LABOUR MARKET
INTELLIGENCE PARTNERSHIP

# Survey Analysis of the Pathways of Public TVET College Learners through NATED Programmes

Joy Papier, Lesley Powell, Timothy McBride and Seamus Needham

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# ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| CBMT | competency-based modular training |
| CIPSET | Centre for Integrated Post-School Education and Training |
| DHET | Department of Higher Education and Training |
| EC | Eastern Cape |
| EMIS | Education Management Information System |
| FET | further education and training |
| FS | Free State |
| FTE | full-time equivalent |
| GP | Gauteng province |
| HE | higher education |
| HSRC | Human Sciences Research Council |
| IPSS | Institute for Post-School Studies |
| IT | information technology |
| KZN | KwaZulu-Natal |
| LMIP | Labour Market Intelligence Partnership |
| LP | Limpopo province |
| MIS | Management Information System |
| MP | Mpumalanga province |
| NATED | National Accredited Technical Education Diploma |
| NC | Northern Cape |
| NC(V) | National Certificate (Vocational) |
| NEET | not in employment, education or training |
| NMMU | Nelson Mandela Metropolitan University |
| NQF | National Qualifications Framework |
| NSC | National Senior Certificate |
| NW | North West |
| POPI | Protection of Personal Information |
| PSET | post-school education and training |
| SETA | sector education and training authority |
| SSACI | Swiss-South African Cooperation Initiative |
| TVET | technical and vocational education and training |
| UWC | University of the Western Cape |
| WC | Western Cape |

# PREFACE

In 2009 the South African government administration, informed by a results-focused philosophy, identified 12 priority outcomes for the country. Outcome 5 refers to 'a skilled and capable workforce to support an inclusive growth path', and the delivery of this outcome is led by the Minister of Higher Education and Training. Delivery Agreement 5 consists of three parts, with Output 5.1 committing the Department of Higher Education and Training (DHET) to establish a credible mechanism for skills planning, in collaboration with 20 national and provincial ministries. The DHET commissioned the Human Sciences Research Council (HSRC) to support the DHET in establishing a credible institutional mechanism for skills planning (Memorandum of Agreement between the DHET and the HSRC, February 2012). Thus the Labour Market Intelligence Partnership (LMIP) project, with six themes of research, was established.

The objective of one of the research themes is to obtain a better understanding of the pathways and transitions undertaken by young people through the education and training system into the workplace. The key question underpinning this work is: What are the dynamics of access, progression, graduation and labour market destinations along various education, training and labour market trajectories, and how can this knowledge inform skills planning in South Africa? The research therefore collected and analysed data which then provides crucial information on the following:

- Understanding the extent to which **access** is conditioned by socio-economic factors, the quality of primary and secondary schooling, as well as spatial and demographic characteristics. In particular, it is important to know which barriers affect young people who successfully finish their schooling.
- **Pathways** or trajectories through the secondary school and post-school sector refer to the choices that students make in terms of institutions, subjects, degrees and specialisations.
- **Transitions** from and through education and training into the labour market are the final step in the progression sequence. Given the large investments (at both the household and government levels) made in training and higher education, the successful matching of available skills to the demands of the labour market is of significant interest in South Africa.

The post-school education and training landscape in South Africa consists of a diverse range of sectors and institutions. These include: Adult Basic Education and Training (ABET) centres; Technical and Vocational Education and Training (TVET) colleges; workplace training programmes (learnerships and apprenticeships); as well as traditional, comprehensive and universities of technology. All of these components of the post-schooling system are of vital importance to the supply of skills to the labour market and the broader

South African economy, and understanding the issues of access, pathways and transitions will provide valuable information for skills planning.

A number of research studies were conducted within this theme of research. The key questions that each of the studies attempted to answer is reflected in the following topics:

1. What is the progression, graduation and destination of secondary school students?
2. How matric results influence university access, field of study and progression through to university.
3. What are the school-to-work transitions in the National Income Dynamic Study?
4. What are the university graduate destination outcomes: The Eastern Cape study on transitions to the labour market
5. Assessing the usability of graduate destination surveys for the analysis of labour market outcomes.
6. Scoping for a tracer study of the education and training and labour market outcomes of workplace training programmes.
7. What are the pathways of TVET college learners through the TVET colleges and beyond?
8. Who accesses adult education programmes and where do they progress to: An exploratory tracer study on community education and training centres.

# EXECUTIVE SUMMARY OF THE SURVEY DATA ON THE 2013 COHORT OF TVET NATED COMPLETERS

In this executive summary of the report, we respond to the questions that guided this research and set out the summary conclusions that were drawn from the data analysis. This summary is intended to provide a snapshot of the main findings, but the complete depiction of the data is contained in the body of the report.

## Characteristics of the 2013 NATED graduates cohort

The following can be stated about the technical and vocational education and training (TVET) college cohort that completed studies in 2013:

### Graduates' gender

- Of the 3 013 respondents surveyed, 42.5% (1 281) were female and 57.5% (1 731) were male.
- 71.8% of the graduates from Business Studies were female compared with Engineering Studies, where only 35.3% of the graduates were female.

### Graduates' race

- With regard to race, the majority of students (96.2%) were black African, with 2.1% Coloured, 1.5% white and 0.3% Asian.
- 80.3% of the black African cohort were graduates in Engineering Studies and 19.7% were graduates in Business Studies.

### Graduates' provinces in which they studied

- NATED (National Accredited Technical Education Diploma) students in the sample graduated from colleges in the following provinces: 34.5% from Gauteng colleges; 17.4% from KwaZulu-Natal (KZN) colleges; 14.3% from Limpopo colleges; 10.5% from Mpumalanga colleges; 6.9% from Free State colleges; 6.5% from Eastern Cape colleges; 5.4% from North West colleges; 2.8% from Western Cape colleges; and 1.4% from Northern Cape colleges.

### Graduates' age

- 49.4% or 1 488 students were aged 25 to 34 years; 27.6% or 831 students were aged 15 to 24 years; and 5.7% were older than 35 years.
- 77% of the sample could be classified as youths (15 to 34 years old).

### Graduates' NATED programmes

- 80.2% of all graduates were from Engineering Studies and 19.8% were from Business Studies.
- 54.6% of engineering graduates were N3 engineering students.
- 43.6% of N6 graduates were from Business Studies and 56.4% were from N6 Engineering Studies.
- 45% or 1 362 of the total 2013 NATED graduates were enrolled at N6 level.

### Graduates' qualifications at enrolment

- 72.3% or 2 180 students already held a matric certificate.
- 24.2% enrolled with a matric that allowed access to diploma study.
- 5.6% had a matric that allowed accessed to bachelor's degree study.
- In the N3 programmes, 95% or 1 546 graduates had a matric pass.

### Graduates' reasons for choosing college NATED programmes

- 59% of the respondents indicated that they had enrolled at the college because they were interested in the particular field.

- 36% had enrolled because they believed this would help them get a job.
- 5.6% had enrolled because they had received a bursary.

**College support for graduates in finding employment**

- 42% of the 2013 cohort indicated that the college had supported them in gaining employment by providing career guidance.
- 41% said that the college had supported them in finding employment by providing practical training.
- 17% indicated that the college had provided support through job placement.

## Graduate destinations and industry take-up

**Employed graduates at the time of the survey**

- 52.3% (1 576) of graduates making up the total 2013 cohort were employed at the time of the survey, that is, 30 months after completing their NATED programmes in 2013.
- Of those employed, 54.2% were male and 49.8% were female.
- Of those employed, 34.4% (530) were either in internships or apprenticeships; 26.5% (407) were in permanent employment; 23.7% (364) were employed in terms of long-term contracts; and 15.4% (238) were employed in terms of short-term contracts.
- In sum, just over 50% of the employed cohort were in permanent employment and in long-term contracts.
- The employment rates of white and Coloured graduates were significantly higher than those of black African graduates, though white and Coloured graduates constituted very small proportions of this cohort (1.5% and 2.1%, respectively).
- The majority of employed NATED graduates were in Gauteng.
- The Western Cape, KwaZulu-Natal and Gauteng employed two-thirds of the NATED graduates. These provinces also have the highest enrolments of the country's colleges.
- N6 graduates had significantly higher employment rates (60%) than N3 graduates (51%).
- The data suggests that matric bachelor passes were more popular with employers than lower-level schooling achievements.
- Lower numbers of young people were appointed in permanent positions as compared with mature graduates, while a higher proportion of employed youths were appointed in internships or apprenticeships compared with mature students.
- A higher proportion of employed graduates who were youths were appointed on short-term contracts (of six months or less) as compared with mature graduates.
- A significantly lower proportion of employed female graduates were appointed in permanent positions as compared with male graduates.
- 64.9% or 1 015 of employed NATED graduates had held one job since graduating in 2013; 27.5% or 431 had held two jobs; and the remaining 119 employed graduates had held three or four jobs since graduating. 0.7% or 16 employed individuals who did not respond to this question were excluded.
- Almost two-thirds of employed graduates (64.4%) were employed in private companies and 31.4% were employed by government.
- 72.7% of N3 engineering graduates were employed in the private sector, while 56.2% of N6 graduates (Engineering and Business Studies) were employed in the private sector and 39.3% were employed in government.
- Of those who responded, 33.2% of the graduates earned between R1 000 and R3 000 per month; 28.6% earned between R3 001 and R5 000 per month; 19.9% earned between R5 001 and R10 000 per month; and 14.6% earned more than R10 000 per month.
- 49% of female graduates earned less than R3 000 per month as compared with 28% of male graduates. Similarly, 27% of female graduates earned more than R5 000 per month compared with males, 40% of whom earned more than R5 001 per month. Of the 15% of graduates who earned over R10 000 per month, 65% were male and 35% were female.

- 49% of Business Studies graduates earned less than R3 000 per month, while 33% of Engineering Studies graduates earned less than R3 000 per month.
- 71% of permanently appointed graduates earned over R5 000 per month, with 43% earning over R10 000.
- 61% of those appointed in terms of long-term contracts (six months or more) earned less than R3 000 per month.
- It took 58% of employed graduates over six months to access their first job, and, for 32%, it took over a year to access their first job.
- 32% of interns and apprentices took longer than a year to source their internship/apprenticeship, and some took two years or longer.
- The majority of employed respondents (67%) indicated that they were using the skills learnt in their NATED qualification in their job, while 27% indicated that they were using their skills only to some extent. 6.1% were not using any of the skills learnt in their NATED programme.

**Graduates not in employment at the time of the survey**

- 47.7% (1 437) of respondents indicated that they were unemployed at the time of the survey in mid-2016.
- 10% of the total unemployed said they were studying.
- 93% (1 298) of the unemployed indicated that they were looking for a job, and 7% (77) said that they were not looking for a job.
- 59% had been unemployed for more than two years since completion, and 75% had been unemployed for 12 months or longer of the 30 months since completion.
- Those who said they were looking for work believed they had not found work because of a lack of opportunities. 21% said this was because they did not have the right skills, while 1% said they were no longer interested in what they had studied.
- Those who responded to a question about their job search strategies said they were looking for work independently and responding to advertisements or going through an agency. A minor proportion said they were either asking contacts or asking for help at the college.
- 15 graduates who are currently studying are undertaking an NC(V) (National Certificate (Vocational)) programme and 46 are undertaking an N3, even though they already have this qualification, while 45 are undertaking an N4, N5 or N6 programme even though they already have an N6 qualification.
- The main reason provided for studying further was to achieve a higher qualification where appropriate or to further their careers.

## Student migrations

- 57% of the graduates in the 2013 cohort stayed in their home town to study and continued to live in their home town after completion.
- 23% migrated to another province to study and then remained in that province after graduation.
- 8.8% studied in their home town but then moved after graduation to another province.7.6% migrated to another province to study but then returned home after they had graduated, while 3% migrated to another province to study and then moved to a third province.
- The main reason cited for migrating by more than 72% of respondents was the hope that there would be better job opportunities elsewhere.

Note, issues related to the methodology of this study, and the implications of these findings that can give rise to further research, are contained at the end of the report. We now proceed with the main body of the report.

# 1. BACKGROUND, SUBSTANTIATION AND PURPOSE OF THIS STUDY

## Introduction

Graduate employment is a critical outcome of public technical and vocational education and training (TVET) colleges. It is surprising, therefore, that little is known about the progression of TVET students through college and into employment. Generally, we do not know who is graduating from college, whether they are entering work, what the quality of the work is that they are entering, and what is required to facilitate that development. Moreover, apart from a few dated studies and one that is more recent, there is little or no consolidated data in the public domain tracing TVET college graduates' current absorption into the labour market, that is, whether or not they are finding employment either nationally or provincially.[1] Through the Education Management Information System (EMIS), the Department of Higher Education and Training (DHET) is attempting to remedy this situation by using its Skills Accord database, but limited capacity exists to conduct this labour-intensive exercise both at colleges and in the DHET.

This document reports on the results of a telephone survey, conducted nationally in June and July 2016, of 4 050 TVET Business Studies and Engineering Studies graduates from the N3 and N6 programmes. Equally importantly, it reports on the methodology adopted because of the urgency of developing a coherent national system for tracking college graduate students into workplaces. The data reports on the graduates' demographic profile, prior education profile, initial motivations, programme of study, selected college interventions, job search strategies, current employment status (including self-employment), current studies, future plans, and migration between provinces. The data is presented here in order to construct an initial data set of NATED (National Accredited Technical Education Diploma) graduates as a basis for developing a destination study agenda in line with the intentions of the Labour Market Intelligence Partnership (LMIP). Drawing on primary data collected via the survey from a stratified sample of graduates across the 50 colleges nationally, this report provides indicative findings on the state of graduate employment for N3 and N6 Business and Engineering programmes.

## Background to the project

This project forms part of the DHET-commissioned LMIP, a project of the Human Science Research Council (HSRC), which seeks to align public higher education (HE) and further education and training (FET) (TVET and adult/continuing education) provision to local and national labour markets. One of the critical areas identified by this initiative is the dearth of supply and demand data on post-school graduates, which is crucial to data-informed planning and delivery.

This research was undertaken by two university partners, the Institute for Post-School Studies (IPSS) at the University of the Western Cape (UWC) and the Centre for Integrated Post-School Education and Training (CIPSET) at the Nelson Mandela Metropolitan University (NMMU). Research design and fieldwork were supported by call centre experts SA Commercial and Qurio. A limited literature review was also conducted as an earlier deliverable in this project in order to provide a context with regard to issues around vocational education and employment trajectories.

1 We are aware of the SSACI-JET large-scale survey to track NC(V) (National Certificate Vocational) learners into employment, as well as of earlier work by Cosser (2003) and Gewer (2010).

## Research questions

The following research questions were set out for investigation:

- Who accessed, and progressed through, the NATED qualification route?
- What were the destinations of NATED graduates at key exit points?
- What has been the take-up of NATED college graduates within industry?

## Project scope

The research targeted N6 Business Studies graduates and N3 and N6 Engineering Studies graduates from the 50 public TVET colleges across South Africa who had completed their qualifications in 2013. The sampling frame was drawn from the Skills Accord lists of placements provided by the DHET and was supplemented by student contact data obtained from 26 TVET colleges (i.e. 50% of the total number of colleges). Subsequent to cleaning of the data, there were approximately 21 000 records. The telephone survey aimed at a 20% sample stratified by college and achieved 4 050 respondents. The data was later further cleaned and weighted, resulting in 3 013 respondents.

'Graduates' refers to students who completed all the subjects for the N3 or N6 Engineering and Business programme, as per the list received from the DHET. As 2012 DHET data was not comprehensive, the majority of graduates were seen to be from 2013. Private TVET institutions were not included in the survey.

The survey was quantitative, with respondents selecting responses from a predetermined list of options set up in a consultative process and covering the main research questions indicated above. Reporting is against 38 variables, including characteristics of students entering the college (demographics, prior qualifications, motivation for entering college), student choices and experiences at college (college, programme, level, and selected work-related programmes), post-college destinations and experience (employment status, salary, contract type, and job search strategies), and interprovincial migration.

# 2. CONTEXT

## The public TVET college sector

Since the new institutional-landscape document on the merger of 152 technical colleges in 2001, there have been 50 large multicampus TVET (technical and vocational education and training) colleges nationally. These colleges offer a range of programmes from the traditional NATED (National Accredited Technical Education Diploma) Report 191 (N1–N6) qualifications, to learnerships and apprenticeships, National Senior Certificate (NSC) (matric) programmes, a range of skills programmes, SETA-based (sector education and training authority) qualifications, competency-based modular training (CBMT), industry-specific training, trade test preparation and testing, higher education certificates and bridging courses, and the flagship National Certificate (Vocational) (NC(V)) programmes. Traditionally associated with the important task of artisan training through the NATED programmes, TVET colleges offer not only engineering disciplines such as construction, electricity, metalwork and modern mechanics, but also intermediate skills in a range of occupations such as information technology (IT), business studies, hospitality, tourism, educare and other caring professions (e.g. development studies and law/policing), various second-chance programmes for the youth, and so forth. The Department of Education's recapitalisation programme in 2006 attempted to resource colleges with additional workshops, equipment and classrooms in preparation for the implementation of the new NC(V) programmes, followed soon after by the provision of National Student Financial Aid Scheme (NSFAS) bursaries for TVET students. This had the effect of rapidly increasing college enrolments but placed teaching and learning resources under tremendous strain.

In the past decade, the skills development strategy of South Africa increasingly emphasised the critical need for intermediate skills in the economy and the constraints placed on growth and economic inclusion by the small size of the TVET college sector. The *White Paper for Post-School Education and Training*[2] (PSET) anticipates that enrolments will increase to one million by 2015 and to 2.5 million by 2030 from its 2013 base of about 650 000 headcount enrolments. An aim of the *White Paper* is the formation of 'a single, differentiated but highly articulated' post-school education and training system which contributes to an inclusive growth path by connecting young people and adults to work and higher education through education opportunities and the upgrading of their skills. This is intended to make education more relevant to the needs of the economy by promoting better articulation as well as partnerships between post-school education systems, thereby meeting the needs of the South African labour market[3] and becoming more relevant to the social and economic transformation of South Africa.

## The NATED programmes

The NATED (or Report 191) programmes (also known as N-programmes) are the programmes traditionally linked to apprenticeships by the Manpower Training Act of 1981. These

2 Department of Higher Education and Training (DHET) *White Paper for Post-School Education and Training: Building an Expanded, Effective and Integrated Post-School System* (DHET 2013), section 3.1.3.

3 There are complex discussions around the relationships between education and work. The *White Paper* combines an emphasis on economic inclusion with economic growth. Implied in this vision is the creation of a skills infrastructure that can support economic growth and meet the needs of industry, and, by the same token, absorb large numbers of unskilled labour into programmes in order to meet these needs. This would involve changing the country's overall skills profile.

programmes were traditionally offered as pre-matric[4] (N1–N3) and post-matric (N4–N6) programmes, a predominantly theoretical component of the apprenticeships. The Engineering programmes were offered as trimester programmes and the Business programmes were offered as semester programmes.

During the apprenticeship phases, NATED programmes were typically offered on a 'block release' basis using a 'sandwich model'. Alternating between college and work, students completed a level, worked in industry for a similar period of time, and then returned for the next level. Towards the end of the apartheid era, however, the apprenticeship system fell into decline and the increased number of black students entering the college system coincided with the increasing delinking of the college system from this direct relationship with companies, which implied colleges offering trimester or semester theory courses to pre-employed students instead of apprenticeships which mandated an employment contract.

In 2007, the NC(V) was introduced into the colleges as a new, modernised flagship programme, and colleges were instructed to phase out the N-programmes. However, a strong backlash against the phasing out of the NATED programmes resulted in the Minister of Higher Education and Training withdrawing the phasing-out instruction and reintroducing the N1–N3 Engineering programmes. This saw a sharp increase in the number of students re-entering the N-programmes, especially with the application of NSFAS bursary funding to both NC(V) and NATED programmes.

## TVET graduate employment data

According to Objective 2.4 of the PSET:

> One of the main purposes of the post-school system is to prepare workers for the labour market, or to enable individuals to earn sustainable livelihoods through self-employment or establishing a company or cooperative. Everyone should be able to make a living for themselves and contribute skills to a developing economy.

The National Skills Accord (2011) commits companies to providing 12 000 internship/apprenticeship opportunities for TVET college graduates. Ministerial targets have also been communicated to colleges requesting that they track students, and imposing work-placement targets on colleges.

Currently, however, there is limited data on the absorption of NATED graduates into employment, apart from that of Cosser (2003) and Gewer (2010). Anecdotal reports are conflicting about the value of the NATED qualification within industry: while some hold that employers value the N-qualifications above the NC(V), others contend that the NC(V) is finding purchase with employers as the qualification becomes more generally understood and is bedded down within college provision.

4 'Matric' is used here to mean having obtained an NSC. Historically, the term was linked to entry into university studies, but is now used in the public discourse to mean the acquisition of a Grade 12 pass.

# 3. RESEARCH METHODOLOGY

## Introduction

This section focuses on the data-collection methods used to obtain a representative sample of NATED 191 learners across 50 public TVET colleges for the study of public TVET college learners' destinations and pathways. The report documents the collation of data obtained from the DHET and public TVET colleges, as well as the analysis of this information. From these data sets, a representative sample of learners was identified and the survey questionnaire was constructed. Advice received during the course of project planning informed the strategic decision to employ a commercial call centre in order to administer the survey questionnaire. The report also details the approaches taken to ensure maximum return rates and completion of the questionnaire.

## Research design

Given the lack of data on TVET college graduate destinations, an empirical investigation offered the best prospects of better understanding graduate destinations. Tracer studies provide retrospective analyses of populations and are often used in education to evaluate the impact of programmes after graduation. Typically, tracer studies occur a year or two after graduation and consist of large-scale 'snapshot' surveys with the possibility of future follow-up surveys in order to provide longitudinal data. Tracer studies, particularly those that are to be telephonically administered, have to address the tension between the amount of time that a respondent can reasonably be expected to continue with the call and respond to questions, and the number of questions that researchers wish to include. As a result, telephonic tracer studies are frequently restricted with regard to the range of questions included. The circumstances of this report, however, necessitated a more comprehensive survey. Given the lack of data and limited understanding of the nature of TVET graduates' life course, this research sought to create a larger set of variables in the interests of exploratory research. It was the intention of this research that this initial report on the variables included would point in the direction of areas requiring more detailed research.

### Ethical considerations

We submitted ethical-clearance protocols to UWC and to the DHET. These were followed by requests to the DHET for public TVET college enrolment and throughput data for the years 2012 to 2014. DHET data for 2012 was problematic, as this official data included both private and public TVET colleges and was not disaggregated.

### Sampling frame

Difficulties were encountered in obtaining a sampling frame for the population. Requests for data on TVET graduates for 2012 and 2013 were addressed to the DHET's Management Information System (MIS) as well as the Examinations Section. From these engagements, it appeared that the DHET's MIS dealt with data on enrolments (not completers), which contained contact details, while the Examinations Section had achievement data, which was based on subject completions rather than unitised graduate records. However, the latter data, according to the Examinations Section, did not include contact details for students. Graduate data and contact details were thus housed in separate, incompatible databases within the DHET at the time of the research.

In order to circumvent this issue, the DHET was requested to provide a sampling frame which the Institute for Post-School Studies (IPSS) would attempt

to supplement. We were advised by the Swiss-South African Cooperation Initiative (SSACI), which had conducted tracer studies of National Certificate (Vocational) (NC(V)) students, that the Skills Accord data provided by colleges to the DHET reported on work placements and contained contact details. The potential difficulty with this data was that it focused on NC(V) and NATED student work placements rather than completions. Nonetheless, the DHET provided us with Skills Accord data for 2012, 2013 and 2014.

In addition, the IPSS requested graduate data from all 50 colleges. Of the 50 public TVET colleges, 21 provided data on the placement of college students in the workplace (essentially, the reports that they had submitted to the DHET), but in varying formats and with varying field names. Data received did not provide sufficient information on NATED N2 graduates, a first exit point to apprenticeships in South Africa. A decision was therefore taken to record available data on N3 and N6 Engineering Studies students as well as N6 Business Studies students. The Centre for Integrated Post-School Education and Training (CIPSET) accordingly created a composite graduate database of NATED Engineering Studies students and NATED Business Studies students.

Based on the availability of data, those graduating in 2013 were selected. It was later found that a number of graduates from 2012 were included, but these were excluded from analysis for this report, as it was difficult to obtain the disaggregated population (all NATED completers) data for 2012. Official figures published by the DHET and disaggregated by programme, level and year for the year 2013 cohort were in the end used as the population size for the study.

An extensive process of creating a database, cleaning the available data and removing duplicates or unusable records, ensued. An initial database that combined the Skills Accord data and the data obtained from colleges directly was constructed that comprised some 71 000 entries. This was reduced to 53 148 entries by eliminating duplicate entries in respect of students. The database was further reduced to a total of 22 787 entries consisting of students *with contact details*. SA Commercial later ran another check for duplicates on the database and reduced the number of entries to 21 000. A decision was taken to exclude all 2014 entries due to the small number of records received for that year, as well as the lack of a population database against which to weight this data. The final dataset presented to SA Commercial as the sampling frame consisted of 19 377 records.

**Sampling methodology**

The intended sample size was 20% of the total number of completers for 2013, stratified in terms of the population of completers per province and per college where possible so as to ensure that the sample arrived at would include all nine provinces. The data was stratified in terms of province, programme area (Business Studies and Engineering Studies), and programme level (N3 and N6). The sample was further stratified at the level of the college, with the service provider attempting to call 20% of the data set provided per college. Data was captured per individual respondent, per response item, into separate fields.

**Development of a survey questionnaire**

The development of a destinations survey was informed by the aims of the research, which aims are reiterated below:

- To understand who accessed, and progressed through, the NATED qualifications route in 2013;
- To ascertain the destinations of NATED graduates at key exit points; and
- To quantify the take-up of 2013 NATED graduates within industry at the time of the survey in mid-2016, some two-and-a-half years after exiting college.

A first cut of the questionnaire was derived from the research questions, but the IPSS also had access to the questionnaire used by the SSACI in its NC(V) destination survey, as well as to the instrument and input of the LMIP as a result of work done in the Eastern Cape among higher education students. With the input of CIPSET partners, the survey questionnaire underwent a number of iterations. Further amendments had to be made once it was decided to appoint a call centre service provider, since telephonic surveys are subject to additional considerations – which are reported on herein.

**Appointment of a commercial call centre to conduct the survey**

The SA Commercial call centre was appointed as the preferred provider based on its experience, its expertise and the cost. SA Commercial also came highly recommended by similar researchers in the field. The following deliverables for the TVET college destination pathways survey were agreed upon:

- Align and set up the graduate database within SA Commercial's telephony system;
- Consult on the survey questionnaire in order to prioritise key research questions;
- Conduct a survey of NATED graduates in order to achieve a sample size of at least 20%; and
- Report on the survey results.

The IPSS held numerous meetings with the call centre provider to further refine the survey questionnaire and ensure that it would achieve optimal completion rates. This involved a reorganisation of the response items in the questionnaire in order to foreground the most critical information required from respondents. Thus the information on graduates' destination pathways *after* completion of their qualification was requested *first* in anticipation of calls ended prematurely by participants. Qualitative questions were turned into quantitative questions in order to eliminate confusion and ensure that graduates could answer the survey within 20 to 25 minutes (the length of time, in the call centre's experience, that young people will stay engaged on the telephone). A number of questions were rephrased in order to ensure that second-language speakers would easily understand the questions. A question on job remuneration was ranked according to differing pay-scale brackets in order to assist graduates in answering sensitive questions. Once the questionnaire was refined, the questions were tested on a protected online platform so as to assess where areas of confusion potentially existed. As a result of this testing, further amendments were made in order to improve the flow of the questionnaire.The IPSS also drew on experience gained during a graduate survey of Eastern Cape university graduates, which had offered an incentive for students to complete the graduate survey. Participants in the survey could have their names entered into a lucky draw with an iPad as a prize. The call centre partners corroborated that this strategy would be attractive to young people, and respondents were therefore offered the chance to win an iPhone or an iPad by way of a similar competition.

## Fieldwork

The specific nature of telephone interviews (as opposed to face-to-face or written surveys) required a research design that took into account the quality of responses, and not only the quantity. Telephone surveys were prone not only to missed calls, but also to missing data and (more subtly) indifferent responses (see Cohen & Morrison 2007).

The call centre cautioned that, whilst their operators would undergo extensive training, the categories needed to be sufficiently clear in order to enable consistent data capture. There was also concern that the interview process should meet the requirements of the Protection of Personal Information (POPI) Act, even though the Act had not yet been finalised at the time. An advantage offered by the call centre was the possibility of respondents being able to respond in English, Afrikaans and an indigenous African language.

It was recommended that, from a data-capture point of view, it would be best to maintain strongly quantitative responses with a limited range of predetermined possible responses which could then be quantified. The emphasis would be on arriving at a quantitative data set with unambiguous data responses. Specialist data metrics consultants participated in the preparation, assisting with the survey instrument design in order to pre-code the data metrics.

The preparation phase therefore involved a multidisciplinary team responsible for survey design, fieldwork and data metrics, and these considerations were pre-designed into the survey instrument. Questions were pre-coded at the design stage and data metrics reports were designed up front. This would enable capturing the fieldwork process itself (number of calls made, duration of calls, number of incomplete surveys)

and the direct capture at the point-of-fieldwork response onto the database.

The final data set would be provided as a spreadsheet with an initial analysis of frequency counts and preliminary comparatives on selected variables. These would be presented and discussed by the team to take into account fieldwork considerations, data-capture considerations and survey intentions in the analysis and interpretation of the data.

As the 'cold call' approach was considered to be undesirable and inefficient, the call centre recommended approaching the survey in a phased manner and 'warming up the market' through an initial SMS contact.

A series of 'sweeps' was included in the design of the fieldwork as follows:

1. A 'blank' call was made electronically to the data set to ascertain how many of the phone numbers were still operational, since students would have graduated at least three years previously.
2. An SMS was sent to all *operational* numbers informing students of the purpose of the research and of the iPad prize, and requesting permission to conduct the interview. This included a response option. The option of completing an online questionnaire was also given to students in this SMS.
3. Emailing the questionnaire to those students who indicated this option.
4. Conducting the telephone interviews with those who agreed to participate.
5. A final 'thank you' email, which would also serve to announce the winners of the competition around participation.

Two IPSS researchers participated in the training of the call centre staff during their induction phase and provided contextual explanations about the TVET sector and the purpose of the destination survey. Fieldworkers underwent a three-day training process involving an item-by-item interrogation of the survey instrument, as well as a dry run, a conversation with the IPSS researchers, clarification of issues regarding standardisation of responses, and role-plays of different scenarios and respondent types.

## Contact and response rate

The call centre adopted a strategy of contacting 20% of all NATED graduates in each of the 50 public TVET colleges in an attempt to arrive at a representative sample of completers across South Africa. The administration of the survey was commenced on 6 June 2016 and, by 30 June 2016, 4 050 NATED graduates had completed the survey. Each student was called a maximum of three times if they were not available at the time of the first call. Call centre operators were instructed to try numbers at three different times before replacing that person in the sample. All interactions with NATED graduates were audio-recorded and the IPSS received a daily statistics report that detailed call completion and efficiency rates.

The contactability of the sampling frame is reported in the figure provided by SA Commercial (Figure 1). An initial rationale for conducting telephone interviews was that TVET college students might not be able to complete an online survey owing to inadequate Internet access. Of the 19 377 respondents, only 208 responded positively to completing the survey online or via email, confirming our assumption about TVET students having limited access to appropriate technology.

In addition to the response rate, the contactability rate is important for future research of this kind. Of the 19 377 records, 10 121 (58%) cell phone numbers could not be connected to during the survey. In addition, a further 2 666 numbers were operational, but could not be used to contact the lead person in the sample. Therefore, of the *19 377* potential respondents in the sampling frame, *the actual available number of respondents was reduced to only 4 561*. From this total number of available respondents, a stratified sample had to be attempted in order to arrive at the 20% sample that had originally been envisaged. Taking into account the 4 561 respondents available to be surveyed, the 4 050 completed surveys thus represent an 80% response rate, albeit an unintended consequence of non-contactable telephone numbers. With reference to the number of rejected calls, the fieldworkers had to call 1.78 persons in order to obtain a willing respondent. If future tracer studies are to be

successful, this finding points to the need for colleges to establish alumni liaison systems which regularly check the contact details of ex-students and ensure that there are also alternative contact details.

This 80% was achieved by contacting all the contact numbers in the available database. Unlike other telephonic-survey methodologies, the call centre did not exclude contacts with contactable phone numbers once a substrata target had been achieved. Rather, the call centre continued to contact all the contactable graduates contained in the database. To correct for imbalances in the survey returns, the data was subsequently weighted for the report, and, though not optimal owing to the foregoing, the results exist as a probability sample of graduates for whom contact details were available.

*The research process itself is therefore a key finding of this research.* Whilst the targeted number of respondents was met, the conditions for data collection were less than ideal and will require systemic intervention going forward. The table below indicates the contactability outcome and the 'sample' ultimately achieved.

## Cleaning the findings data

The response data received from the call centre contained 4 049 cases, but the analysis in this report is based on 3 013 cases for reasons that are explained in the sections that follow. As stated earlier, the decision was taken to include only those who graduated in 2013 in the sample owing to the difficulties of obtaining a unitised population for 2012. However, a number of respondents (n = 566) indicated that they had graduated in 2012 rather than 2013. In view of the challenge of trying to weight this smaller sample, the graduates from 2012 were excluded from this analysis, although this data could be put to future use. In addition, cases that met either one or more of the following criteria were excluded:

1. All those who graduated in 2012.
2. All those who indicated that they were not enrolled at a public TVET college in 2013.
3. All those where the programmatic field was left blank.
4. All duplicate cases.
5. All those whose course information suggested that they did not graduate from a NATED programme in 2013, but rather from a NC(V) programme.

Figure 1: Contactability and success rates of the SA Commercial survey

**Lead outcome**

Contactability

| Outcome | Definition | Volume | Percentage |
|---|---|---|---|
| DMC | Connected and spoke to the Lead | 4 561 | 26.29% |
| No contact | Unable to connect | 10 121 | 58.34% |
| Non-DMC contact | Connected to the telephone number, but did not speak to the Lead ID | 2 666 | 15.37% |
| **Grand total** | | **17 348** | **100%** |

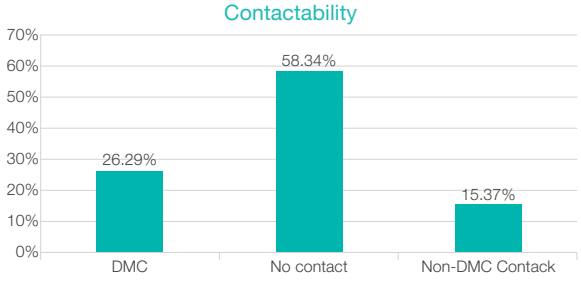
**208**

5% surveys completed due to emails and SMS communication

A total volume 20.1% surveys completed based on all methods of communication

**4 049**

Contactability




Success rates

| | | |
|---|---|---|
| **Conversion rate** | **Percentage of surveys completed to successful contact** | **80.97%** |
| **Efficiency rate** | **Percentage of surveys completed to leads touched (inclusive of no contacts and contacts** | **178.84%** |

SA Commercial

6. Where the province, N-level or programmatic field was left blank and where imputation from other fields was not possible.

*In total n = 1 049 cases were removed from the final database, leaving 3 013 valid cases for analysis.* The weighted respondents who participated in the survey were drawn from all 50 public, accredited colleges in the country.

## Weighting the data

Post-stratification weighting was applied to the survey returns so as to adjust the data in order to account for the sample biases that emerged from the processes discussed above. These sample biases emerged as a result of the usual survey error, but were distorted further by the varying management information systems in the public TVET college sector that resulted in uneven capacity to provide graduate contact information.

The population used to weight cases was based on the statistics provided in the DHET's (2014) *Statistics on Post-School Education and Training in South Africa: 2012* (see Table 1 for a composite table of the population). Four factors provided in the DHET report were utilised to weight the data, namely:

1. The province.
2. The programme area, specifically Business Studies or Engineering Studies.
3. The N-level, specifically N3 and N6.
4. The gender.

Table 2(a) to (d) provides the weighting report for each of the four factors utilised for weighting the sample. The table provides the population target which was determined from the DHET graduate data, the sample, and the load calculated to achieve a fit of '1'.

The effective base of the weighted sample was designed in order to reduce the likelihood of skewed, weighted adjustments. The effective base serves as a test of whether the weighting has distorted a particular weighting factor. The effective base was calculated as the (sum of the weight factors)$^2$ / sum of the squared weight factors. The effective base for the weighting applied in this study is within an acceptable level of 1 357 = 45.04% of the sample. Thirty iterations were done with the sequence: 1; 2; 3; 4.

Table 3 shows the distribution of the weighted sample and Figure 2 provides the scatter plot. Together, they show that the majority of the weighted sample (58%) has been weighted in the range of <0.2 to 2.0, with the smallest weighting applied being 0.09 and the largest being >6.65.

The data-weighting process ensured that a representative sample of NATED N3 and N6 graduates was reached in this survey and that broader assertions could be made about NATED

Figure 2: Distribution of weighted cases

graduates based on the findings in respect of this cohort. In the next section, we present the quantitative findings in a series of tables and figures that depict the information gathered in terms of the survey questionnaire. These findings have also been summarised in the Executive Summary at the outset of this report.

## Table 1: Population (DHET 2014)

| Province | Engineering Studies | | | Business Studies | | | Grand total |
|---|---|---|---|---|---|---|---|
| | N3 | N6 | Total | N3 | N6 | Total | |
| **Eastern Cape** | 1 113 | 619 | 1 732 | 0 | 561 | 561 | **2 293** |
| **Free State** | 1 094 | 479 | 1 573 | 0 | 782 | 782 | **2 355** |
| **Gauteng Province** | 6 277 | 3 153 | 9 430 | 0 | 1 758 | 1 758 | **11 188** |
| **KwaZulu-Natal** | 3 719 | 1 689 | 5 408 | 0 | 1 545 | 1 545 | **6 953** |
| **Limpopo** | 2 008 | 1 394 | 3 402 | 0 | 477 | 477 | **3 879** |
| **Mpumalanga** | 2 117 | 469 | 2 586 | 0 | 175 | 175 | **2 761** |
| **North West** | 1 148 | 270 | 1 418 | 0 | 361 | 361 | **1 779** |
| **Northern Cape** | 113 | 65 | 178 | 0 | 138 | 138 | **316** |
| **Western Cape** | 794 | 473 | 1 267 | 0 | 860 | 860 | **2 127** |
| **Total** | **18 383** | **8 611** | **26 994** | **0** | **6 657** | **6 657** | **33 651** |

*Notes: The population represents the number of 'completers' in 2013. The 'number of completers' refers to the number of students who were eligible to complete, and who successfully completed, the Report 191 N3 and N6 certificates in the 2013 academic year.*

## Table 2: Weighting (a) by province; (b) by programme; (c) by N-level; and (d) by gender

| Province | Populations target | Sample | Load | Fit |
|---|---|---|---|---|
| Eastern Cape | 0.0681 | 0.0700 | 0.9724 | 1.0000 |
| Free State | 0.0700 | 0.0674 | 1.0390 | 1.0000 |
| Gauteng Province | 0.3325 | 0.1932 | 1.7213 | 1.0000 |
| KwaZulu-Natal | 0.2066 | 0.225 | 0.9181 | 1.0000 |
| Limpopo | 0.1153 | 0.0485 | 2.3794 | 1.0000 |
| Mpumalanga | 0.0820 | 0.0820 | 1.0003 | 1.0000 |
| North West | 0.0094 | 0.0345 | 0.2723 | 1.0000 |
| Northern Cape | 0.0529 | 0.0495 | 1.0697 | 1.0000 |
| Western Cape | 0.0632 | 0.2300 | 02748 | 1.0000 |

| Programme | Populations target | Sample | Load | Fit |
|---|---|---|---|---|
| Business Studies | 0.1978 | 0.5828 | 0.3394 | 1.0000 |
| Engineering Studies | 0.8022 | 0.4172 | 1.9229 | 1.000 |

| N-level | Populations target | Sample | Load | Fit |
|---|---|---|---|---|
| N3 | 0.5463 | 0.2532 | 0.5463 | 1.0000 |
| N6 | 0.4537 | 0.7468 | 0.4537 | 1.000 |

| Gender | Populations target | Sample | Load | Fit |
|---|---|---|---|---|
| Female | 0.4250 | 0.5573 | 04250 | 1.0000 |
| Male | 0.5750 | 0.4427 | 0.5750 | 1.000 |

## Table 3: Distribution of the sample prior to and post weighting

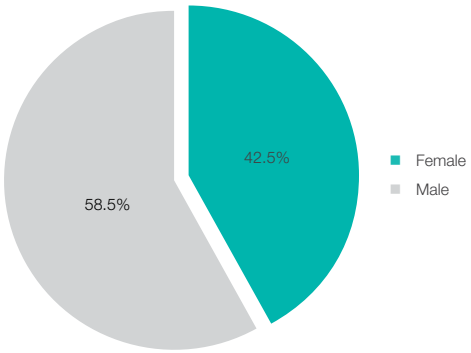
| Distribution | Sample | Weighted |
|---|---|---|
| > 3.0 | 0.07 | 0.27 |
| 2.5–3.0 | 0.05 | 0.13 |
| 2.0–2.5 | 0.01 | 0.02 |
| 1.5–2.0 | 0.12 | 0.20 |
| 1.0–1.5 | 0.08 | 0.11 |
| 0.7–1.0 | 0.05 | 0.05 |
| 0.4–0.7 | 0.19 | 0.11 |
| 0.2–0.4 | 0.26 | 0.09 |
| < 0.2 | 0.18 | 0.02 |

# 4. FINDINGS

## Profile of respondents (2013)

### Gender

Figure 3: Weighted respondents – by gender




Of the 3 013 respondents surveyed, Figure 3 shows that 42.5% (1 281) of the respondents were female and 57.5% (1 731) were male.

While the total number of women at TVET colleges enrolled in NC(V) and NATED programmes has increased, gender disparities continue in the gender divide that exists between the programmes. Table 4, for example, shows that 71.8% of the graduates in Business Studies in 2013 were female as compared with Engineering Studies, where only 35.3% of the graduates were female.

The gender distribution is the same for the NATED graduates provided by the DHET (2014), which is understandable as the data was weighted according to such information. The gender distribution shows slightly fewer females than in the case of NC(V) enrolments and graduates, where 53.4% of NC(V) graduates are female and 45.8% male. The reason for this, as indicated in Table 4, is the far greater number of Engineering Studies graduates in relation to Business Studies graduates, combined with the gender disparity in Engineering Studies enrolments and graduates.

### Race

Figure 4 shows that the majority of students (96.2%) are black African, with 2.1% Coloured, 1.5% white and 0.3% Asian.

Table 5 shows NATED graduates by race and programme area. It indicates that a significantly higher proportion of white graduates graduate from Engineering Studies (95.5%) as compared with Business Studies (4.5%). The percentage-point

Table 4: Gender and programme area

| | Gender | | |
|---|---|---|---|
| | **Female** | **Male** | **Total** |
| **Business Studies** | 428 | 168 | **596** |
| | 71.8% | 28.2% | **100%** |
| | 33.4% | 9.7% | **19.8%** |
| **Engineering Studies** | 852 | 1 565 | **2 417** |
| | 35.3% | 64.7% | **100%** |
| | 66.6% | 90.3% | **80.2%** |
| **Total** | **1 280** | **1 733** | **3 013** |
| | **42.5%** | **57.5%** | **100%** |
| | **100.0%** | **100.0%** | **100.0%** |

difference is statistically significant at Pearson's chi2(2) = 17.9985, p = .00044.

Figure 5 shows a higher proportion of N3 engineering graduates across race groups compared with N6 programmes.

**Province**

Table 6 shows that the largest proportion of weighted respondents (34.5%) lived in Gauteng. This is followed by 17.4% who lived in KwaZulu-Natal, 14.3% who lived in Limpopo, and 10.5% who lived in Mpumalanga. The remaining provinces each had

Figure 4: Weighted respondents – by race

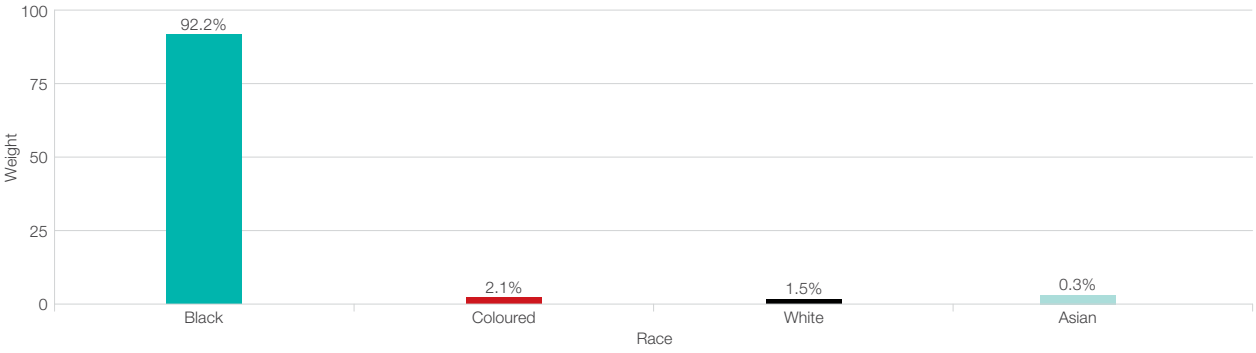



Figure 5: Weighted respondents – by race and N-level

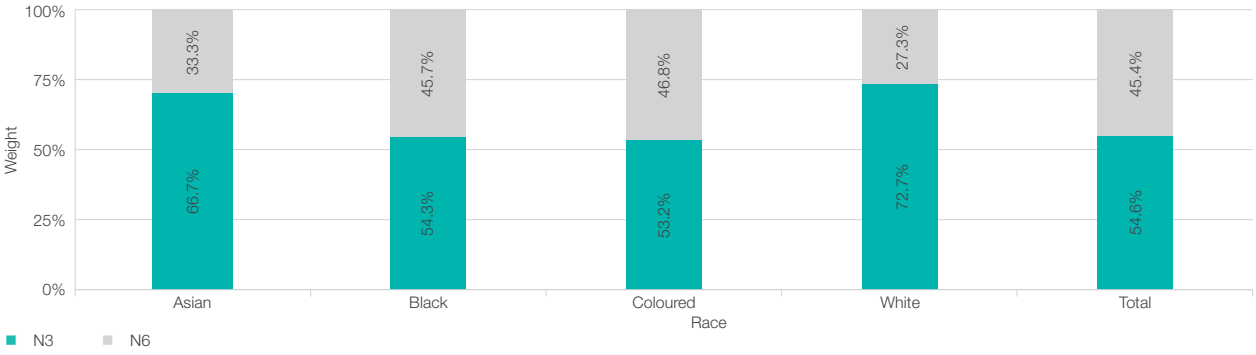


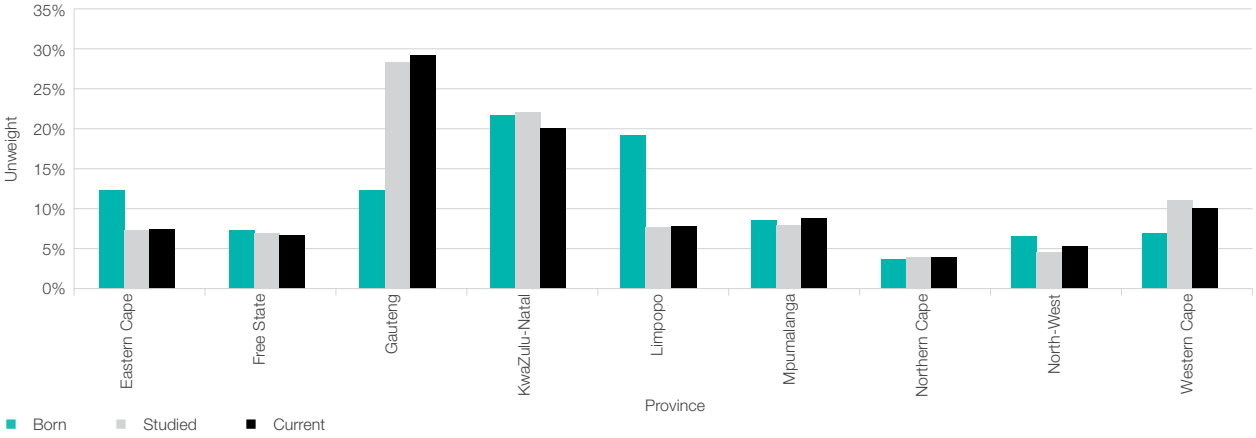

Table 5: Race and programme area

| | | Asian | Black | Coloured | White | Total |
|---|---|---|---|---|---|---|
| **Business Studies** | Count | 1 | 570 | 23 | 2 | **596** |
| | % with race | 11.1% | 19.7% | 36.5% | 4.5% | **19.8%** |
| **Engineering Studies** | Count | 8 | 2 329 | 40 | 42 | **2 418** |
| | % with race | 88.9% | 80.3% | 63.5% | 95.5% | **80.2%** |
| **Total** | **Count** | **9** | **2 898** | **63** | **44** | **3 014** |
| | **% with race** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

Table 6: Weighted respondents – by province

| Province | Totals | % |
|---|---|---|
| Not provided | 11 | 0.3 |
| Eastern Cape | 195 | 6.5 |
| Free State | 206 | 6.9 |
| Gauteng Province | 1 038 | 34.5 |
| KwaZulu-Natal | 524 | 17.4 |
| Limpopo | 430 | 14.3 |
| Mpumalanga | 317 | 10.5 |
| North West | 163 | 5.4 |
| Northern Cape | 44 | 1.4 |
| Western Cape | 85 | 2.8 |
| **Total** | **3 013** | **100.0** |

Figure 6: Respondent migration across provinces (unweighted)




less than 10% of the weighted respondents, with only 1.4% of NATED graduates living in the Northern Cape and only 2.8% living in the Western Cape.

Figure 6 shows the percentage of the respondents (unweighted) by province in terms of where they were born, where they studied, and where they were residing at the time of the survey. With stable migrant populations, a percentage-point difference between born and studied would presumably indicate movement for study purposes. A movement from studies to work would presumably indicate either movement for employment or a return to place of residence (i.e. moving back to the home province). A striking illustrative example of this population migration is the number of respondents who moved to Gauteng for study purposes. The majority of respondents studying in Gauteng were from outside Gauteng. A similar number moved from Limpopo for study purposes, and the net migration rate after study remained constant, suggesting that students did not return to the province. Moreover, additional respondents migrated to Gauteng after their studies, suggesting that additional respondents went to Gauteng for employment. The Western Cape and the Eastern Cape have a similar pattern, except that Eastern Cape respondents returned to their home province after studies (in net terms). KwaZulu-Natal, on a smaller scale, saw a net influx of respondents and a net outflow for work.

### Age

Figure 7 shows that 49.4% (1 488) of respondents are in the age cohort of 25 to 34; 27.6% (831) are in the age cohort of 15 to 24; and the remaining 5.7% are older than 35 years. The findings therefore show that the majority age grouping (77% or 2 320) is that of the youth (15–34 years). However, 522 (17.35%) respondents did not provide their age and 5.7% are mature students (35–64 years).

## NATED entry characteristics

### Respondents by qualification at enrolment

Figure 8 shows that the majority of the respondents (72.3% or 2 180) enrolled in their NATED programme with a matric; 24.2% enrolled with a matric in addition to a diploma or a university pass; and

Figure 7: Weighted respondents – by age

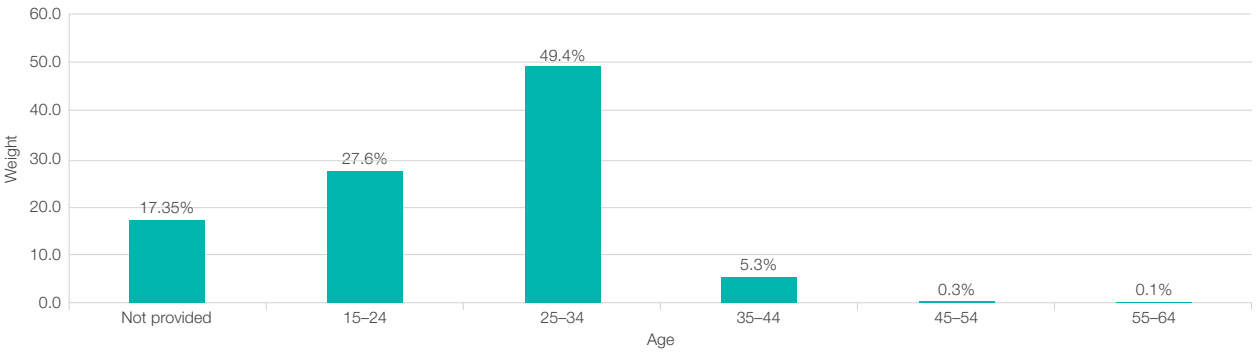
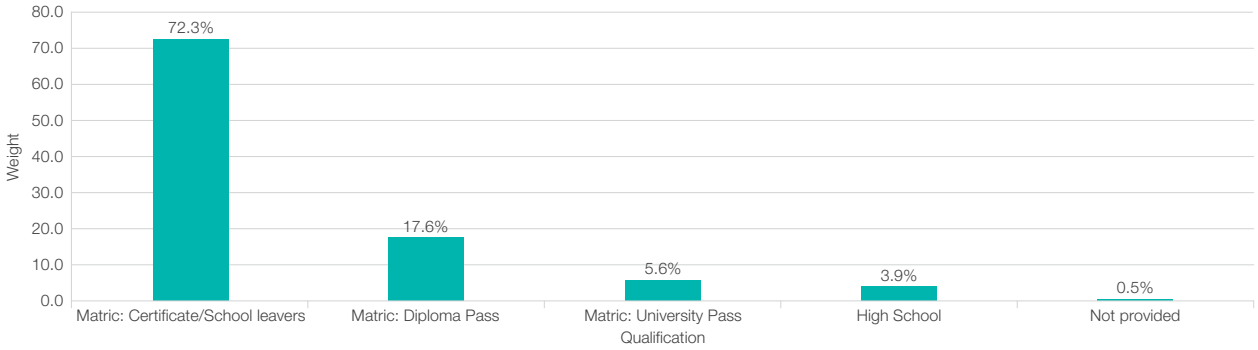


Figure 8: Weighted respondents – by qualification at enrolment




5.6% enrolled in their NATED programme with a university pass. Information was not provided for 0.5% (14 respondents). It is surprising to note how few learners did not possess a matric (3.9%), as the entrance criteria for NATED programmes is a Grade 9 qualification.

Table 7 shows that 95% (1 546) of graduates from N3 programmes enrolled in the programme with at least a matric pass. This points to possible inefficiencies in the system, but also to the long pathway that students take from school to work.

While TVET colleges offer programmes predominantly across National Qualifications Framework (NQF) Levels 2 to 4, 45% (1 362) of the NATED graduates from 2013 were enrolled, at least nominally, at N6 level or what could be considered the higher education (NQF 5) level (Table 7). This highlights a 'soft' boundary between TVET colleges and the higher education sector that has not been fully supported by articulation pathways from the colleges to South African universities.

**Respondents by programme area and N-level**

Table 8 shows that 54.6% of the respondents graduated with an N3 Engineering Studies qualification and 45.4% with an N6 Business Studies or Engineering Studies qualification. It also indicates that: 19.8% of respondents graduated from Business Studies and 80.2% from Engineering Studies; and that 43.6% (596) of N6 graduates graduated from Business Studies and 56.4% (771) from Engineering Studies. It should be noted that NATED Business Studies only enrols students with a matric-equivalent certificate, as this programme is offered at the N4 to N6 levels (NQF Level 5).

Table 7: Weighted respondents – by entry qualification and N-level

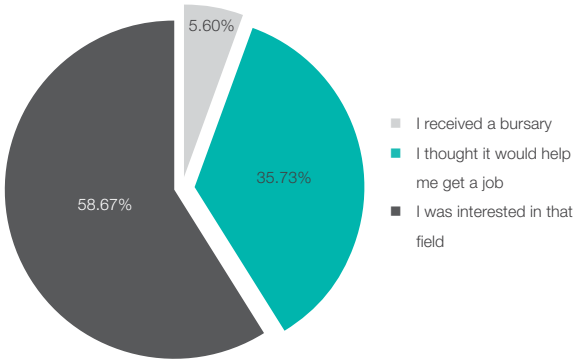
| Row labels | N3 | N6 | Grand total |
|---|---|---|---|
| High School | 89 | 30 | 119 |
| Matric: Certificate/School leavers | 1 158 | 1 021 | 1 180 |
| Matric: Diploma Pass | 282 | 247 | 529 |
| Matric: University Pass | 106 | 64 | 170 |
| **Grand total** | **1 635** | **1 362** | **2 997** |

Table 8: Weighted respondents – by programme area and N-level

| | N3 | N4 | Total |
|---|---|---|---|
| **Business Studies** | 0 | 596 | **596** |
| | 0.0% | 100.0% | **100.0%** |
| | 0.0% | 43.6% | **19.8%** |
| **Engineering Studies** | 1 646 | 771 | **2 417** |
| | 68.1% | 31.9% | **100.0%** |
| | 100.0% | 56.4% | **80.2%** |
| **Total** | **1 646** | **1 367** | **3 013** |
| | **54.6%** | **45.4%** | **100.0%** |
| | **100.0%** | **100.0%** | **100.0%** |

The pie chart (Figure 9) provides the reason that respondents gave for enrolling at the college. It shows that 59% of the respondents indicated that they enrolled at the college because 'they were interested in that field'; 36% enrolled because they thought 'it would help them get a job'; and 5.6% enrolled because they 'received a bursary'. These findings are supportive of the arguments made by Powell and McGrath (2015) who state that students enrol at TVET colleges for reasons broader than simply getting a job.

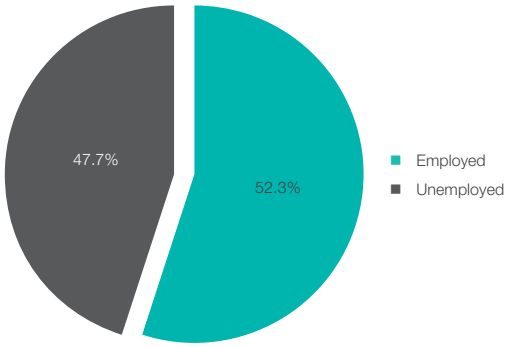
Figure 9: Respondents by reason for enrolling at the college




## Graduate destinations: Employment rates

Figure 10 shows that 52.3% (1 745) of NATED (N3 and N6) graduates were employed subsequent to their NATED programme in 2013, with 47.7% not being in employment at the time of the survey in 2016.

Figure 10: Percentage of employed vs unemployed NATED graduates




### Employment rates by gender

Figure 11 shows the employment rates by gender. As can be seen, there is a 4.4% percentage-point difference between the employment rate of males (54.2%) and females (49.8%). This suggests gender privilege in the labour market, an element found pervasively throughout the data in this report.

### Employment rates by race

On the face of it, it would appear that a significant difference exists in employment rates by race (Figure 12), indicating that a black African graduate

Figure 11: Employment rates – by gender

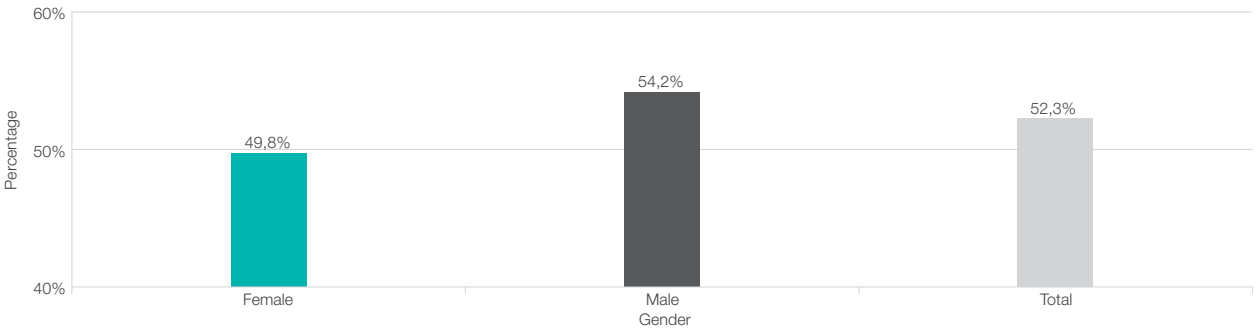
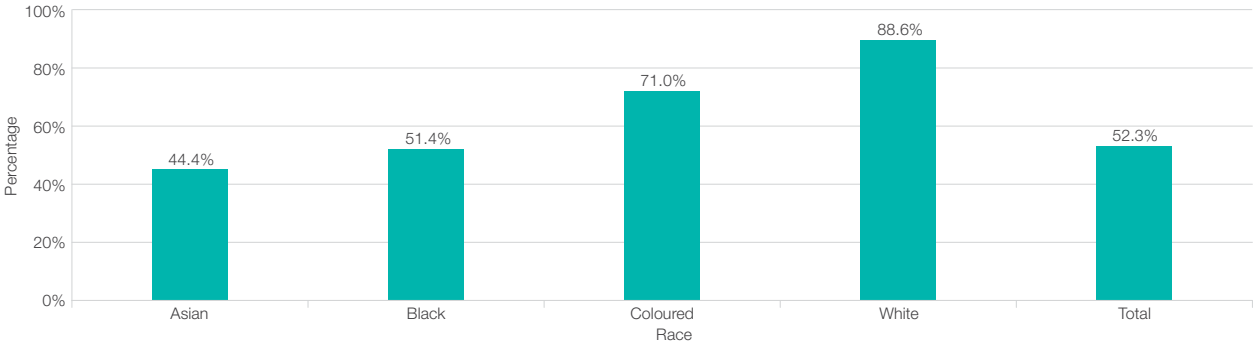



Figure 12: NATED graduate employment rates – by race



is 1.6 times less likely than a white graduate to gain employment and 1.4 times less likely than a Coloured graduate.[5] It should be noted, though, that white and Asian graduates accounted for very small percentages of the cohort population at 1.5% and 0.3%, respectively.

### Employment rates by province

Figure 13 shows the employment rates by province. These employment rates need to be read with the total number of graduates per province reflected in Figure 14. Whereas the Free State shows the lowest employment rate and the Northern Cape the highest, the Northern Cape only represents 1.3% of the 2013 sample.

Figure 14 shows that the majority of the employed NATED graduates (36.2%) are in Gauteng. In total, the Western Cape, KwaZulu-Natal and Gauteng employ two-thirds of the country's NATED graduates. These figures are distorted by enrolment rates, as these three provinces also enrol the majority of the country's NATED students.

## Factors affecting employment rates

Of the factors included in the survey instrument, five factors significantly affected employment rates (or employability). In terms of factors that were included in the survey, the *five* factors that were shown to significantly affect employment rates were as follows:

### Factor 1: The N-level of the graduates

Figure 15 shows that N6 graduates (at post-matric level/NQF Level 5) had significantly higher employment rates (of 57.3%) than N3 (NQF Level 4-equivalent) graduates (48.2%). The percentage-point difference is statistically significant at Pearson's chi2(2) = 6.505, p = 0.010757 (*1).

5 Corrections for the other factors that affect employment rates have not been taken into account.

Figure 13: NATED graduate employment rates – by province

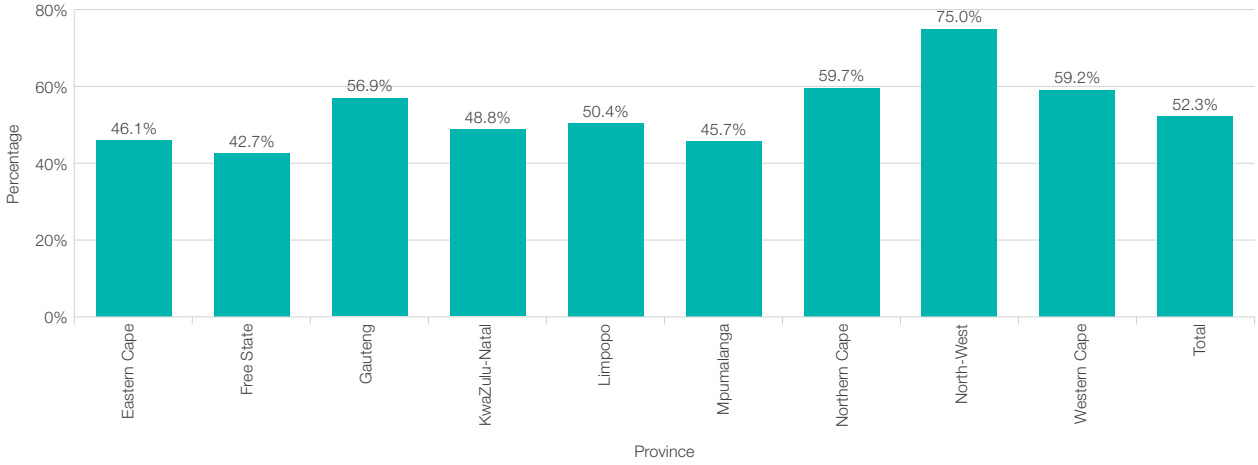



Figure 14: Provincial distribution of employed NATED graduates

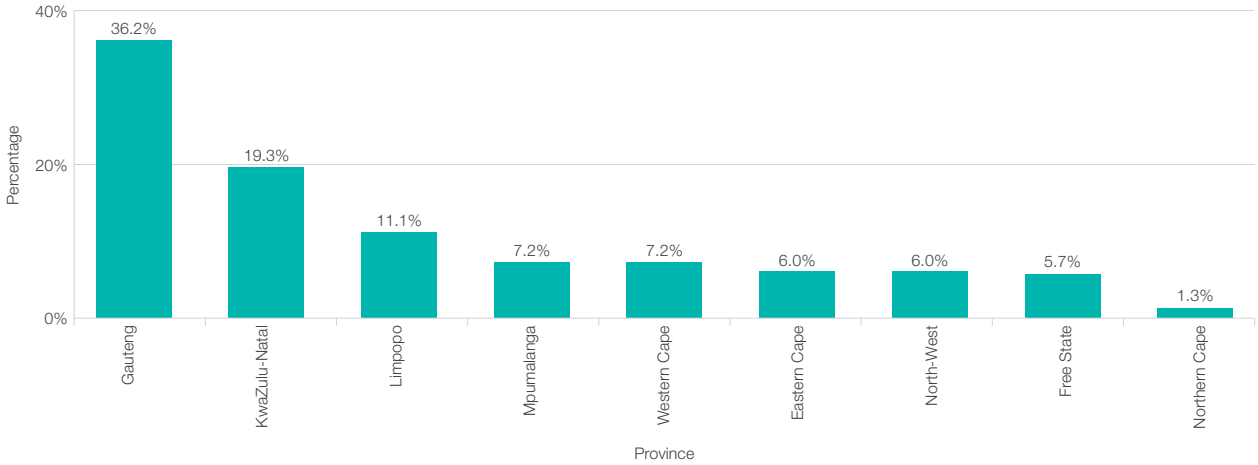
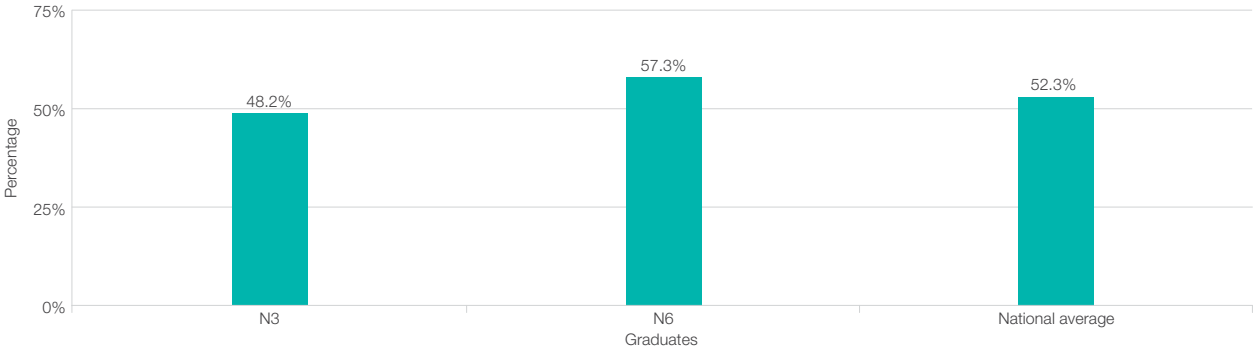


Figure 15: Percentage employed – by N3 and N6




**Factor 2: The race of the graduates**

As shown earlier, white and Coloured graduates (very small percentages of the sample) had a significantly higher employment rate than black African NATED graduates.

**Factor 3: The province in which graduates live**

As with the labour market nationally, the provincial location of NATED graduates strongly affected employment rates (at Pearson's chi2(2) = 18.999, p = 0.0149)*[1] 6. This issue is discussed later in this report.

**Factor 4: The highest qualification of graduates at the time of enrolling**

Figure 16 shows that 49% of graduates who enrolled for their NATED qualification with a high school qualification gained employment after graduation, as compared with 55% who enrolled with a matric and a post-matric certification. The percentage-point difference is significant at Pearson's chi2(2) = 11732.98, p = 0.00001 (*[1]).

**Factor 5: The course from which students graduated**

- Figure 17 shows that NATED students graduating from Public Management and Financial Management had a higher employment rate than graduates from any other Business Studies programme.
- NATED students graduating from Civil Engineering, on the other hand, had a significantly lower employment rate than graduates from any other Engineering Studies course.

(Note that percentages for Manufacturing and Public Relations need to be read with caution, as they represented less than 1% of the sample.)

Other than these five variables, no other variable included in the survey was a significant factor with regard to the probability of being employed.

## Graduate destinations: Employment characteristics

In the previous section (see Figure 10), a broad distinction was made between those in employment

6 Corrections for the other factors that affect employment rates have not been taken into account.

Figure 16: Percentage employed – by school qualification

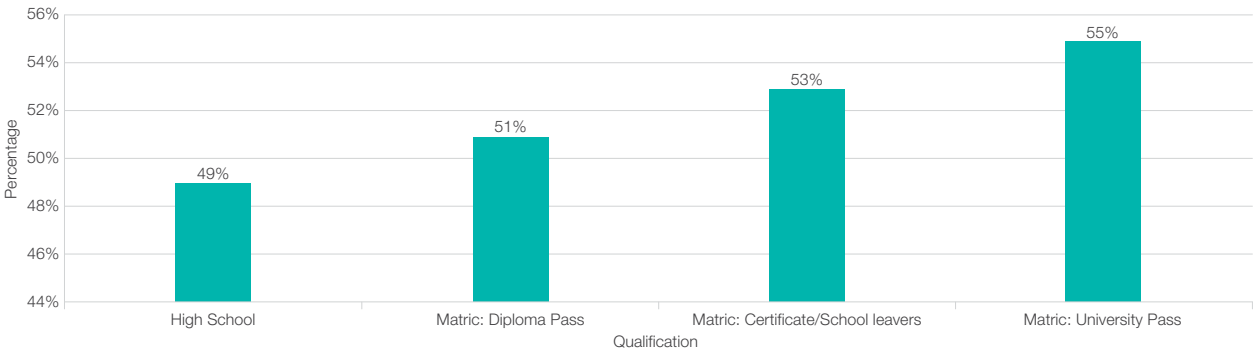
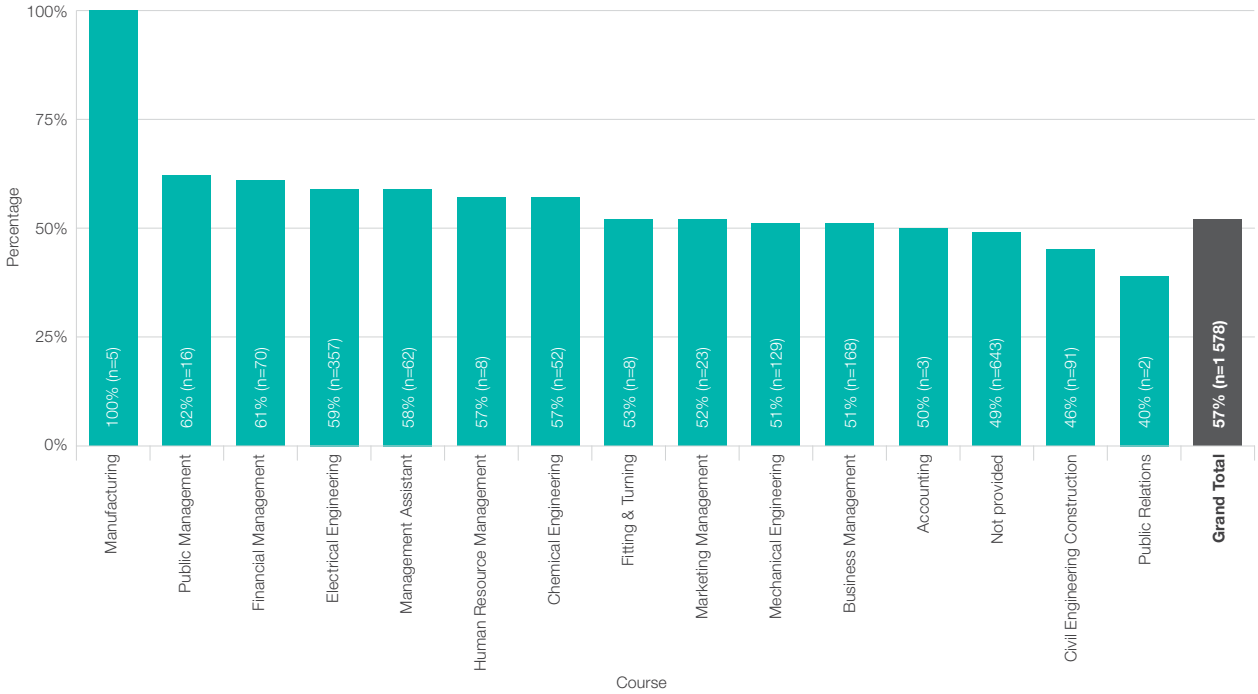


Figure 17: Employment rate – by course studied




and those 'not in employment'. However, there are varying degrees to which respondents could be considered employed or 'not in employment' The following sections examine the degrees of employment in terms of contract type, earning capacity, time to first job, relevance to field of study, and related factors.

### Employment by contract type

Figure 18: Employment by employment contract type

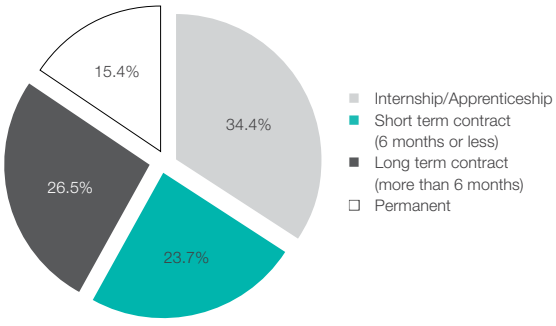



Figure 18 shows that of the 1 576 graduates (52.3%) who were employed at the time of the survey:

- 530 (34.4%) were employed in terms of either internships or apprenticeships;
- 407 (26.5%) were in permanent employment, and 364 (23.7%) were employed in terms of long-term contracts; and
- 238 (15.4%) were employed in terms of short-term contracts.

(Note that the contract type was not provided for 28 respondents.)

It is a significant finding that just over 50% of the employed cohort were in permanent employment and in long-term contracts.

A significantly lower number of young people (15–24 years) were appointed in permanent positions as compared with mature graduates. Also, a significantly higher proportion of employed youths were appointed in internships or apprenticeships three years after graduation as compared with mature students. Furthermore, a significantly higher proportion of employed graduates who were youths were appointed in terms of short-term contracts (of six months or less) as compared with mature graduates (older than 24 years).

In total, 73.1% of mature graduates who were employed were appointed in permanent positions and/or in terms of long-term contracts of more than six months.

In the same period, 35% of employed youths were appointed in internships or apprenticeships, 21.3% in permanent positions, and 25% in longer-term contracts of six months or more.

Figure 19 shows a significant percentage-point difference between employment contracts by gender (Pearson's chi2(2) = 8.648, p = .034355). For both males and females, the majority were appointed in internship or apprenticeship positions: 38.7% of females were appointed in internships or apprenticeships and 31.6% of males were appointed in such positions. The second-largest proportion, for both males and females, were appointed in terms of permanent contracts: 24.1% of employed female graduates and 28% of employed male graduates.

The findings show that a significantly higher proportion of females were appointed as interns or apprentices as compared with males, and a significantly lower proportion of employed female graduates were appointed in permanent positions as compared with male graduates (Pearson's chi2(2) = 6.8314, p = 008957).

Figure 20 shows significant percentage-point differences among the employment contracts of employed NATED graduates by race (albeit that white and Coloured employees are very small proportions of the sample).

- 84% (32) of white employed graduates were appointed in permanent posts, whereas 24% of black African employed graduates were appointed in permanent posts. The percentage-point difference is statistically significant at p < .05 (Fisher's test p = 0).
- This is similarly the case in respect of Coloured employed graduates where 43% were appointed in permanent positions as compared with 24% of black African graduates.
- The same significant percentage-point difference is to be seen in the appointment of employed graduates in internship or apprenticeship positions. Figure 20 shows that 35% of black

Figure 19: Employment by employment contract type – by gender

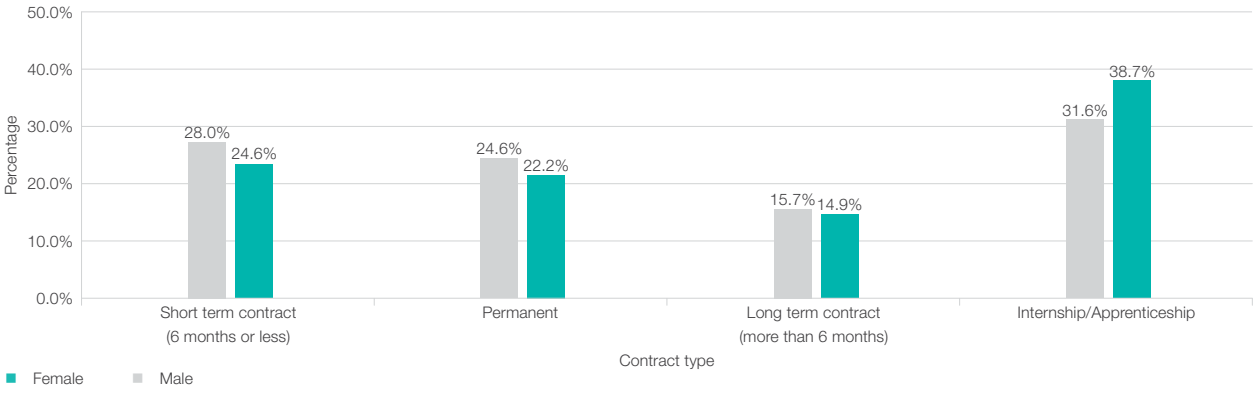
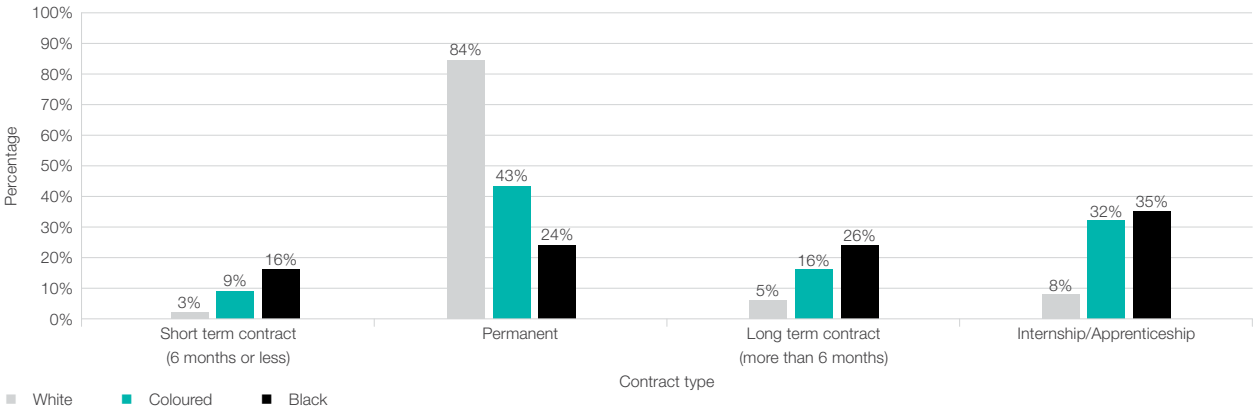



Figure 20: Employment by employment contract type – by race



African graduates were appointed in internship or apprenticeship positions as compared with 7% of white graduates, albeit that black African graduates constitute 96% of the cohort and whites only 1.5%.

Figure 21 shows the type of contract that employed NATED graduates were appointed under, by province.

Three years after graduation, the North West province had the highest proportion of graduates appointed in permanent positions. The Western Cape had 34% – the second-highest proportion of graduates appointed in permanent positions – and the Northern Cape had 29% of graduates appointed in such positions.

The Limpopo and Eastern Cape provinces had the lowest proportions of graduates appointed in permanent positions. Of the total employed NATED graduates, only 18% of such graduates were appointed three years after graduation in permanent positions. In terms of permanent and long-term contracts, the North West province had the highest percentage (62%), followed by the Northern Cape with 58%. The Free State had the lowest number of employed graduates in permanent and long-term contracts at 33%, followed by the Eastern Cape with 36%.

The Free State and the Eastern Cape had the largest proportion of employed graduates appointed in internship or apprenticeship positions, with over half of employed NATED graduates in the Free State (52%) and the Eastern Cape (52%) being employed three years after their graduation in terms of either an internship or apprenticeship. Gauteng and Mpumalanga had the smallest proportion of employed graduates appointed in internship and/or apprenticeship positions.

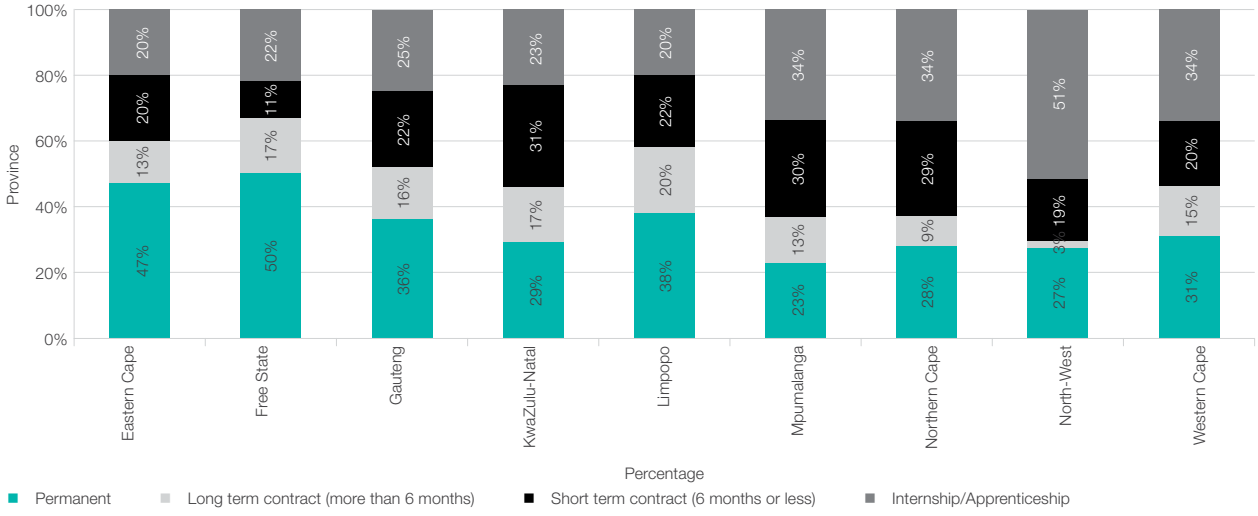
### Number of jobs held

Figure 22 shows that 64.9% (1 015) of employed NATED graduates held one job since graduating in 2013, 27.5% (431) held two jobs, and the remaining employed graduates (119) held three or four jobs since graduating. Figure 21 excludes 0.7% (16) of employed respondents who did not respond to this question.

Figure 23 shows that a significant percentage-point difference between the number of jobs held since graduation and the nature of the employment contract, exists (the Pearson's chi-square statistic is 66.7139, and the p-value is < 0.00001). The vast majority of interns and apprentices held either one job (77%) or two (22%). This is in contrast to those in permanent posts where only 57% in such posts held one job and 56% who were appointed in terms of long-term contracts (of six months or more). Figure 23 excludes 2.3% (37) of respondents who did not respond to this question.

These findings are significantly different from the experience of NC(V) graduates, where 47%

Figure 21: Employment by employment contract type – by province



held more than one internship and 44% more than one apprenticeship after graduation (SSACI 2016).

### Type of employer

Almost two-thirds of employed graduates (64.4%) were employed in a private company and 31.4% were employed by government (Figure 24). This is a significant finding, as it shows that graduates with NATED qualifications are still valued by the private sector.

Figure 25 shows that a significant difference exists between the employers of N3 and N6 graduates.

Of the N3 engineering graduates, 72.7% were employed in the private sector, while 56.2% of N6 graduates (Engineering Studies and Business Studies) were employed in the private sector and 39.3% in government. The percentage-point difference is significant at Pearson's chi2(2) = 47.2114, p = .00001. A possible reason for the private sector employing higher percentages of N3 engineering graduates was provided in a commissioned research project on artisan supply and demand UWC's Further Education and Training (FET) Institute for the Western Cape Department of Economic Development and Tourism in 2013. Interviews with engineering-firm employers showed

Figure 22: Number of jobs held since graduating

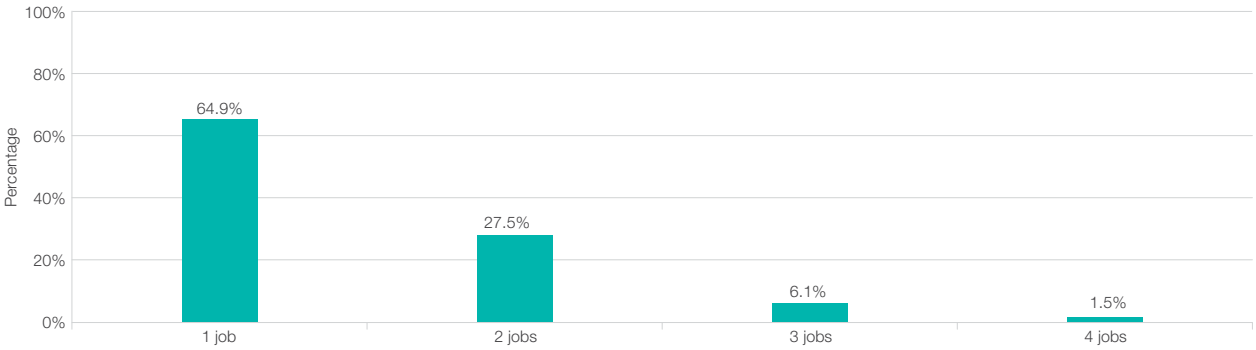



Figure 23: Number of jobs held since graduating – by type of employment contract

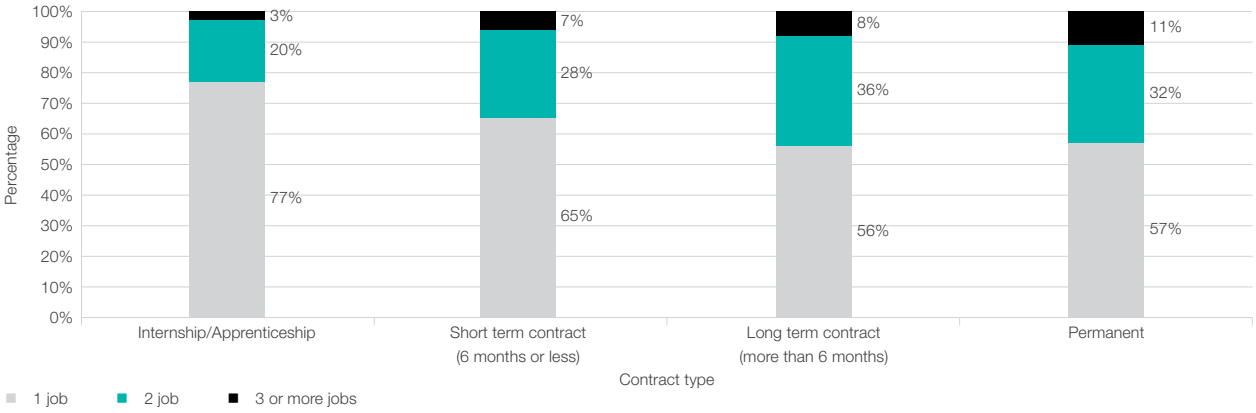



Figure 24: Employment – by type of employer

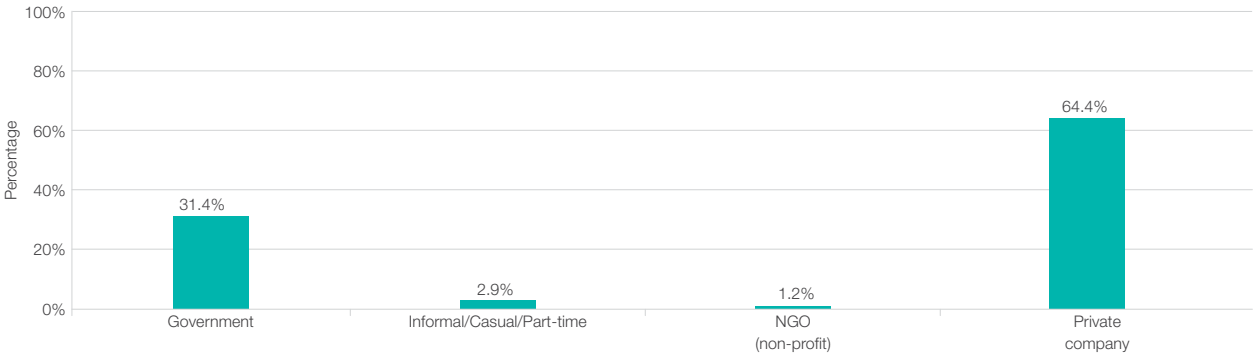
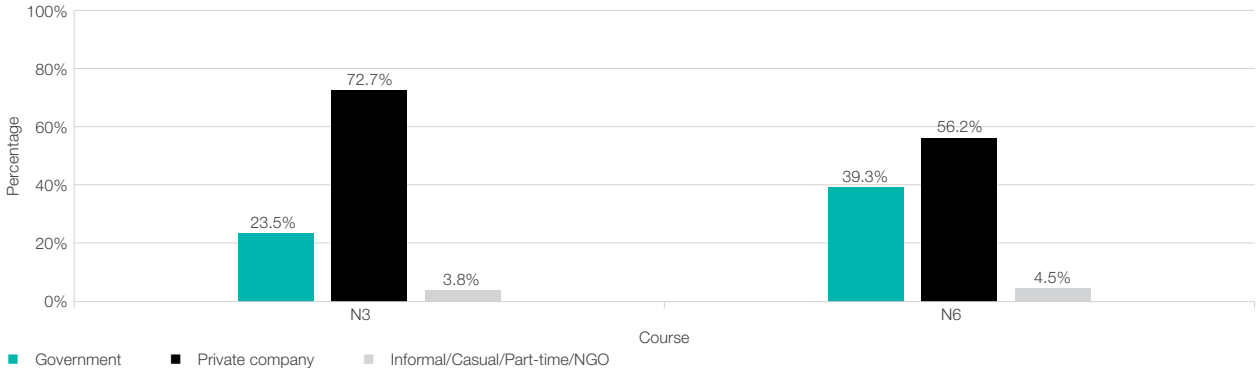


Figure 25: Type of employer – by N3 and N6




that they preferred to take on apprentices with a minimum of an N2 qualification and then provide additional specialised training within the company. Reasons for this included the need to train their own staff – which did not always lead to trade testing – in order to avoid poaching of their qualified artisans by other engineering companies.

### Earning capacity

Figure 26 shows that: a third of the graduates (33.2%) earned between R1 000 to R3 000 per month; 28.6% earned between R3 001 to R5 000 per month; 19.9% earned between R5 001 and R10 000 per month; and 14.6% earned more than R10 000 per month. Of all employed graduates in this cohort, 34.5% earned above R5 000 per month.

Note that Figures 26 to 30 exclude information not provided by 447 respondents.

A significant difference in earning capacity exists by gender. Figure 27 shows that 49% of female graduates were earning less than R3 000 per month as compared with 28% of males. Similarly, 27% of female graduates earned more than R5 000 as compared with males where 40% earned more than R5 001. Of the graduates, 15% earned over R10 000, with 65% being male and 35% being female.

Figure 26: Employment – by salary

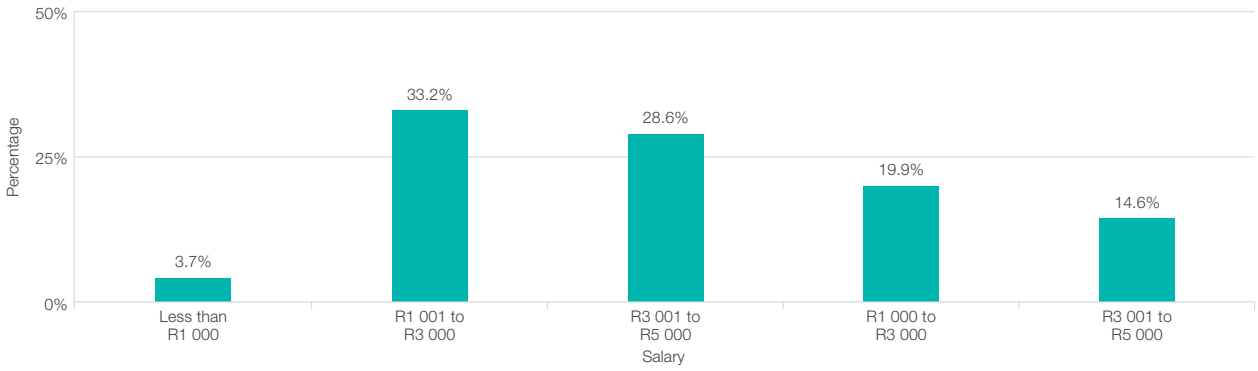



Figure 27: Income bracket – by gender

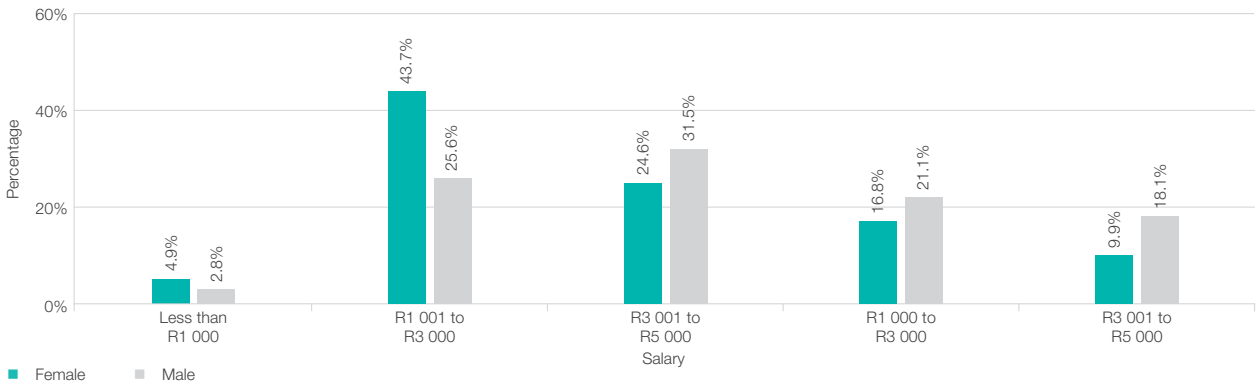


Table 9: Type of employer by programme area

| | Business Studies | Engineering Studies | Grand total |
|---|---|---|---|
| Less than R1 000 | 12 | 28 | **40** |
| | 5% | 3.3% | **3.7%** |
| | 29% | 71% | **100%** |
| R1 001 to R3 000 | 102 | 261 | **363** |
| | 44.2% | 30.2% | **33.2%** |
| | 28% | 72% | **100%** |
| R3 001 to R5 000 | 56 | 257 | **313** |
| | 24.4% | 29.8% | **28.6%** |
| | 18% | 82% | **100%** |
| R5 001 to R10 000 | 38 | 180 | **217** |
| | 16.3% | 20.8% | **19.9%** |
| | 17% | 83% | **100%** |
| More than R10 000 | 23 | 137 | **120** |
| | 10.1% | 15.9% | **14.6%** |
| | 15% | 85% | **100%** |
| Grand total | **232** | **862** | **1 094** |
| | **100%** | **100%** | **100%** |
| | **100%** | **100%** | **100%** |

Table 9 shows the percentage-point differences that existed in the earning capacity of graduates, by programme field. It reveals a significant difference in the earning capacity of Business Studies graduates as compared with Engineering Studies graduates. While almost half (49%) of Business Studies graduates earned less than R3 000 per month, 33% of Engineering Studies graduates earned less than R3 000 per month. Similarly, while a quarter (26%) of Business Studies graduates earned over R5 001 and 10% earned over R10 000; over a third (37%) of Engineering Studies graduates earned over R5 000 and 16% earned over R10 000 per month.

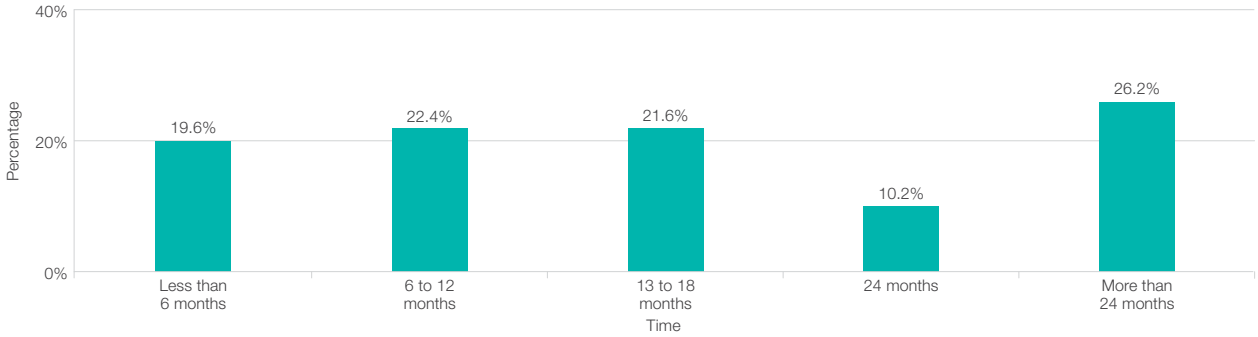
## Earnings

Table 10 shows the percentage-point differences that exist in the earning capacity of graduates by different contract types. It indicates that interns and apprentices, as well as employees appointed in terms of contracts that were short term and even longer term (longer than six months), earned significantly less than graduates appointed in permanent positions. While half of interns (50%)

Table 10: Type of employer – by salary

| | Internship/ Apprenticeship | Long term contract (more than 6 months) | Permanent | Short term contract (6 months or less) | Grand total |
|---|---|---|---|---|---|
| Less than R1 000 | 13 | 14 | 7 | 6 | **40** |
| | 3.2% | 5.8% | 2.0% | 4.5% | **3.7%** |
| | 33% | 36% | 14% | 17% | **100%** |
| R1 001 to R3 000 | 190 | 92 | 57 | 24 | **363** |
| | 47.0% | 37.3% | 8.4% | 36.8% | **33.2%** |
| | 52% | 25% | 7% | 16% | **100%** |
| R3 001 to R5 000 | 127 | 81 | 54 | 51 | **313** |
| | 31.6% | 32.6% | 17.9% | 34.6% | **28.7%** |
| | 41% | 26% | 16% | 17% | **100%** |
| R5 001 to R10 000 | 65 | 47 | 23 | 81 | **216** |
| | 16.0% | 19.1% | 28.4% | 14.6% | **19.7%** |
| | 30% | 22% | 38% | 11% | **100%** |
| More than R10 000 | 9 | 13 | 15 | 124 | **160** |
| | 2.2% | 5.2% | 43.4% | 9.6% | **14.7%** |
| | 5% | 8% | 77% | 9% | **100%** |
| Grand total | **404** | **247** | **285** | **156** | **1 092** |
| | **100%** | **100%** | **100%** | **100%** | **100%** |
| | **100%** | **100%** | **100%** | **100%** | **100%** |

Figure 28: Time to first job

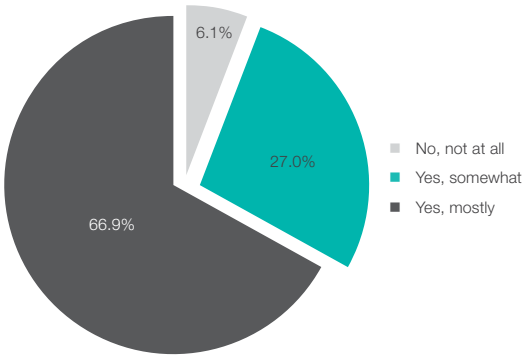



earned less than R3 000, only 10% of permanently employed graduates earned less than R3 000. Similarly, while 18% of interns/apprentices earned over R5 000, 71% of permanently appointed graduates earned over R5 000, with 43% earning over R10 000. Appointees on long-term contracts (six months or more) also earned significantly less than permanently appointed employees, with 43% earning less than R3 000 per month compared with 10% of permanent staff.

### Time taken to obtain employment since exiting college

Over two-thirds (67%) of graduates were employed in the first year after graduation, with 38% being employed within the first six months after graduation and 26% within six to 12 months after graduation. Of great concern is that it took 58% of employed graduates more than six months to access their first job, and, for 32%, it took more than one year to access their first job.

Figure 29: Utilising the skills learnt in the N-level qualification



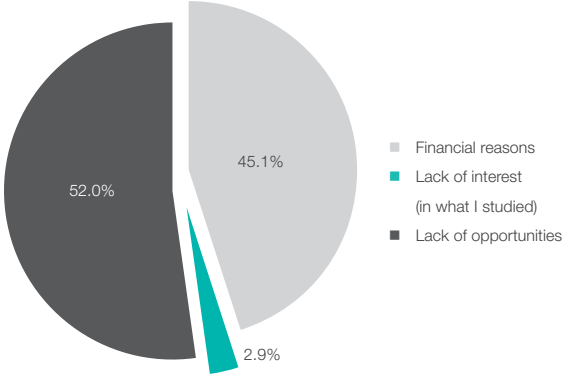

With regard to interns/apprentices, 65% were appointed within a year of graduation. However, of these, 26% took between six and 12 months to source their internship/apprenticeship. Furthermore, 32% of interns and apprentices took longer than a year to source their internship/ apprenticeship.

### Utilisation of skills learnt in the NATED qualification

The majority of employed respondents (67%) indicated that, in their job, they were mostly using the skills that they learnt during their NATED qualification, with 27% indicating that they were only to some extent (somewhat) using the skills that they learnt in such qualification, and a small percentage of employed graduates (6.1%) indicating that they were not using any of the skills at all that they learnt during their NATED programme.

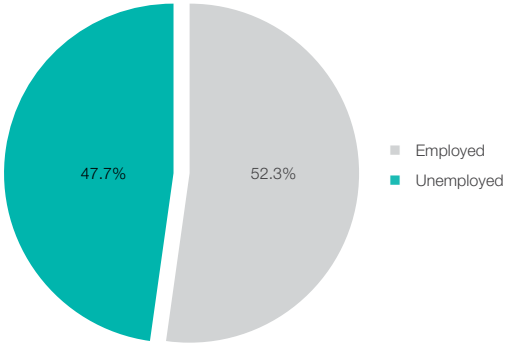
Figure 30 provides the reasons why those who were not using their skills decided to take the particular job. Of these, 45% indicated that, for financial reasons, they took up their current employment despite not being able to use the skills that they had learnt during the NATED programme; 52% did so because of a lack of opportunities; and 3% did so because they were no longer interested in pursuing a career in the area in which they had studied.

Figure 30: Reasons for not utilising the skills learnt in the N qualification

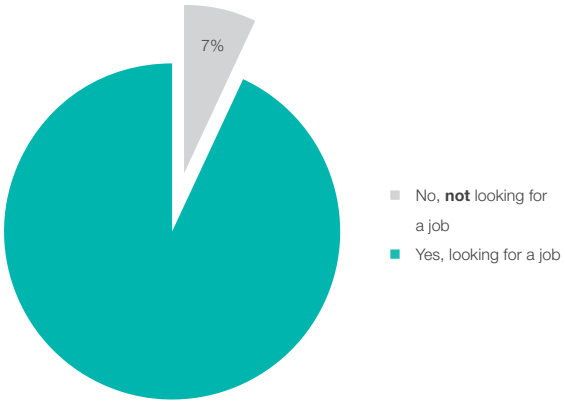


## Graduate destinations: The unemployed/those not in employment

### Figure 31: Percentage of unemployed vs employed NATED graduates




### Figure 32: Jobseekers




Of the respondents, 47.7% (1 437) indicated that they were unemployed at the time of the survey (Figure 31). Of these, 93% (1 298) indicated that they were looking for a job and 7% (77) that they were *not* looking for a job (Figure 32). These totals exclude 61 unemployed respondents who did not respond to this question.

Table 11 disaggregates the employed and unemployed graduates into those also studying or not. This shows that, of the 48% unemployed, 10% were studying. Therefore, 38% could be described as NEET (not in employment, education or training).

Figure 33 shows that 46% of the unemployed graduates had been unemployed for over two years, and 59% for two years or more. In addition, 75% had been unemployed for 12 months or longer out of the 30 months. This means that, for the majority of the graduates who were unemployed (59%), they had been unemployed for most of the 30 months since their graduation in 2013.

Figure 34 shows that the majority of unemployed graduates who were looking for work believed that the reason that they had not found work was because of a 'lack of opportunities'. Moreover, 21% indicated that they believed that this was because they '[did] not have the right skills', and 1% indicated that it was because of a 'lack of interest in what they had studied'. This reinforces findings in the literature on unemployment that qualifications cannot address the structural issues of unemployment.

### Table 11: Cross tabulation of employment and current studies

| Employment Status | Not studying | Studying | Total |
|---|---|---|---|
| Employed | 45% | 7% | 52% |
| Not in employment | 38% | 10% | 48% |
| **Total** | **83%** | **17%** | **100%** |

### Figure 33: Period of unemployment

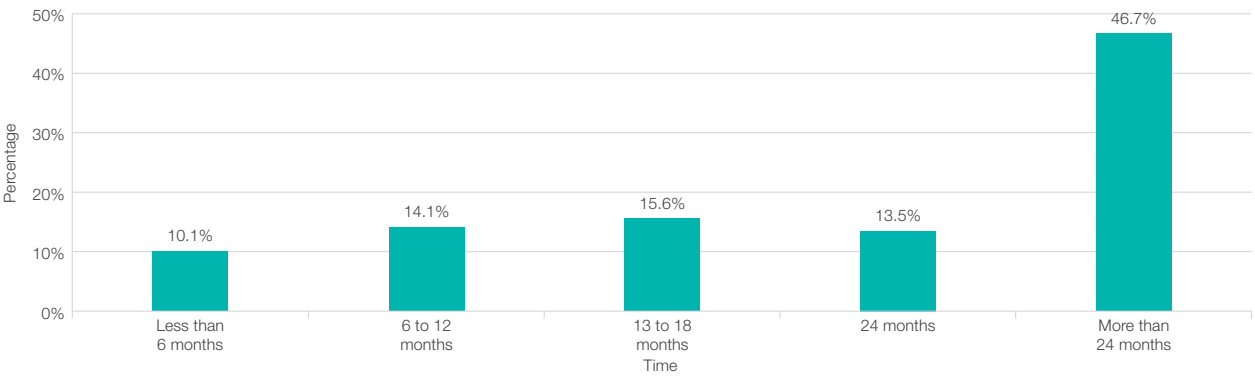


Figure 34: Reason(s) given for being unemployed

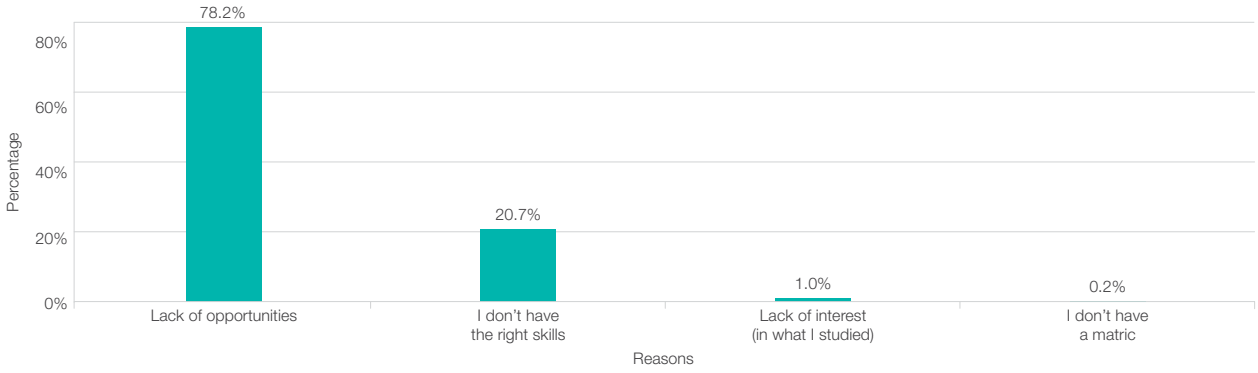



Figure 35: Job search/support strategies

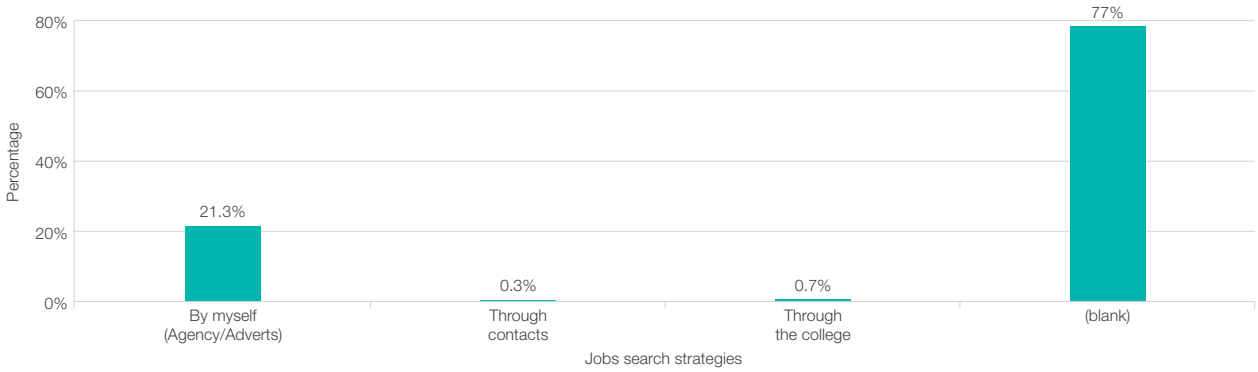



Figure 35 provides the job search strategies that unemployed graduates who were looking for work engaged in. A large number of respondents (77.7%) chose not to respond to this question. Those who did respond, however, indicated that they were looking for work by themselves by examining and responding to adverts or going through an agency (21.3%). The remaining 1% indicated that they were either using contacts (0.3%) or the college (0.7%).

## College support strategies toward employment

Figure 36: Support received from college in terms of employment

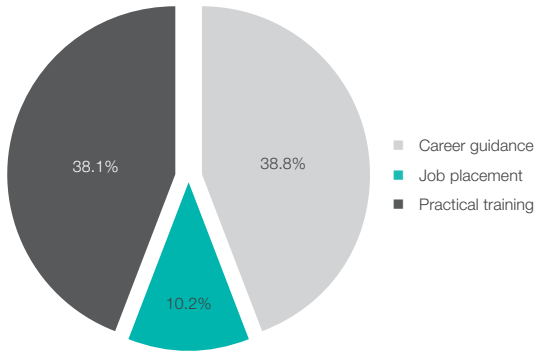



Figure 36 shows that 42% of the 2013 cohort indicated that the college had supported them in gaining employment by providing career guidance; 41% said that the college had done so by providing practical training; and only 17% indicated that the college had provided support through job placement.

## Studying at the time of the survey

Figure 37: Studying at the time of the survey

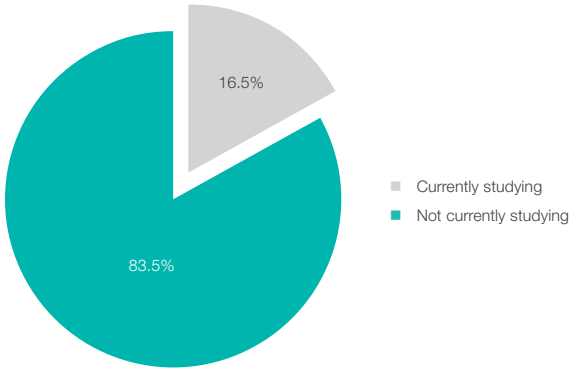



Figure 37 shows that 17% of the respondents indicated that they were studying at the time of the survey. Of those studying, 7% were employed, and 10% were not in employment while studying.

## Figure 38: Programme being undertaken

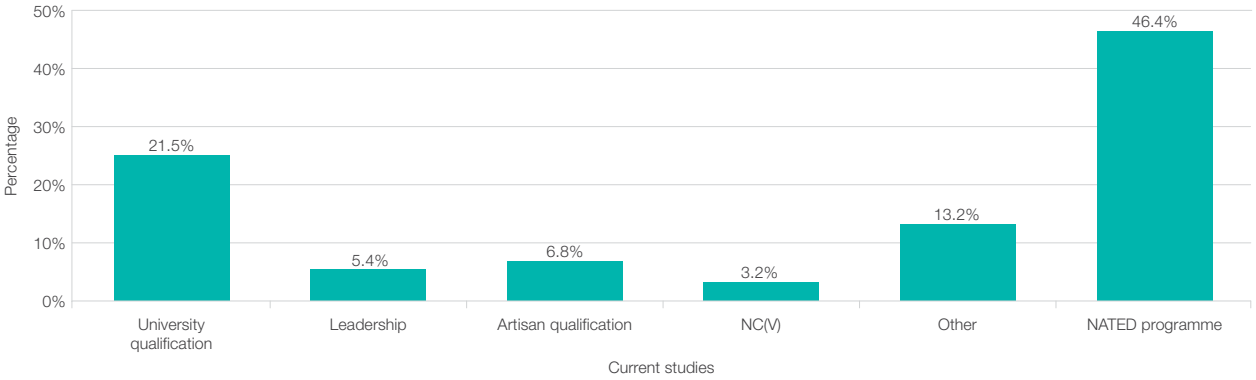



Figure 38 shows the programme areas in which 17% of the total number of graduates were undertaking studies at the time of the survey. An analysis of their previous qualifications shows learners moving through complex pathways into their NATED programme, and then from their NATED programme into further study. Of the graduates who were studying at the time of the survey, 15 were undertaking an NC(V) programme and 46 were undertaking an N3, even though they already had a qualification at this level. Moreover, 45 were undertaking an N4, N5 or N6 programme, even though they already had an N6 qualification.

## Figure 39: Reason for studying further

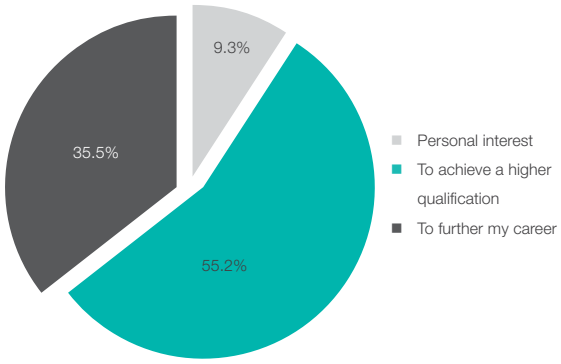



Figure 39 shows that the main reason that respondents gave for studying further was to achieve a higher qualification (55.2%) or to further their career (35.5%).

### Migration

Figure 40 shows that 57% of the graduates stayed in their home town to study and continued to live in their home town. Of the remainder, 23% migrated to another province to study and then remained in that province after graduation; 8.8% studied in their home town but then moved after graduation to another province; 7.6% migrated to another province to study but then returned home after they had graduated; and 3% migrated to another province to study and then to a third province eithe to work or study further.

The main reason stated for migrating, as depicted in Figure 41, was the hope that there would be better job opportunities (72.6%), but a small number of graduates wanted to move home.

## Figure 40: Migratory patterns

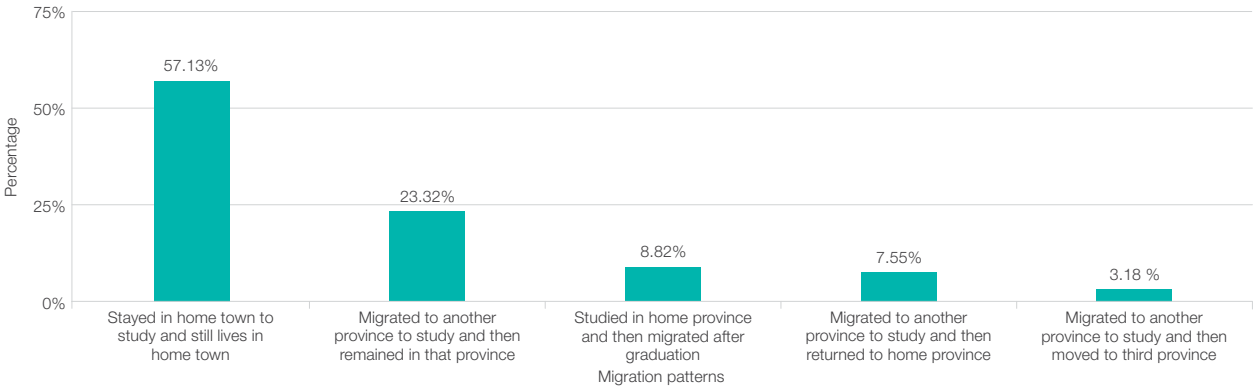
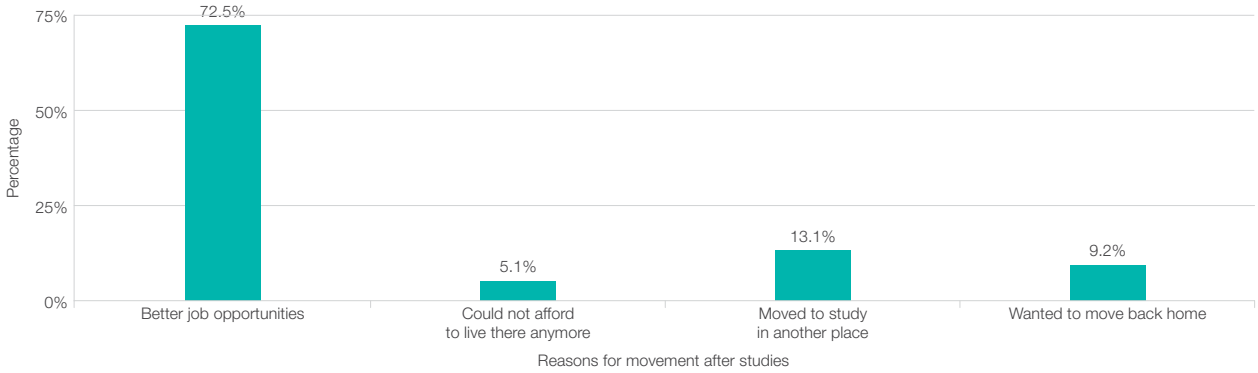


Figure 41: Reasons for movement after studying




## Issues arising from the findings that require further research

A number of issues that should be cause for concern arise from the findings in this report and may inspire further research or interventions. The following are mentioned as possible starting points:

- The gender imbalances that are still starkly evident in traditionally male-dominated college programmes such as Engineering Studies, as well as the gender differentials in earnings.
- The fact that the majority of entrants to TVET colleges had achieved a matric, yet pass and throughput rates in Engineering Studies and Business Studies (see the DHET annual reports) are still relatively poor (An analysis of those who enter with matric into college programmes could reveal whether completing matric is a comparative advantage for college learners, and whether subjects taken at school prepare them adequately for college programmes).
- The low numbers of self-employed graduates could suggest that self-employment is not treated as a serious option for TVET college learners while they are still in college and where preparation for such an option could be provided.
- The ability of TVET colleges to provide learners with competitive qualifications and work experience that will provide opportunities for employment in the face of depressed labour market conditions. (Further research is also needed on the interrelationship between TVET colleges and the formal and informal economies.)
- An analysis of business, industry and public state departments that offer employment to TVET college graduates to ascertain which sectors of the economy are being served by TVET colleges.
- The fact that public provision within TVET colleges is relatively homogenous despite differing local and regional socio-economic conditions. (Further research could identify ways in which the TVET college sector could diversify over time through differentiation and articulation approaches within a responsive South African post-school education and training sector.)

# 5. LEARNING FROM THE METHODOLOGY

At the time that this study was conducted in 2013, TVET college management information systems and national data systems were in the process of receiving attention. We note below the challenges experienced in attempting to gather accurate student data at the time, but are aware that, in the interim, strides have been made in addressing some of the difficulties that were encountered.

## Problems with the data sets

- During the data-cleaning process we found duplicate records, inaccuracies, incorrect entries, missing fields and missing data.
- The data sets were fragmented, with no linking ID across the different sets (Skills Accord data and college data).
- The arrangement of data was idiosyncratic, with no standardised drop-down lists for instance and no standardised layout or format used for the colleges' data (e.g. Word documents, spreadsheets, PDFs).
- The colleges' data was often incomplete, with no ID, no year of completion, no programme name (and only 21 out of 50 colleges submitted data).
- Ethical-clearance processes were lengthy. Not only had they to be undertaken at the university, but permissions also had to be obtained from the DHET.
- Confidentiality was a concern, as the ID number is a key identifier.
- Obtaining informed consent is costly if not done at the point of student entry.
- The accuracy of results requires weighting (against the official graduate population).
- Missing or inconsistent data can impact results, as valid inferences need to be drawn in order to build reliability.

## What data sets are needed for robust research?

Credible national data must be available to enable institutional averages to be calculated and compared. Data on *individual* technical and vocational education and training (TVET) colleges was difficult to find, yet is crucial for comparative performance analyses. Headcount enrolments in the TVET sector across various qualification types are potentially misleading, since programme durations range from trimester, to semester, to year-long programmes. Reporting on full-time equivalents (FTEs) as well as individual headcounts would therefore provide more accurate data on enrolments and throughput.

## Recommendations for future quantitative studies

- A functional, unitary record database would allow more meaningful and accurate disaggregated information.
- Broad agreement on the parameters of a coherent national database would ensure efficient utilisation for monitoring, evaluation, planning, research and policy development.
- Properly defined and commonly accepted data definitions and descriptions should be used.
- A uniform system of data reporting and uploading from individual colleges needs to be put in place at colleges.
- A national Education Management Information System (EMIS) should enable the range of reports necessary for planning and forecasting.
- Finally, a monitoring and evaluation plan – with appropriate indicators against which to report performance and progress – should be established.

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LABOUR MARKET
INTELLIGENCE PARTNERSHIP

## Survey Analysis of the Pathways of Public TVET College Learners through NATED Programmes

One of the main purposes of the TVET college system is to prepare workers for the labour market. Very little, however, is known about students' progression through college into employment. Consequently, there is little consolidated data to inform their absorption into the labour market.

This report conveys the results of a telephonic survey of some 3 000 TVET Business Studies and Engineering Studies graduates from the N3 and N6 programmes, and shares the indicative findings in respect of these graduates.

At the time of the survey, thirty months after graduation, just over half of the total 2013 graduates (52.3%) were employed. Of those employed, 34.4% were in internships or apprenticeships, 50.2% were in permanent employment or long-term contracts, and 15.4% were in short-term contracts. Not all graduates who are not in employment can be considered to be unemployed, though. At the time of the survey, 47.7% of the respondents indicated that they were unemployed, but of this grouping 3% said that they were self-employed and 10% said that they were studying.

The data is presented here in order to construct an initial data set of NATED (National Accredited Technical Education Diploma) graduates as a basis for developing a destination study agenda in line with the intentions of the LMIP.

### About the LMIP

The Labour Market Intelligence Partnership (LMIP) is a collaboration between the Department of Higher Education and Training, and a Human Sciences Research Council-led national research consortium. It aims to provide research to support the development of a credible institutional mechanism for skills planning in South Africa. For further information and resources on skills planning and the South African post-school sector and labour market, visit http://www.lmip.org.za.