a cross(x). 1- Strongly disagree, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree

No	Statement	1	2	3	4	5
<b>Training needs</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
7.1	Training facilitators stated the current training needs before I entered the programme	1	2	3	4	5
7.2	Training facilitators clearly stated the desired outcomes	1	2	3	4	5
7.3	Training provided is linked to my needs	1	2	3	4	5
7.4	Skills and knowledge obtaining during training are relevant to my company needs	1	2	3	4	5
7.5	Training needs emphasized in organisation's training practices to ensure	1	2	3	4	5

	training effectiveness					
<b>Training Needs Analysis</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
7.6	Training facilitators conducted a formal training needs assessment before entering the programme	1	2	3	4	5
7.7	I had an input to express my needs interests and expectations	1	2	3	4	5
7.8	So far the training addresses my key issues and needs	1	2	3	4	5
7.9	Training programme has so far increased my current skills and knowledge	1	2	3	4	5
<b>Levels of analysis</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
7.10	I was involved in the need analysis range of different people	1	2	3	4	5
7.11	The necessary people were consulted in the needs analysis process	1	2	3	4	5
7.12	It was made clear why I was involved to participate in the needs analysis	1	2	3	4	5

8. What data collection method was used to identify your training needs? Please tick (√) in the box.

Questionnaires

Direct observation

Skills, Knowledge and Abilities (KSAs) tests

Personal face-to-face interviews facilitators

Determination through special committee

Group interviews with facilitators and trainers

Others (please specify)

### Section C: Trainer's Competency

9. **Instructions:** Please read each statement carefully and indicate how strongly you agree or disagree. Rate them on a scale 1-5 by using a thick (√) or a cross(x).

1- Strongly disagree, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree

No.	Statements	1	2	3	4	5
<b>Communication skills</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
10.1	Trainers' demonstrate good communication skills while delivering the training	1	2	3	4	5
10.2	Trainers create opportunities for Question and answers and use questioning to engage participation.	1	2	3	4	5
10.3	Trainers demonstrates effective delivery of the quality training	1	2	3	4	5
10.4	Trainer's presentation of the work course was well paced and clear	1	2	3	4	5
10.5	Trainers have the ability to provide positive and constructive feedback	1	2	3	4	5
10.6	Trainers responds to questions with a balanced understanding of the teachings	1	2	3	4	5
10.7	Trainers communicate clearly and effectively in written and visual forms.	1	2	3	4	5
<b>Training skills</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
10.8	Trainer shows strong technical knowledge of the subject by use by applying construction industry examples	1	2	3	4	5
10.9	Trainers displays competency in the delivery training	1	2	3	4	5
10.10	Trainers encourages questions during the training	1	2	3	4	5

10.11	Trainers demonstrates keenness in supporting with the course work	1	2	3	4	5
10.12	Trainers appear confident and well prepared to teach. Deliver the teachings in an understandable and clear manner; stay on topic.	1	2	3	4	5
10.13	Trainers have the able to maintain a clear, strong, kind, and effective presence when training, throughout the entire course.	1	2	3	4	5
10.14	Trainer understands the detrimental outcomes of using experiential exercises inappropriately, or placing them improperly in the curriculum sequence.	1	2	3	4	5
<b>Problem solving skills</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
10.15	Trainers Identifies a problem that exists and take timely, appropriate action	1	2	3	4	5
10.16	Trainers Inspire others on the team to contribute to the problem-solving process	1	2	3	4	5
10.17	Trainers have the ability to handling difficult situations; Has basic knowledge of potential problem areas.	1	2	3	4	5
10.18	Trainers are able to spot potential problems and refer us to appropriate resources	1	2	3	4	5
10.19	Trainers gave me enough individual help with my problems	1	2	3	4	5
10.20	Trainers have the ability to deal with crisis and conflict	1	2	3	4	5

10. **Instructions:** Please rate the qualities that trainer shows towards training. Rate them on a scale 1-5 by using a thick (√) or a cross(x). (1) 1- Not at all 2-To a little extent, 3- To some extent, 4-To a large extent, 5- To a large extent

No.	Statements	1	2	3	4	5
11.1	Influencing our development to be independent	1	2	3	4	5
11.2	Encouraging learners to think through issues to generate ideas	1	2	3	4	5
11.3	Being good listeners and questioners	1	2	3	4	5
11.4	Being flexible in the use of training strategies and tactics	1	2	3	4	5
11.5	Positively reinforcing a our success to encourage us to be more proactive	1	2	3	4	5
11.6	Shows genuine concern for the us to establish an effective and helpful relationship	1	2	3	4	5
11.7	Demonstrating technical competence in the area being taught	1	2	3	4	5

#### Section D: Assessment strategy

11. **Instructions:** Please read each statement carefully and indicate how strongly you agree or disagree. Rate them on a scale 1-5 by using a thick (√) or a cross(x). (1)

1- Strongly disagree, 2- Disagree, 3-Neutral, 4- Agree, 5- Strongly agree

No.	Statement	1	2	3	4	5
<b>Purpose of assessment</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
13.1	The assessment influences my learning positively	1	2	3	4	5
13.2	I get helpful feedback on how I am doing after every assessment (in a form of a mark)	1	2	3	4	5
13.3	Assessment is an important part of my training	1	2	3	4	5
13.4	Trainer always makes it easy to know the standard of work expected	1	2	3	4	5
13.5	Assessment provides problem-solving feedback	1	2	3	4	5

13.6	Assessment identifies what I know about the trained course work	1	2	3	4	5
<b>Summative assessment</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
13.7	Formal assessment was done through an assignment or projects, tests or examination or both after completion of course work	1	2	3	4	5
13.8	Assessment results were recorded in scores or grades	1	2	3	4	5
13.9	Assessment provides me with the opportunity to demonstrate what I know	1	2	3	4	5
13.10	Assessment allows me to transfer what I have learned to specific and real-life tasks	1	2	3	4	5
13.11	Assessment are carried out from time-to-time	1	2	3	4	5
<b>Formative assessment</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
13.12	Trainers uses in-class and task activities to assess my work	1	2	3	4	5
13.13	Trainers provides feedback and information during while training is taking place	1	2	3	4	5
13.14	Trainers provide feedback and where I went wrong corrections are made	1	2	3	4	5
13.15	Questions and answering are sometimes informal	1	2	3	4	5
13.16	Assessment carried out while the learning is in progress day-to-day	1	2	3	4	5
13.17	Trainers are interactive when assessing my work	1	2	3	4	5
<b>Outcomes-based assessment</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
13.18	Trainers were clear on what they were expecting for my success	1	2	3	4	5
13.19	Trainers provide a portfolio for all our tests, class activities and participation in group classes	1	2	3	4	5
13.20	Assessments objectives are linked with training outcomes	1	2	3	4	5
13.21	Assessment shows evidence of my level of achievement	1	2	3	4	5
13.22	Assessment helps me to improve my work	1	2	3	4	5
<b>Indicators of classroom sound assessment</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
13.23	Enough time was given for completing my knowledge assessment (written test or class activities)	1	2	3	4	5
13.24	I get nervous or stressed out while carrying out an assessment with the current assessment strategy	1	2	3	4	5
13.25	Trainers involve us in setting goals for our learning	1	2	3	4	5
13.26	Trainers design assessment that serve the intended purposes	1	2	3	4	5
13.27	Assessments process fits the purpose	1	2	3	4	5
13.28	The instruction, assessment and scoring are standard-based	1	2	3	4	5
13.29	Assessment guides and focuses on my professional development	1	2	3	4	5
13.30	Assessment is done in a fair manner and not bias	1	2	3	4	5

**Thank you for your time and patience in answering the questions. Your contributions to the study is highly appreciated**



## **Appendix C: Consent Form for Semi-structured interviews**



### **REQUEST FOR AN APPROVAL TO CONDUCT AN INTERVIEW**

I am a registered student for the Master's Degree in Construction Management at the Cape Peninsula University of Technology. This letter serves to seek approval from the management of Training force to conduct research on training of emerging contractor.

The research topic is: IMPACT OF THE STRUCTURED TRAINING ON EMERGING CONTRACTORS WITHIN THE WESTERN CAPE PROVINCE, SOUTH AFRICA. The research will be both in quantitative and qualitative as it aims to investigate personal views, perceptions and experiences of the participants involved in the training.

Researcher will use semi-structured interviews on training facilitators, project manager and trainers to collect data, questionnaire to collect data from the trainees and observation of the classroom practices. The interview of training facilitators and trainers, researcher will ensure that an appointment is secured and the scheduled time will be informed by the availability of the facilitators and trainers.

Feedback from the study will add value with regards of improving the implementation of the training intervention and also assist managers and facilitators in their decision making.

Research will be conducted during August and September 2015.

Thank you in anticipation

Musawenkosi Ngqongisa

## **Appendix D: Interviews Questions for programme facilitators, programme coordinators and project manager**

**Interview number:** .....

**Date of interview:** .....

### **Section A: Training needs**

1. How were training needs identified by the programme?

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2. At what levels (organisational analysis, individual analysis or task analysis) was the Training Needs Analysis conducted prior to determining the training needs?

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3. What barriers did the programme experience in conducting a TNA?

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### **Section B: Trainers Competency**

1. How do you select trainers for the programme?

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2. What selection criteria do you use?

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3. Do you assess the trainer's competency before selection?

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4. What level of qualification and experience does the trainer need in order to be selected?

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**Section C: Monitoring and evaluation indicators**

1. According NCDP (National Contractor Development Programme) guidelines training facilitators are required to monitor their programmes in order to fulfil their mandate, what tools does the WCCDP have in place to monitor the programme?

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2. Does the programme have any key indicators, variables or specific areas used for measuring the performance and outcomes of the programme?

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3. How are the key indicators or variables selected and developed?

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4. Are trainees given the opportunity to assess the quality of the training provided?

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**Section D- Assessment strategies**

1. What assessment strategies can be adopted by the Western Cape Contractor Development Programme, in order to measure the emerging contractors in the structured training intervention?

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2. What assessment strategies are used for assessing the trainees?

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3. In what ways does the assessment strategy used improve the learning?

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4. What motivated you to choose the assessment strategy (Time, cost, curriculum constraints, personal preference and etc)?

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**Thank you for your time and patience in answering the questions. Your contributions to the study is highly appreciated**

## Appendix E: Interview Questions for Trainers

Interview number: .....

Date of interview: .....

### Section A: Training Needs Analysis

1. Are you responsible for any activity regarding the TNA within the WCCDP? If yes, in what way are you involved?

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2. Who do you think must conduct the TNA, trainers or training facilitators? And why?

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3. As a trainer, is the existing method of conducting TNA ideally for WCCDP? And why?

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4. What is your role in the design of the content?

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### Section B: Trainer's competency

1. What competencies are required of trainers in a structured training intervention by the Western Cape Contractor Development Programme?

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2. Did the facilitators conduct a competency evaluation on you? And how?

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3. What qualifications and competencies (Communication, interpersonal, technical, leadership, management, personal competency) were required of you?

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4. Have you attended any formal training for training-for-trainers program or course?

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5. Do you have any construction experience?

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**Section C: Assessment**

1. Do you assess the learning of trainees?

b. If yes, what type of assessment strategy do you use? And why?

c. If No, how do you gauge the learning?

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2. Who selects the type of assessment strategy to be used? Trainer or training facilitator?

a. If training facilitators selects the assessment strategy, what kind of assessment strategy would you use that would be beneficial for programme?

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3. Does the assessment have a positive influence on the training?

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4. What problems do you encounter when carrying out assessment?

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**Thank you for your time and patience in answering the questions. Your contributions to the study is highly appreciated**

## Appendix F: Interview Questions for Trainees

Interview number: .....

Date of interview: .....

### Section A: Training Needs Analysis

1. How were your needs identified?

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2. Does the training provided relate to your needs and challenges?

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### Section B: Trainer's competency

1. Did the trainers demonstrate competency during the training?

Communication skills

Training skills

Problem-solving skills

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2. Did the trainers show good qualities of trainers?

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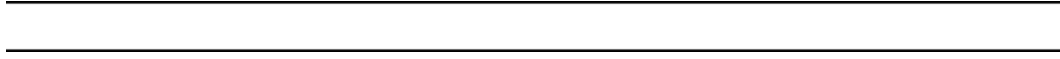
### Section C: Assessment

1. What are your feelings, views and opinions about the current assessment strategies used at the WCCDP?

Summative assessment

Formative assessment

Outcomes assessment



**Thank you for your time and patience in answering the questions. Your contributions to the study are highly appreciated.**