Education Series Volume V

Higher education and skills in south Africa, 2017

Report: 92-01-05

THE SOUTH AFRICA I KNOW, THE HOME I UNDERSTAND

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Education Series Volume V

Higher Education and Skills in South Africa, 2017

Statistics South Africa

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Statistician-General

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Abbreviations and acronyms

ABET	Adult Basic Education and Training
AET	Adult Education and Training
CESM	Classification of Educational Subject Matter
CET	Community Education and Training
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
FET	Further Education and Training
GDP	Gross Domestic Product
GHS	General Household Survey
HE	Higher Education
HEI	Higher Education Institution
HEMIS	Higher Education Management Information System
LOLT	Language of Learning and Teaching
MDGs	Millennium Development Goals
MTSF	Medium-Term Strategic Framework
NADSC	National Artisan Development Support Centre
NAMB	National Artisan Moderation Body
NATED	National Accredited Technical Education Diploma
NC(V)	National Certificate (Vocational)
NDP	National Development Plan
NQF	National Qualifications Framework
NSC	National Senior Certificate
NSFAS	National Student Financial Aid Scheme
OECD	Organisation for Economic Cooperation and Development
PSET	Post - School Education and Training
QLFS	Quarterly Labour Force Survey
SADC	Southern African Development Community
SAICA	South African Institute of Chartered Accountants
SAQA	South African Qualifications Authority
SA-SAMS	South African School Administration and Management System
SDG	Sustainable Development Goals
SETA	Sector Education and Training Authority
STATS SA	Statistics South Africa
STEM	Science, Technology, Engineering and Mathematics
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISA	University of South Africa

WC	Western Cape
EC	Eastern Cape
NC	Northern Cape
FS	Free State
KZN	KwaZulu-Natal
NW	North West
GP	Gauteng
MP	Mpumalanga
LP	Limpopo
RSA	Republic of South Africa

Foreword

South Africa has a constitutional commitment to equality of educational opportunities for all citizens. The National Development Plan (NDP) further articulates the national goals of the country by stating that government should provide support for the higher education system by building a strong and coherent set of institutions for delivering quality education, by expanding the production of highly skilled professionals and enhancing the innovative capacity of the nation; and by creating an educational and science system that serves the needs of society. The NDP recognises that education is the engine of social mobility and will increase social justice and democracy. The higher education system is therefore expected to play a significant role in producing the skills and knowledge that the country needs to drive its economic and social development.

Post-secondary education and skills training in South Africa is mostly a service provided by the public sector and is a major concern for all stakeholders involved. This report presents data and analysis to contribute towards a better understanding of the higher education system in South Africa. Diverse data sources were used to make the report more comprehensive and better inform policy debates. Most of the data sources used were data received from the Department of Higher Education and Training. These were supplemented with data sources from the Department of Basic Education, as well as the General Household Survey 2017.

South Africa has experienced a moderate population growth when compared to other developing countries. The country is characterised by a young population with 32,3 million individuals being younger than 30 years in 2018 (mid-year population estimates, Statistics South Africa 2018). At the time, there were on average 97 children younger than 20 for 100 working-age adults in the country. The high youth unemployment rate is exacerbated by their lack of preparation for the labour market. During the past eight years, since the 2011/12 financial year, the total education budget increased by close to 88%, while the actual cost of higher education doubled from R38 billion in 2011/12 to R79,7 billion in 2017/18. The total post-school education cost was estimated to be two percent of the GDP during 2017/18. Between 2010 and 2017, a total of R70,8 billion in National Student Financial Aid Scheme (NSFAS) funding was granted to more than 3 million students. In 2017, 85,7% of the money allocated to NSFAS was granted to university students while the rest (14,3%) was granted to students at TVET colleges. This funding was insufficient and many deserving potential students, without other financial means, continue to be excluded from the system or pay for tuition fees under great duress for them and their families.

One of the biggest impediments of higher educational attainment in South Africa, is the low levels of progression of learners within the further education and training (FET) phase. This results in a lower percentage of youth achieving a national senior certificate (NSC) pass. In 2017, the progression rates of Grade 10 learners to Grade 11 was 80,8%, whereas 73,3% of Grade 11 learners progressed to Grade 12. This does not take learners who left the school system before reaching those grades into account. The breakdown by gender showed lower progression rates for males compared to females. In 2017, 80,8% of enrolled learners wrote the NSC exams. During the same period, the NSC pass rate among male candidates was 77,2% and 73,4% among females.

The percentage of first-time entering students as a ratio of total bachelor and diploma passes declined over the years, with less than half of those who achieved bachelor or diploma passes being enrolled as first-

time students in 2016 (46,5%). First-time enrolments at public universities increased by 82,6% from 2000 to 2011, but declined from then onwards. The absolute numbers of continuing students increased by 59,5% between 2000 and 2016.

According to the General Household Survey 2017 data, only 33,8% of youth aged 18–24 were attending educational institutions, amongst which 22,2% were attending school while 11,6% were attending post-school educational institutions. Among those who were not attending educational institutions, more than half (51%) claimed that they did not have the financial means to pay for their tuition fees. Enrolment at higher education institutions, by fields of study, showed that in 2000 and 2016 the highest total enrolment numbers were in the fields of business, economics and management followed by education studies. Substantial increases in

enrolment were observed from 2000 to 2016 among black African (106,9%), followed by coloureds (103,4%), and Indians/Asians (27,8%). During the same period there was a decrease of 6,2% in white enrolments. In 2016, more than three quarters of enrolments amongst black Africans, coloureds, and Indians/Asians were for bachelor degrees (including all NQF levels 7 and equivalent). In addition, 63,0% of enrolments in bachelor degrees (including all NQF levels 7 and equivalent) were females. Enrolments at private higher education institutions increased from 8,4% in 2008 to 16,4% in 2016.

The number of graduates from public universities more than doubled from 92 874 in 2000 to 203 076 in 2016. In 2016, the number of graduates from TVET and private colleges stood at 135 492. The time taken by students to complete their undergraduate qualifications improved over time. However, among the cohort starting their studies in 2000, 19% were able to graduate within the required period, whilst 29% of the 2011 entrants could do the same. Undergraduate success rates among contact mode students also rose from 77,1% in 2009 to 83,0% in 2016. During the same period, success rates among distance education students rose from 62,9% to 67,6%. According to the GHS, close to 47% of youth aged 20–24 years who held bachelor degrees or qualifications equivalent to NQF level 7 belonged to the wealthiest household income quintile. In comparison, only 7,4% of youth who held qualifications equivalent to NQF level 7 came from the poorest household income quintile. Furthermore, close to 36% of youth holding postgraduate degrees or qualifications equivalent to NQF levels 8–10 belonged to the wealthiest household income quintile.

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Chapter 1: The post-secondary education and training system

1.1 Introduction

Most developing countries are investing heavily in education in order to meet their development agenda and fight poverty. This endeavour requires a vast mobilisation of human and financial resources in order to broaden the opportunities for learning for all and ensure that the learning needs of all young people and adults are met through equitable access to continuous education. Due to population dynamics that are at play, as in most developing countries, South Africa struggles to meet the growing educational needs of its youth.

Population growth in South African is moderate compared to other developing countries. However it has still grown by close to 20 million people in 25 years from an estimated 37,8 million in 1993 to 57,7 million in 2018 (Stats SA, 2018a)[1]. The country is characterised by a young population with more than half of the population (32,3 million) below age 30 (Stats SA, 2018a). A comparison of the number of children with the economically active population that is expected to drive economic growth, shows that there are on average 97 children younger than 20 for 100 working-age adults (youth dependency ratio) in South Africa[2]. In 2015, the Organisation for Economic Cooperation and Development (OECD) average youth dependency ratio was 39 people aged 0–20 for every 100 people aged 20–64 (OECD Family Database)[3]. In South Africa, the youth also bear the brunt of high unemployment levels which is exacerbated by their lack of preparation for the labour market. The percentage of young persons aged 15–24 years who were not in employment, education or training was estimated at 31,1% in 2018. During the same period, among unemployed persons, only 1,7% were graduates, while 6,3% had other tertiary as their highest level of education. More than half (57,1%) had an education level below matric, followed by those with a matric at 34,2% (QLFS Q4: 2018, Stats SA, 2019). Most individuals do not consider secondary school completion as the ceiling in educational achievement as was found in the past (Report 92-01-03 Stats SA, 2017). This is reflected in the growing demand for educational financing for the youth. The Government has not been able to meet this growing need, especially at post-secondary level due to financial and infrastructural constraints. This has exacerbated inequality in access to post-secondary schooling and contributed towards an increase in the absolute number of poorly educated youth. Other consequences include the proliferation of private post-secondary institutions with questionable standards as well as the #FeesMustFall movements in South Africa in response to the rising cost of higher education. At a strategic level, government responded to these challenges by changing the governance and funding of the system.

South Africa currently has three separate ministries that deal with the provision of education services: the ministry for social development which is responsible for early childhood education and care; the Ministry for Basic Education which is responsible for primary and secondary schools; and the Ministry for Higher Education and Training which is responsible for adult education and skills training, colleges, and universities. The Department of Higher Education and Training (DHET) is a national department which is responsible for setting the goals and framework for the higher education system as well as the funding of the system. Post-school education and training as defined by DHET and used within the context of this report, refers to education and training that occurs after the end of compulsory schooling (Grade 9).

[1] Estimated based on mid-year population estimates, 2018

[2] Estimated on the number of children and young people (aged 0–20) per 100 people of working age (aged 20–64). The child dependency ratio tells us the proportion of the child population who are 'dependent' on those of working-age, its calculation groups those aged under 20 as the 'dependants' and classifies those aged 20–64 years as the working-age population.

[2] www.oecd.org/els/family/database.htm OECD-Social Policy Division-Directorate of Employment, Labour and social Affairs.

1.2 The governance of the higher education system

With the amendment[4] of the Higher Education Act (Act No 101 of 1997) in 2010, the government of South Africa underlined the importance of refocusing public policy in the higher education system. The amendment concerned certain definitions and the splitting of the sector into two separate education departments and ministers respectively dealing with basic and higher education and training. The policy change facilitated the link between budgeting and planned, measurable results, with special attention to outcomes. The Act also made provision for the establishment of the Council on Higher Education, which advises the Minister of Higher Education and Training on issues related to the structure[5] of the system, the quality of higher education, funding and student financial aid as well as language policies. The Act also makes provision for the registration of private higher educational institutions[6] and a Registrar who is the only entity that may register such institutions. Requirements that need to be fulfilled before the registration of educational institutions include: financial sustainability, educational standards equal to those of public higher education institutions and compliance with the requirements of the South African Qualifications Authority (SAQA). SAQA was established through section 3 of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995) to oversee the development and implementation of the National Qualifications Framework (NQF) as defined by the National Qualifications Framework Act, 2008 (Act No. 67 of 2008). The NQF is a framework for the standardisation, classification, registration, and publication of national qualifications, learning achievements, training and outcomes. The NQF has ten levels of qualifications that provide broad descriptions of the learning achievements or outcomes that are appropriate to a qualification at that level.

Figure 1.1: National Qualifications Framework levels and sub- frameworks

Further education and training					Skills development		Post-secondary					
School/Colleges					Colleges		University					
Grade 9	Grade 10	Grade 11	Grade 12	NSC/NCV	18 months	3-5 years	Year 1	Year 2	Year 3	+1 year	+3-5 years	+1-2 years
NCV1	NCV2	NCV3	NCV4		Apprenticeship	Artisans	Higher Certificate	Diploma	Degree	Honours	Masters	Phd
	NATED 1	NATED 2	NATED 3		N4-N6	Trade test	N4-N6	Diploma				
NQF 1	NQF 2	NQF 3	NQF 4		NQF 5	NQF 6	NQF 5	NQF 6	NQF 7	NQF 8	NQF 9	NQF 10

Source: Adapted by Stats SA from SAQA

The NQF comprises three qualifications sub-frameworks that consist of further education and training, higher education, and trades and occupations sub-frameworks. Each sub-frameworks is regulated by different acts[7].

The higher education sector was designed to create a combination of institutions and programmes with multiple entry and exit options needed for a growing economy. The greatest challenge is the transition to post-school learning for those who did not make it into the higher education system; therefore the Continuing Education and Training Act[8], 2006 (Act No 16 of 2006) was enacted to create such opportunities for learning and the

[4] Higher Education Laws Amendment Act, 2010 (Act No 26 of 2010)

[5] Every public higher education institution may appoint a chancellor; must establish a council; a senate; a principal; a vice-principal; a students' representative council; and an institutional forum.

[6] Upon registration, the private higher education institution receives a certificate of registration which must be displayed on its premises.

[7] General and Further Education and Training Quality Assurance Act, 2001 (Act No. 58 of 2001) provides for the development of a sub-framework for the general and further education bands of the national qualification sub-framework; the Higher Education Qualification Framework: Higher Education Act, 1997 (Act No. 101 of 1997) and the Skills Development Act, 1998 (Act No. 97 of 1998) provide for the sub-frameworks for occupational and trade qualifications as well as for trade and occupational learning programmes that lead to qualifications or part-qualifications. These regulations ensure that South African qualifications meet appropriate criteria, determined by the Minister of Higher Education and Training, and are internationally comparable; and of acceptable quality. Furthermore, three quality councils were established to implement the sub-frameworks: UMALUSI (Council for Quality Assurance in General and Further Education and Training), the Council for Higher Education, and the Council for Trades and Occupations.

[8] Renamed from the Further Education and Training Colleges Act, 2006. (Act No. 16 of 2006). The Act was renamed to emphasise on the post-school adult education that takes place in colleges and excludes those that take place at schools.

development of intermediate to high level skills. Adult basic education and trainings take place in community education and training (CET) colleges also known as community colleges as well as technical vocational education and training (TVET) colleges. CET and TVET colleges were established in accordance with the Continuing Education and Training Act, 2006 (Act No 16 of 2006). These institutions are responsible for all training and learning, leading to qualifications or part-qualifications at levels 1–4 of the NQF. CET colleges provide both basic and further education and training qualifications or part-qualifications such as the National Senior Certificate for adults, while TVET colleges offer trade and occupational qualifications or part-qualifications. The Continuing Education and Training Act, 2006 also makes provision for the registration of private colleges. In 2017, government saw the need for a national strategic articulation policy in order to align the various qualifications in the three NQF sub-frameworks to create pathways between the qualifications and enable qualification and learning progression9.The Skills Development Act, 1998 was set to provide an institutional framework to develop and implement national, sector and workplace strategies on the improvement of the skills of the South African workforce. The national skills development fund was established in 1999 in terms of this Act. It provides funding for national skills development in support of the development of a capable workforce for an inclusive growth path.

Since its foundation in 2009, the DHET has been responsible for the formulation of national higher education and training policies and for monitoring the implementation of these policies. The higher education system consists of 26 universities[10], which are categorised as general academic universities, comprehensive universities and universities of technology. In 2016/17, the private higher education sector consisted of 125 registered private higher education institutions (PHEIs), 50 TVET colleges, 2 795 CET colleges or community learning centres. Public higher education institutions are autonomous with the state playing a limited role in their day-to-day operations.

1.3 Policies and national frameworks related to higher education and training

Government policies on education places emphasis on the basic education phase as the foundation for lifelong learning, but also reiterate the need to expand the duration of education for better outcomes in knowledge and life skills. This is because many areas of social and economic developments require skills and understanding only developed in higher education. South Africa has achieved universal primary school education and high levels of secondary completion rates due to its concerted effort in retaining children throughout the basic schooling system. In contrast to this, the post-school education system in South Africa is characterised by low participation, and high attrition rates and suffers from poor alignment of the curriculum to the needs of the economy. New policies focus on providing a second chance in education for those who dropped out from the schooling system without any qualifications and those seeking adult education. These policies also motivate for internship and work-based learning as work experience improves productivity.

The national development plan

The vision for education in the national development plan (NDP) re-iterates the need for new education opportunities for learners who scored low on the National Senior Certificate (NSC) exam as well as creating opportunities for continued learning for all adults who seek technical, vocational or occupational qualifications. Consequently the NDP gives directions on the expansion of the higher education sector by creating new educational institutions and revitalising existing ones, producing highly skilled professionals that can improve the research output and innovation capacity of the country, and strengthen professional bodies. The plan also aims to strengthen the relationship between training institutions and the work place. The following are selected targets extracted from the NDP that relate to the post-school phase and that need to be met by 2030:

- 450 000 learners eligible for bachelor programme with maths and science;
- Increase to 1,25 million enrolments in further education and training colleges;

[9] Articulation policy for the post-school education and training system of South Africa, Department of Higher Education and Training, (Gazette No 40545),13 January 2017

[10] Known categories: 11 general academic universities, 9 comprehensive universities and 6 universities of technology.

- Increase to 1 million enrolments in CET per year;
- Increase to 75% the graduation rate from further education and training colleges;
- Enrolment in higher education sector to increase to more than 30% (1 620 000)
- Increase graduation rates at university to more than 25% (or 425 000 graduates);
- Produce 30 000 artisans per year; and
- Produce more than 100 doctoral graduates per million per year.

White paper on higher education

The white paper for post-school education and training, which was set out to transform the post-school system was approved by Cabinet on 20 November 2013. The white paper sets out guidelines to improve the capacity of the post-school education and training system to meet the country's needs, as well as to integrate the various components of the post-school system. Key objectives include: strengthening the management and governance of colleges from their previous positions, developing the quality of teaching and learning, increasing training responsiveness to local labour markets, improving student support services, and developing the infrastructure of the colleges. The white paper also calls for the review and rationalisation of vocational programmes and qualifications and the establishment of community colleges. These colleges should cater mainly for youth and adults who did not complete their schooling or who never attended school and thus did not qualify to study at TVET colleges and universities. While these colleges were expected to mainly offer vocational programmes, they were also expected to provide work-integrated learning opportunities, by linking programmes such as the expanded public works programme to their classroom-based learning. The white paper also promotes the growth in student access to university and improving success rates in these institutions, as well as introducing free education for the poor. It also suggests that the sector investigates possibilities to provide distance education programmes at TVET and community colleges.

1.4 Funding and financial aid

Public expenditure on education enhances the human capital of the country by contributing to personal and social development. Hence the decision on the financial resources allocated to education is a choice that has to be made carefully, as this also influences economic growth and social inequality. However, in most countries, private households and the private sector are also significant sources of funding for the education sector. Table 1.1 shows the annual national budget expenditure on education for South Africa for the past eight years since the 2010/11 financial year.

Table 1.1: National budget (in R billion) expenditure on learning and culture, 2010/11–2017/2018

Expenditure in billion	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018
Basic education	127,0	145,5	152,1	164,0	177,6	191,1	205,8	216,7
Total higher education		38,0	43,9	55,3	59,4	65,6	74,6	79,7
University transfers	23,3	26,0	31,3	28,7	29,9	26,2	28,0	31,6
National student aid scheme						10,0	14,3	15,3
Skills development levy institutions						25,3	15,9	21,1
Education administration	9,0	11,7	9,6	10,6	12,3	13,1	14,6	15,8
Technical and vocational education and training	5,7	6,2	14,4	20,1	23,4		6,9	7,4
Recreation and culture	5,8	6,4	8,6	9,1	10,6		12,0	12,6
Total education expenditure budget	170,8	195,8	207,4	223,4	253,8	265,7	297,5	320,5
Total consolidated budget expenditure for the financial year	907,0	979,3	1 058,3	1 149,4	1 252,3	1 351,0	1 445,2	1 563,1
Expenditure on GDP	2 748,1	3 022,4	3 245,3	3 540,3	3 796,5	4 045,0	4 359,7	4 667,1

Source: Estimates of National Expenditures, National Treasury 2010–2018

There are separate budget allocations for basic education and post-school education, as shown in the table above. While the bulk of the budget goes to the basic education sector, the budget is expected to provide for all the national programmes and systems that support the general school education, with the exception of the provincial education departments. The provincial education budgets are allocated as part of the provinces budget. Within the post-school education sector, the allocation includes transfers to universities and in recent years, transfers to the National Student Financial Aid Scheme (NSFAS). In the 2017/2018 financial year, the total education budget expenditure amounted to R320,5 billion and public expenditure on university transfers totalled R31,6 billion. During the past eight years, the total education budget increased by R149,7 billion which was an increase of close to 87,6%. Similarly, between 2011/12 and 2017/18, the cost of higher education doubled.

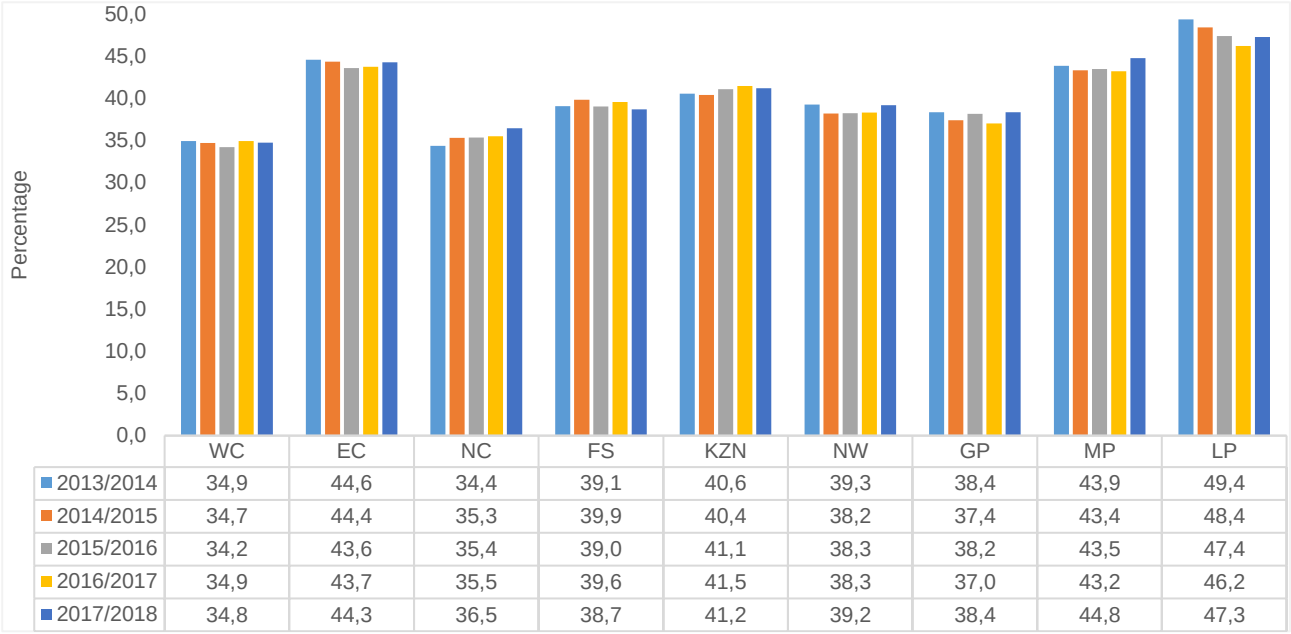
Table 1.2: Education expenditure as a percentage of total budget and GDP expenditure, 2010/11–2017/2018

	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018
Total education budget as a percentage of total budget expenditure	18,8	20,0	19,6	19,4	20,3	19,7	20,6	20,5
Total basic education budget as a percentage of total budget on education	74,4	74,3	73,3	73,4	70,0	71,9	69,2	67,6
Total post-school education budget as a percentage of total budget on education	22,2	22,4	26,7	26,6	25,8	28,1	26,8	28,5
Total education budget as a percentage of GDP	6,2	6,5	6,4	6,3	6,7	6,6	6,8	6,9
Total basic education budget as a percentage of GDP	4,6	4,8	4,7	4,6	4,7	4,7	4,7	4,6
Total post-school education budget as a percentage of GDP	1,4	1,5	1,7	1,7	1,7	1,8	1,8	2,0

Source: Estimates of National Expenditures, National Treasury 2010–2018; Special request on expenditure on GDP current prices, Statistics South Africa, 2018.

The above table shows budget allocations as a percentage of the total education budget and as a percentage of GDP expenditure for the past eight financial years. The total national education budget as a percentage of the total national budget increased from 18,8% in the 2010/2011 financial year, to 20,5% in 2017/2018. Primary and secondary education accounted for 67,6% of expenditure on education, or 4,6% of GDP in the 2017/2018 financial year. Post-school education accounted for two percent of the GDP in 2017/2018, a modest increase from the 2010/2011 financial year (1,4%).

Figure 1.2: Provincial education budget expenditure as a percentage of the total provincial budget expenditure 2013/14–2017/18

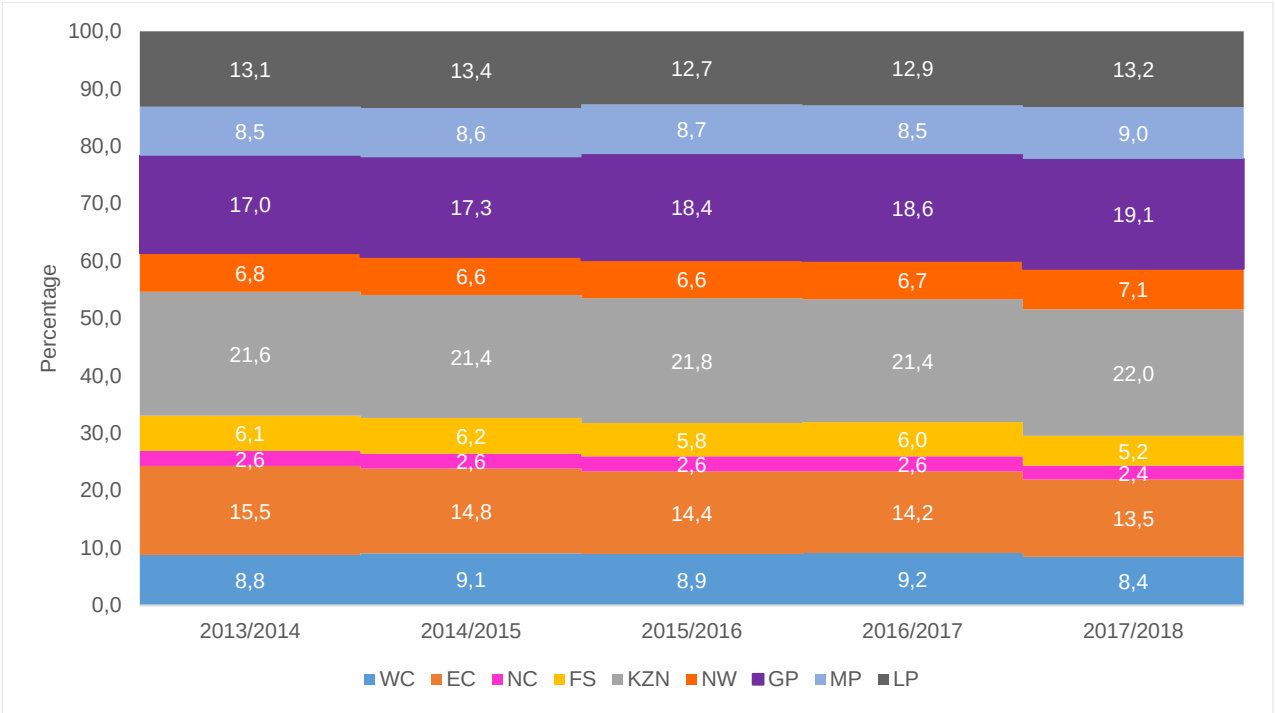


	WC	EC	NC	FS	KZN	NW	GP	MP	LP
2013/2014	34,9	44,6	34,4	39,1	40,6	39,3	38,4	43,9	49,4
2014/2015	34,7	44,4	35,3	39,9	40,4	38,2	37,4	43,4	48,4
2015/2016	34,2	43,6	35,4	39,0	41,1	38,3	38,2	43,5	47,4
2016/2017	34,9	43,7	35,5	39,6	41,5	38,3	37,0	43,2	46,2
2017/2018	34,8	44,3	36,5	38,7	41,2	39,2	38,4	44,8	47,3

Source: 2017 Estimates of Provincial Revenue and Expenditure, National Treasury

As shown in the above figure, education was the most important budget item in almost all the provinces with proportional allocations as high as 47,3% (R32,1 billion) of the provincial budget expenditure allotted in Limpopo, in the 2017/2018 financial year. Limpopo, Mpumalanga, Eastern Cape and KwaZulu-Natal have all allocated more than 40% of their budget expenditure on education for they are the provinces with the highest proportion of learners in their population. Western Cape, at a cost of R 20,6 billion in the 2017/2018 financial year, maintained the lowest proportion (close to 35%) of funding for education compared to other provinces.

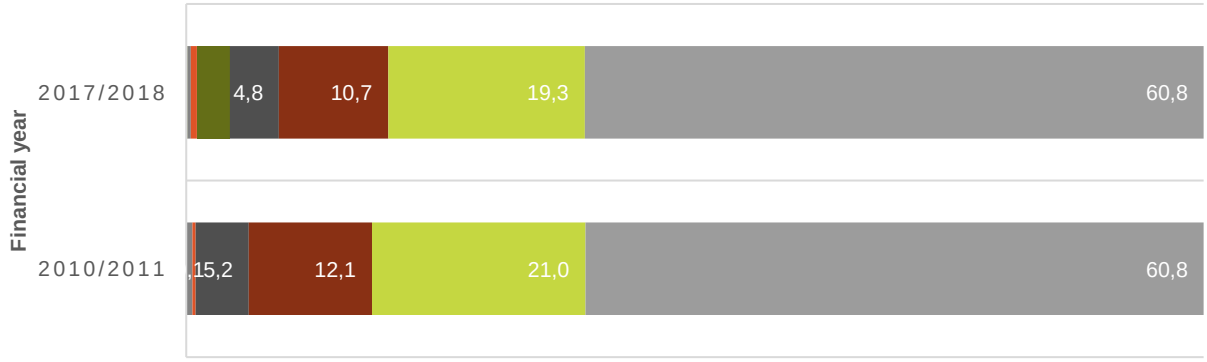
Figure 1.3: Share of provincial education budget 2013/14–2017/18



Source: 2017 Estimates of Provincial Revenue and Expenditure, National Treasury

Figure 1.3 provides information on the provincial share of public funding on education. The share of public spending on education is mostly driven by funding on the provincial equitable share[11]. The equitable share formula is used to calculate each province's share of the overall provincial allocation, but each province is allowed to decide how that share should be spent on the various services they provide (education, health, transport, housing, etc.). The calculations of the equitable share are based on a multi-dimensional formula. The education component of the equitable share formula contributes 48% to the total budget allocated to provinces and is largely based on each province's share of the national school age population (children aged 5–17) and its share of learners enrolled in Grade R–Grade 12. Consequently, the share of the provincial budget allocation was the highest in KwaZulu-Natal (22,0% in 2017/2018) followed by Gauteng (19,1% in 2017/2018) where most children aged 5–17 lived.

Figure 1.4: Budget expenditure breakdown on higher education and training, 2010/11 and 2017/18



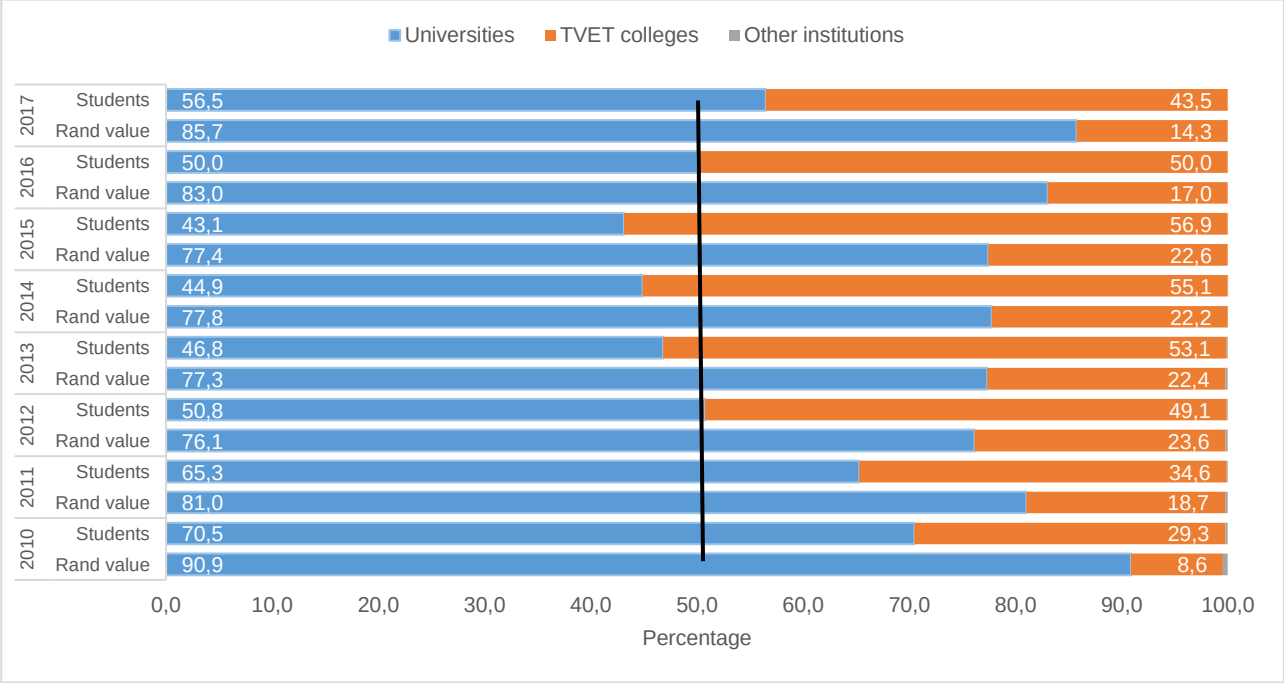
	2010/2011	2017/2018
Planning, policy and strategy	0,1	0,1
Skills development	0,5	0,4
Education administration	0,3	0,6
Community education and training	0,0	3,2
National skills fund	5,2	4,8
Technical and vocational education and training	12,1	10,7
Sector education and training authority	21,0	19,3
University education	60,8	60,8

Source: 2017 Estimates of Provincial Revenue and Expenditure, National Treasury

Figure 1.4 presents the breakdown of the budget for post-school education. Generally, the highest share of public spending in post-school education goes to university education, followed by the sector education and training authority (SETA) and technical and vocational education and training (TVET).

[11] Education is considered as a basic service to the people of South Africa. The Constitution allows provinces to receive equitable shares to be able to render service in education. The provincial equitable share works with a formula that distributes the funding allocation according to six components: institution share (lump sum allocated to all provinces to assist them with joint service delivery activities; education share (amount allocated by taking into account the size of the school going population in the province and those enrolled in public schools; health share (allocated for the use of public health services); basic share (allocated to total provincial population size; economic activity share (based on value of provincial GDP); poverty share (based on the total poor population of the province).

Figure 1.5: National Student Financial Aid Scheme awards, 2010–2017



Source: Annual Reports 2011–2017, National Student Financial Aid Scheme

Since the creation of the funding scheme in 1999, the National Student Financial Aid Scheme awarded loans and full costs bursaries to students attending universities and colleges in South Africa. Between 2010 and 2017, a total of R70,8 billion was granted to 3 083 857 students. University students were generally issued with a higher proportion of the total rand value, as the cost of education is higher and longer in these institutions. From 2013 onwards, the number of student recipients of the scheme who were attending TVET colleges increased notably, while the rand value of their financial aid remained small compared to those of university students. A decline in TVET recipient numbers, relative to universities, was again observed in 2016 and 2017.

1.5 Outcomes related to higher education

As part of the commitment to the National Development Plan, by 2030 the higher education sector should be able to provide for the diverse educational and skills needs of the economy and society.

MTSF Outcome 5: A skilled and capable workforce to support an inclusive growth path

The MTSF outcome 5 has identified four sub-outcomes:

1. Developing a credible institutional mechanism for labour market and skills planning;
2. Increasing access and success in programmes leading to intermediate and high level learning;
3. Increasing access to and efficiency of high-level occupationally directed programmes in needed areas; and
4. Increasing access to occupationally directed programmes in needed areas and thereby expand the availability of intermediate level skills with a special focus on artisan skills.

These outcomes have several targets to be met by 2030. This is to be attained through intermediate targets that are set through the MTSF process. The targets of selected indicators that need to be met by 2019 are summarised in Table 1.3:

Table 1.3: Selected targets for outcome 5 to be met by 2019

TVET and Artisan programmes
o 5 000 students accommodated in public TVET colleges by December 2019;
o 200 000 per annum NC(V) and Report 191 students awarded bursaries by 31 March 2019;
o 60% of NC(V) L 4 per year funded students obtaining the qualification within the stipulated time by 31 March 2019;
o DHET national artisan learners trade test pass percentage (including INDLELA)- 65% pass rate by 2019;
o 24 000 artisans qualified per annum by 31 March 2019;
o 140 000 work based learning opportunities by 31 March 2019;
o 1 238 000 headcount enrolments in TVET colleges by 2018;
o Certification rates in TVET qualifications by 2019 - NC(V) L4: 65% ; N3: 65%; N6: 65% ;
Special programmes and support
o 9 000 students per annum in foundation programmes (36 000 cumulative from 2014 to 2018 academic year), reported annually and verified by 31 October 2019);
o 205 000 eligible students obtaining financial assistance annually from 2015 academic year;
o 80% graduates with ICT skills by 2019;
Enrolments and targets per programme
o 1 070 000 students enrolled in higher education studies at universities (2018 academic year, reported and verified by 31 October 2019);
o 57 000 graduates in engineering sciences from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019)
o 45 000 graduates in human health and animal health from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019);
o 36 000 graduates in natural and physical sciences from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019);
o 99 000 graduates in initial teacher education from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019);
o Success rates at universities: 83% (2018 academic year, reported and verified by 31 October 2019);
o Higher education undergraduate success rates (contact): 81% (2018 academic year, reported and verified by 31 October 2019);
o Higher education undergraduate success rates (distance):71% (2018 academic year, reported and verified by 31 October 2019).
Graduate and post graduate targets
o Percentage of university academic staff with PhDs to be 46% (2018 academic year, verified by 31 October 2019);
o Number of doctoral graduates from 2400 per annum (12 000 cumulative from 2014 to 2018 academic year) reported annually and verified by 31 October 2019;
o Number of postgraduates funded through DST per annum: 27 411 Masters; 15 209 Doctoral and 3 682 Post-doctoral by 2019;
o 34 000 research masters graduates from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019);

Academic work force and research
○ Additional first-time entrants (black African and women) to academic workforce in addition to normal replacement and plans to be 100 (per annum) additional young (black African and /or women) entrants to workforce by 2019/20;
○ 100 academics per annum supported though the Teaching and Research Development Grant by 31 March 2019;
○ 330 research infrastructure grants awarded to higher education institutions, science councils, national facilities of the NRF, and museums by March 2019;
○ 33 700 ISI accredited research articles published by NRF-funded researchers by 31 March 2019;
○ 22 032 researchers awarded research grants through NRF managed programmes as reflected by the NRF project reports by 31 March 2019;

- **Sustainable Development Goals**

The Millennium Development Goals (MDGs) mobilised high-level political support in South Africa and overlapped significantly with the country's own education priorities. As a result, South Africa met most of the MDG educational targets. While the post-MDG development agenda (Sustainable Development Goals (SDGs)) is mostly based on past MDG approaches, the aim is to build a sustainable world through political commitment with the universal pledge "to leave no one behind". SDG 4 deals with achieving inclusive and equitable quality education and promoting lifelong learning opportunities for all. In particular 2 out of the 11 targets and associated 2 indicators were intended to measure participation and achievement of youth at post-secondary and skills training activities. These targets consist of the following:

- By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university;
- Increased participation rates of youth and adults in formal and non-formal education and training in the previous 12 months, by sex.
- By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship;
- Increase in the proportion of youth and adults with information and communications technology (ICT) skills, by type of skill.

- **Unesco education for all**

In 2000, in a historical move through the "Dakar Framework for Action**"** the World Education Forum framed the "education for all" concept and agreed on six key measurable education goals that needed to be met by all nations by 2015 in order for countries to meet their basic developmental goals.

- Goal 1: Expand early childhood care and education;
- Goal 2: Provide free and compulsory primary education for all;
- Goal 3: Promote learning and life skills for young people and adults;
- Goal 4: Increase adult literacy by 50 percent;
- Goal 5: Achieve gender parity by 2005, gender equality by 2015; and
- Goal 6: Improve the quality of education.

These goals were monitored by Unesco through its annual "Global Education Monitoring Report"[12].

1.6 Objective of the report

The post-school sector in South Africa is a critical element in the drive to meet the human capacity needs of the country and to achieve the various benchmarks described above. The reforms undertaken in the sector

[12] Previously known as the Education for all Global Monitoring Report.

create improved conditions for young people who completed the compulsory education system to transit into upper secondary and tertiary education. The strategy sets various objectives that include access to lifelong learning and enrolment at tertiary educational institutions, making these a reality to an increased number of youth and young adults. In addition, major focus has been placed on enhancing youth creativity, innovation and entrepreneurship. Public expenditure on higher education is lower compared to spending on primary and secondary school phases and remains a challenge to the country in the context of its economic crisis and increased levels of public debt. The strategy also states that educational benchmarks should include employability of graduates, since one of the challenges in South Africa is unemployment of tertiary qualification holders (unemployment rate of 6,6%, QLFS Q3: 2018) as well as graduates unemployment (unemployment rate of 1,7%, QLFS Q3: 2018)[13]. South Africa has a number of prestigious universities with a reputable accreditation system. These universities attract a large number of foreign students from the continent, especially at the post-graduate level. This significantly increases the diversity of the post-school student body.

This report describes the features and trends in the post-secondary education system in South Africa. The report presents data and analysis to contribute towards a better understanding of the higher education system in South Africa. Diverse data sources were used to make the report more comprehensive and better inform policy debates. Most of the data sources used were data received from the Department of Higher Education and Training. These were supplemented with data sources from the Department of Basic Education, as well as the General Household Survey 2017 data. The report is organised into five chapters. The first chapter summarises the main features of the post-secondary education system; the second chapter provides an overview of the transition from school to post-school education and training; chapter three discusses participation in post-school education. This is followed by chapter four, which provides information on adult educational attainment; and chapter five concludes.

[13] Quarterly Labour Force Survey, Q3: 2018, Statistics South Africa, 2018

Chapter 2: Transition from school to post-school education

2.1 Background

Post-secondary education in South Africa includes academic, vocational education and technical training, learnerships, internships and skills development programmes. Students have the option of either taking the National Senior Certificate (NSC) or the National Certificate Vocational (NCV) at the end of secondary schooling to transit into post-school education. The NSC is aimed at students attending ordinary schools whereas the NCV is aimed at students attending Further Education and Training (FET) public and private colleges, as well as other institutions offering FET vocational programmes. Learners studying towards the NSC study at least seven subjects, which include two compulsory official South African languages (one language of learning and teaching, a home language or a first additional language); mathematics or mathematical literacy, life orientation and three elective subjects from the designated subjects list[14]. The NCV comes with levels 2–4[15] on the NQF and offers programmes comprising subjects that consist of academic knowledge and theory, integrated with the practical skills and values specific to each vocational area. As in the case of the NSC, the NCV has three compulsory subjects also referred to as the three fundamental learning subjects and vocational learning subjects.

A candidate must write not fewer than seven subjects and fulfil the following minimum promotion requirements to pass the NCV: achieve a minimum of 40% in an official language on either the first additional language level or home language level, provided that the language chosen is a language of learning and teaching of the institution; achieve a minimum of 30% in either mathematics or mathematics literacy; achieve a minimum of 40% in life orientation; achieve a minimum of 50% in four vocational subjects[16].

The NSC or the NCV are the minimum requirements to be admitted to higher educational institutions. However, the minimum admission requirements for a higher certificate, diploma and bachelor's degree have been set by a special policy[17]. The higher certificate pass requires achievement of 40% in the home language, at least 40% in two other subjects and at least 30% for three other subjects. For the diploma pass, a candidate must achieve

[14] The list of recognised NSC subject is categorised as Group A (core subjects) and Group B (elective subjects). Group A: official languages at home and first additional languages (all 11 official South African languages at home and first additional South African language), mathematical literacy or mathematics, life orientation. Group B: agricultural management practices, agricultural sciences, agricultural technology, dance studies, design, dramatic arts, music, visual arts, accounting, business studies, economics, official languages at second additional level and non-official languages (all 11 official second additional languages and other languages such as Arabic, French, German, Gujarati, Hebrew, Hindi, Italian, Latin, Portuguese, Spanish, Tamil, Telegu and Urdu), civil technology, electrical technology, mechanical technology, engineering graphics and design, history, religion studies, computer applications technology, information technology, life sciences, physical sciences, consumer studies, hospitality studies, tourism.

[15] This learning pathway consists of three qualifications in the FET band and provides learners with broad vocation competencies with specialisation in a particular vocational area. Learners can either exit the education system at NQF level 2 (equivalent to Grade 10), level 3 (equivalent to Grade 11) or level 4 (Grade 12) as the qualifications prepare them for the labour market or they can proceed to the higher education phase if they choose so.

[16] Primary agriculture, secondary agriculture, nature conservation, forestry, wood technology, horticulture, design studies, visual arts, performing arts, cultural studies, music, sport, film television and video, finance economics and accounting, generic management, human resources, marketing, procurement, office administration, public administration, project management, public relations, communication studies, information studies, language, literature, schooling, higher education and training, early childhood development, adult learning, occupationally directed ETD practice, engineering and related design, manufacturing and assembly, fabrication and extraction, process plant operations, process instrumentation, environmental relations, general social studies, industrial and organisational governance and human resource development, people/human-centred development, public policy, politics and democratic citizenship, religious and ethical foundations of society, rural and agrarian studies, traditions history and legacies, urban and regional studies, safety in society, justice in society, sovereignty of the state, preventive health, promotive health and development, curative health, rehabilitative health/service, mathematical sciences, physical sciences, life sciences, information technology and computer sciences, earth and space sciences, environmental sciences, hospitality tourism travel gaming and leisure, transport operations and logistics, personal care, wholesale and retail, consumer services, cleaning domestic hiring protecting and rescue services, physical planning design and management, building construction, civil engineering construction electrical infrastructure construction, drawing office practice.

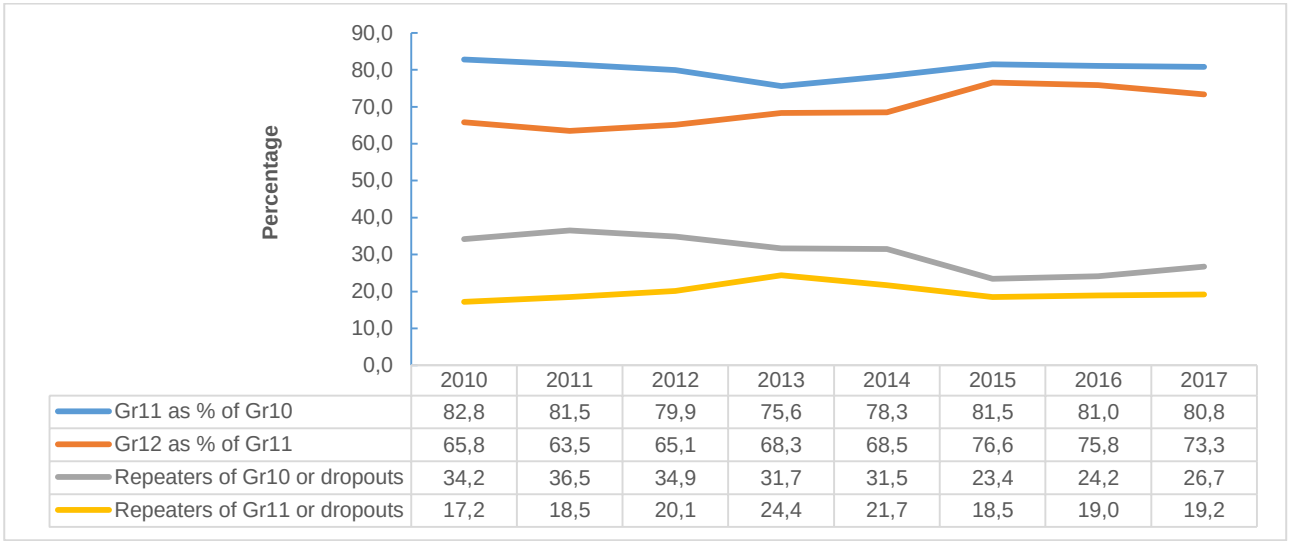
[17] Minimum admission requirements for higher certificate, diploma and bachelor's degree programmes, Government gazette No. 27961, August 2005.

40% in the home language, at least 40% in three high credit subjects[18] and at least 30% in two other subjects[19]. For an admission to a bachelor's degree, an achievement rating of at least 4 (adequate achievement) with a score of 50–59% must be obtained in four subjects from the list of high credit NSC subjects. Similarly, the minimum admission requirements to a bachelor's degree programme for a NCV candidate include the achievement of 60–69% in three fundamental subjects and 70–79% in vocational subjects from the designated list. Higher education institutions can also stipulate additional admission criteria for their various programmes.

The post-school education system in South Africa consists of close to 487 post-school education and training institutions[20] and 3 417 community learning centres. Universities offer undergraduate courses of study leading to certificate, diploma, bachelor degrees as well as qualifications programmes leading to advanced degrees. The Technical and Vocational Education and Training (TVET) colleges, created in 2002 by restructuring close to 150 technical colleges to constitute 50 TVET colleges, offer a variety of courses and programmes with durations ranging from a short course of a few hours to formal diploma courses of three years. Community Education and Training (CET) colleges service individuals who do not qualify for admission to TVET colleges or universities but who wish to raise their potential for further learning.

The duration of the NSC is the three years of the FET phase, namely Grades 10–12 in which learners are expected to study all the required subjects discussed previously. The rule for repetition in the South African school system only allows repetition of one year per school phase[21]. Hence learners can only be retained once in the FET phase. In fact we see a substantial percentage of repeating or dropout learners during the FET phase by analysing the rate of progression through the grades.

Figure 2.1: Grades 11 and 12 progressions, 2010–2017



	2010	2011	2012	2013	2014	2015	2016	2017
Gr11 as % of Gr10	82,8	81,5	79,9	75,6	78,3	81,5	81,0	80,8
Gr12 as % of Gr11	65,8	63,5	65,1	68,3	68,5	76,6	75,8	73,3
Repeaters of Gr10 or dropouts	34,2	36,5	34,9	31,7	31,5	23,4	24,2	26,7
Repeaters of Gr11 or dropouts	17,2	18,5	20,1	24,4	21,7	18,5	19,0	19,2

Source: DBE: School Realities 2010–2017; Stats SA analysis

The above figure presents the progression rates of learners enrolled in Grades 11 and 12 in ordinary schools. In 2017, 80,8% of learners who enrolled in Grade 11 had enrolled in Grade 10 during the previous year. Similarly, 73,3% of learners who enrolled in Grade 12 in 2017 had enrolled in Grade 11 during the previous

[18] Accounting, agricultural sciences, business studies, dramatic arts, economics, engineering graphics and design, geography, history, consumer studies, information technology, languages, (one language of learning and teaching at a higher education institution and two other recognised language subjects), life sciences, mathematics, mathematical literacy, music, physical sciences, religion studies, visual arts.

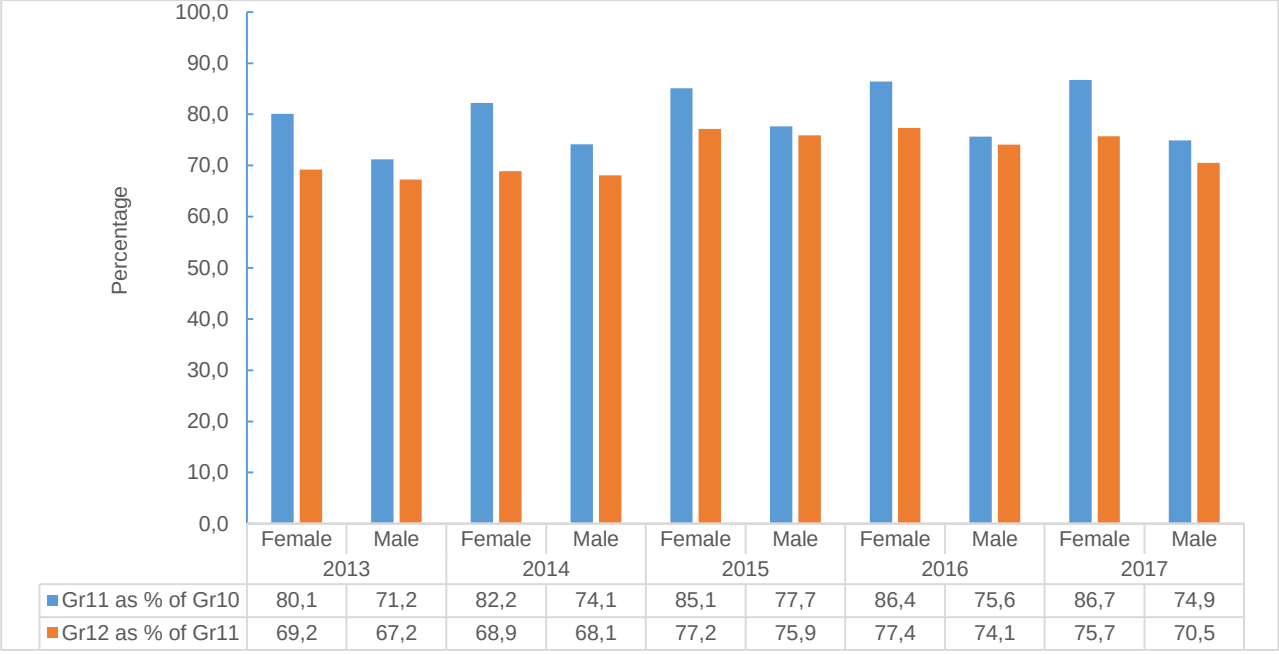
[19] Low credit subjects: agricultural management practices, agricultural technology, civil technology, computer applications technology, dance studies, design studies, electrical technology, hospitality studies, mechanical technology, tourism.

[20] 26 public higher education institutions, 123 private higher education institutions, 50 TVET colleges, 9 community education and training colleges, and 279 private colleges.

[21] Admission policy for ordinary public schools, Government Notice 2432 in the Government Gazette, Vol. 400, No. 19377 of 19 October 1998.

year. This was an increase of 7,5 percentage point from 2010. This also means that 26,7% of learners enrolled in Grade 10 in 2016 either dropped out or repeated Grade 10 in 2017. Furthermore, 19,2% of learners enrolled in Grade 11 in 2016 either dropped out or repeated Grade 11 in 2017.

Figure 2.2: Grades 11 and 12 progressions by gender, 2013–2017



	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	2013		2014		2015		2016		2017	
Gr11 as % of Gr10	80,1	71,2	82,2	74,1	85,1	77,7	86,4	75,6	86,7	74,9
Gr12 as % of Gr11	69,2	67,2	68,9	68,1	77,2	75,9	77,4	74,1	75,7	70,5

Source: DBE: School Realities 2010–2017; Stats SA analysis

The above figure presents the breakdown by gender of progression rates of learners enrolled in Grades 11 and 12 in ordinary schools from 2013 to 2017 in South Africa. The graph reveals that progressions from Grade 10 to 11 as well as Grade 11 to 12 were higher among female learners compared to male learners. However, there is no clear trend to progression patterns over the years for both genders although the last two years (2016 and 2017) showed increased levels of progression for both genders during the five years under consideration. In 2017, seven out of eight (86,7%) female learners who attended Grade 10 in 2016 progressed to Grade 11, while three quarters (74,9%) of male learners who attended Grade 10 in 2016 progressed to Grade 11. Progression to Grade 12 was much lower for both genders as only 75,7% among female and 70,5% among male learners enrolled in Grade 11 in 2016 were enrolled in Grade 12 in 2017.

Table 2.1: Grades 11 and 12 progressions by province and gender, 2010 and 2017

	2010						2017					
	Gr11 as % of Gr10			Gr12 as % of Gr11			Gr11 as % of Gr10			Gr12 as % of Gr11		
Province	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**
WC	84,1	77,1	**80,8**	75,9	74,1	**75,1**	83,7	77,1	**80,6**	83,1	80,9	**82,1**
EC	83,9	76,7	**80,5**	59,5	59,6	**59,5**	86,3	74,5	**80,4**	70,7	66,3	**68,7**
NC	77,8	70,1	**74,0**	67,1	65,1	**66,2**	79,2	69,1	**74,3**	70,3	65,5	**68,1**
FS	76,7	68,5	**72,5**	59,4	59,4	**59,4**	71,0	61,8	**66,4**	80,8	75,2	**78,2**
KZN	98,2	89,7	**93,9**	65,4	60,9	**63,3**	98,2	85,1	**91,6**	73,1	65,7	**69,6**
NW	72,9	64,3	**68,5**	57,4	58,1	**57,7**	72,5	64,8	**68,7**	72,9	70,7	**71,9**
GP	88,3	75,6	**81,8**	73,3	67,4	**70,5**	84,7	73,5	**79,1**	77,4	71,7	**74,7**
MP	89,6	81,0	**85,4**	74,1	70,7	**72,5**	93,0	82,8	**88,0**	80,4	75,8	**78,2**
LP	88,2	75,5	**81,8**	67,5	67,3	**67,4**	83,7	67,3	**75,1**	76,9	72,8	**75,0**
Total	**87,5**	**78,0**	**82,8**	**66,9**	**64,5**	**65,8**	**86,7**	**74,9**	**80,8**	**75,7**	**70,5**	**73,3**

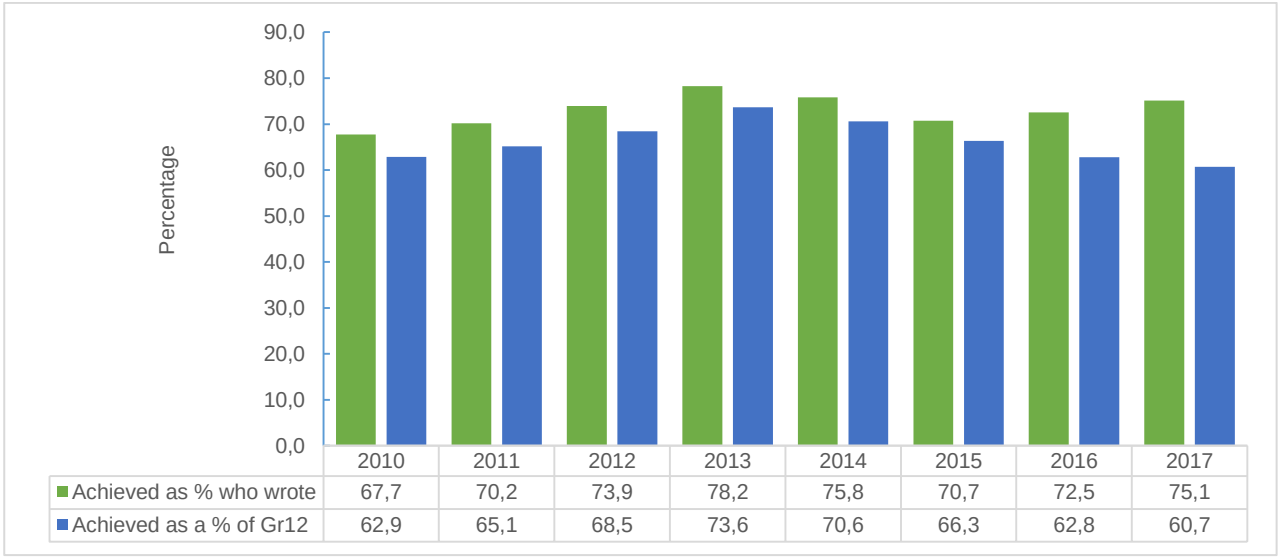
Source: DBE: School Realities 2010, 2017; Stats SA analysis

The above table shows the breakdown by gender of progression rates of learners enrolled in Grades 11 and 12 in ordinary schools during 2010 and 2017 by province. Nationally, there were large improvements in 2017 in the levels of progressions from Grade 11 to Grade 12 with females attaining the highest proportions compared to males. Free State and Limpopo were the provinces with the highest improvements in proportions of learners' progressions from Grade 11 to Grade 12 in the past eight years. Furthermore, Western Cape had the highest proportion of learners who progressed from Grade 11 to Grade 12 in 2017 followed by Free State and Mpumalanga. Eastern Cape, Northern Cape and KwaZulu-Natal were the provinces with the highest male dropout rate in Grade 12 in 2017. In 2017, Free State and North West had the lowest progression to Grade 11 from Grade 10 with males having the lowest progression rates.

2.2 Trends in National Senior Certificates enrolment and performance

The most important sign of progress in opportunities to acquire post-school education is access to secondary education and achievement of the NSC with a good performance. However, even though there has been noteworthy progress in expanding access to secondary education, inequality by geographical location and other factors still persist. This results in poor academic outcomes for a lot of learners.

Figure 2.3: NSC candidates who achieved the NSC examination compared to those who enrolled in Grade 12 and those who wrote the exam, 2010–2017

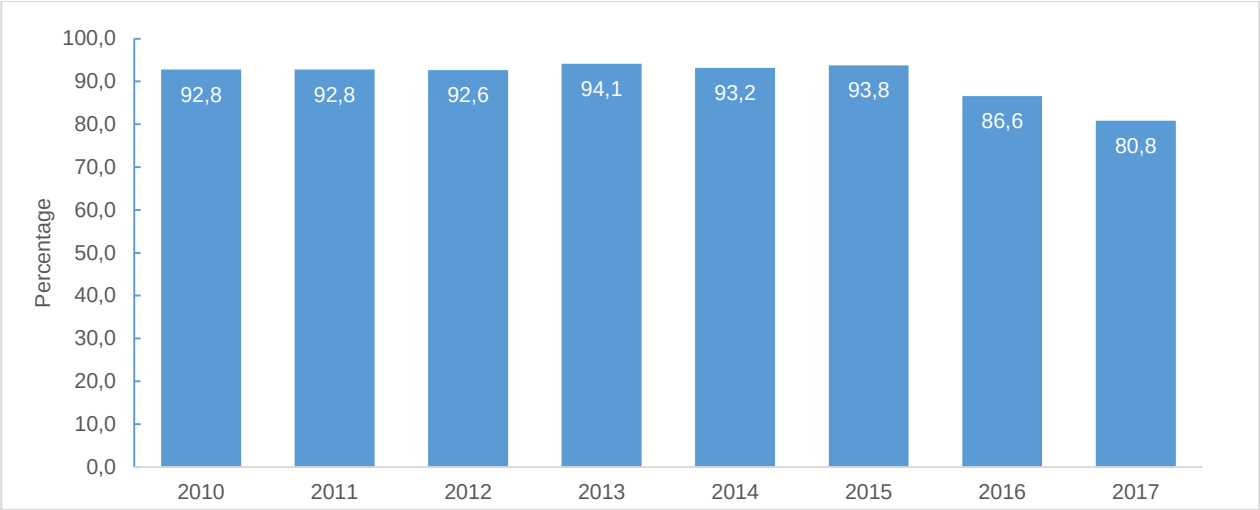


	2010	2011	2012	2013	2014	2015	2016	2017
Achieved as % who wrote	67,7	70,2	73,9	78,2	75,8	70,7	72,5	75,1
Achieved as a % of Gr12	62,9	65,1	68,5	73,6	70,6	66,3	62,8	60,7

Source: DBE: National Senior Examination Report 2010–2017, School Realities 2010–2017; Stats SA analysis
Note: Total achieved include candidates who qualify for endorsed certificate

The above graph presents the NSC achievement disparities during 2010 to 2017 among those who wrote the exam and those who enrolled in Grade 12. The graph shows an overall improvement in NSC achievement rates among those who wrote the exam while achievement as a percentage of Grade 12 enrolment shows very slow progress. In particular, the positive trend held on achievement as a percentage of Grade 12 enrolment until 2013 was reversed in 2014 reaching its lowest proportion in 2017.

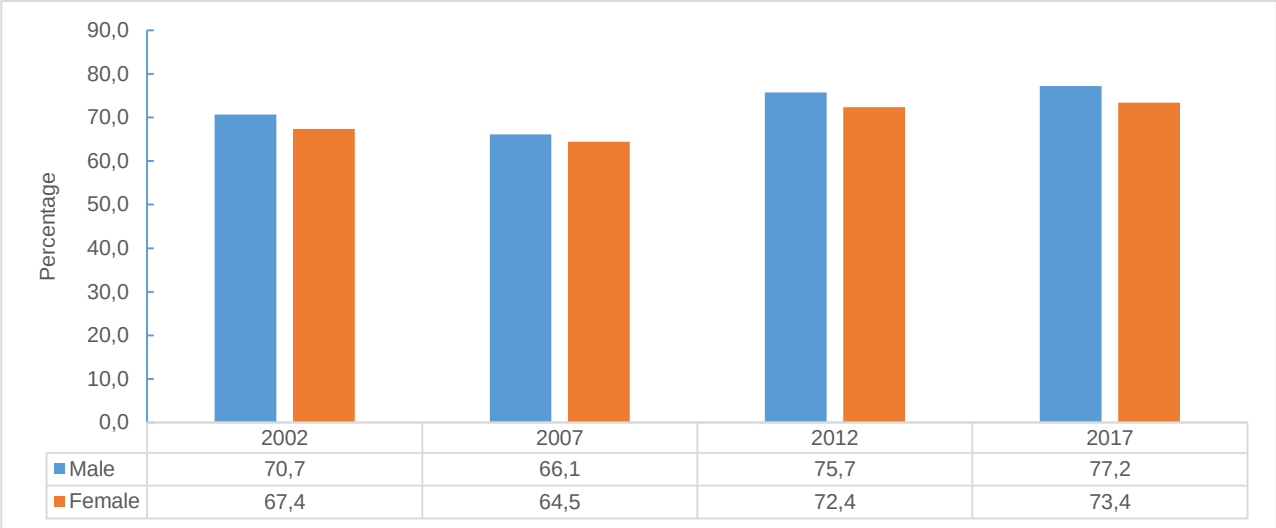
Figure 2.4: NSC candidates who wrote the exam as a percentage of the Grade 12 enrolled learners, 2010–2017



Source: DBE: National Senior Examination Report 2010–2017, Stats SA analysis

Since compulsory schooling starts at age seven in South Africa the appropriate and acceptable age at Grade 12 is 18, hence learners who write the NSC are commonly aged 18. In 2017, among the total matriculants who wrote the NSC, 31,4% were aged 18 whereas 20,8% were aged 19. In total, close to 90% of the NSC candidates who wrote the exam in 2017 were aged 17–21 whereas those eligible to write the exam fall mostly in the age categories 17, 18 and 19. The above graph presents the distribution of individuals who wrote and achieved the NSC pass. In 2010, our estimates show that close to 93% of learners enrolled in Grade 12 wrote the NSC exam. However this percentage declined to 81% in 2017.

Figure 2.5: NSC candidates who achieved the NSC examination by gender, 2002–2017

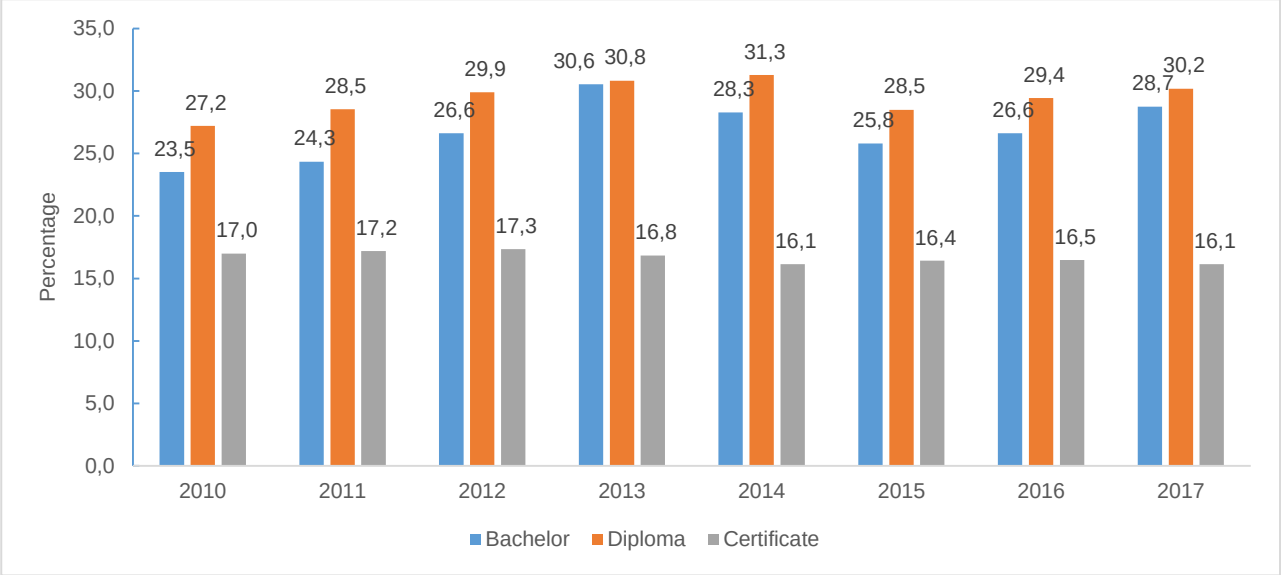


	2002	2007	2012	2017
Male	70,7	66,1	75,7	77,2
Female	67,4	64,5	72,4	73,4

Source: DBE: National Senior Examination Reports 2012, 2017, School Realities 2002–2007

The above figure shows the NSC pass rates to be higher among males compared to female learners during 2002–2017. NSC achievement for male learners (70,7%) was three percentage point higher than the achievement rate for female learners (67,4%) in 2002. The largest gap between female and male achievements was observed in 2017.

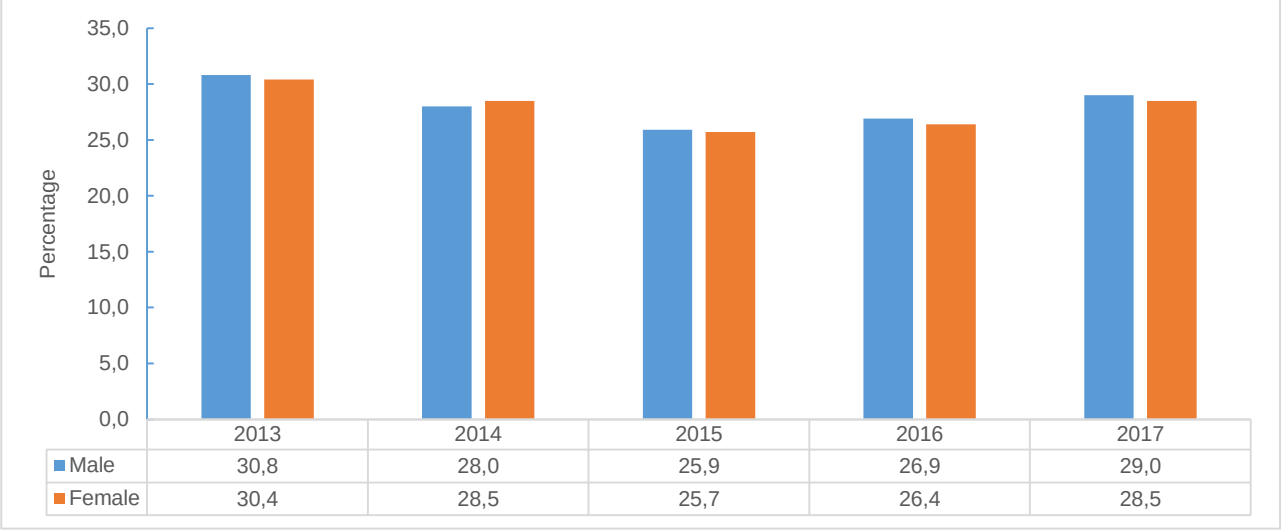
Figure 2.6: NSC performance as a percentage of those who wrote the exam by achievement type, 2010–2017



Source: DBE: National Senior Examination Report 2010–2017

The above graph shows the NSC performance among those who wrote the exam by achievement type. There has been a moderate increase in the percentage of bachelor and diploma achievement in the past eight years (5,2 and 3,0 percentage point increases respectively). In 2017, while close to 29% of candidates who wrote the NSC exam achieved a bachelor pass, three in ten candidates who wrote the exam achieved a diploma pass.

Figure 2.7: Bachelor pass rate by gender, 2013–2017

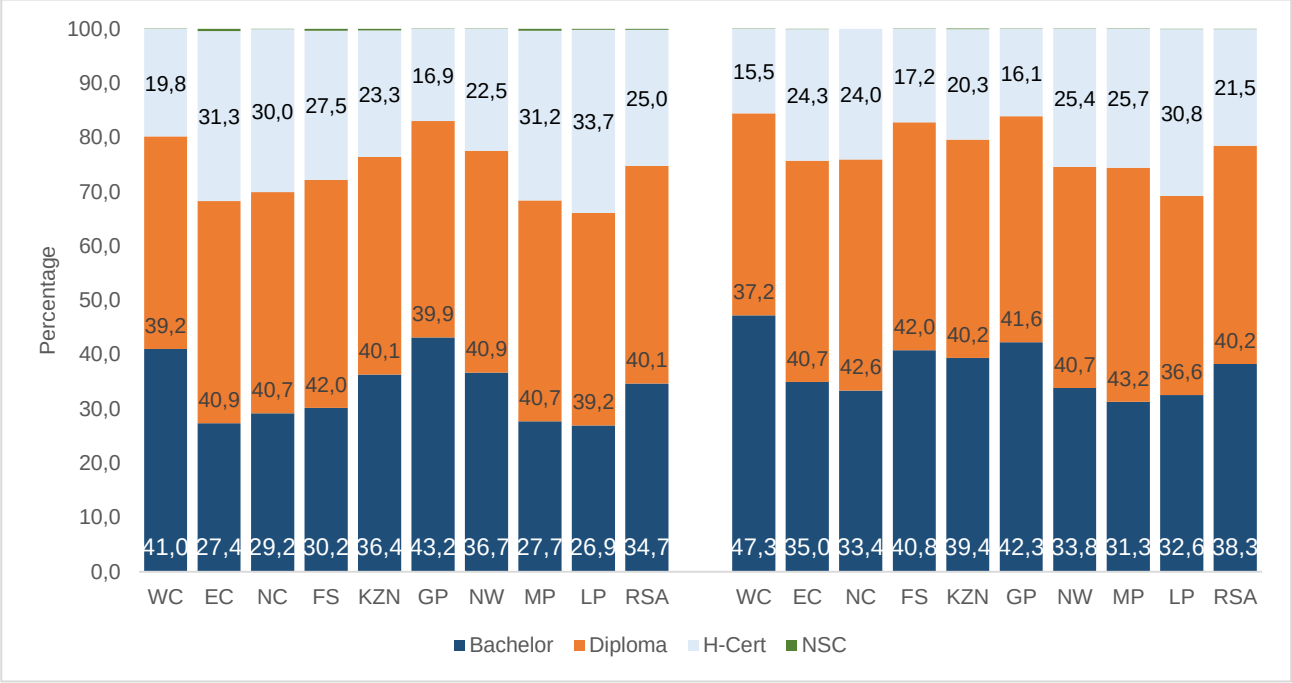


	2013	2014	2015	2016	2017
Male	30,8	28,0	25,9	26,9	29,0
Female	30,4	28,5	25,7	26,4	28,5

Source: DBE: National Senior Examination Report 2013–2017

The above graphs shows the breakdown of the bachelor pass rate by gender. There was a small decline in the bachelor pass rate for both genders during the five years included in the analysis while the differences between the genders in terms of achievement were negligible.

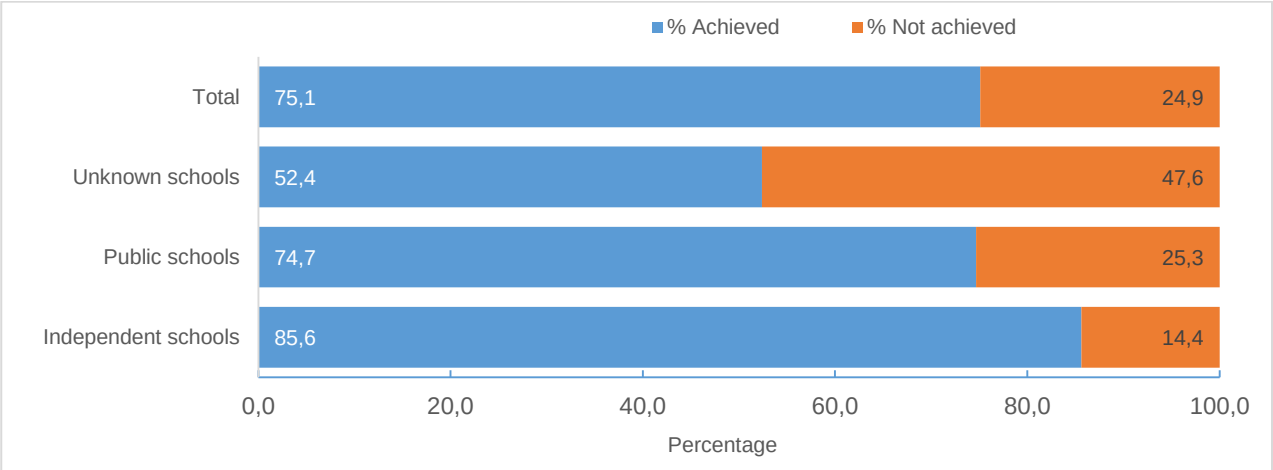
Figure 2.8: NSC performance by achievement type and province, 2010 and 2017



Source: DBE: National Senior Examination Report 2010–2017

The above graph shows the NSC performance among those who passed the exam by achievement type. Whereas a bachelor pass was the highest in the Western Cape and Gauteng for both years, Free State experienced the biggest improvement in bachelor pass rates. Furthermore, in 2017, diploma pass rates were much higher than all other types of passes in all the provinces except for the Western Cape and Gauteng. Certificate passes were also substantial in provinces such as North West, Mpumalanga and Limpopo where these accounted for more than a quarter of all the passes.

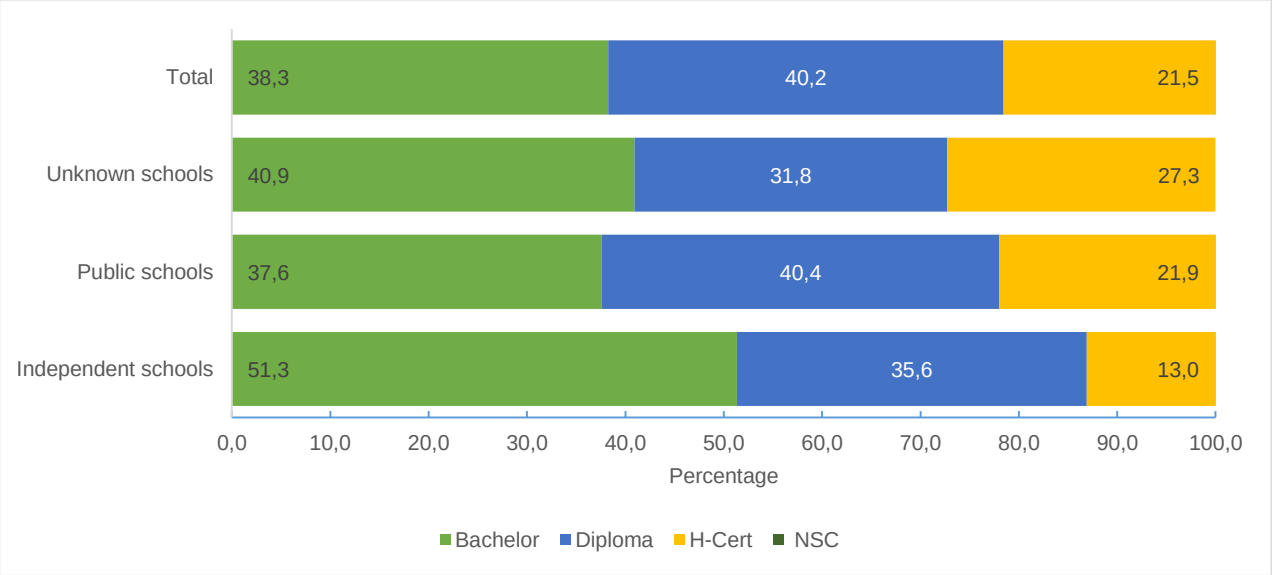
Figure 2.9: NSC performance by school type, 2017



Source: DBE: National Senior Examination Results 2017

The above graph shows the performance in 2017 of learners who wrote the NSC examination by school type. Independent schools had the highest percentage of learners' achievement compared to public schools. However the bulk of NSC candidates (96%) attended public schools. Among learners attending public schools, close to a quarter who wrote the NSC test did not pass the exam.

Figure 2.10: NSC achievement by school type and performance type, 2017



Source: DBE: National Senior Examination Results 2017

The above graph shows the achievement type in 2017 of learners who wrote the NSC examination by school type. Independent schools had the highest percentage of learners who achieved bachelor's degree pass compared to public schools. Among learners attending public schools, the majority (40,4%) achieved a diploma pass, while close to 38% achieved a bachelor's pass.

The NSC was created in 1994 during post-apartheid educational reforms, however national exam paper setting was only realised in 2000. Subsequent reforms of the examination system in 2008 resulted in the introduction of the NSC[22]. The purpose was to standardise the test. Even though the DBE is responsible for setting up the examination papers, Umalusi is responsible for the moderation of the papers. The administration and marking of the examination papers continued to be the responsibility of the provincial departments of education. These structural reforms may have contributed towards fluctuation of the overall NSC results, as well as provincial performances as shown in the results of over two decades of school performance data presented in Table 2.2 and Figure 2.11 below. Reforms implemented in 2000, improved academic performance both at national and provincial levels. The introduction of the NSC in 2008 also had a small effect on students' performance causing lower performance levels. Western Cape managed to sustain good performance throughout the two decades while Free State improved its overall performance over the years with some degree of fluctuation. Eastern Cape and Limpopo were the provinces that showed slow growth in NSC achievement, whereas Mpumalanga could be claiming success coming from a similar low base in 1994.

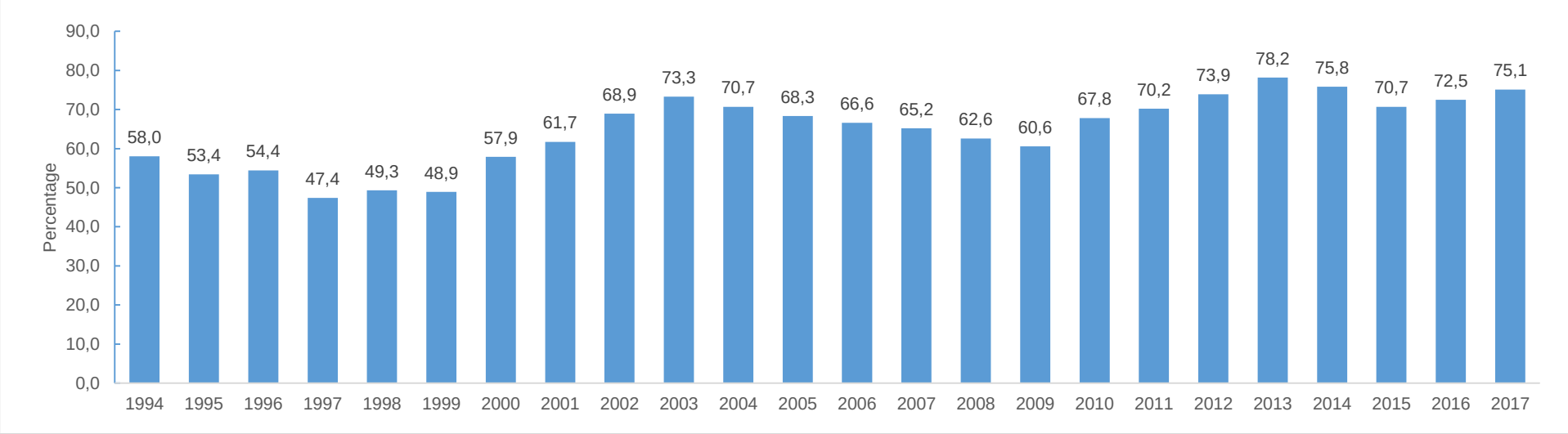
[22] See Appendix A for the difference in senior certificate and national senior certificate

Table 2.2: NSC pass rate by province, 1994–2017

Province	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Western Cape	85,6	82,7	80,2	76,2	79,0	78,8	80,6	82,7	86,5	87,1	84,3	84,4	83,7	80,6	78,4	75,7	76,1	82,8	82,8	85,1	82,2	84,7	85,9	82,7
Eastern Cape	56,8	47,8	49,0	46,2	45,1	40,2	49,8	45,6	51,8	60,0	53,5	56,7	59,3	57,1	50,6	51,0	58,3	58,1	61,6	64,9	65,4	56,8	59,3	65,0
Northern Cape	77,7	74,5	74,1	63,8	65,4	64,3	71,2	84,2	89,9	90,7	83,4	78,9	76,8	70,3	72,7	61,3	72,3	68,8	74,6	74,5	76,4	69,4	78,7	75,6
Free State	55,8	49,7	51,1	42,5	43,4	42,1	52,7	59,0	70,7	80,0	78,7	77,8	72,2	70,5	71,8	69,4	70,7	75,7	81,1	87,4	82,8	81,6	88,2	86,0
KwaZulu-Natal	67,6	69,3	61,8	53,7	50,3	50,7	57,2	62,8	70,8	77,2	74,0	70,5	65,7	63,8	57,6	61,1	70,7	68,1	73,1	77,4	69,7	60,7	66,4	72,9
Gauteng	61,3	58,0	58,3	51,7	55,6	57,0	67,5	73,6	78,1	81,5	76,8	74,9	78,3	74,6	76,4	71,8	78,6	81,1	83,9	87,0	84,7	84,2	85,1	85,1
North West	70,2	66,3	69,6	50,0	54,6	52,1	58,3	62,5	67,8	70,5	64,9	63,0	67,0	67,2	68,0	67,5	75,7	77,8	79,5	87,2	84,6	81,5	82,5	79,4
Mpumalanga	47,5	38,2	47,4	46,0	52,7	48,3	53,2	46,9	55,8	58,2	61,8	58,6	65,3	60,7	51,8	47,9	56,8	64,8	70,0	77,6	79,0	78,6	77,1	74,8
Limpopo	44,4	37,8	38,8	31,9	35,2	37,5	51,4	59,5	69,5	70,0	70,6	64,9	55,7	58,0	54,3	48,9	57,9	63,9	66,9	71,8	72,9	65,9	62,5	65,6

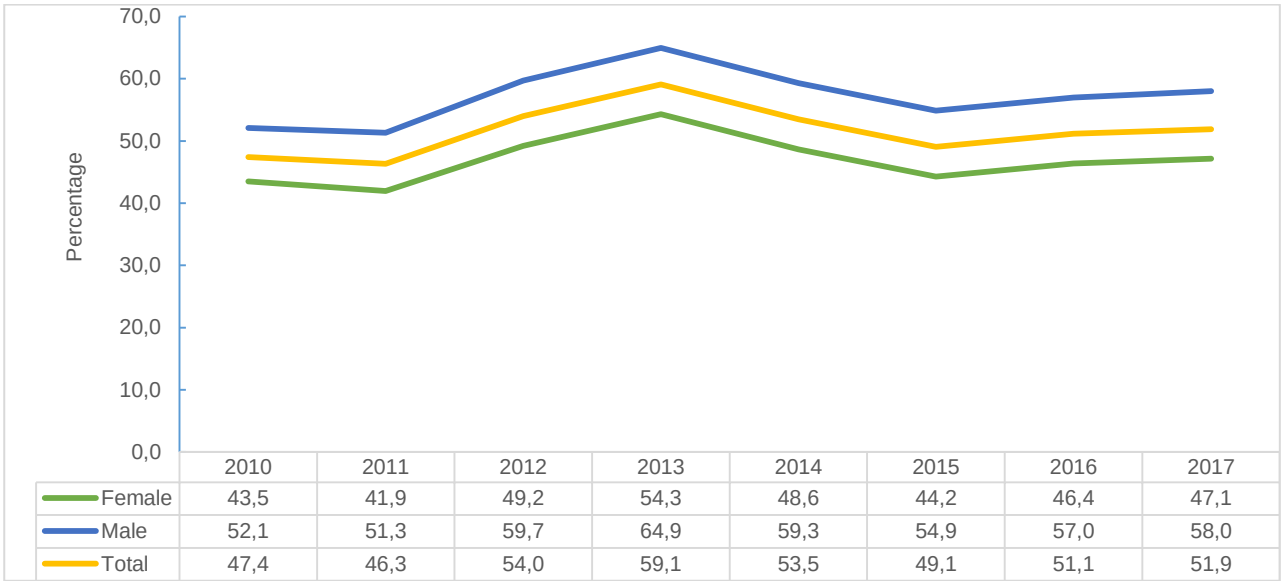
Source: DBE: National Senior Examination Results 2013–2017

Figure 2.11: National NSC pass rate, 1994–2017



Source: DBE: National Senior Examination Results 2013–2017

Figure 2.12: NSC mathematics pass rate by gender, 2010–2017

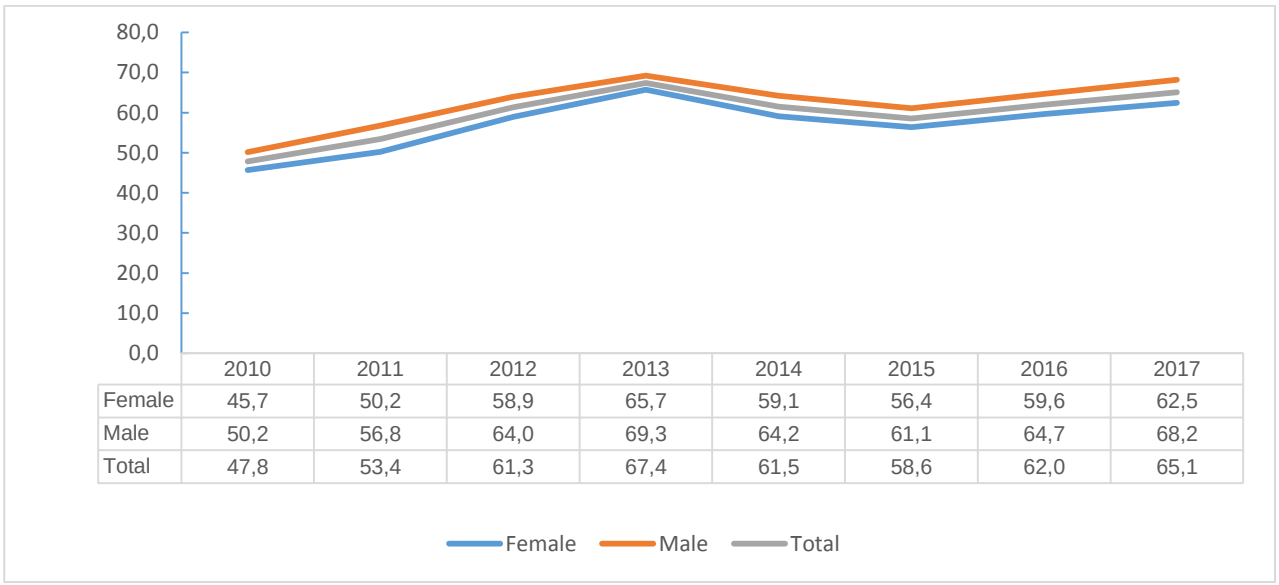


	2010	2011	2012	2013	2014	2015	2016	2017
Female	43,5	41,9	49,2	54,3	48,6	44,2	46,4	47,1
Male	52,1	51,3	59,7	64,9	59,3	54,9	57,0	58,0
Total	47,4	46,3	54,0	59,1	53,5	49,1	51,1	51,9

Source: DBE: National Senior Examination Results 2013–2017

NSC mathematics pass rates differed by gender. Pass rates of males exceeded those of females in all the years presented in the above graph, while female pass rates were generally below the national average. Pass rates increased in 2013 and reached an all-time high for both genders at 54,3% for females and 64,9% for males.

Figure 2.13: NSC physical sciences pass rate, 2010–2017



	2010	2011	2012	2013	2014	2015	2016	2017
Female	45,7	50,2	58,9	65,7	59,1	56,4	59,6	62,5
Male	50,2	56,8	64,0	69,3	64,2	61,1	64,7	68,2
Total	47,8	53,4	61,3	67,4	61,5	58,6	62,0	65,1

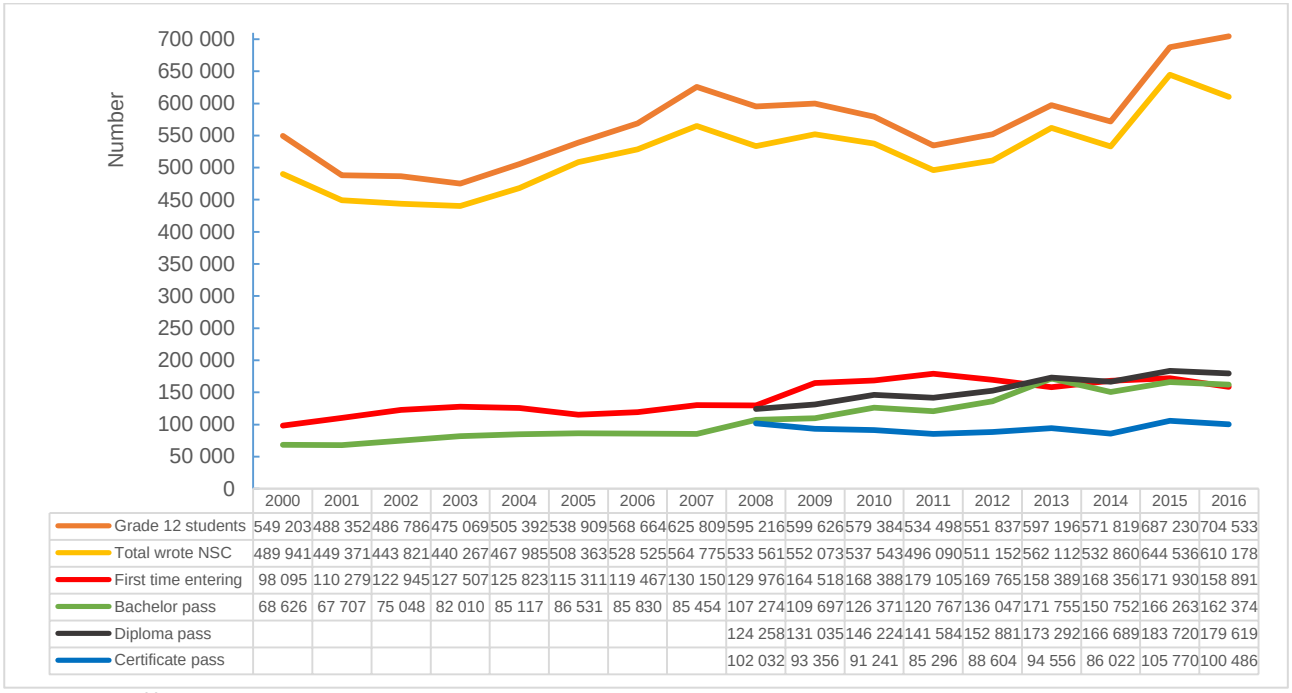
Source: DBE: National Senior Examination Results 2013–2017

The gender gap in NSC physical sciences pass rates was narrow compared to the gender gap in mathematics. While there was a much higher percentage of females who wrote physical science exams than males, males tended to be more likely to pass the exams than females.

2.3 Transition into post-school education

Government has measurable targets for post education outcomes, but elusive strategies on transition to post-school education as part of the national performance plan. In South Africa, poor readiness for post-school education combined with structural factors such as availability of finances, has an impact on access to post-secondary education. Furthermore, transition into post-school education needs to take into account education requirements for the range of career pathways and should ensure that learners survive school transitions and remain on track for high achievement and attainment.

Figure 2.14: First-time students entering public universities at undergraduate degrees and diplomas programmes, 2000–2016



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Grade 12 students	549 203	488 352	486 786	475 069	505 392	538 909	568 664	625 809	595 216	599 626	579 384	534 498	551 837	597 196	571 819	687 230	704 533
Total wrote NSC	489 941	449 371	443 821	440 267	467 985	508 363	528 525	564 775	533 561	552 073	537 543	496 090	511 152	562 112	532 860	644 536	610 178
First time entering	98 095	110 279	122 945	127 507	125 823	115 311	119 467	130 150	129 976	164 518	168 388	179 105	169 765	158 389	168 356	171 930	158 891
Bachelor pass	68 626	67 707	75 048	82 010	85 117	86 531	85 830	85 454	107 274	109 697	126 371	120 767	136 047	171 755	150 752	166 263	162 374
Diploma pass									124 258	131 035	146 224	141 584	152 881	173 292	166 689	183 720	179 619
Certificate pass									102 032	93 356	91 241	85 296	88 604	94 556	86 022	105 770	100 486

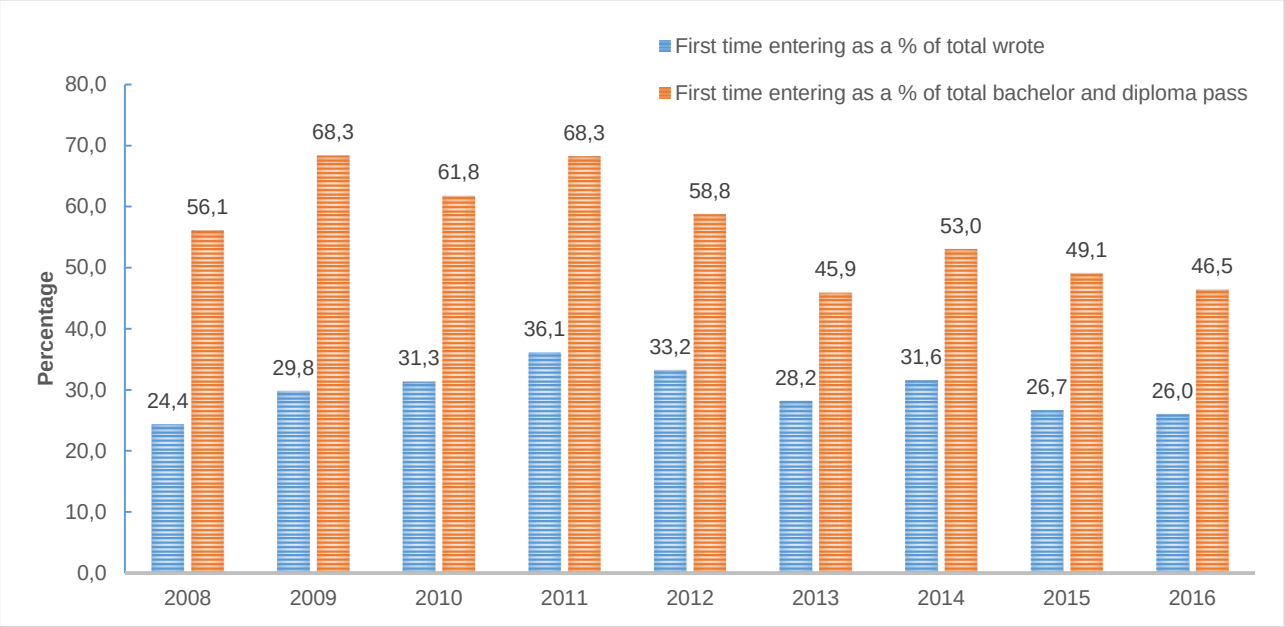
Source: DHET[23]

First-time entering university students are individuals registered for an undergraduate or pre-diploma course and who have not registered in any higher educational institutions before[24]. The above graph presents a historical analysis of the number of first-time students who transitioned from school or other activities to post-secondary schooling between 2000 to 2016. Examining the differences between the learners who attended Grade 12, those who wrote the NSC exam, those who fulfilled the undergraduate NSC entry prerequisite and actual enrolment patterns offer a number of observable characteristics of the transition to post-secondary schooling in South Africa. The graph shows that the steady increase in bachelor and diploma passes were not accompanied by a significant surge in first-time undergraduate enrolment at public higher education institutions.

[23] Statistics on post school education and training in South Africa, Department of Higher Education and Training 2015, 2016; 2000–2008 first-time entering undergraduate cohort studies for public higher education institutions, Department of Higher Education and Training 2016

[24] Department of Higher Education and Training

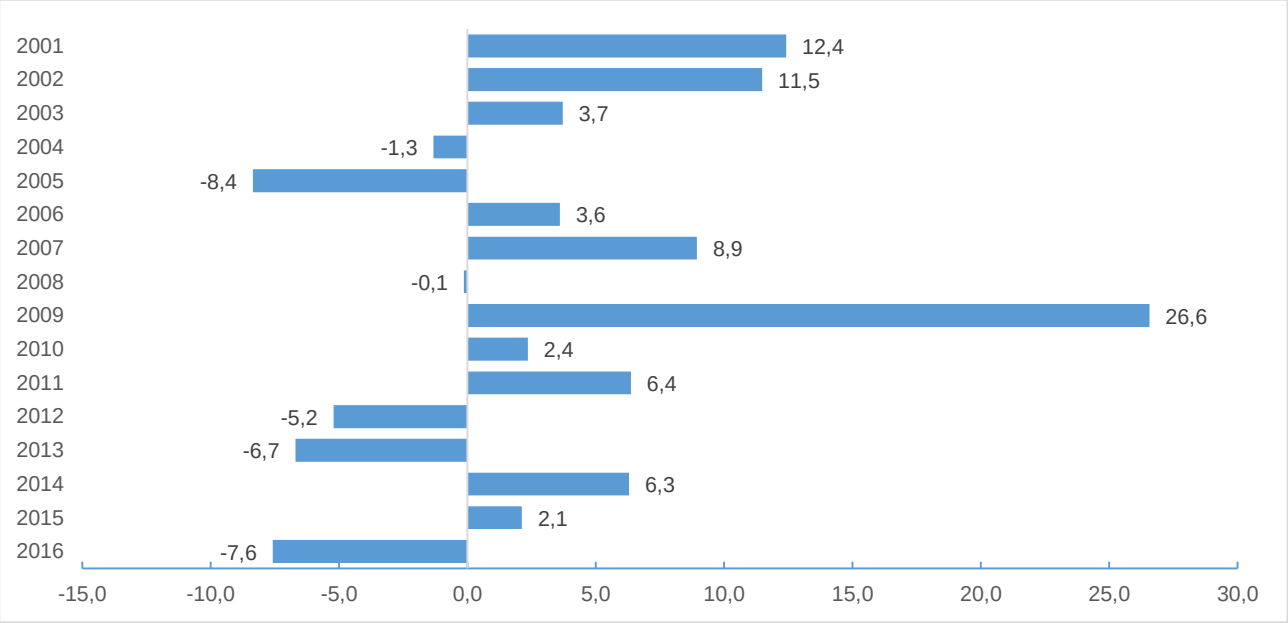
Figure 2.15: First-time students entering undergraduate degrees and diploma programmes, 2008–2016



Source: DHET and DBE, Stats SA analysis

Universities enrolled far less people compared to the percentage of individuals who wrote the NSC exam or those who obtained a bachelor or diploma pass. In 2008, less than a quarter of those who wrote the NSC exam actually made it into university and only 26% of learners who wrote the exam in 2016 were able to enrol at undergraduate level. The percentage of first-time entering students as a ratio to total bachelor and diploma passes declined over the years, with less than half of those who achieved bachelor or diploma passes being enrolled as first-time students in 2016 (46,5%). There was however a lot of fluctuations in the number of first-time entering students over the years as depicted in the figure below.

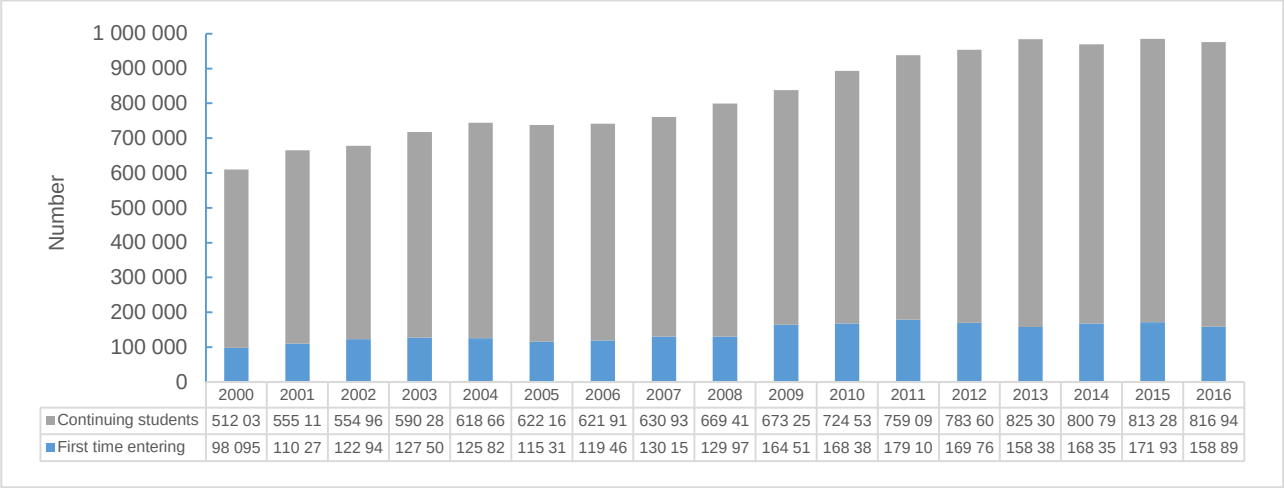
Figure 2.16: Percentage change in first-time entering undergraduate students at public universities, 2000-2016



Source: DHET, Stats SA analysis

The above graph shows that enrolment varied from year to year for first-time entering undergraduate students. First-time enrolment was 12% higher in 2001 than in 2000 and also grew by close to 12% from 2001 to 2002. In 2003, first-time enrolment did not grow at the same pace as the previous years, and there was a 1,3% decrease in enrolment between 2003 and 2004 which worsened in 2005 reducing the percentage of first-time entering students by 8,4% in 2005. The highest annual growth rate in first-time enrolment was observed between 2008 and 2009 (26,6%), which seems to have occurred to compensate for the decline observed in the previous years. Furthermore, the increase in the percentage of first-time enrolment gained in subsequent years did not translate into sustained growth beyond two consecutive years.

Figure 2.17: First-time enrolment and all other enrolment at public universities, 2000–2016

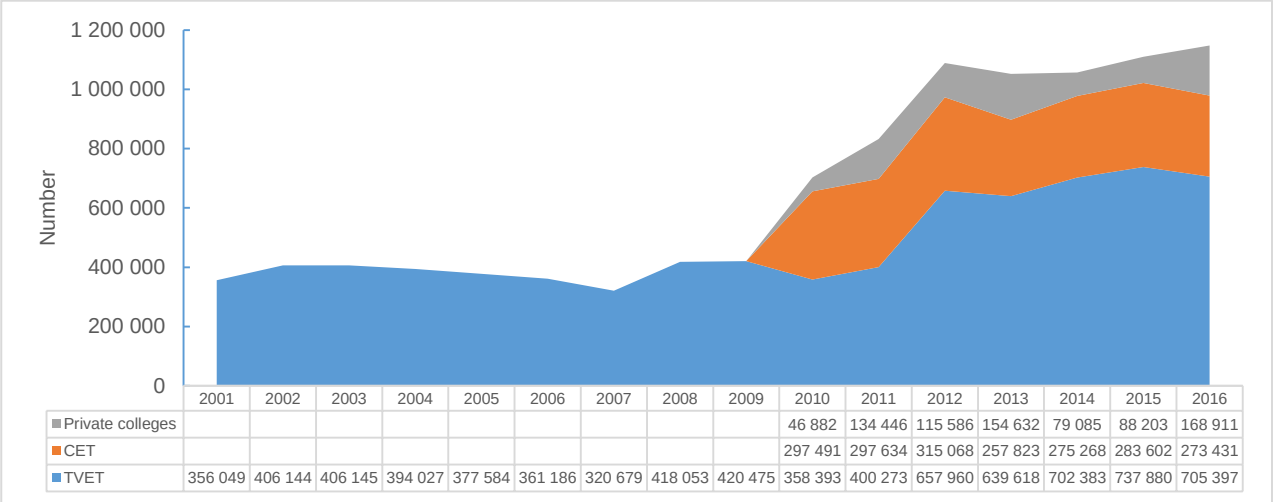


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Continuing students	512 03	555 11	554 96	590 28	618 66	622 16	621 91	630 93	669 41	673 25	724 53	759 09	783 60	825 30	800 79	813 28	816 94
First time entering	98 095	110 27	122 94	127 50	125 82	115 31	119 46	130 15	129 97	164 51	168 38	179 10	169 76	158 38	168 35	171 93	158 89

Source: DHET, Stats SA analysis
Note: Values include enrolment at technikons from 2000 to 2004

First-time enrolment at public universities increased by 82,6% between 2000 and 2011 from 98 095 to 179 105. Between 2011 and 2013, first-time enrolment declined again and started to increase again from 2014. The number of students continuing with university studies increased by 59,5% between 2000 and 2016.

Figure 2.18: Enrolment in TVET, CET and private colleges, 2001–2016



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Private colleges										46 882	134 446	115 586	154 632	79 085	88 203	168 911
CET										297 491	297 634	315 068	257 823	275 268	283 602	273 431
TVET	356 049	406 144	406 145	394 027	377 584	361 186	320 679	418 053	420 475	358 393	400 273	657 960	639 618	702 383	737 880	705 397

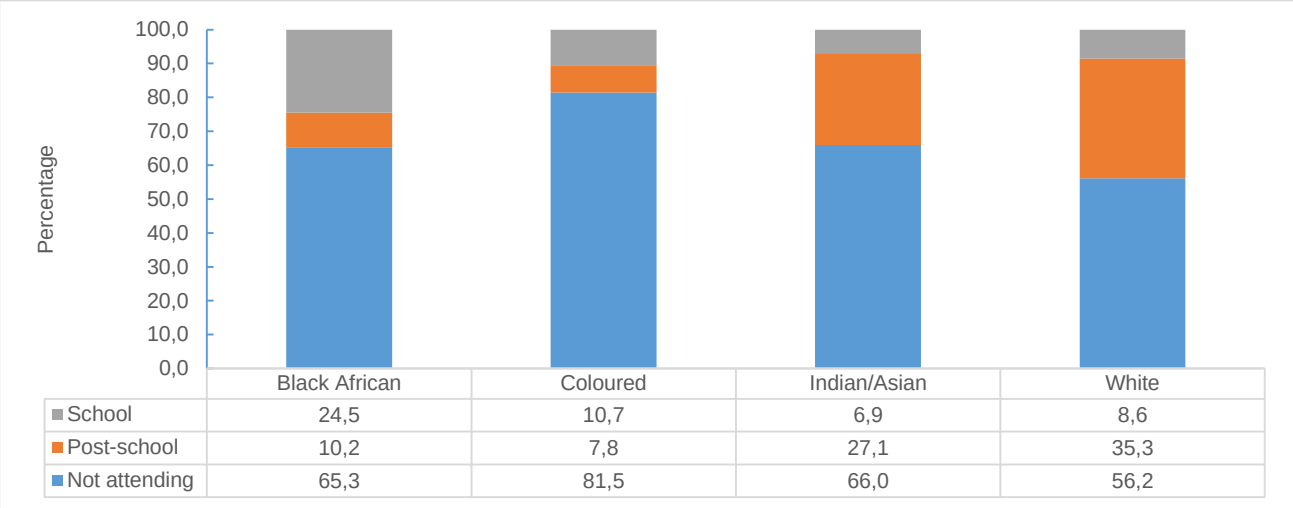
Source: DHET

TVET colleges were increasingly a good option for individuals seeking post-secondary education. Although there have been fluctuations over time in enrolment levels at TVET colleges, the enrolment at these institutions doubled between 2001 and 2016.

2.4 Attendance of educational institutions

Attendance is measured through the GHS by asking the respondent if he/she was currently attending an educational institution (Stats SA, 2018b). The purpose of using the GHS data is to analyse the level of post school transition by young individuals.

Figure 2.19: Attendance of educational institutions by individuals aged 18–24 by population group, 2017

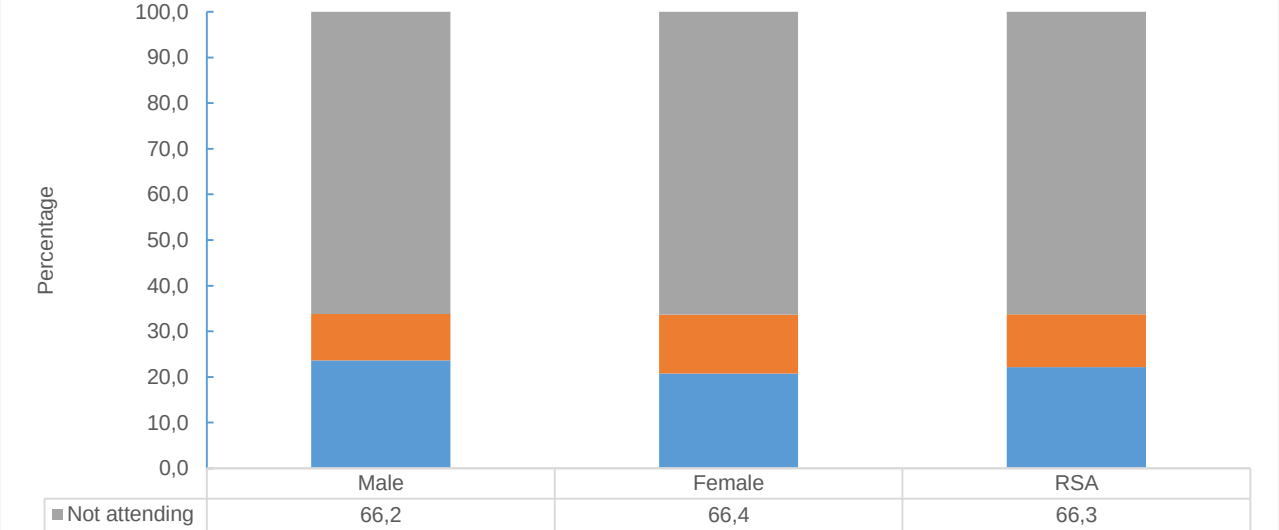


	Black African	Coloured	Indian/Asian	White
School	24,5	10,7	6,9	8,6
Post-school	10,2	7,8	27,1	35,3
Not attending	65,3	81,5	66,0	56,2

Source: GHS 2017

The above graph shows the attendance rate of educational institution among individuals aged 18–24 by population group. Whites (43,9%), black Africans (34,7%) and Indians/Asians (34,0%) were the most likely to attend educational institutions. Compared to the other population groups, a lower percentage of coloured youth were the least likely to attend educational institutions (18,5%). Among those attending educational institutions, whites (35,3%) were the most likely to attend post-school educational institutions followed by Indians/Asians (27,1%).

Figure 2.20: Attendance of educational institutions by individuals aged 18–24 by gender, 2017

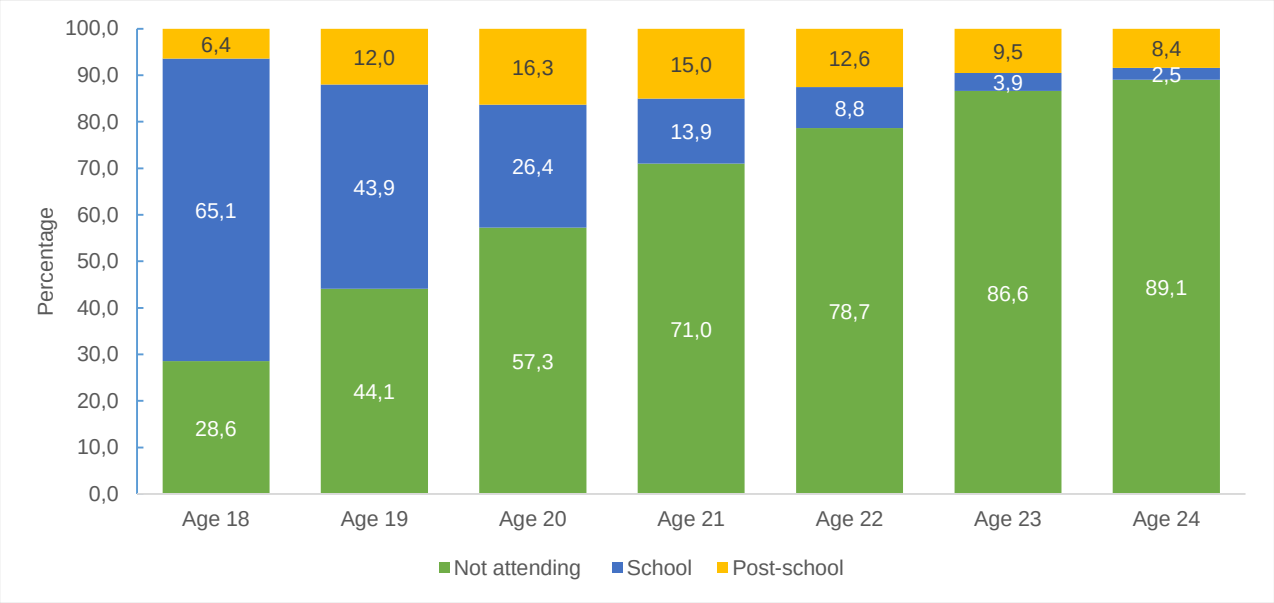


	Male	Female	RSA
Not attending	66,2	66,4	66,3
Post-school	10,2	12,9	11,6
School	23,6	20,7	22,2

Source: GHS 2017

There were no gender differentials in non-attendance of educational institutions by the youth aged 18–24. Only 33,8% of individuals aged 18–24 in both genders were attending educational institutions. However, females (12,9%) were the most likely to attend post-school educational institutions.

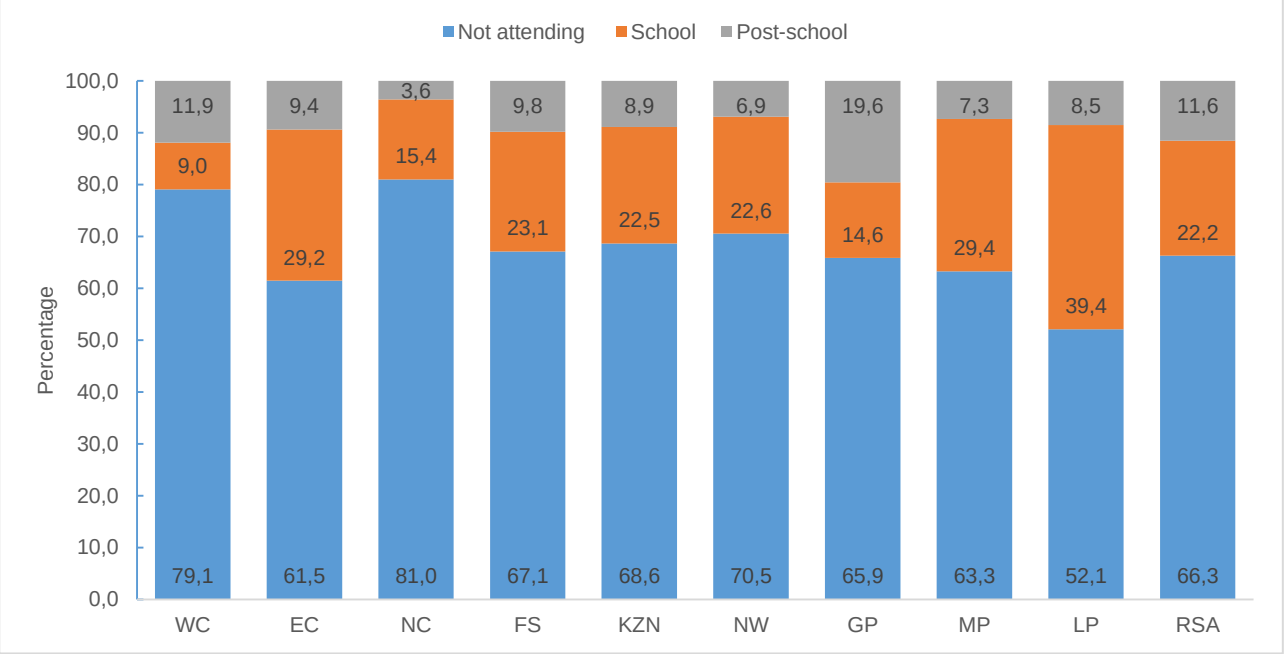
Figure 2.21: Attendance of educational institutions by individuals aged 18–24 by age, 2017



Source: GHS 2017

Attendance rates were the highest (71,5%) among those aged 18 and 19 (55,9%) as it would include individuals still at school. However, attendance rates declined with age and only 10,9% of individuals were attending an educational institution by age 24. Attendance of post-school educational institutions was the highest among youth aged 20–22.

Figure 2.22: Attendance of educational institutions by individuals aged 18–24 by province, 2017



Source: GHS 2017

Attendance rates among youth also differed by geographical location. The highest youth attendance rate was observed in Limpopo (47,9%) followed by the Eastern Cape (38,6%) and Mpumalanga (36,7%). These youth were most likely to attend secondary school. The lowest percentages of youth attending educational institutions were found in the Northern Cape (19,0%) and Western Cape (20,9%). Gauteng and Western Cape had the highest percentage of individuals attending post-school educational institutions (19,6% and 11,9% respectively).

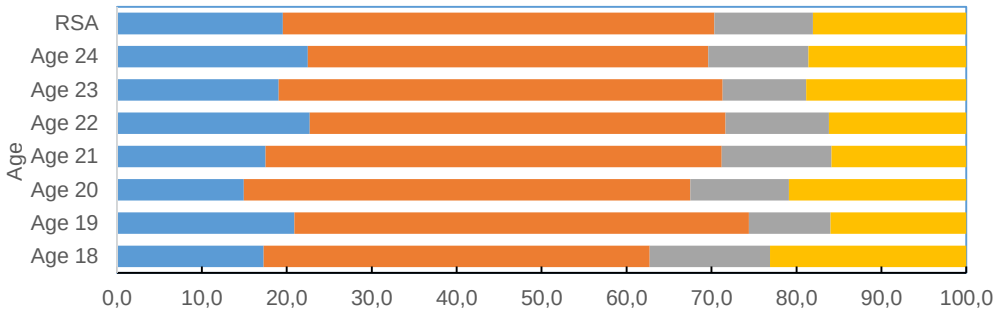
Table 2.3: Reasons for not attending educational institutions by individuals aged 18–24 by population group, 2017

Reasons for not attending any educational institution	Number/ percentage	Black African	Coloured	Indian /Asian	White	Total
Completed/Satisfied with level of education	Number	370 619	117 258	17 593	49 549	**555 019**
	Percent	15,2	43,0	43,1	53,2	**19,5**
No money for fees	Number	1 288 263	109 344	19 248	25 982	**1 442 837**
	Percent	52,9	40,1	47,1	27,9	**50,8**
Family commitment	Number	290 861	22 631	*	12 492	**329 449**
	Percent	11,9	8,3	*	13,4	**11,6**
Poor academic performance	Number	484 277	23 671	*	5 049	**513 553**
	Percent	19,9	8,7	*	5,4	**18,1**
Total	**Number**	**2 434 020**	**272 904**	**40 863**	**93 072**	**2 840 859**

Source: GHS 2017

Of the 2,8 million youth aged 18–24 who were not attending any educational institutions, half of them (1,4 million) reported that they did not attend any educational institutions because they had no money for fees. Close to 20% (555 019) did not study because they were satisfied with the level of education that they had achieved and 18% (513 553) could not study because of poor academic performance. The remaining 12% (329 449) could not study due to family commitments. Among black African youth, more than half (53%) did not study because they did not have money for fees. By contrast, only 28% of white youth reported not being able to attend educational institutions due to lack of funds. The majority of white youth (53%) reported that they were not studying because they were satisfied with their education level. In addition, 43% of the coloured and Indian/Asian youth gave similar reasons for not attending educational institutions. Among black Africans, only 15% stated that they were not studying because they were satisfied with their level of education and 20% did not study due to their poor academic performance.

Figure 2.23: Reasons for not attending educational institutions by individuals aged 18–24 by age, 2017

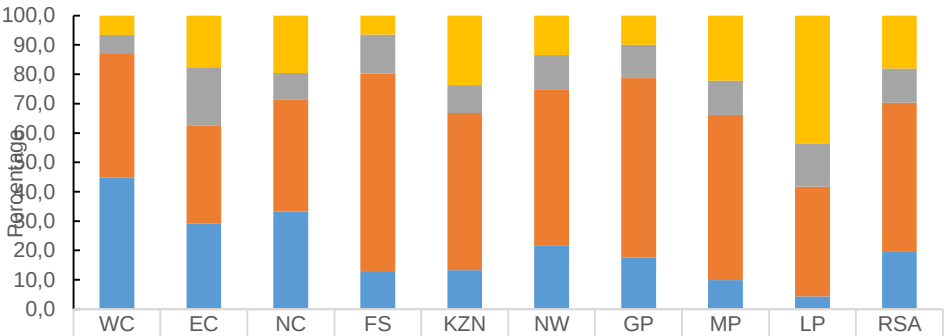


	Age 18	Age 19	Age 20	Age 21	Age 22	Age 23	Age 24	RSA
Completed/satisfied with level of education	17,3	20,9	14,9	17,5	22,7	19,1	22,5	19,5
No money for fees	45,5	53,5	52,6	53,7	48,9	52,3	47,2	50,8
Family commitment	14,2	9,6	11,6	12,9	12,2	9,8	11,8	11,6
Poor academic performance	23,1	16,0	20,9	15,9	16,2	18,8	18,6	18,1

Source: GHS 2017

For all the age groups, financial difficulty was reported as the main reason for not attending educational institutions. Among youth aged 18, 23,1% indicated that poor academic performance was their reason for not attending educational institutions.

Figure 2.24: Reasons for not attending educational institutions by individuals aged 18–24 by province, 2017

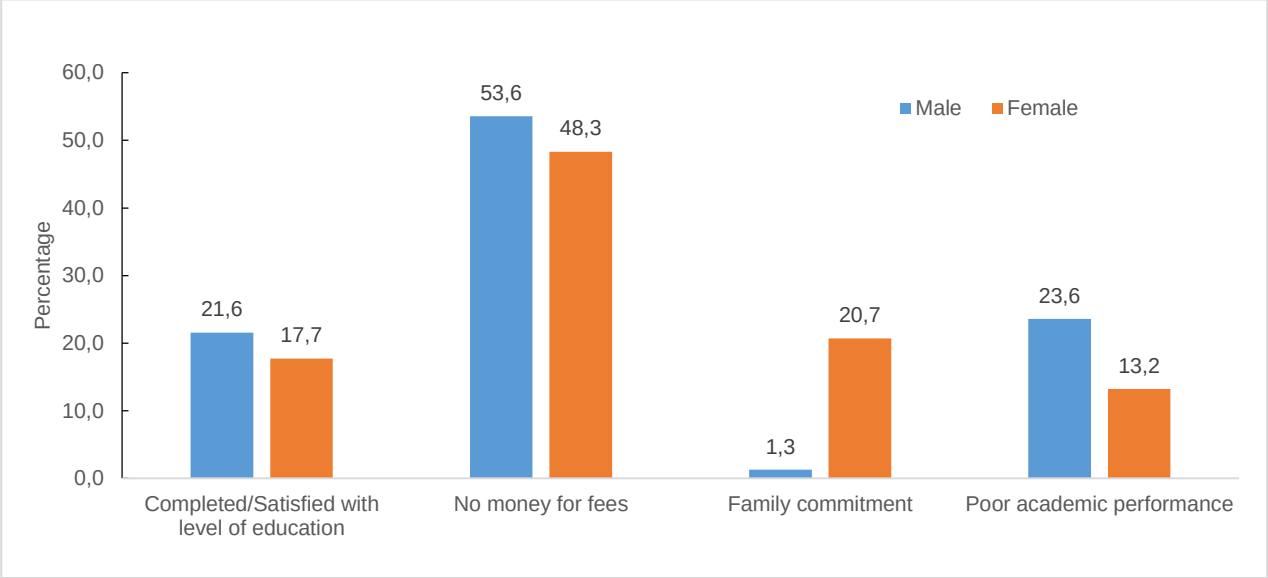


	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Poor academic performance	6,5	17,6	19,6	6,5	23,7	13,4	9,9	22,2	43,5	18,1
Family commitment	6,3	19,9	9,1	13,3	9,6	11,7	11,3	11,6	14,7	11,6
No money for fees	42,2	33,3	38,1	67,3	53,5	53,3	61,2	56,3	37,5	50,8
Completed/Satisfied with level of education	44,9	29,1	33,3	13,0	13,3	21,6	17,5	9,9	4,3	19,5

Source: GHS 2017

For youth aged 18–24 residing in Free State, KwaZulu-Natal, North West, Gauteng and Mpumalanga, the principal reason for not attending any educational institution is lack of money for school fees. In Western Cape, most youth reported that they were not studying because they were satisfied with their level of education (45%), while 42,2% in the same province indicated that they did not have money for fees. In Limpopo, most youth claimed that they did not attend any educational institutions due to poor academic performance (43,5%), while 37,5% indicated that they did not attend due to lack of finances.

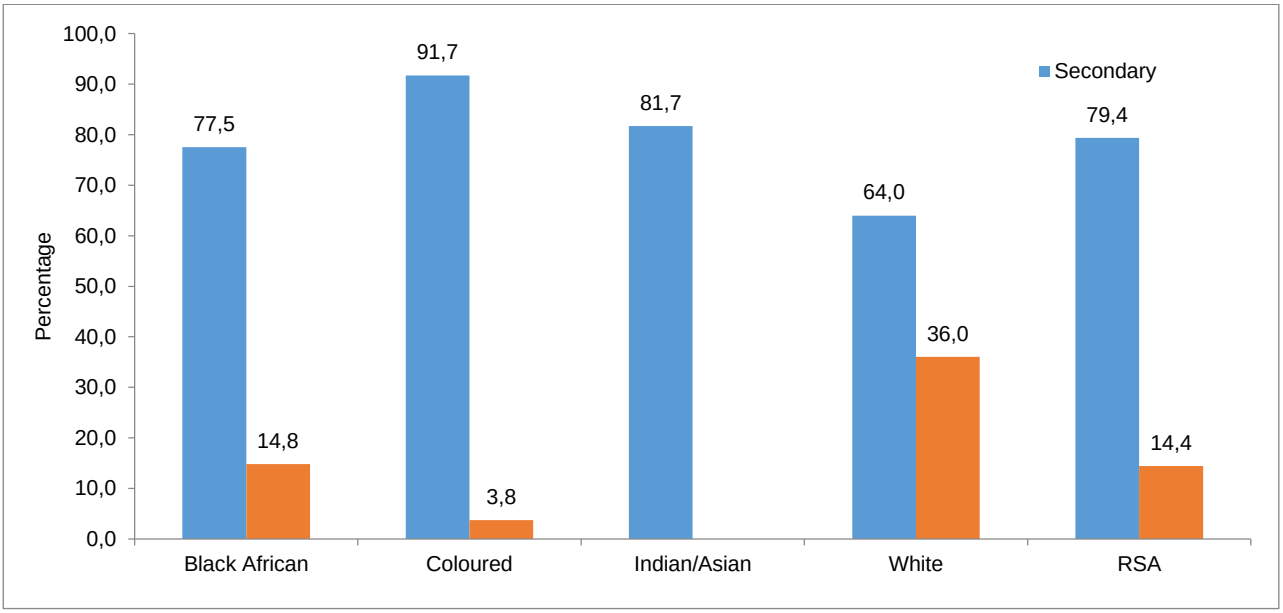
Figure 2.25: Reasons for not attending educational institutions by individuals aged 18–24 by gender, 2017



Source: GHS 2017

Reasons for not attending educational institutions differed by gender. Among male youth, 21,6% stated that they were satisfied with the level of education they had already achieved while 17,7% of females provided similar reasons. The majority of male youth were unable to study due to lack of money for fees (53,6%) in comparison to 48,3% of female youth that gave the same reason for non-attendance. Family commitment was the second main reason among female youth (20,7%) for non-attendance of educational institutions while it was the least important reason (1,3%) for male youth. However, a sizable percentage of male youth (23,6%) indicated that they were unable to study due to poor academic performance.

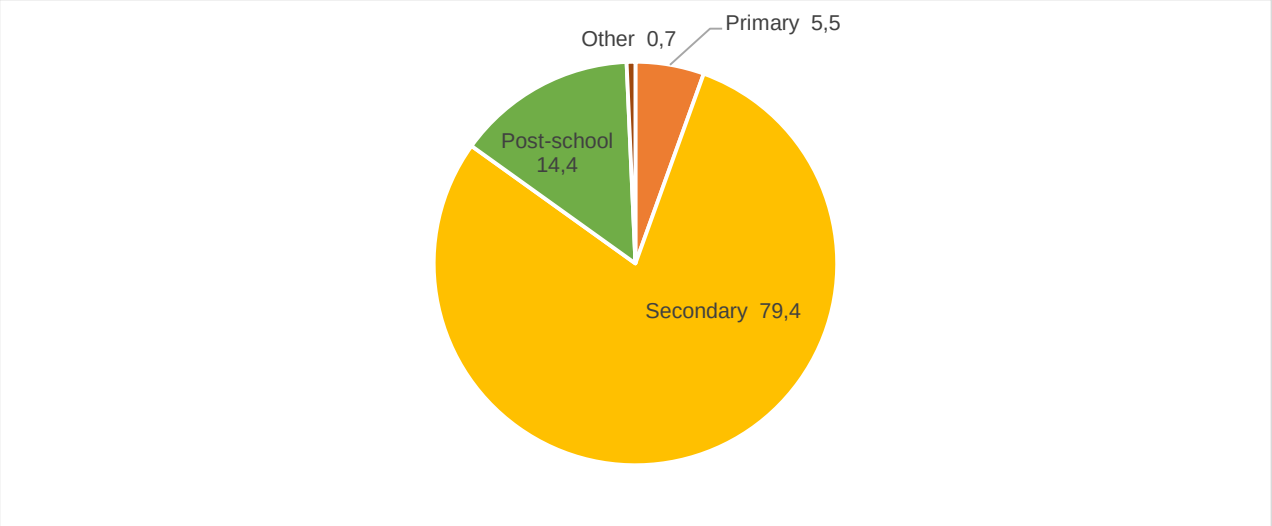
Figure 2.26: Individuals aged 18–24 who were not attending educational institutions and were satisfied with their educational attainment by their highest level of education and population group, 2017



Source: GHS 2017
Note: Figures too low for post-school education for Indians/Asians to include in the analysis.

Most of the youth who were not attending educational institutions and who claimed that they were satisfied with their level of education only completed secondary education. This constituted 77,5% of black Africans, 91,7% of coloureds, 81,7% of Indians/Asians and 64,0% of whites. Furthermore, among youth who were satisfied with the level of education they had already achieved, whites had the highest proportion who completed tertiary level qualifications (36,0%) whereas only 14,8% of black Africans and 3,8% of coloureds had similar qualifications.

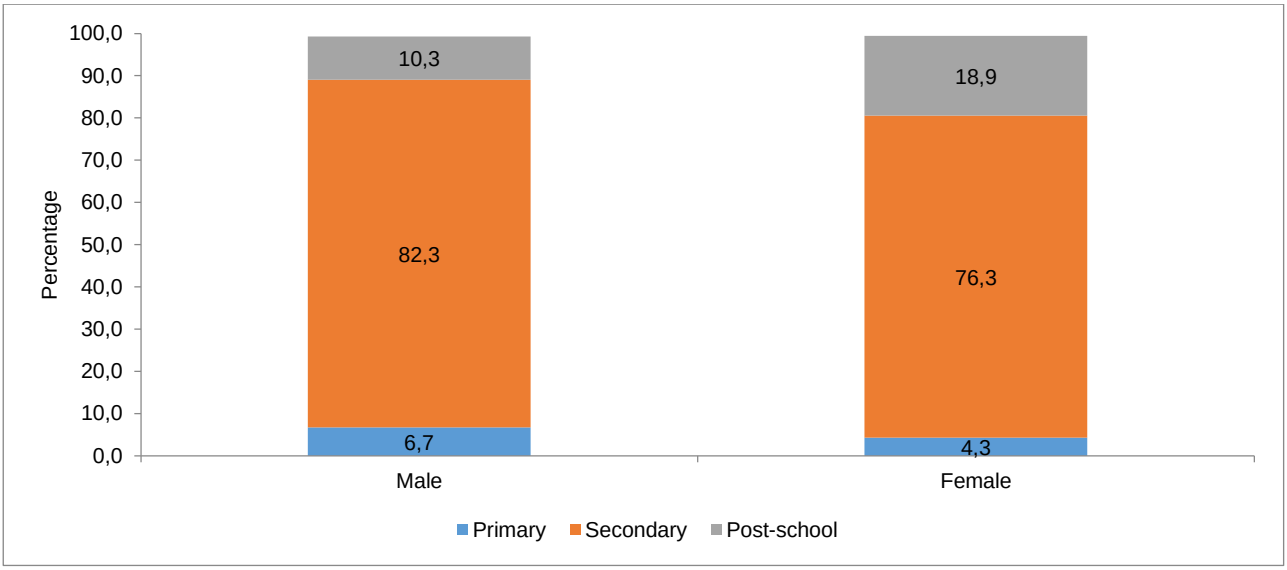
Figure 2.27: Individuals aged 18–24 who were not attending educational institutions and were satisfied with their educational attainment by their highest level of education, 2017



Source: GHS 2017

Youth who were not attending any educational institution, but had completed secondary education only and claimed they were satisfied with their level of education constituted 79,4% nationally while 14,4% had achieved tertiary qualifications. The rest (5,5%) only completed primary schooling or some other education.

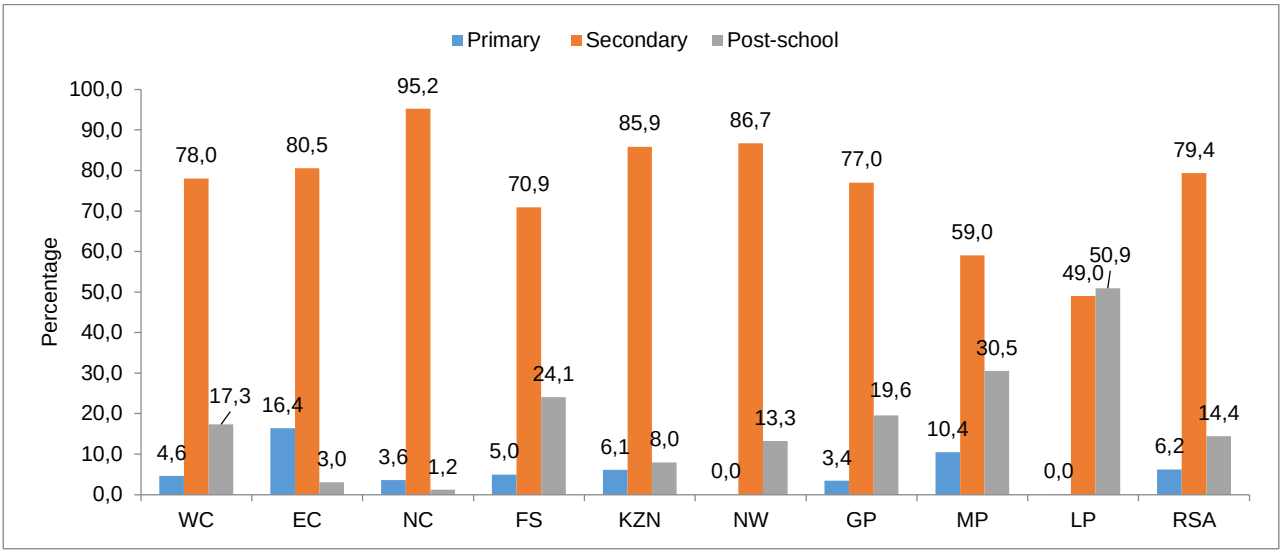
Figure 2.28: Individuals aged 18–24 who were not attending educational institutions and were satisfied with their educational attainment by their highest level of education and gender, 2017



Source: GHS 2017

The breakdown by gender on educational achievement by youth aged 18–24 who were satisfied with their educational level revealed that among males, 10,3% completed post-school education while 18,9% of females completed similar qualifications. Furthermore, more than eight out of ten, (82,3%) male youth and 76,3% of female youth had completed secondary schooling. The remaining 6,7% of male youth and 4,3% of female youth had only completed primary education.

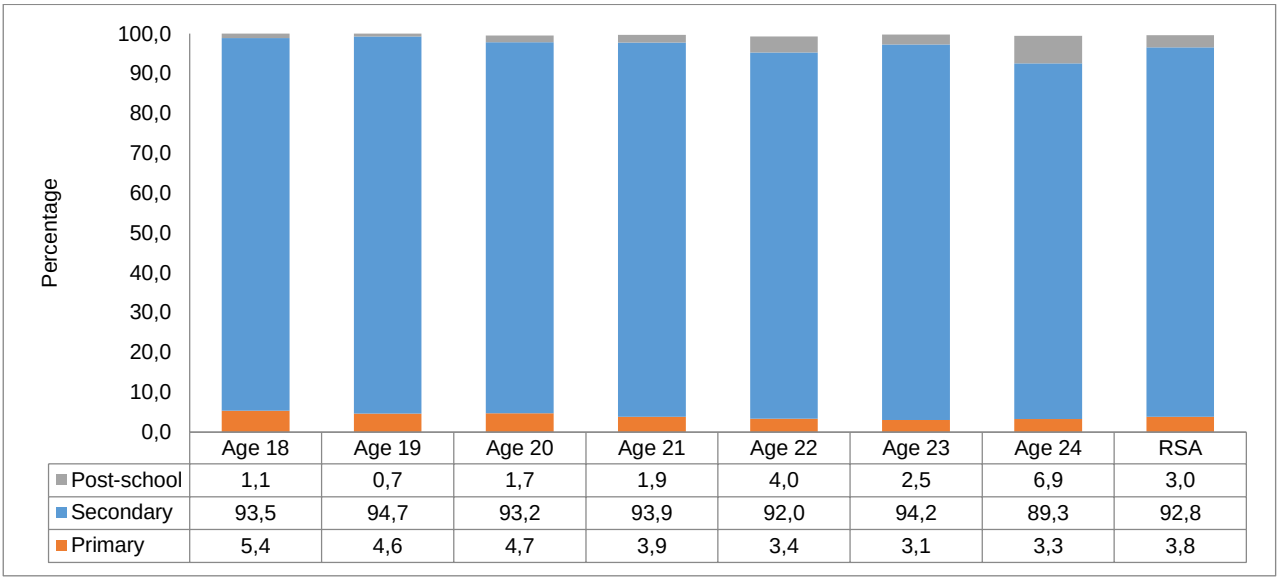
Figure 2.29: Individuals aged 18–24 who were not attending educational institutions and were satisfied with their educational attainment by highest level of education and province, 2017



Source: GHS 2017

Limpopo, Mpumalanga and Free State were the three provinces where the highest proportion of youth who completed tertiary qualifications resided (50,9%, 30,5% and 24,1% respectively). Eastern Cape, Mpumalanga and KwaZulu-Natal were the three provinces where the highest proportion of youth who only completed primary education resided (16,4%, 10,4% and 6,1% respectively).

Figure 2.30: Individuals aged 18–24 who were not attending educational institutions and had no money for fees to undertake further studies by highest level of education and age, 2017



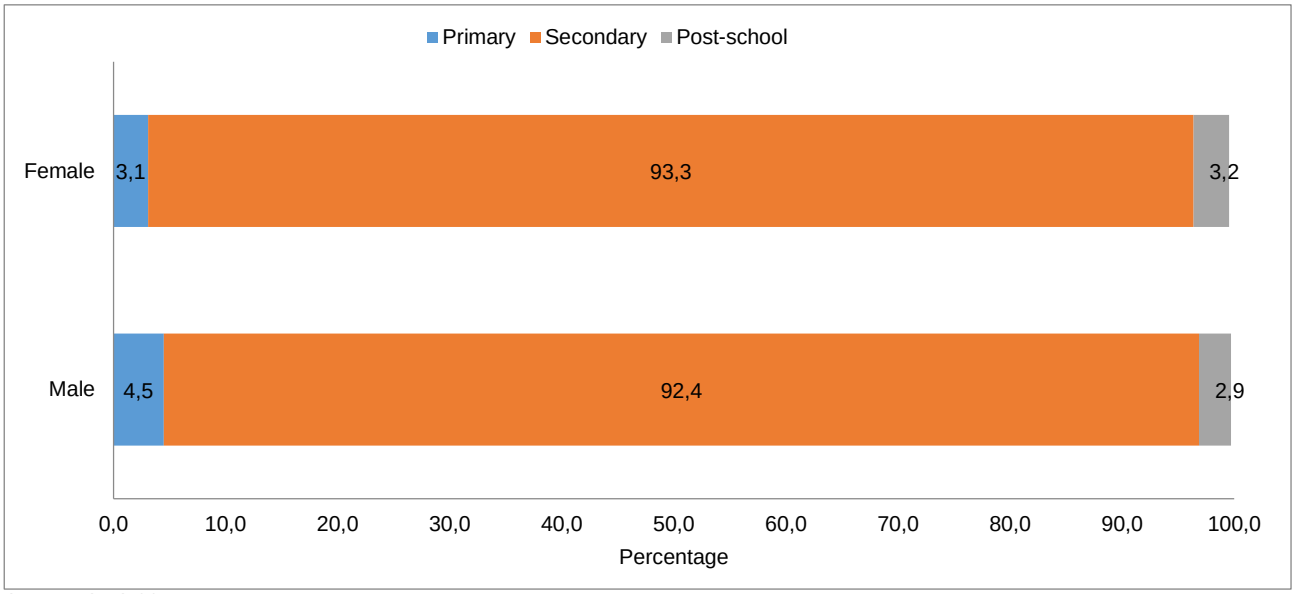
	Age 18	Age 19	Age 20	Age 21	Age 22	Age 23	Age 24	RSA
Post-school	1,1	0,7	1,7	1,9	4,0	2,5	6,9	3,0
Secondary	93,5	94,7	93,2	93,9	92,0	94,2	89,3	92,8
Primary	5,4	4,6	4,7	3,9	3,4	3,1	3,3	3,8

Source: GHS 2017

Note: Percentages do not necessarily add up to 100 due to the exclusion of “other” from the analysis

Most of the youth who were not attending educational institutions and had no money to undertake further studies only achieved secondary education. These constitute nationally close to 93% of the youth. The lowest proportion of such individuals were found amongst those aged 24 (89,3%). Furthermore, nationally, close to four percent had primary education only and three percent achieved post-school education.

Figure 2.31: Individuals aged 18–24 who were not attending educational institutions and had no money for fees to undertake further studies by highest level of education and gender, 2017



Source: GHS 2017

The majority of youth aged 18–24 reached their ceiling in education after completion of secondary schooling due to lack of finances. Close to three percent in both genders had completed post-school qualifications whereas five percent of males and three percent of females only achieved primary schooling.

2.5 Summary and conclusion

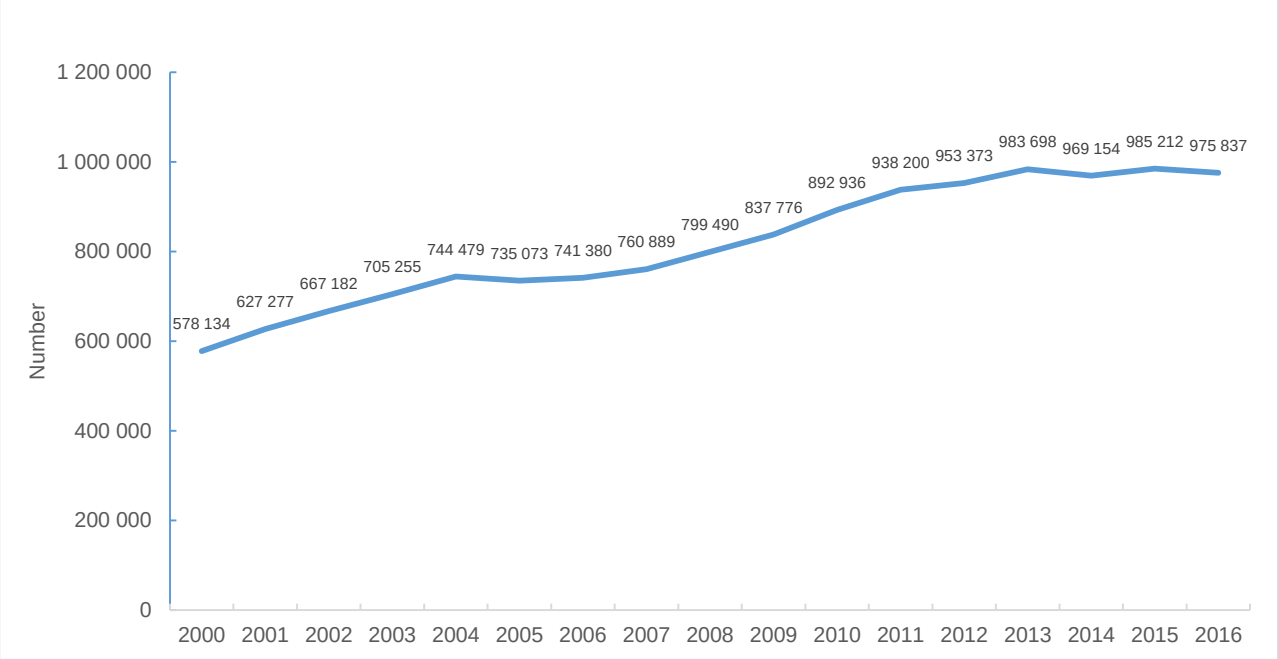
This chapter shows that transition within the FET phase and from school to post-school education increased over the years, but remains low with almost half of the learners enrolled in Grade 10 not progressing to Grade 12. In 2017, eight out of ten learners who enrolled in Grade 11 were enrolled in Grade 10 during 2016. Similarly, seven out of ten learners in Grade 11 had progressed to Grade 12. While the Western Cape had by far the highest level of progression of learners from Grade 11 to Grade 12 in 2017 (82%), Eastern Cape and Northern Cape were the provinces with the lowest levels of progression. While NSC pass rates increased from 58% in 1994 to 75,1% in 2017 with steady improvement in the bachelors and diploma pass rates since 2008, this was not followed by a substantial increase in enrolment of first-time entering students at universities. However, participation at TVET colleges, CET and private colleges has increased. Participation in education by youth aged 18–24 was low with 66,3% among this group not attending any educational institutions. The main reason given by youth for non-attendance of educational institutions was lack of finances to fund their tuition. Among youth aged 18–24, not attending education institutions, but who claimed being satisfied with the levels they have achieved, 79,4% had completed secondary education while only 14,4% had achieved tertiary education.

Chapter 3: Participation in post-school education and skills development

3.1 Students' participation in universities and technikons

This chapter provides information on the main features and trends related to access to post-secondary education in South Africa. The post school education sector consists of private and public universities and colleges. During the past two decades there has been growth in participation at post-school institutions mainly due to expansion in government funding of the sector. However, the country still struggles to meet the rising educational needs of the youth as well as the market demand for skills as discussed in the previous chapter. This gives rise to issues of equity in access to post-school education, as students from poor backgrounds generally struggle to access higher education.

Figure 3.1: Trends in enrolment at universities and technikons, 2000–2016



Source: DHET (HEMIS)

Enrolment at universities and technikons increased steadily over the past sixteen years. In 2000, there were 578 134 registered students, and by 2016 the number almost doubled. The percentage of enrolled students increased by 38,2% between 2000 and 2008 and by 22,0% between 2008 and 2016.

Table 3.1: Enrolment at universities and technikons by CESM categories and gender, 2000

	University					Technikon					Total	
	Male		Female			Male		Female				
CESM categories	Number	%	Number	%	Total	Number	%	Number	%	Total	Number	%
Agriculture and renewal resources	2 405	60,0	1 603	40,0	**4 008**	3 338	64,2	1 858	35,8	**5 196**	9 204	1,6
Architecture and the built environment	2 032	64,6	1 113	35,4	**3 145**	4 209	73,7	1 504	26,3	**5 713**	8 858	1,5
Visual and performing arts	1 378	32,0	2 922	68,0	**4 300**	1 239	44,4	1 550	55,6	**2 789**	7 089	1,2
Business, economics and management studies	40 277	53,6	34 826	46,4	**75 103**	29 958	45,8	35 441	54,2	**65 399**	140 502	24,4
Communication, journalism and related studies	1 757	29,9	4 129	70,1	**5 886**	1 431	34,6	2 703	65,4	**4 134**	10 020	1,7
Computer and information sciences	7 834	61,4	4 916	38,6	**12 750**	11 258	55,1	9 161	44,9	**20 419**	33 169	5,8
Education	19 459	29,3	47 056	70,7	**66 515**	5 998	50,8	5 819	49,2	**11 817**	78 332	13,6
Engineering and engineering technology	8 972	84,9	1 597	15,1	**10 569**	19 824	80,9	4 687	19,1	**24 511**	35 080	6,1
Health care and health sciences	10 682	33,6	21 070	66,4	**31 752**	1 691	31,8	3 624	68,2	**5 315**	37 067	6,4
Home Economics	62	5,1	1 151	94,9	**1 213**	477	16,8	2 363	83,2	**2 840**	4 053	0,7
Industrial Arts, Trades and technology	93	53,8	80	46,2	**173**	561	41	808	59,0	**1 369**	1 542	0,3
Languages, linguistics and literature	5 860	32,4	12 228	67,6	**18 088**	2 852	51,9	2 638	48,1	**5 490**	23 578	4,1
Law	19 732	55,4	15 885	44,6	**35 617**	4 604	53,2	4 054	46,8	**8 658**	44 275	7,7
Libraries and museums	973	32,1	2 055	67,9	**3 028**	192	25,4	564	74,6	**756**	3 784	0,7
Life science and physical sciences	7 236	48,7	7 628	51,3	**14 864**	2 047	41,1	2 937	58,9	**4 984**	19 848	3,4
Mathematical sciences	6 879	59,6	4 669	40,4	**11 548**	2 034	77,2	602	22,8	**2 636**	14 184	2,5
Military sciences	2	100,0	0	0,0	**2**	0	0	0	0,0	**0**	2	0,0
Philosophy, religion and theology	3 466	54,7	2 876	45,3	**6 342**	9	29	22	71,0	**31**	6 373	1,1
Physical education, health education and leisure	799	47,3	889	52,7	**1 688**	405	63,1	237	36,9	**642**	2 330	0,4
Psychology	5 960	27,4	15 831	72,6	**21 791**	449	42,6	605	57,4	**1 054**	22 845	4,0
Public management and social services	3 442	37,3	5 789	62,7	**9 231**	12 720	61,2	8 070	38,8	**20 790**	30 021	5,2
Social sciences and social studies	16 261	42,8	21 776	57,2	**38 037**	2 519	42,9	3 356	57,1	**5 875**	43 912	7,6
Total	**165 559**	**44,1**	**210 088**	**55,9**	**375 647**	**107 816**	**53,8**	**92 604**	**46,2**	**200 420**	**576 067**	**100,0**

Source: DHET (HEMIS)
Note: Unspecified gender was excluded from the analysis

Table 3.1 above shows the total number of students enrolled at universities and technikons in 2000 according to the South African Classification of Educational Subject Matter (CESM) categories and by gender. Of the total 576 067 students enrolled at universities and technikons, the majority of students in both genders were enrolled for business, commerce and management sciences. These subjects were followed by education and law, which in total accounted for over one-fifth (21,3%) of all the CESM categories in the table. The enrolments in the sciences, technology, engineering and mathematics (STEM) fields constitute close to 27% of all enrolments; business, economics and management studies 24,4% of all enrolments; and education 13,6% of all enrolments.

According to Table 3.1, male students in universities were more likely to study business, commerce and management sciences (53,6%) compared to their female counterparts (46,6%).Seven in ten of all female students (70,7%) studied education compared to 29,3% of male students. At technikons however, a higher percentage of females (54,2%) were enrolled in business, commerce and management sciences as compared to 24,4% male students. The only other notable difference between male and female students was in the field of engineering, where 6,1% of females as compared to 19,1% males were enrolled in this programme.

Table 3.2: Enrolment at universities by CESM categories and gender, 2016

CESM categories	Male		Female	
	Number	%	Number	%
Agriculture, agricultural operations and related sciences	9 563	2,3	9 968	1,8
Architecture and the built environment	7 557	1,8	4 961	0,9
Visual and performing arts	5 660	1,4	8 379	1,5
Business, economics and management studies	117 001	28,6	147 931	26,1
Communication, journalism and related studies	6 230	1,5	13 772	2,4
Computer and information sciences	26 222	6,4	14 935	2,6
Education	45 434	11,1	131 550	23,2
Engineering	61 160	15,0	22 067	3,9
Health professions and related clinical sciences	18 083	4,4	42 313	7,5
Family ecology and consumer sciences	876	0,2	2 650	0,5
Languages, linguistics and literature	6 984	1,7	14 325	2,5
Law	27 593	6,8	31 646	5,6
Life sciences	11 632	2,8	18 710	3,3
Physical sciences	15 000	3,7	15 486	2,7
Mathematics and statistics	8 757	2,1	5 431	1,0
Military sciences	5	0,0	1	0,0
Philosophy, religion and theology	3 599	0,9	2 965	0,5
Psychology	6 651	1,6	23 793	4,2
Public management and services	15 418	3,8	18 506	3,3
Social sciences	15 273	3,7	37 732	6,7
Total	**408 697**	**100,0**	**567 119**	**100,0**

Source: DHET (HEMIS)
Note: Unspecified gender was excluded from the analysis;

In 2016, a similar pattern[25] was observed as in 2000, where there were more female students (567 119) than male students (408 697); that constituted 58% female participants. Furthermore, education combined had 176 984 students which constituted 18,1% of the total enrolled students. The STEM fields of study represented 29,9% of all enrolment, amounting to 2,6 percentage point increase from 2000. The total percentage enrolment in education had also increased to 18,1% in 2016 while business, economics and management studies increased to 27,1%. The most popular field of study for female students was business, economics and management studies (26,1%), followed by education (23,2%), health professions and related clinical sciences (7,5%). A large number of male students (28,6%) studied business, economics and management studies followed by about 15,0% in engineering while 11,1% were registered for studies in education. Military sciences, philosophy, religion, theology, family ecology and consumer sciences had the lowest number of enrolments for both males and females.

[25] Separate data collection for technikons was no more conducted since the reform of the sector where some technikons were merged to create universities of technology.

Table 3.3: Enrolment by population group and CESM categories for university and technikons, 2000

CESM category	University				Technikon			
	Black African	Coloured	Indian/Asian	White	Black African	Coloured	Indian/Asian	White
Agricultural. and renewable resources	62,6	1,1	0,8	35,5	57,2	2,4	0,9	39,5
Architecture and environmental design	30,3	3,9	6,4	59,4	58,3	7,2	5,0	29,5
Arts, visual and performing	25,0	5,3	2,6	67,1	32,8	3,6	3,1	60,5
Business, commerce and management sciences	36,4	5,8	13,7	44,1	76,7	6,4	2,8	14,2
Communication	58,9	2,7	5,2	33,3	69,5	5,8	4,1	20,6
Computer science and data processing	40,6	5,1	12,0	42,4	65,6	7,6	7,5	19,4
Education	88,1	2,1	1,8	8,1	96,4	1,5	0,4	1,8
Engineering and engineering technology	26,0	3,1	13,3	57,6	68,8	5,1	6,6	19,4
Health care and health sciences	43,6	5,2	13,5	37,7	47,2	7,5	10,7	34,6
Home economics	59,9	2,1	0,7	37,3	57,1	5,8	5,8	31,3
Industrial arts, trades and Technology	8,5	5,8	1,5	84,2	32,4	9,7	6,7	51,2
Language, linguistics, and literature	55,8	6,4	4,6	33,2	76,8	7,9	3,4	11,9
Law	45,2	6,7	9,6	38,6	77,5	7,8	2,9	11,8
Libraries and museums	53,1	3,9	4,4	38,5	77,3	5,9	7,5	9,3
Life sciences and physical sciences	40,9	6,0	8,4	44,7	74,1	7,3	7,4	11,1
Mathematical sciences	46,5	3,3	8,8	41,4	69,4	7,3	4,3	19,0
Military sciences	45,5	0,0	0,0	54,5	0,0	0,0	0,0	0,0
Philosophy, religion and theology	38,4	7,0	5,6	49,0	89,0	5,3	0,8	4,8
Physical education, health education and leisure	34,9	3,0	4,3	57,8	38,0	4,1	1,1	56,9
Psychology	44,5	5,7	7,3	42,5	75,8	8,2	2,7	13,2
Public administration and social services	77,3	6,4	3,2	13,1	80,2	7,6	3,0	9,2
Social sciences and social Studies	56,2	5,1	8,1	30,7	76,8	5,8	2,9	14,5
Total	**193 318**	**17 969**	**31 265**	**128 650**	**145 738**	**12 493**	**8 200**	**33 962**
	52,1	**4,8**	**8,4**	**34,7**	**72,7**	**6,2**	**4,1**	**16,9**

Source: DHET (HEMIS)
Note: *Unspecified population group was excluded from the analysis

According to Table 3.3 on tertiary enrolment in 2000, black African students had the highest number of enrolment at universities (193 318) and technikons (145 738) consisting of 52,1% of overall university enrolments and 72,7% of overall technikon enrolments. The number of white university students was 128 650 which consisted of 34,7% of overall university enrolments, while technikons enrolled 33 962 white students which represented of 16,9% of all students. The coloured population group had the lowest number of enrolments at university (17 969) compared to the other population groups. The breakdown of subjects by population group revealed a number of patterns. For all of population groups and both types of institutions, business, commerce and management sciences were the subjects where most students were enrolled. However, whites had the highest percentage of students enrolled in these subjects at university (44,1%) while black Africans had the highest percentage of students enrolled in these subjects at technikons (76,7%). The second most popular field of study at university was education where 88,1% of the black Africans students were enrolled. The highest percentage among students enrolled in this field at technikons were also black Africans (96,4%). Life sciences, physical sciences and engineering were dominated by whites at university and by black Africans at technikons.

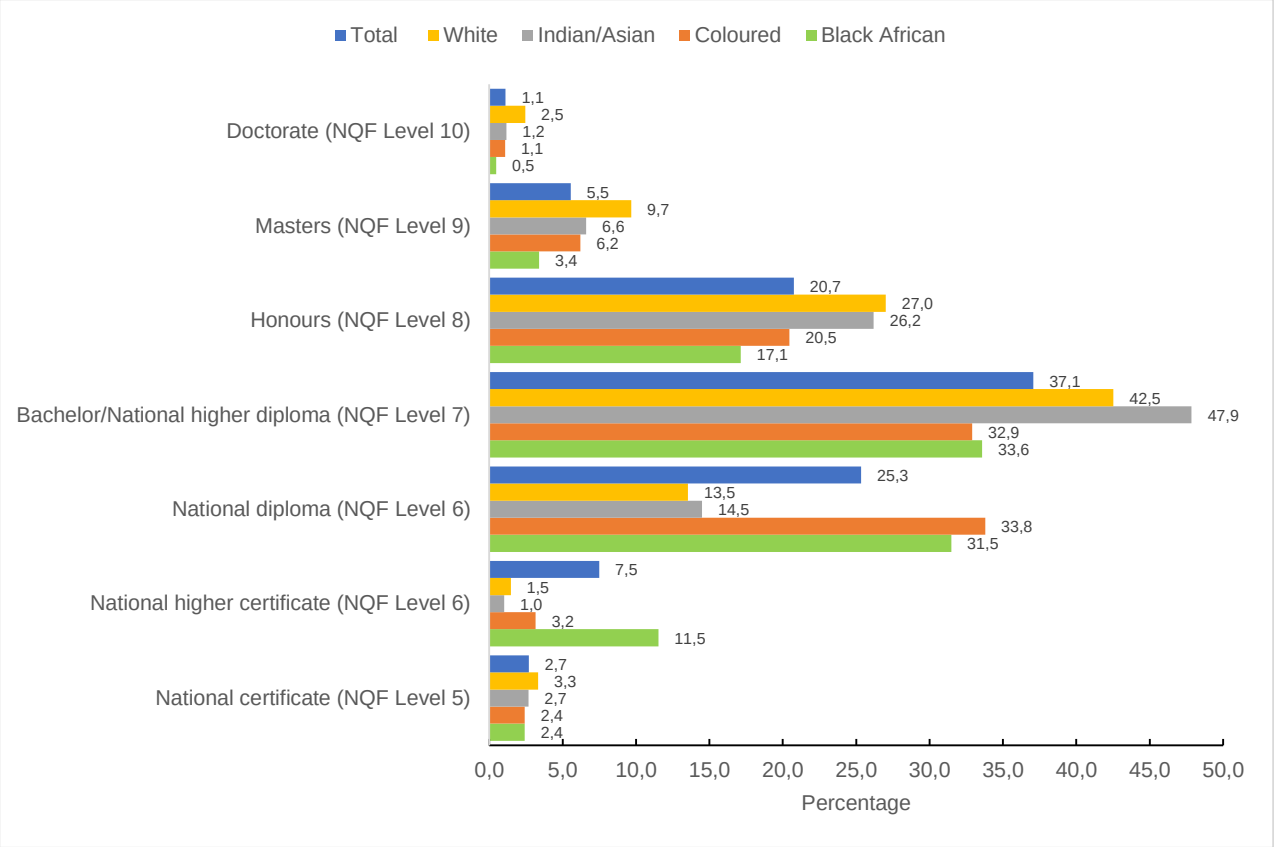
Table 3.4: Enrolment by population group and CESM categories for universities, 2016

CESM category	Black African		Coloured		Indian/Asian		White		Total
	Number	%	Number	%	Number	%	Number	%	
Agriculture, agricultural operations and related sciences	15 227	78,0	477	2,4	225	1,2	3 584	18,4	**19 512**
Architecture and the built environment	7 823	63,0	722	5,8	846	6,8	3 022	24,3	**12 413**
Visual and performing arts	7 853	57,1	1 268	9,2	464	3,4	4 170	30,3	**13 755**
Business, economics and management studies	192 312	73,3	15 526	5,9	16 626	6,3	37 947	14,5	**262 411**
Communication, journalism and related studies	15 886	79,8	1 527	7,7	514	2,6	1 976	9,9	**19 902**
Computer and information sciences	30 370	74,4	2 597	6,4	2 174	5,3	5 682	13,9	**40 823**
Education	135 463	76,7	10 890	6,2	6 678	3,8	23 487	13,3	**176 518**
Engineering	58 948	71,7	3 412	4,1	5 007	6,1	14 856	18,1	**82 222**
Health professions and related clinical sciences	34 931	58,9	5 036	8,5	5 616	9,5	13 766	23,2	**59 350**
Family ecology and consumer sciences	2 386	67,7	160	4,5	144	4,1	832	23,6	**3 522**
Languages, linguistics and literature	14 017	66,5	2 432	11,5	787	3,7	3 850	18,3	**21 086**
Law	40 505	69,1	4 514	7,7	3 708	6,3	9 900	16,9	**58 628**
Life sciences	18 473	61,7	2 132	7,1	1 986	6,6	7 370	24,6	**29 961**
Physical sciences	22 937	76,1	1 556	5,2	1 324	4,4	4 330	14,4	**30 148**
Mathematics and statistics	10 527	74,8	780	5,5	661	4,7	2 101	14,9	**14 068**
Military sciences	6	100,0	0	0,0	0	0,0	0	0,0	**6**
Philosophy, religion and theology	3 355	52,1	877	13,6	245	3,8	1 967	30,5	**6 444**
Psychology	17 519	58,1	2 824	9,4	1 827	6,1	7 994	26,5	**30 165**
Public management and services	30 045	88,6	1 730	5,1	655	1,9	1 463	4,3	**33 893**
Social sciences	42 890	83,2	3 501	6,8	964	1,9	4 191	8,1	**51 546**
Total	**701 474**	72,6	**61 960**	6,4	**50 450**	5,2	**152 487**	15,8	**966 371**

Source: DHET (HEMIS)
Note: *Unspecified population group was excluded from the analysis

Although the number of students enrolled at institutions of higher learning grew marginally from 2000 to 2008 for all population groups, substantial increases in enrolments at universities were observed from 2002 until 2016. Accordingly, enrolment for black Africans grew from 339 056 in 2000 to 701 474 in 2016 (106,9%); enrolment for coloureds grew from 30 462 in 2000 to 61 960 in 2016 (103,4%); and for Indians/Asians grew from 39 465 in 2000 to 50 450 in 2016 (27,8%). However for whites, there was a decline of 6,2% from 162 612 in 2000 to 152 487. During the same period, major growth by fields of studies were also observed within fields such as business, economics and management studies and education. These were also the top two major fields of study for all population groups. Engineering proportionally attracted the third most students among black Africans and whites compared to the rest of the population groups, while the same was true for coloureds and Indian/Asians for the health profession.

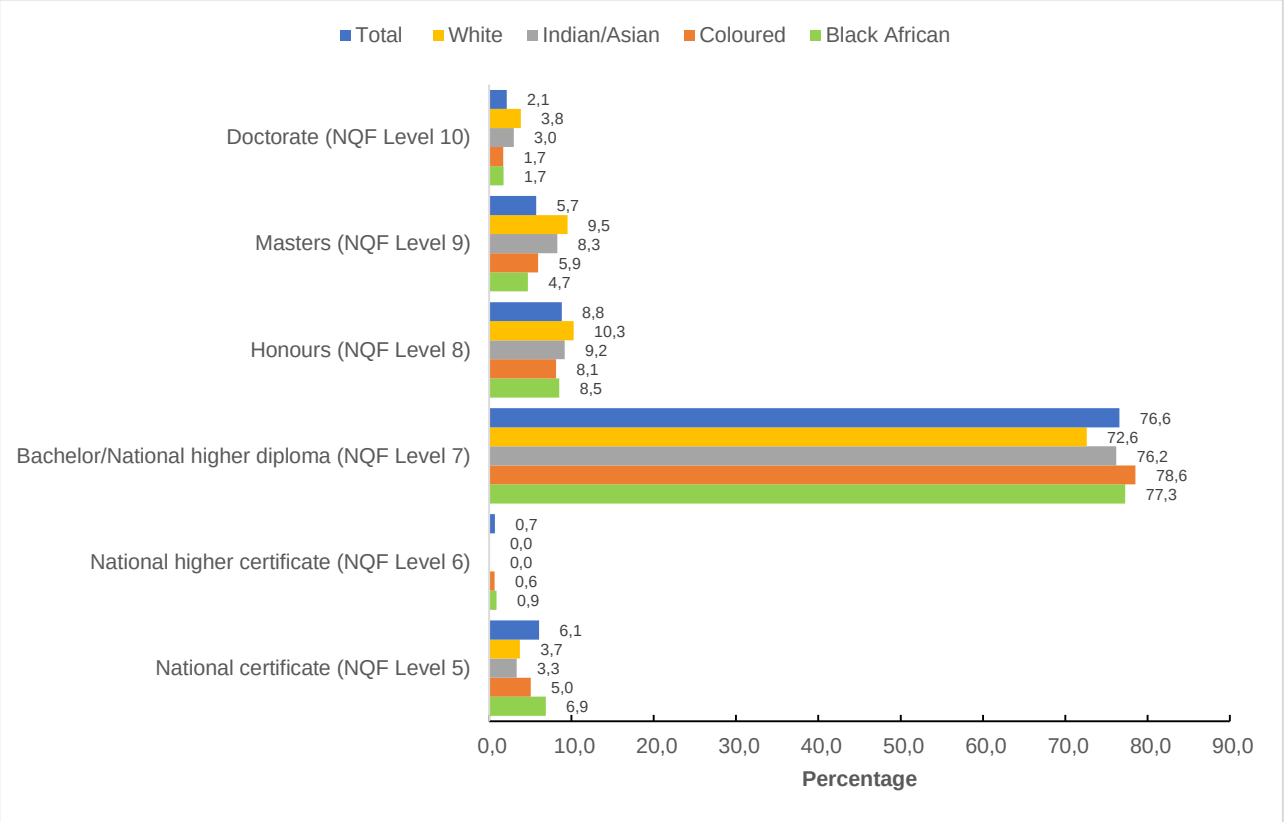
Figure 3.2: Enrolment by population group and qualification categories for universities and technikons, 2000



Source: DHET (HEMIS)
Note: Unspecified population group was excluded from the analysis

Figure 3.2 and 3.3 respectively show enrolment by population group and qualification categories for universities and technikons in 2000 and 2016. Large disparities in the enrolment of students for higher qualification types was notable across the population groups of students enrolled by qualification type in 2000. Whites were more likely than other population groups to be enrolled in masters (9,7%) and doctorate (2,5%) programmes. Higher percentage of enrolments were found for black Africans and coloureds for national higher certificates (black Africans (11,5%) and coloureds (3,2%)). Enrolment for a national diploma was 31,5% for black Africans and 33,8% for coloureds.

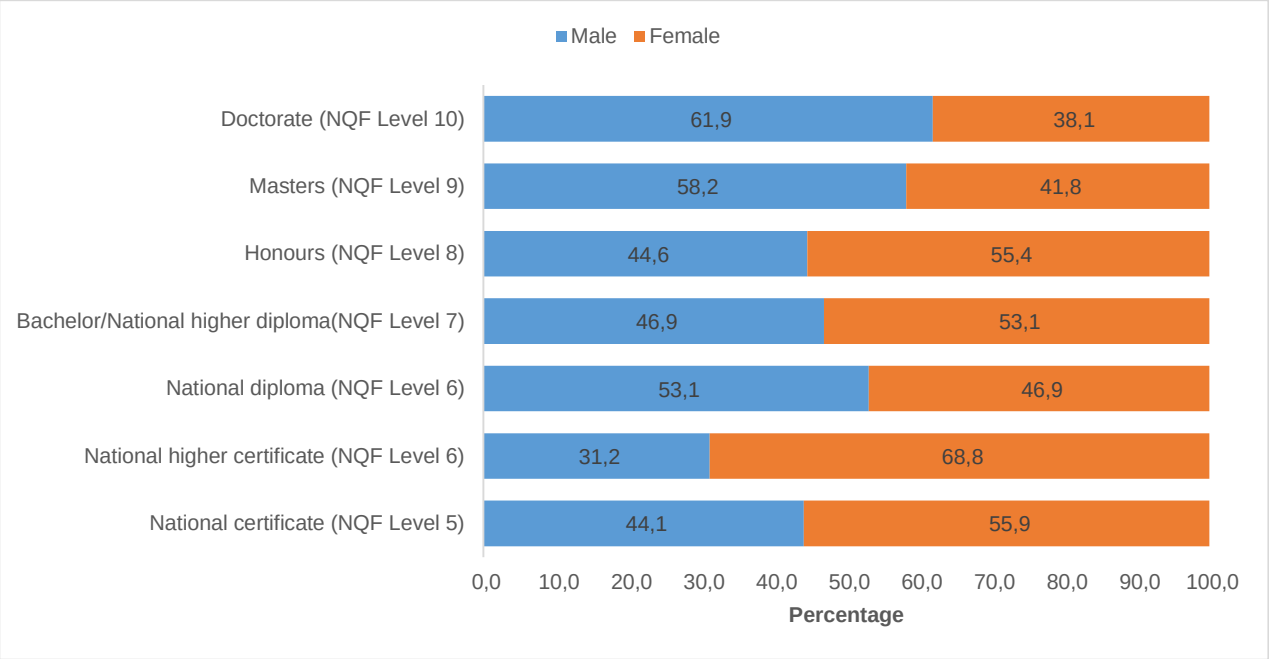
Figure 3.3: Enrolment by population group and qualification categories for universities, 2016



Source: DHET (HEMIS)
Note: Unspecified population group was excluded from the analysis

The percentage enrolment in bachelor degrees more than doubled in 2016 relative to 2000 amongst the black population group compared to other population groups. However, except for the white population, more than three quarters of enrolments amongst the rest of the population groups were for bachelor degrees qualifications. This came at the expense of enrolment for honours degrees, as the percentage of enrolment for such type of degrees was reduced for all population groups when comparing to 2000. However, in terms of sizes, the number of enrolments amongst blacks African in post-higher degrees (masters and doctorate degrees) surpassed the white population group in 2016 when comparing with 2000. Furthermore, the percentage growth in higher degrees for all population groups was low as enrolment for masters degrees for black Africans increased from 3,4% in 2000 to 4,7% in 2016; for coloured for masters degrees reduced from 6,2% in 2000 to 5,9% in 2016 and did not change much for doctorate degrees. Similarly, for Indians/Asians, enrolments for masters degrees increased from 6,6% in 2000 to 8,3% in 2016; and enrolments for doctorate degrees increased from 1,2% in 2000 to 3,0% in 2016. Lastly for whites, enrolment for masters degrees remained unchanged but increased for doctorate degrees from 2,5% in 2000 to 3,8% in 2016.

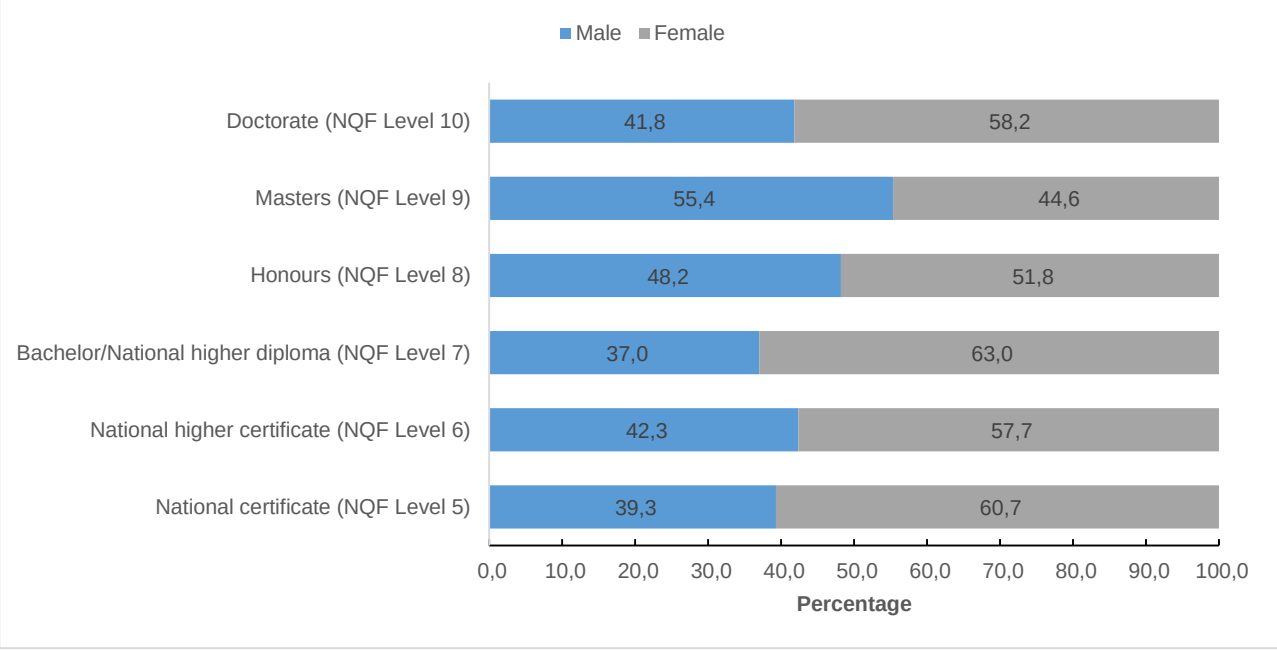
Figure 3.4: Enrolment by qualification categories and gender for technikons and universities, 2000



Source: DHET (HEMIS)

The figure above shows gender disparities that existed in 2000 amongst students enrolled for various qualifications. While for most types of qualifications enrolment of females surpassed that of males, males had a higher percentage of enrolment for post-higher education qualifications. Indeed, more than half of enrolments in masters degrees (58,2%) and close to 62% of enrolments for doctorate degrees consisted of male candidates.

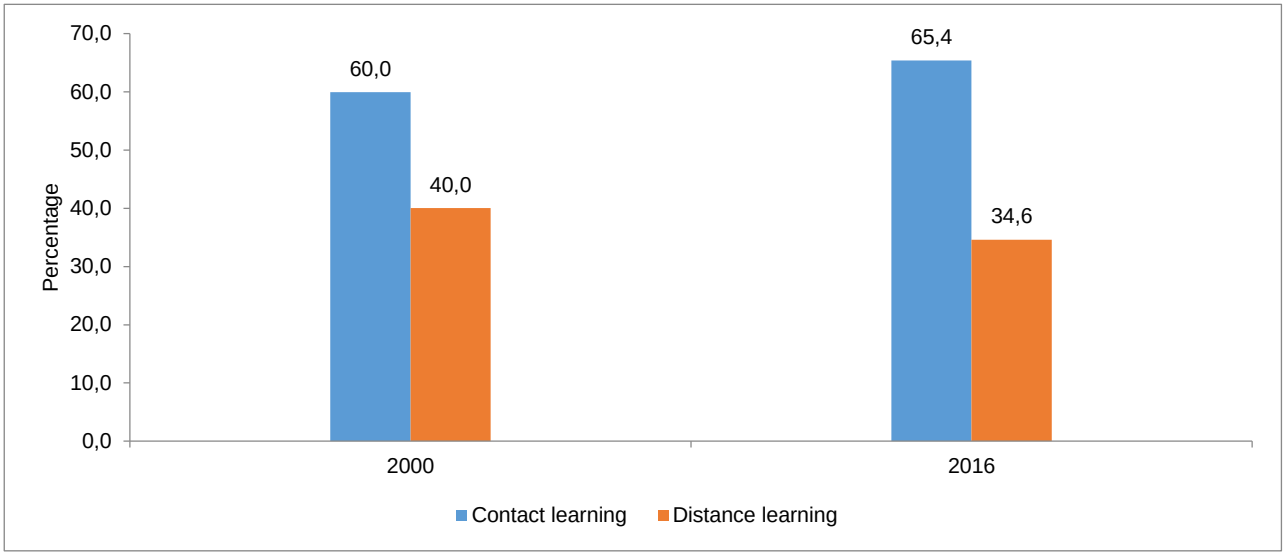
Figure 3.5: Enrolment by qualification categories and gender for universities, 2016



Source: DHET (HEMIS)

The above figure displays the breakdown of enrolment by qualification categories and gender. Compared to 2000, data for 2016 shows the widening gender gap in enrolment at the lowest educational qualification categories. Males were still more likely than females to pursue advanced educational qualifications that are beyond NQF level 7.

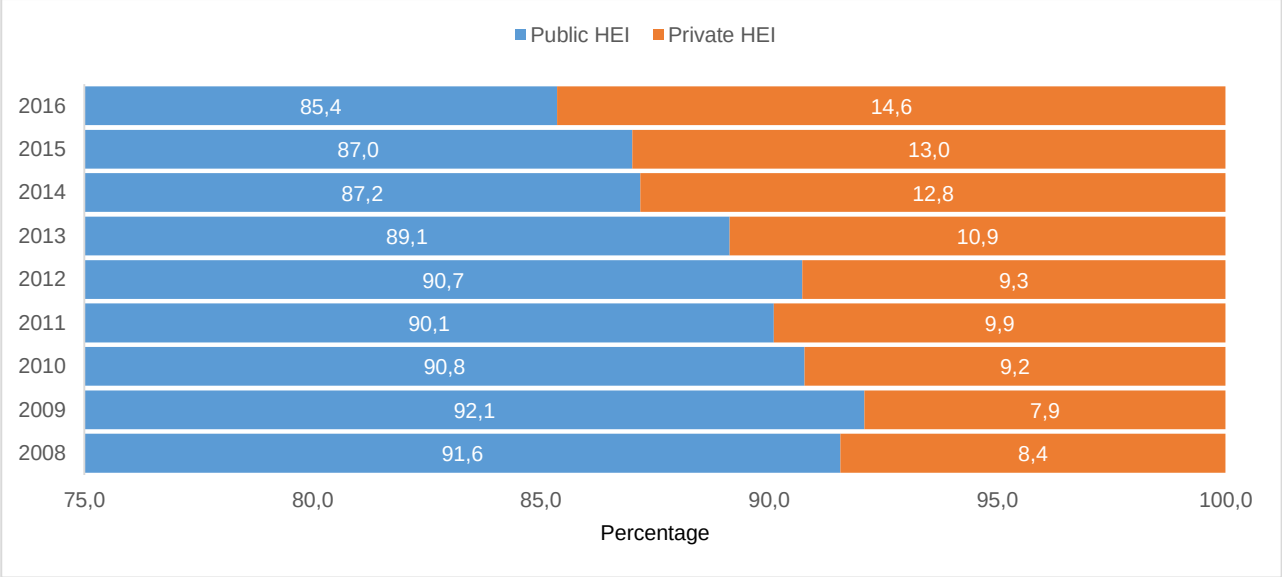
Figure 3.6: Enrolment in universities and technikons by mode of learning, 2000 and 2016



Source: DHET (HEMIS)

Figure 3.6 above shows modes[26] of student attendance in 2000 and 2016. Six in ten students attended contact learning in 2000, whereas in 2016 approximately two thirds of the students registered through contact learning. Slightly more than one third of students studied through distance learning in 2016.

Figure 3.7: Enrolment at public and private higher education institutions, 2008–2016



Source: DHET (HEMIS)

[26] Contact mode of study involves personal interaction with lecturers, supervisors through; inter alia, seminars and practical at the premises of the institution. Distance mode of study involves interaction with lecturers or supervisors through distance education techniques, such as written correspondence, telematics and/or the internet.

The above graph shows uneven growth in enrolment by type of institution. While public higher education institutions (public universities[27]) accounted for the highest proportion of total enrolment (85,4% in 2016), enrolment rates at private higher education institutions (private universities) in 2016 had risen by 6,2 percentage point since 2010.

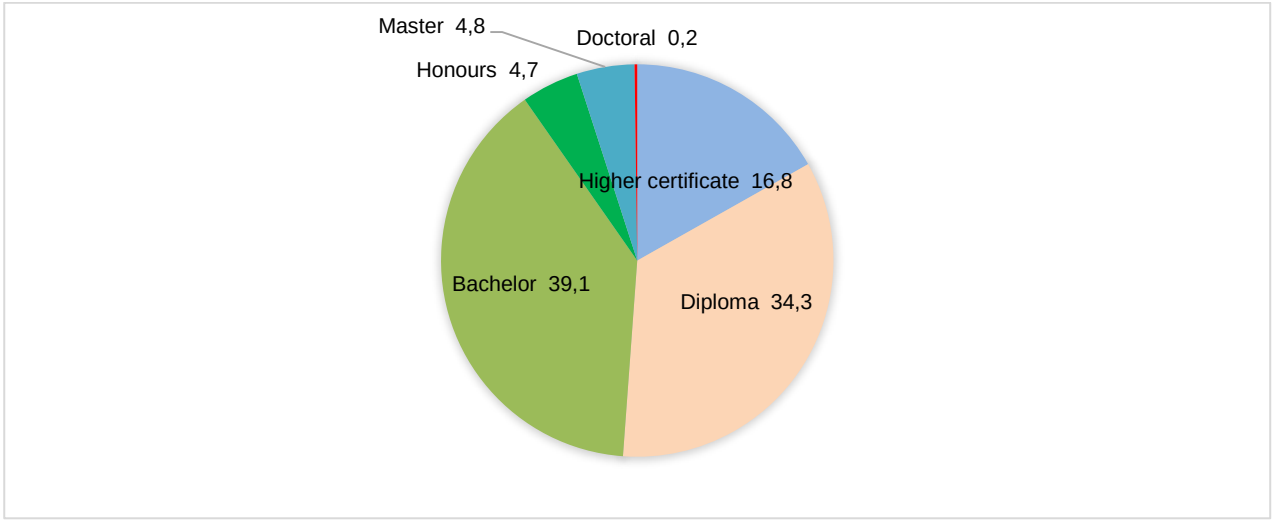
Table 3.5: Enrolment at private higher education institutions by fields of study, 2016

Field of study in private HEI's	Student enrolment	% enrolment
Agriculture and nature conservation	288	0,2
Culture and arts	11 044	6,6
Business, commerce and management studies	91 009	54,4
Communication studies and language	8 757	5,2
Education, training and development	13 082	7,8
Manufacturing, engineering and technology	1 087	0,6
Human and social studies	10 618	6,3
Law, military science and security	4 998	3,0
Health sciences and social services	3 319	2,0
Physical, mathematical, computer and life sciences	18 925	11,3
Services	3 975	2,4
Physical planning and construction	306	0,2
Total	**167 408**	**100,0**

Source: DHET

Most students at private higher educational institutions enrolled for business, commerce and management studies (54,4%) and 11,3 % enrolled for physical, mathematical, computer and life sciences. The lowest enrolments were found in physical planning and construction (306) and agriculture and nature conservation (288) which each constitute 0,2% of all enrolments. Business, commerce and management studies were the fields of study that attracted the most enrolment for both private and public higher education institutions.

Figure 3.8: Enrolment at private higher education institutions by qualification type, 2016



Source: DHET

[27] Data for 2000–2004 for enrolment from technikons were merged with universities to produce total number of enrolment

Figure 3.8 presents students enrolment at private higher education institutions by qualification type. Most students enrolled at private higher education institutions were registered for a bachelor degree (39,1%) or undergraduate diploma (34,3%), while close to ten percent enrolled for graduate qualifications: 4,7% for honours and 4,8% for masters degrees. The lowest enrolments were for doctoral degrees (0,2%).

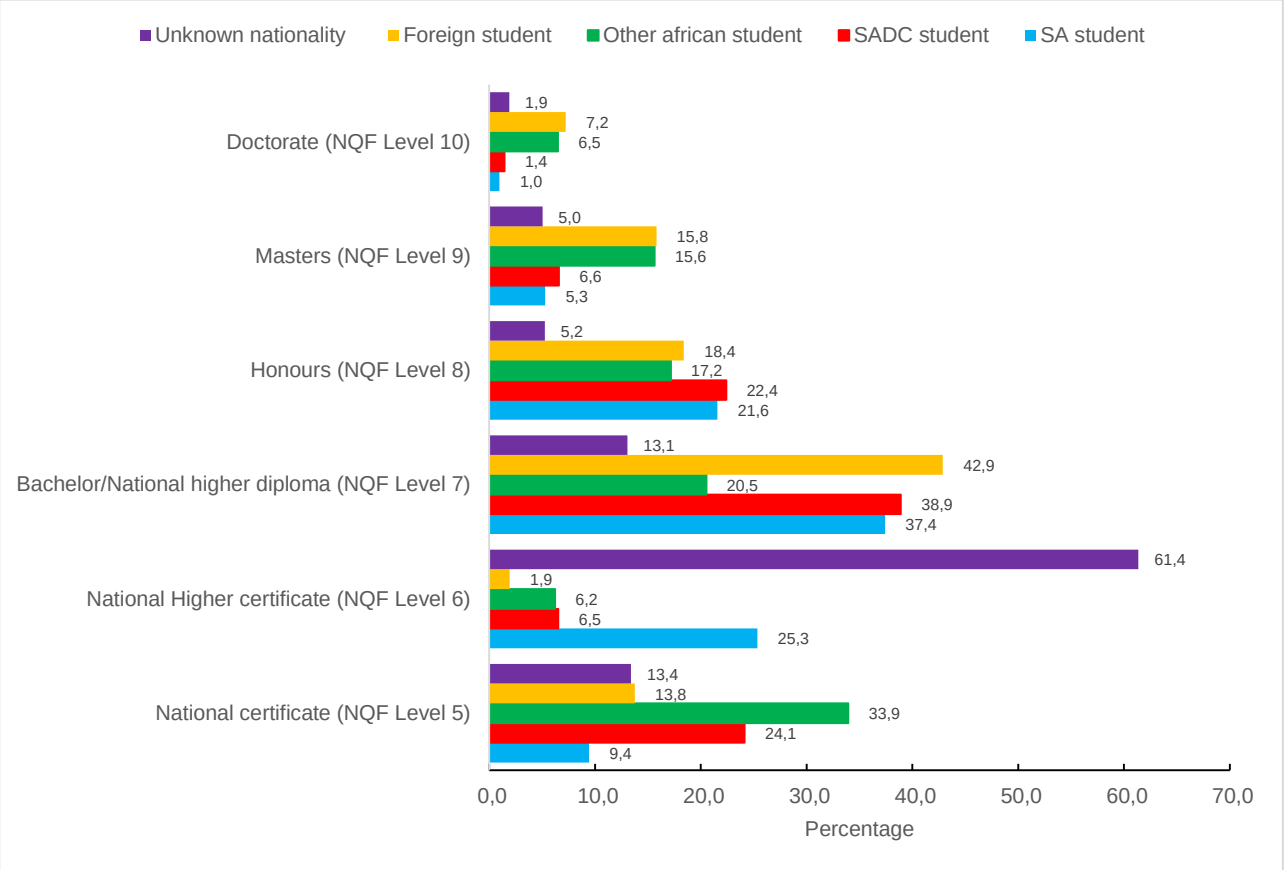
Table 3.6: Enrolments at public universities and technikons by nationality, 2000 and 2016

	2000		2016	
Student's nationality	**Number**	**Percentage**	**Number**	**Percentage**
South African	533 695	92,3	906 456	92,9
SADC	20 844	3,6	49 403	5,1
Other African	4 195	0,7	6 671	0,7
Foreign	5 560	1,0	11 894	1,2
Unknown	13 838	2,4	1 413	0,1
Total	**578 132**	**100,0**	**975 837**	**100,0**

Source: DHET (HEMIS)
Note: SADC excludes South African nationals; foreign excludes all African students

The above table presents students enrolled at public higher education institutions in 2000 and 2016. In both years, the majority of students were South Africans (92,3% and 92,9% respectively). The percentage of students from SADC increased from 3,6% in 2000 to 5,1% in 2016.

Figure 3.9: Enrolment at public universities and technikons by type of qualification and nationality, 2000

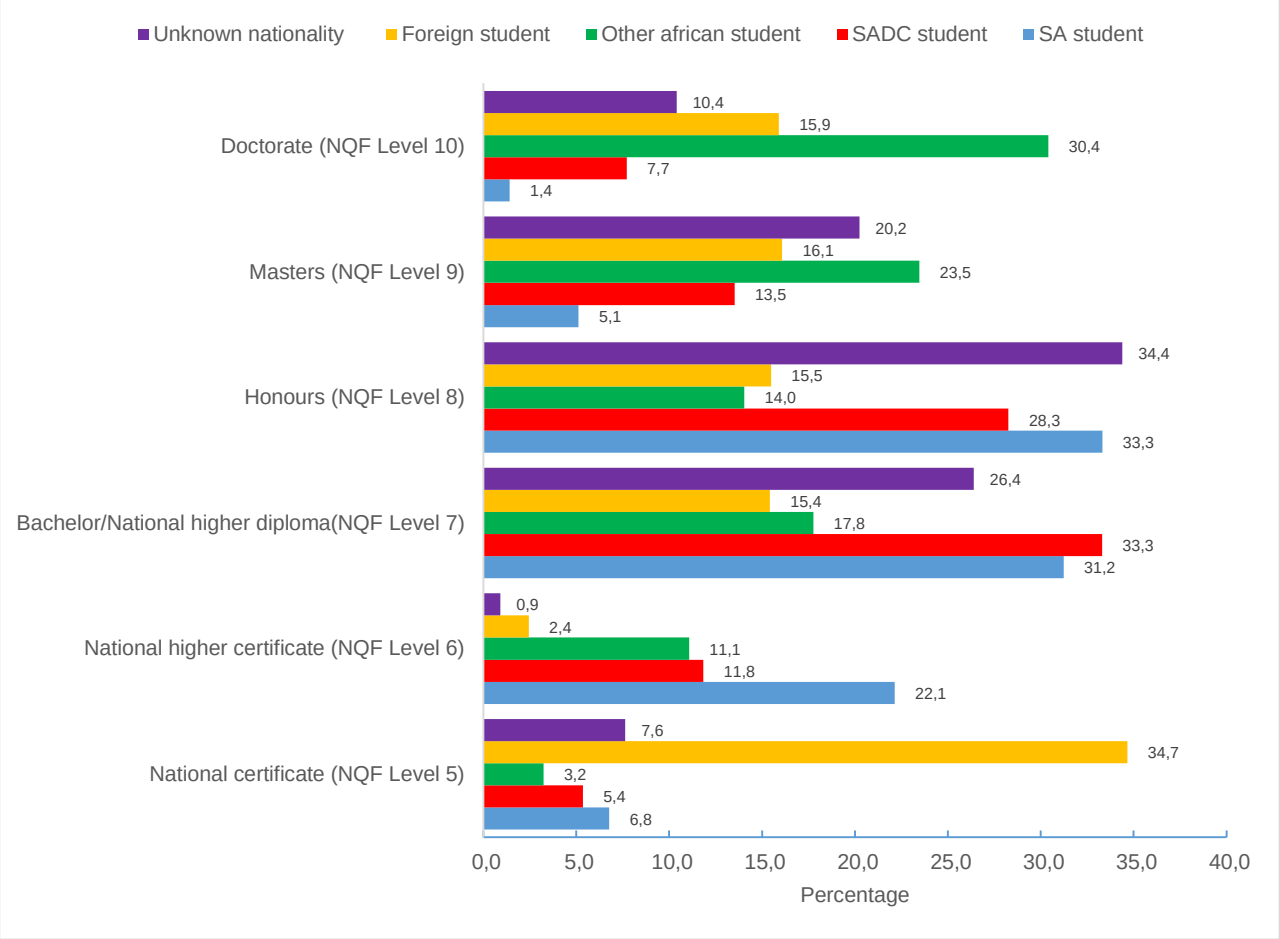


Source: DHET (HEMIS)
Note: SADC excludes South African nationals; foreign excludes all African students

Figures 3.9 shows the percentage of students enrolled at universities and technikons by nationality in 2000. The percentages were calculated using the total number of students in a particular group e.g. foreign students

as the denominator. The majority of South Africans (37,4%) were enrolled for a bachelor degree or a national higher diploma and 25,3% for a national higher certificate. Two in ten (21,6%) South Africans enrolled for an honours degree. Foreign students and African students outside of SADC had the largest percentages of students enrolled for their masters and doctorate studies as compared to SADC and South African students. Close to 16% of all foreign students and 16% of other African students were enrolled for their masters, compared to 6,6% of SADC students and 5,3% of South African students. Similarly, 7,2% of all foreign students and 6,5% of other African students were enrolled for their doctorate, compared to 1,4% of SADC students and 1,0% of South African students.

Figure 3.10: Enrolment at public universities by type of qualifications and nationality, 2016



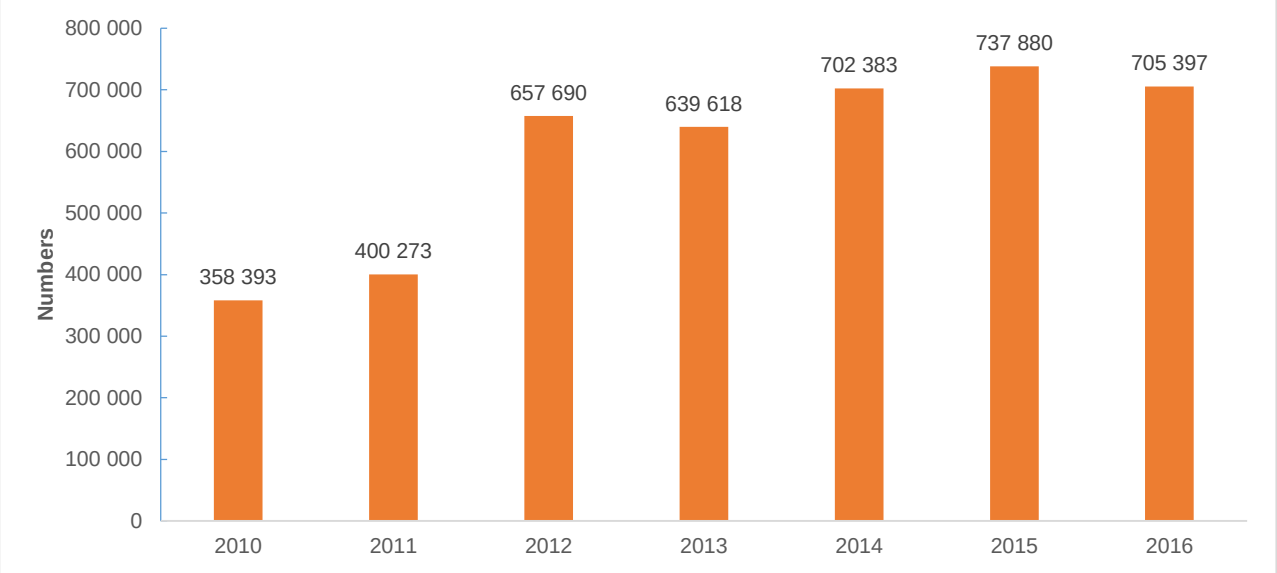
Source: DHET (HEMIS)
Note: SADC excludes South African nationals; foreign excludes all African students

The figure above shows enrolment of students at universities by nationality in 2016. Unlike 2000, most South African students in 2016 were enrolled for honours degrees or qualifications equivalent to NQF level 8 (33,3%) while 31,2% were still pursuing qualifications equivalent to NQF level 7. However there was not much improvement compared to 2000 among South African students in acquiring advanced qualifications such as masters and doctorates. Foreign and other African students would most likely enrol for advanced qualifications such as masters (16,1% among foreign students and 23,5% among other African students) and doctorates (15,9% among foreign students and 30,4% among other African students). Students from SADC had relatively higher percentages studying towards advanced qualifications such as masters and doctorates compared to South African students. A considerable percentage of students from the SADC region also studied for bachelors and honours degrees (33,3% and 28,3% respectively). Furthermore, foreign students were more likely to enrol for national certificates (34,7%) than any of the other sub-categories.

3.2 Student participation in Technical and Vocational Education and Training (TVET) colleges

The South African government's ambition to precipitate rapid growth in the post-school education and training sector was expected to occur through the expansion in enrolment into TVET colleges and also by diversifying delivery mechanisms of higher education studies. This schooling path can accommodate a mixed bag of people who wish to acquire marketable skills for subsequent life opportunities and comes with straight forward admission criteria which consist of completion of Grade 9 schooling and being 16 years and older. Saturday classes as a mode of delivery are offered to employed students. Since TVET colleges offer various courses that range from vocational training to occupational and artisan education, the sector is considered to be alleviating skills shortages by improving the employability of youth. With the potential positive economic returns to the country in mind, financial support was made available by government for students attending public TVET Colleges.

Figure 3.11: Trends on enrolment at TVET colleges, 2010–2016



Source: DHET (TVETMIS)

The above graph shows a large increase in TVET college enrolments from 2010 to 2016, with the highest student enrolment numbers recorded in 2015 (737 880). The biggest increase in enrolment rates (64,3%) took place between 2011 and 2012.

Table 3.7: Enrolment at TVET colleges by qualification category and gender, 2010

Qualification category	Statistics (numbers in thousands)	Gender		Total
		Male	Female	
Report 191(N1-N6)	Number	90 823	81 849	**172 672**
	Percent	52,6	47,4	
NC(V)	Number	65 553	62 976	**128 529**
	Percent	51,0	49,0	
Occupational Qualifications	Number	8 588	9 095	**17 683**
	Percent	48,6	51,4	
Adult Education and Training (AET)	Number	161	34	**195**
	Percent	82,6	17,4	
Other	Number	17 661	8 826	**26 487**
	Percent	66,7	33,3	
Total	Number	**182 786**	**162 780**	**345 566**
	Percent	**52,9**	**47,1**	**100**

Source: DHET
Note: Unspecified gender was excluded from the analysis

Report 191(N1–N6) refers to the NATED programmes, N1 to N6 and consist of occupational and skills programmes previously offered by technical colleges and are contained in the Report 191 policy document. The instructional programmes result in various qualifications: National N Certificates; National N Diplomas; National Integrated Certificates; Non-National Certificates; and Non-National Enrichment Programmes. The study period for these consist of trimester programmes, semester programmes and year programmes and cover 24 fields of study[28]. NC(V) refers to the National Certificate (Vocational) programme which is offered at NQF levels 2–4 and which replaced the NATED programmes. The programme has both theoretical and practical components in 19 vocational fields[29]. The study period for these programmes lasts for three years if fully completed and comprises of three compulsory subjects (language, mathematics or mathematical literacy, life orientation), three compulsory vocational subjects and one optional vocational subject. Occupational qualifications are those qualifications associated with a trade, occupation or profession resulting from work-based learning and consisting of knowledge, practical and work experience components. “Other” refers to all other programmes offered by TVET colleges. For example skills development programmes and short courses varying between a week and a year in three major fields of study: business studies[30], engineering[31] and services[32].

[28] Art and Design; Business Management; Clothing Production; Educare; Engineering Studies; Farming Management; Fertilizer Manufacturing; Financial Management; Hair Care; Hospitality and Catering Services; Human Resources Management; Interior Decorating; Legal Secretary; Management Assistant; Marketing Management; Medical Secretary; Popular Music Composition; Popular Music Performance; Popular Music Studio Work; Public Management; Public Relations; Textiles; and Tourism.

[29] Civil Engineering and Building Construction; Drawing Office Practice; Education and Development; Electrical Infrastructure Construction; Engineering and Related Design; Finance, Economics and Accounting; Hospitality; Information Technology & Computer Sciences; Management; Marketing; Mechatronics; Office Administration; Primary Agriculture; Process Instrumentation; Process Plant Operations; Safety in Society; Tourism; Transport and Logistics; and Primary Health.

[30] Applied Accounting; Human Resources Management; Personnel Management; Business Management; and Administration and Management.

[31] Pulp Making; Mechanical Drawing and Design; Chemical Technology; Chemical Plant Operation; Engineering Physics; and Engineering Technology.

[32] Food Services; Public Relations; Hair Care; and Interior Decorating.

The above table illustrates the number of students enrolled in TVET colleges in 2010, by programme category and gender. There were 345 566 enrolled students, of which more than half (52,9% or 182 786) were males and (47,1% or 162 780) were females. Participation in Report 191 programmes was higher than in any other programmes, followed by NC(V) programmes. Adult Education and Training (AET) programmes were the programmes with the lowest enrolment levels. Enrolment in Report 191 programmes was more likely to be chosen by male (52,6%) than female students (47,4%). The majority of enrolments in AET programmes (82,6%) were by male students and around 17,4% by female students.

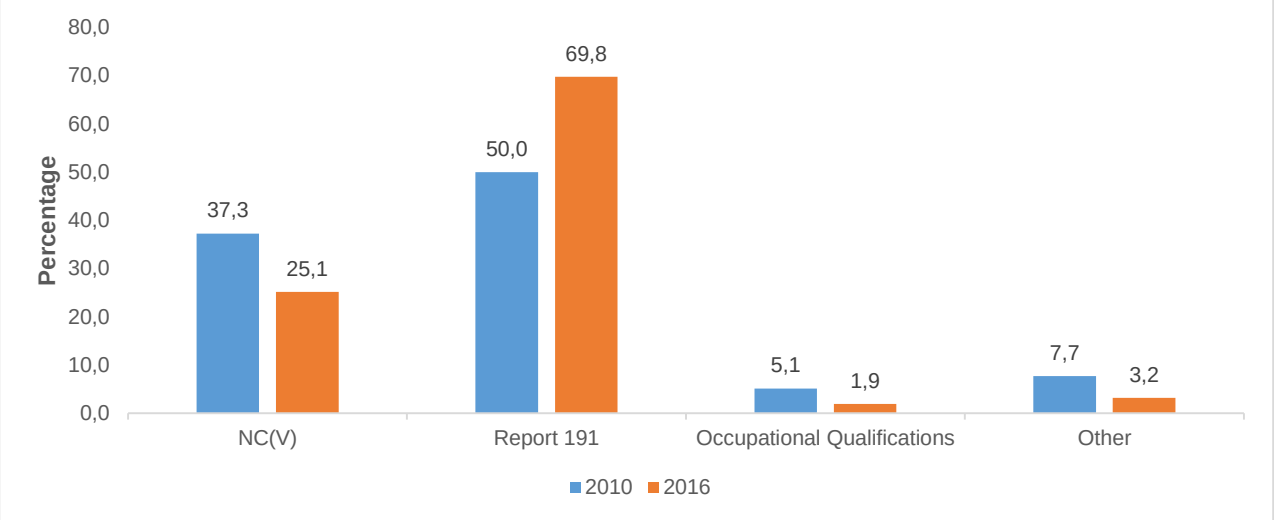
Table 3.8: Enrolment at TVET colleges by qualification category and gender, 2016

Qualification category	Statistics (numbers in thousands)	Gender		Total
		Male	Female	
Report 191 (N1–N6)	Number	222 058	269 968	**492 026**
	Percent	45,1	54,9	**100**
NC(V)	Number	65 419	111 842	**177 261**
	Percent	36,9	63,1	**100**
Occupational Qualifications	Number	4 985	8 657	**13 642**
	Percent	36,5	63,5	**100**
Other	Number	12 066	10 402	**22 468**
	Percent	53,7	46,3	**100**
Total	**Number**	**304 528**	**400 869**	**705 397**
	Percent	**43,2**	**56,8**	**100**

Source: DHET (TVETMIS)

Of the 705 397 students enrolled in TVET colleges in 2016, more than half (56,8%) were females and 43,2% males. More female relative to male students enrolled for Report 191 (N1–N6), NC(V), and occupational qualifications.

Figure 3.12: Enrolment at TVET colleges by qualification category, 2010 and 2016



Source: DHET

The graph above shows the percentage distribution of students' enrolment by qualification type at TVET colleges in 2010 and 2016. Overall there was a decrease of student enrolment from 2010 to 2016 for NC (V) (37,3% to 25,1%); occupational qualifications (from 5,1% to 1,9%) and other qualifications (from 7,7% to 3,2%). However, there was an increase in student enrolment for Report 191 (N1-N6) qualifications from 50,0% to 69,8%.

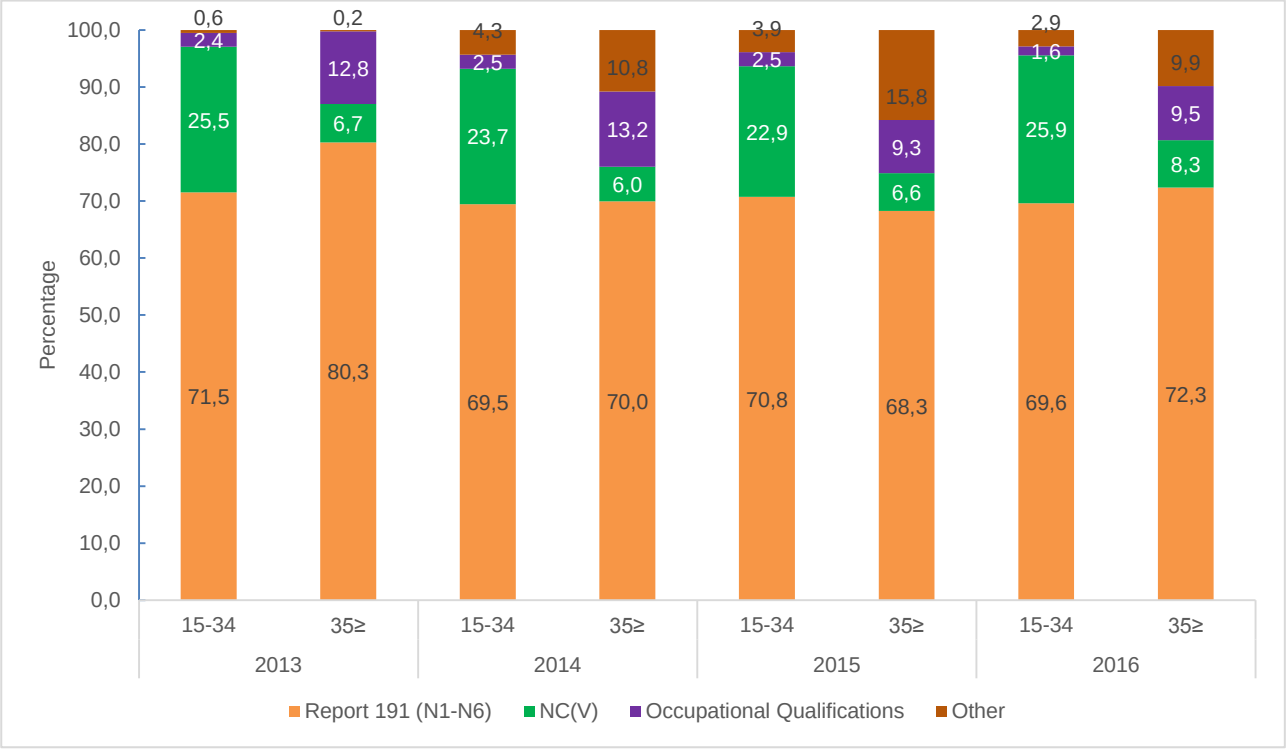
Table 3.9: Enrolment at TVET colleges by qualification category and population group, 2016

Qualification category	Statistics	Population group				Total
		African	Coloured	Indian	White	
Report 191 (N1-N6)	Number	458 025	26 751	1 589	5 512	**491 877**
	Percent	70,5	58,1	82,2	73,0	
NC(V)	Number	168 848	7 616	197	561	**177 222**
	Percent	26,0	16,5	10,2	7,4	
Occupational Qualifications	Number	7 331	6 024	12	271	**13 638**
	Percent	1,1	13,1	0,6	3,6	
Other	Number	15 473	5 640	134	1 203	**22 450**
	Percent	2,4	12,3	6,9	15,9	
Total	**Percent**	**649 677**	**46 031**	**1 932**	**7 547**	**705 187**
	Number	**92,1**	**6,5**	**0,3**	**1,1**	**100,0**

Source: DHET
Note: Unspecified gender was excluded from the analysis

The majority of students enrolled at TVET colleges were black Africans (92,1%) and 6,5% were coloureds. Very few whites and Asians enrolled at TVET colleges (1,1% and 0,3% respectively). The most common enrolment qualification among all population groups was the Report 191 (N1-N6) qualification.

Figure 3.13: Enrolment at TVET colleges by age and qualification category, 2013–2016



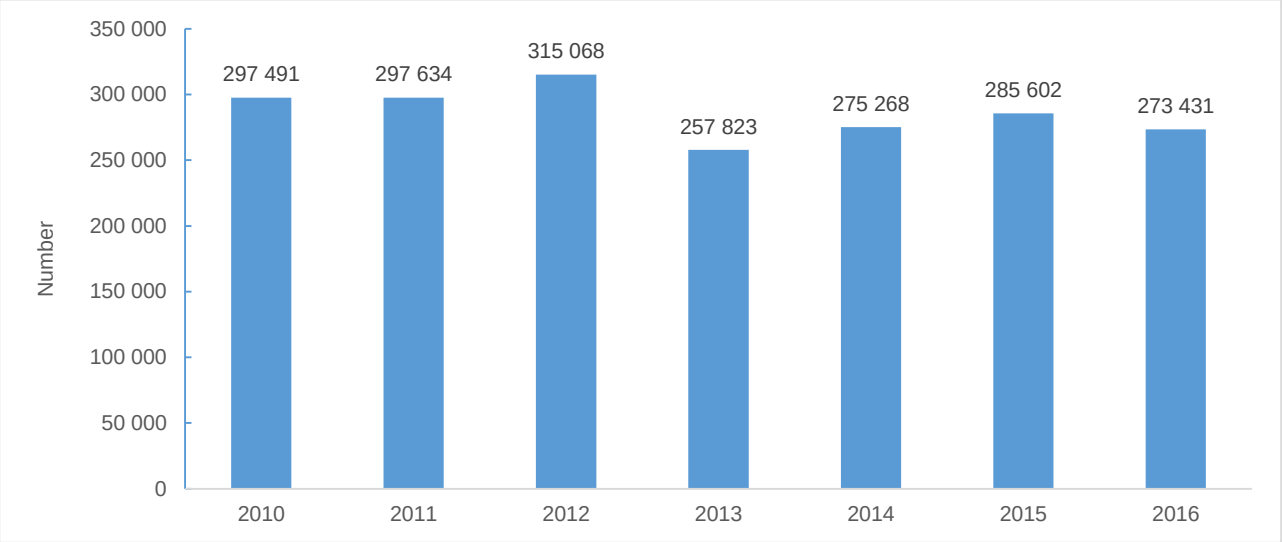
Source: DHET
Note: Unspecified age was excluded from the analysis

Enrolment in Report 191 (N1-N6) qualifications were the highest and similar for the 15–34 and 35+ age cohorts from 2014 onwards. Individuals aged 35 years and older were more likely to enrol in occupational qualifications compared to the youth in all the years, whilst the youth were more likely than the 35+ cohort to enrol in NC(V) studies.

3.3 Student participation in Community Education and Training (CET) and private colleges

As described in chapter 1, CET colleges were established to cater for the youth who dropped out of school or were unable to continue their studies in ordinary schools but still would like to acquire qualifications or skills that can improve their employability and/or progression to opportunities in higher educational institutions. This section presents data on enrolment at CET colleges.

Figure 3.14: Trends in enrolment at CET colleges, 2010–2016



Source: DHET, ABET Annual 2010–2016

The figure above illustrates the distribution of student enrolment at CET colleges from 2010 to 2016, showing stable enrolments patterns across the years. The exceptions were 2012 where a slight jump in enrolment was observed, followed by a steep decline in 2013. The high and low enrolment levels experienced in 2012 and 2013 remain the highest and lowest over the reference period.

Table 3.10: Enrolment at CET colleges by programmes of study, 2010 and 2016

Programmes	2010		2016	
	Number	Percent	Number	Percent
AET Level 1-3	105 474	35,5	60 448	22,1
AET Level 4 (NQF Level 1)	108 910	36,6	122 619	44,8
Grade 10 (NQF Level 2)	392	0,1	284	0,1
Grade 11 (NQF Level 3)	212	0,1	1 349	0,5
Grade 12 (NQF Level 4)	70 683	23,8	85 625	31,3
Occupational programmes/Other	11 820	4,0	3 106	1,1
Total	**297 491**	**100,0**	**273 431**	**100,0**

Source: DHET, ABET Annual 2010–2016

Table 3.10 shows students enrolment at CET colleges for 2010 and 2016. For both years, AET level 4 enrolments were the highest whilst the lowest enrolments were found for Grades 10 and 11. Over the years, changes in enrolment patterns varied by programme type. Enrolment in AET level 1-3 decreased from 35,5% in 2010 to 22,1% in 2016; enrolment in AET level 4 increased from 36,6% in 2010 to 44,8%; and enrolment in Grade 12 increased from 23,8% in 2010 to 31,3% in 2016.

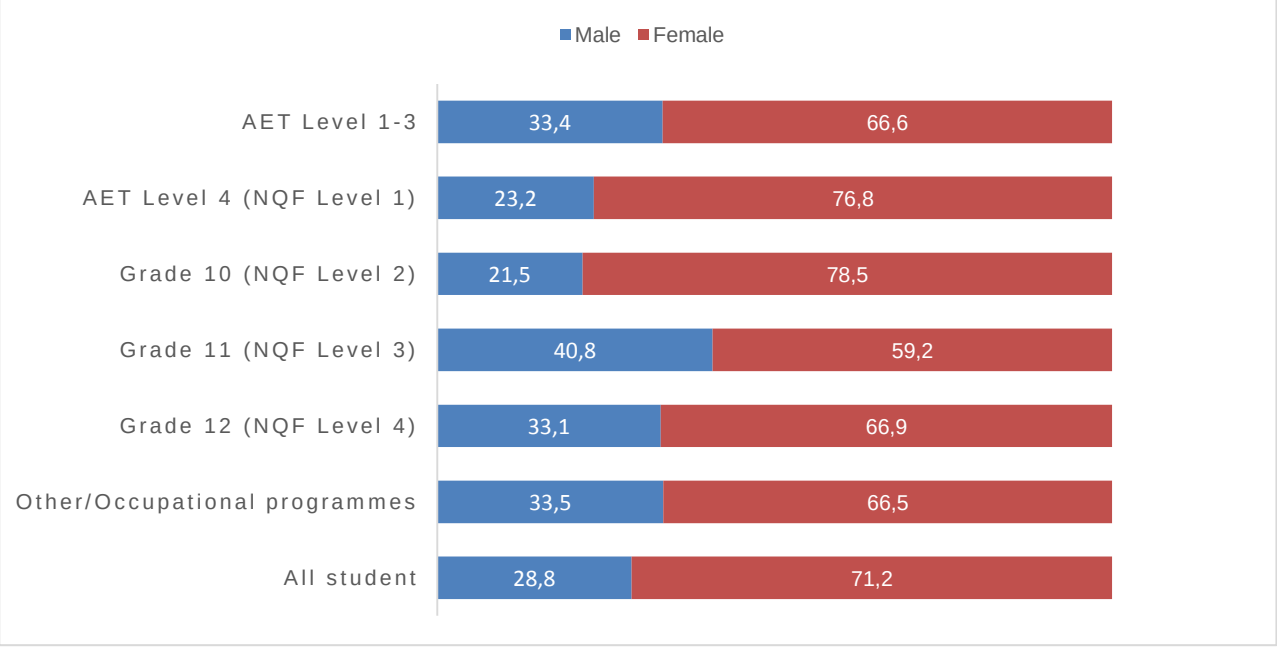
Table 3.11: Enrolment at CET colleges by age, 2016

Programmes	Statistics	Age				
		Age <18	Age 18–24	Age 25–34	Age≥35	Total
AET Levels 1–3	Number	2 379	9 229	13 577	33 403	**58 588**
	Percent	4,1	15,8	23,2	57,0	**100,0**
AET Level 4 (NQF Level 1)	Number	3 363	37 112	46 314	32 413	**119 202**
	Percent	2,8	31,1	38,9	27,2	**100,0**
Grade 10 (NQF Level 2)	Number	3	36	46	64	**149**
	Percent	2,0	24,2	30,9	43,0	**100,0**
Grade 11 (NQF Level 3)	Number	2	844	434	216	**1 496**
	Percent	0,1	56,4	29,0	14,4	**100,0**
Grade 12 (NQF Level 4)	Number	658	34 161	29 517	19 060	**83 396**
	Percent	0,8	41,0	35,4	22,9	**100,0**
Occupational programmes/ Other	Number	181	1 056	875	1 003	**3 115**
	Percent	5,8	33,9	28,1	32,2	**100,0**
Total	**Number**	**6 586**	**82 438**	**90 763**	**86 159**	**265 946**
	Percent	**2,5**	**31,0**	**34,1**	**32,4**	**100,0**

Source: DHET, ABET Annual 2010–2016
Note: Unspecified age were excluded from analysis

The table above shows that the percentage distribution of enrolment by age in CET colleges varied by programme studied. Among the total students enrolled, youth aged 25–34 had the highest enrolment share at 34%. They were followed by youth aged 18–24 at 31%, individuals aged 35 and older at 32,4% and students less than 18 years old at 2,5%. Youth aged 18–34 were mostly enrolled in AET level 4 programmes or Grade 12 whereas the older students were mostly involved in AET levels 1–4.

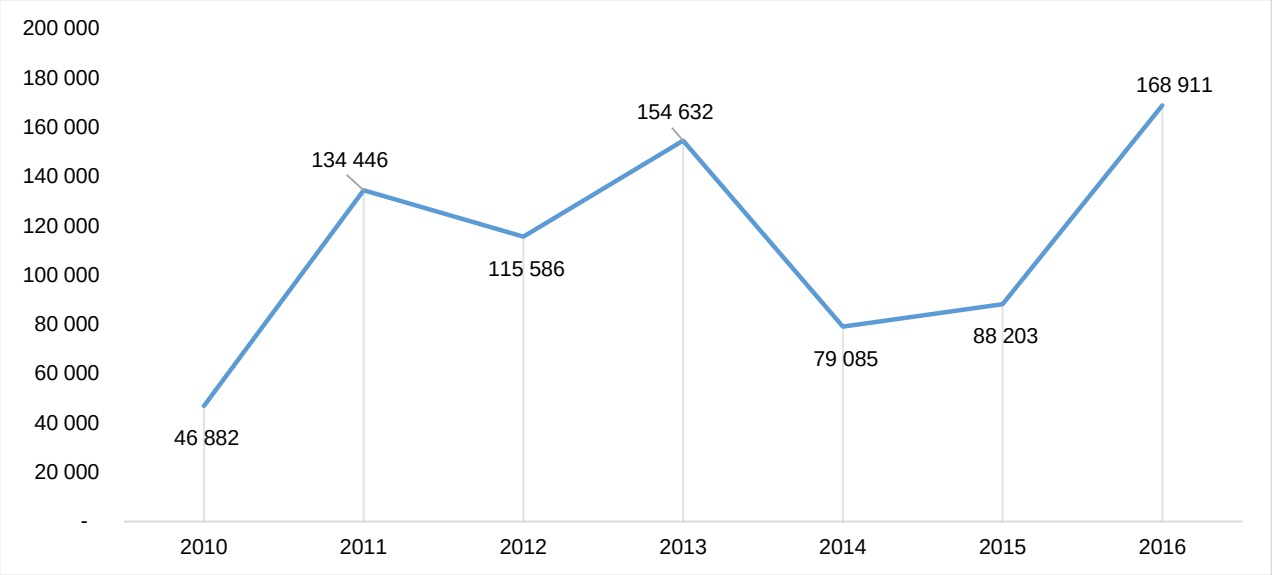
Figure 3.15: Enrolment at CET colleges by gender, 2016



Source: DHET (HEMIS)

The figure above shows the percentage of male and female students enrolled in CET colleges. In 2016, there were approximately 78 000 male students enrolled in CET colleges, compared to approximately 194 000 female students. All programmes had more female than male enrolments. Among those who attended Grade 12 (NQF level 4), about a third (33,1%) were male and more than two thirds were female students.

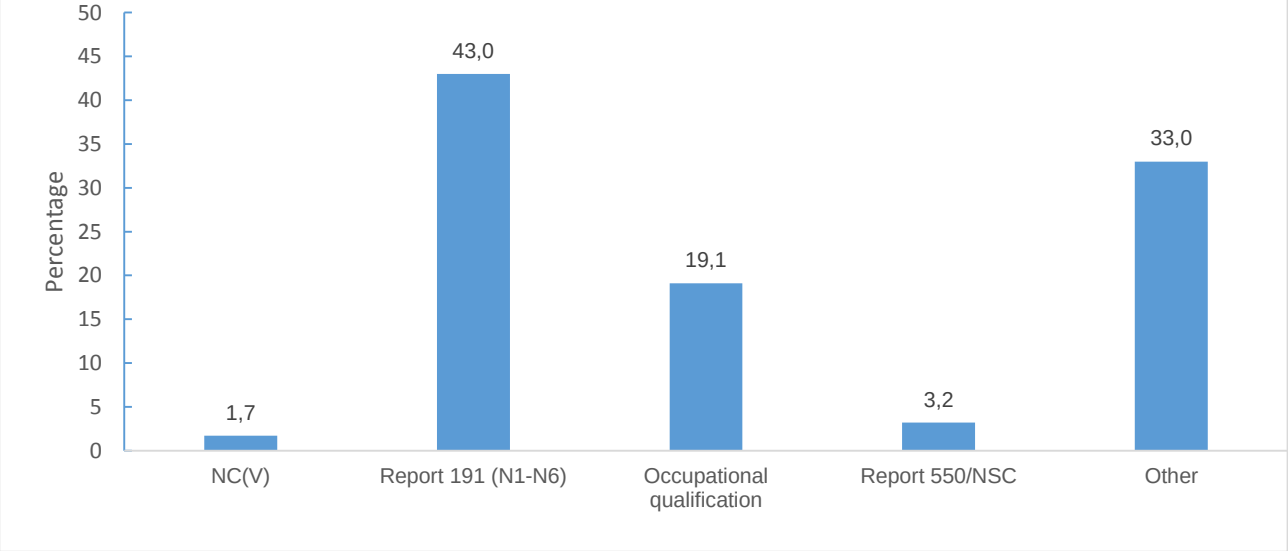
Figure 3.16: Trends in enrolment at private colleges, 2010–2016



Source: DHET
Note: Lower figures in some years were due to not all private colleges providing data consistently every year.

The figure above shows the number of students enrolled in private colleges from 2010 to 2016. Trends in enrolment were unevenly reported over the years. Starting from a low base of 46 882 in 2010, enrolment numbers grew to 134 446 in 2011. However, 2016 had the highest enrolment numbers with 168 911 enrolments which was an increase of close to 9% from 2013.

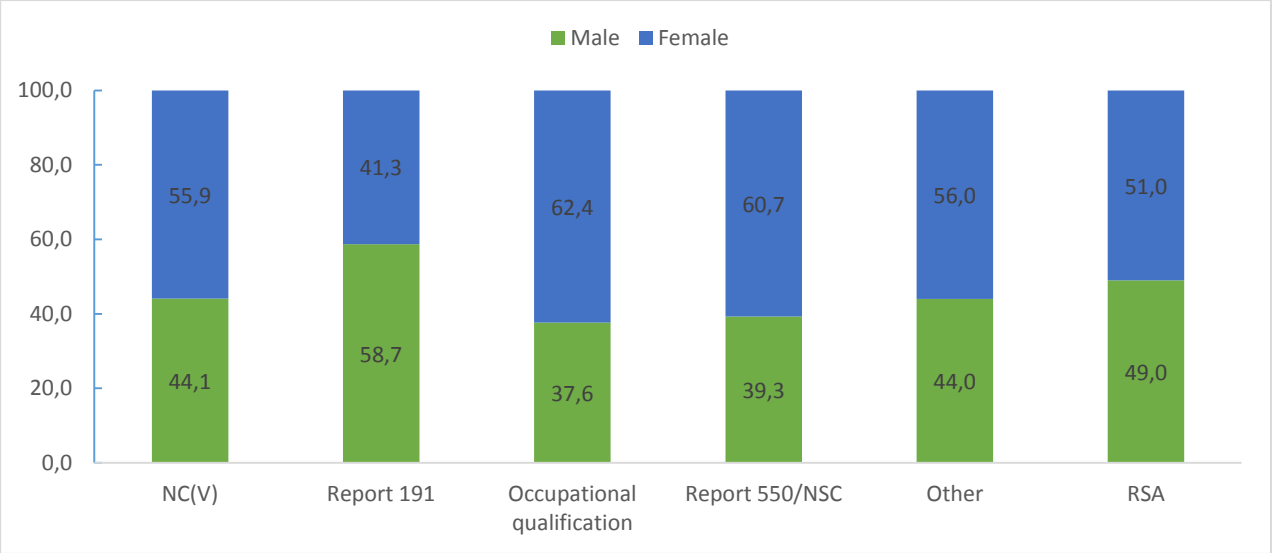
Figure 3.17: Enrolment in private colleges by qualification category, 2016



Source: DHET

The figure above indicates the percentage of enrolments according to qualifications. In 2016, approximately 43,0% of students were enrolled for Report 191 (N1-N6) qualification, 33% for other, 3,2% for Report 550[33]/NSC and two in ten for occupational qualifications.

Figure 3.18: Enrolment in private colleges by gender and qualification type, 2016



Source: DHET

The figure above shows the percentage of male and female private college students enrolled in various qualifications. While overall enrolment proportions had a narrow gender gap (49% males to 51% females), the breakdown by qualification type revealed wider gender gaps. Report 191 attracted more male enrolments (59%) than other qualification types. Close to six out of ten candidates enrolled in occupational qualifications were females; similar observations can also be made about enrolment for Report 550/NSC qualifications.

3.4 Summary and conclusion

This chapter showed that participation in post-school education has increased for all types of educational institutions. Total participation in both private and public higher educational institutions increased by 31,7% from 868 178 in 2008 to 1 143 245 in 2016. Participation in TVET colleges increased by 96,8% from 358 393 in 2010 to 705 397 in 2016. Whilst enrolment at CET colleges has remained stable over the years, enrolment at private colleges has grown from a low base 46 882 in 2010 to 168 911 in 2016.

Enrolment by type of qualification has shown that business, commerce and management sciences were the fields of study attracting the most students, followed by education. However, differences by population group were observed around the choices of educational fields. Furthermore, substantial growth was observed in enrolment for NQF Level 7 qualification, while enrolment at higher NQF levels decreased.

[33] Nated Report 550 or senior certificate for adult learners to qualify with a basic education

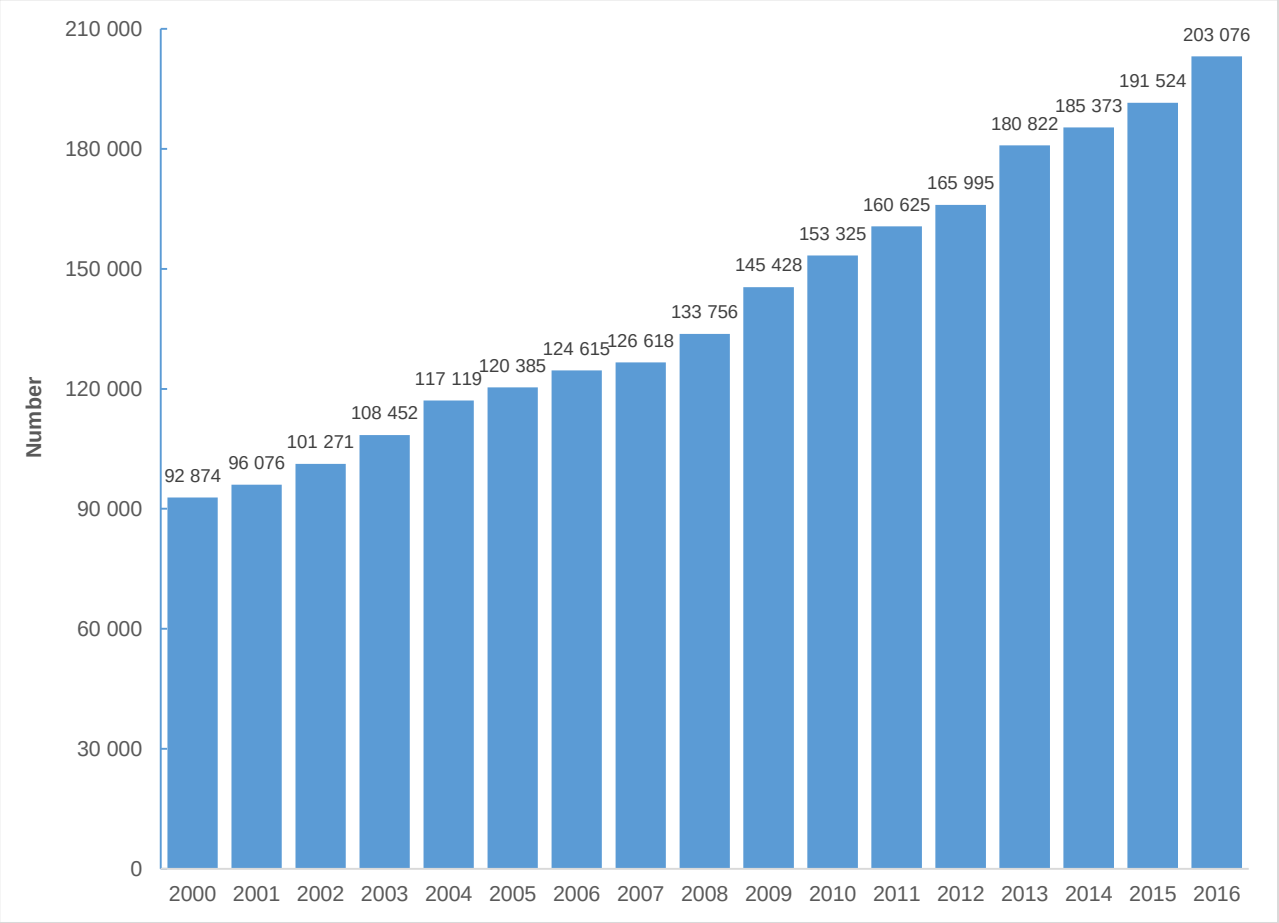
Chapter 4: Higher educational attainment

Major progress has been made in South Africa in improving gender and race equity in access to higher education. Specifically, over the last two decades female participation in higher education has improved significantly. Improved access to higher education has also resulted in proportionally more women moving up the educational ladder. Overall, women now outnumber and outperform men in most educational fields. In this section, data is presented on the gender and race composition of graduates at different stages of higher education qualifications. The disparity in higher education opportunities for young people from affluent households as compared to those from poor households is also highlighted.

4.1 Students post-school progression and graduation

The majority of students enrolled in post-secondary programmes were registered for long undergraduate programmes requiring three to four years of study. However TVET colleges offer the most needed short cycle vocational programmes. A lot of students attending higher educational institutions do not complete on time and a high proportion drop out, while very few students progress to advanced levels of study. The next section presents the trends in levels of progressions and educational outcomes in South Africa.

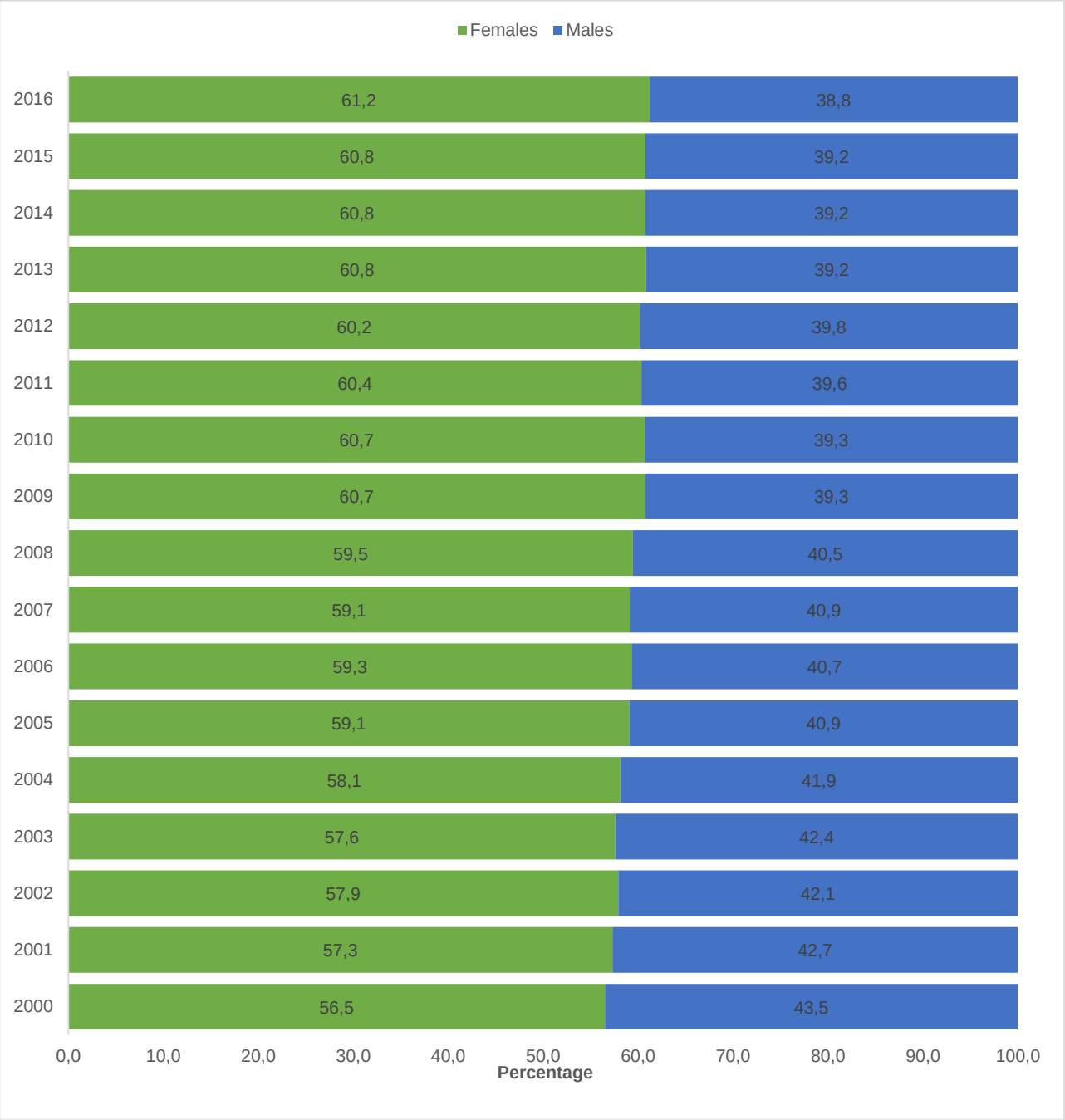
Figure 4.1: Trends in university and technikon graduates, 2000–2016



Source: DHET (HEMIS)

The number of public higher university (universities/technikons) graduates more than doubled between 2000 and 2016. While the growth in graduates remained steady over the years, 2009, 2013 and 2016 were the years where most growth occurred.

Figure 4.2: Graduates of public universities and technikons by gender, 2000–2016

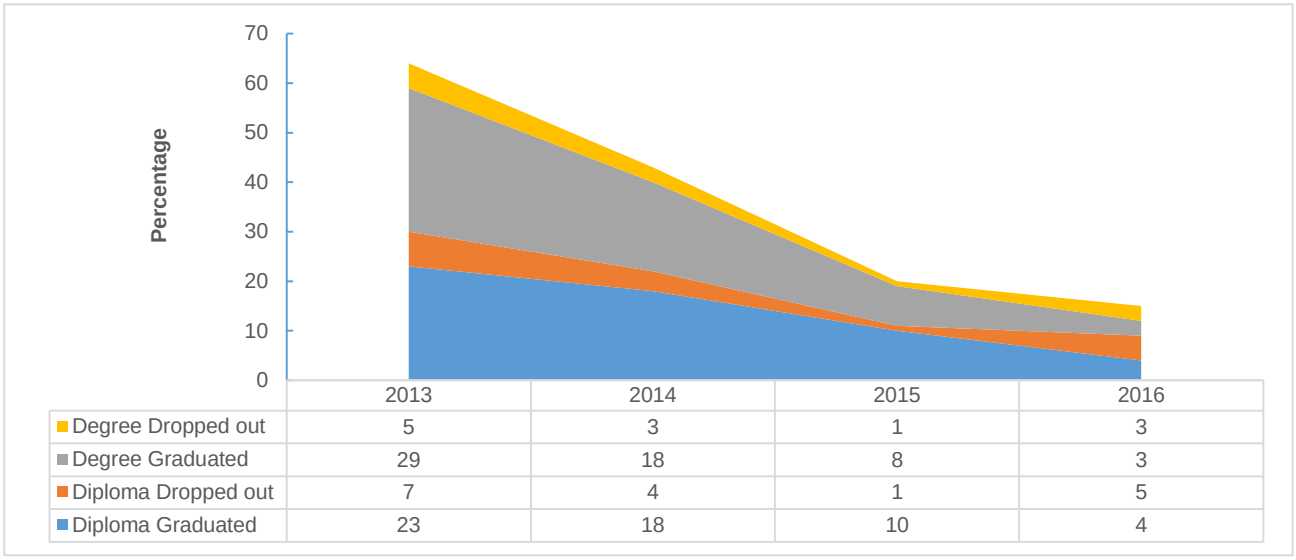


Source: DHET (HEMIS)

The above graph shows the distribution of graduates from public universities and (technikons[34]) by gender. The highest percentage of graduates were female and their percentage relative to males has been rising since 2000. In 2000, more than half of the total graduates were female (56,5%), while the percentage of male graduates was 43,5%. In 2016, close to six out of ten graduates were female. This shows that despite the significant increase in participation in higher education, less progress has been made in reaching gender equity for enrolment and graduation. It is difficult to obtain up-to-date cohort level data on graduation due to difficulties tracking student completion and dropout; it is especially hard to get a gender breakdown on progression rates.

[34] Data for 2000–2004 for graduates from technikons were merged with universities to produce total number of graduates

Figure 4.3: National throughputs for 360-credit diploma and three years degree with first year enrolment in 2011, 2013–2016

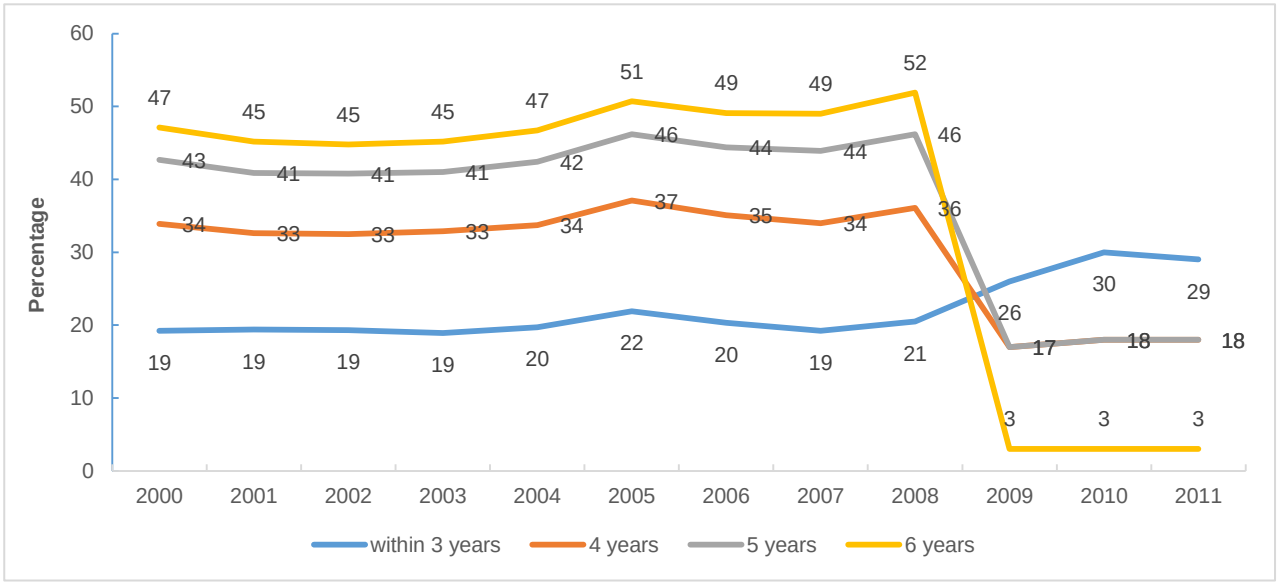


	2013	2014	2015	2016
Degree Dropped out	5	3	1	3
Degree Graduated	29	18	8	3
Diploma Dropped out	7	4	1	5
Diploma Graduated	23	18	10	4

Source: Council on Higher Education, 2018
Note: The analysis excludes students from UNISA

The above graph describes the percentage of dropout and graduates for three year degrees and diplomas. The graphs shows that only 29% among those who registered for the undergraduate degree in 2011 graduated within the required period, while another 29% took four, five or six years to complete their degree. The rest either dropped out immediately, or later, or else, were still trying to complete their degree in 2016 and beyond. Similar results can be observed for those enrolled for diplomas as only 23% managed to graduate within the required period while 18% graduated within four years, ten percent graduated within five years, and four percent graduated within six years.

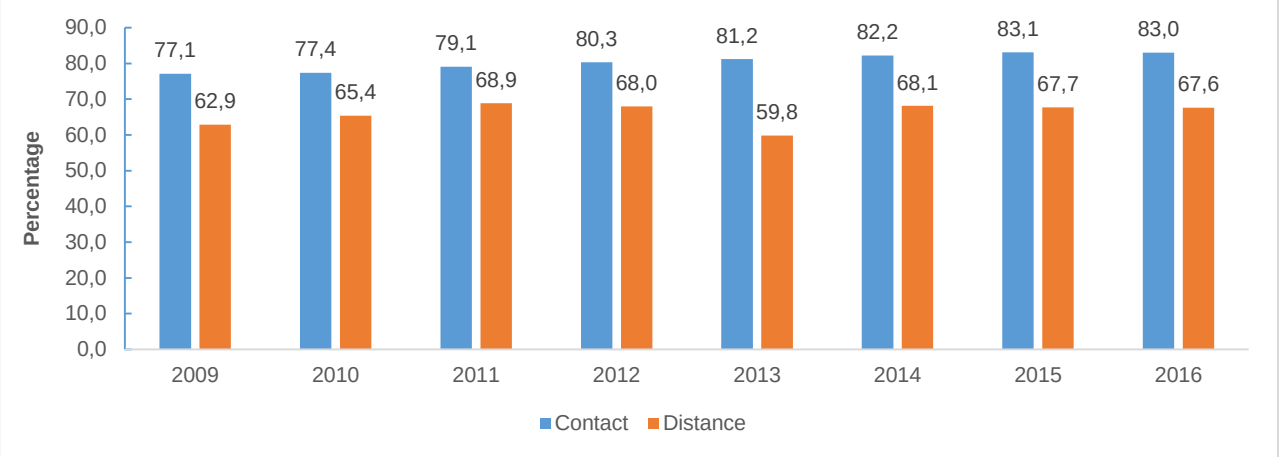
Figure 4.4: National throughputs for three years degree with first year enrolment in 2000–2011



Source: DHET; Council on Higher Education, 2018
Note: The years of enrolment from 2009–2011 were incomplete as these do not include students from UNISA

The above graph shows that the time taken by students to complete a three-year degree improved when students from UNISA were removed. Among the cohort enrolling in 2000, 19% were able to graduate within the required period of three years, and for the cohort enrolling in 2011, 29% were able to graduate within the required period of three years. Of the 2000 cohort, nearly half (47%) took six years (which is double the amount of time required) to complete their degree.

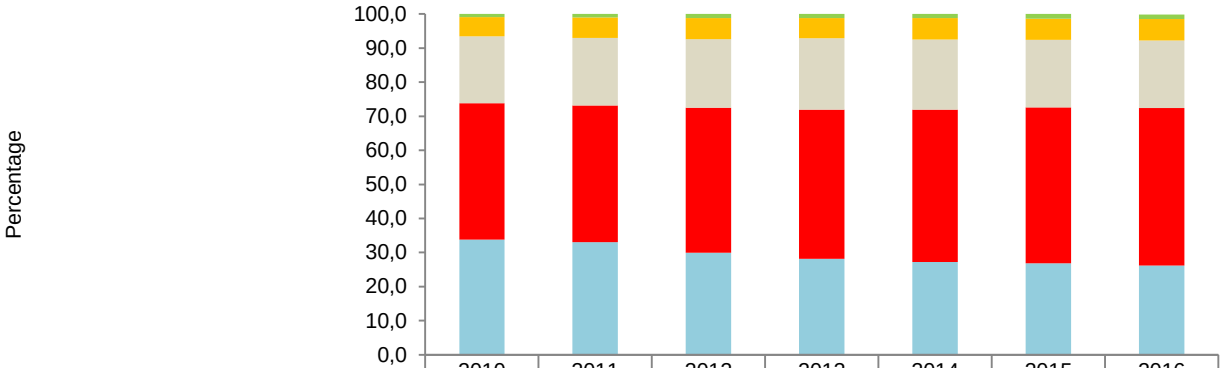
Figure 4.5: Public universities undergraduate success rates by mode of attendance, 2009–2016



Source: Statistics on Post-School Education and Training in South Africa 2015 and 2016, DHET

Success rates are calculated by the DHET in terms of full time equivalent[35] (FTE) enrolled students as FTE passes divided by FTE enrolments. There has been an improvement in undergraduate success rates for both modes of attendance. Among contact students, success rates have risen from 77,1% of students in 2009 to 83,0% in 2016. Similarly, during the same period, success rates of distance education students had risen from 62,9% to 67,6%.

Figure 4.6: Graduates from public universities by qualification type, 2009–2016



	2010	2011	2012	2013	2014	2015	2016
Doctoral degrees	0,9	1,0	1,1	1,1	1,2	1,3	1,4
Masters degrees	5,6	6,0	6,2	6,0	6,3	6,2	6,3
Post-graduate below masters level	19,6	19,8	20,1	21,0	20,6	19,8	19,8
Undergraduate degrees	40,0	40,2	42,6	43,8	44,7	45,8	46,2
Undergraduate certificates and diplomas	33,8	33,0	29,9	28,2	27,3	26,8	26,2

Source: DHET (HEMIS)

[35] A student in the PSET sector who is enrolled for an academic programme for a full academic year and who is registered for all the courses included in the curriculum of the programme. If a student is following for example only half of the courses required for a full-year academic programme, then he/she would be counted as 0,5 FTE students. If a student is taking 20% more than the courses required in a standard full-year curriculum, then he/she would be counted as 1,2 FTE students (DHET)

Out of the 145 426 of students who graduated in 2009, the majority (39,3%) received bachelor degrees, while close to 36% received undergraduate certificates and diplomas. By contrast, in 2016, the percentage of those who received bachelor's degrees increased to 46,2% while the percentage of those who have received undergraduate certificates and diplomas decreased to 26,2%. Graduates in post-graduate qualifications that are below masters (equivalent to honours degrees) and those who received masters' degrees have remained steady.

Table 4.1: Graduates from public universities and technikons by CESM category, 2000–2016

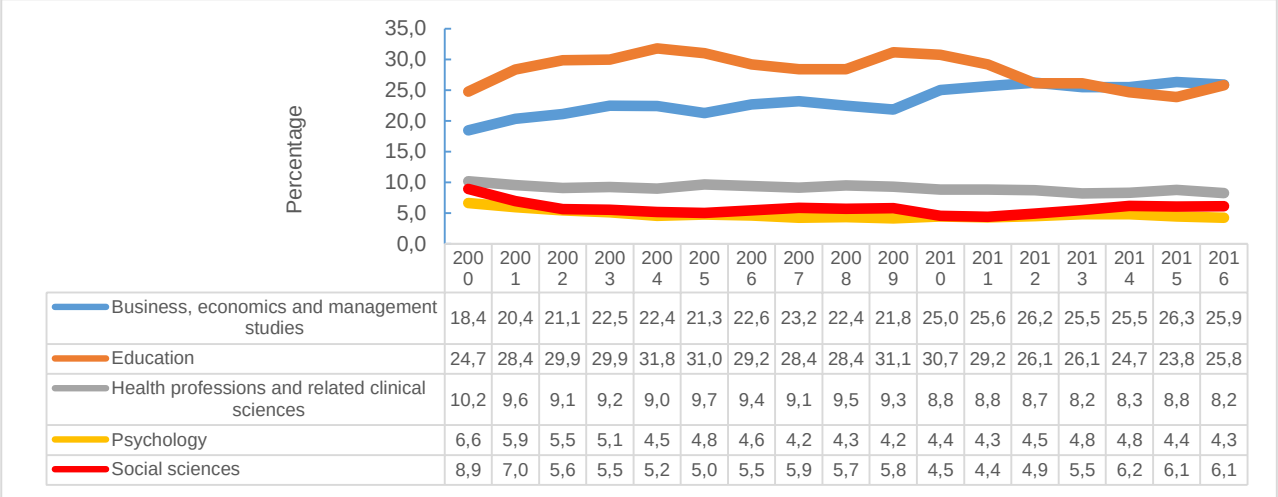
	2000	2002	2004	2006	2008	2010	2012	2014	2016
Agriculture, agricultural operations and related sciences	1,7	1,6	1,7	1,8	1,8	1,7	2,0	2,1	2,2
Architecture and the built environment	1,7	1,7	2,0	2,1	2,4	1,9	1,9	1,7	1,8
Visual and performing arts	2,0	1,9	2,0	2,0	1,8	1,9	1,9	1,7	1,5
Business, economics and management studies	21,4	24,4	25,0	24,2	23,9	27,2	28,1	27,2	27,8
Communication, journalism and related studies	1,7	1,6	1,6	1,7	1,8	1,9	2,2	2,2	2,0
Computer and information sciences	3,7	4,5	4,2	3,6	3,3	3,1	3,6	3,7	3,3
Education	20,2	23,5	25,7	23,6	23,0	24,7	21,6	20,0	20,7
Engineering	4,3	5,1	5,1	6,2	7,0	6,7	7,1	7,6	7,1
Health professions and related clinical sciences	8,3	7,5	7,2	7,8	7,8	7,3	7,3	6,8	6,9
Family ecology and consumer sciences	0,8	0,9	1,0	0,9	0,8	0,3	0,3	0,4	0,4
Languages, linguistics and literature	3,9	2,6	2,3	2,3	2,0	1,6	1,9	1,9	1,6
Law	5,9	5,4	4,1	4,3	4,2	3,5	3,7	3,9	4,2
Life and physical sciences	3,7	3,6	3,8	4,1	4,2	5,6	4,9	6,4	6,4
Mathematics and statistics	1,5	1,4	1,5	1,7	1,8	1,3	1,3	1,4	0,9
Military sciences	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Philosophy, religion and theology	1,6	1,4	1,2	1,1	0,9	0,8	0,8	0,7	0,7
Psychology	4,9	4,1	3,5	3,5	3,3	3,4	3,4	3,7	3,3
Public management and services	4,5	3,2	2,8	3,6	4,2	3,0	3,4	3,4	3,9
Social sciences	8,2	5,6	5,4	5,6	5,9	4,1	4,4	5,3	5,2
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Source: DHET (HEMIS)

The table above describes the percentage of graduates by CESM category. The primary fields of study for graduates for all the years were business, commerce and management studies which grew from 21,4% in 2000 to 27,8% in 2016. The second most awarded qualifications were in the fields of education, while the fields of health professions and related clinical sciences had 7–8% graduates each year. Furthermore, engineering was a field with a growing percentage of graduates over the years. However, most of these graduates were unprepared for careers in science, technology, engineering and mathematics (STEM) as those were the fields of study with the lowest percentage of graduates in 2016. Indeed, university graduates in the key STEM fields[36] of study accounted for only 29% of all graduates.

[36] The list of fields included in the calculation: agriculture, agricultural operations and related sciences, architecture and the built environment, computer and information sciences, engineering, health professions and related clinical sciences, family ecology and consumer sciences, life and physical sciences, and mathematics and statistics.

Figure 4.7: Female graduates according to the top CESM categories of specialisation, 2000–2016

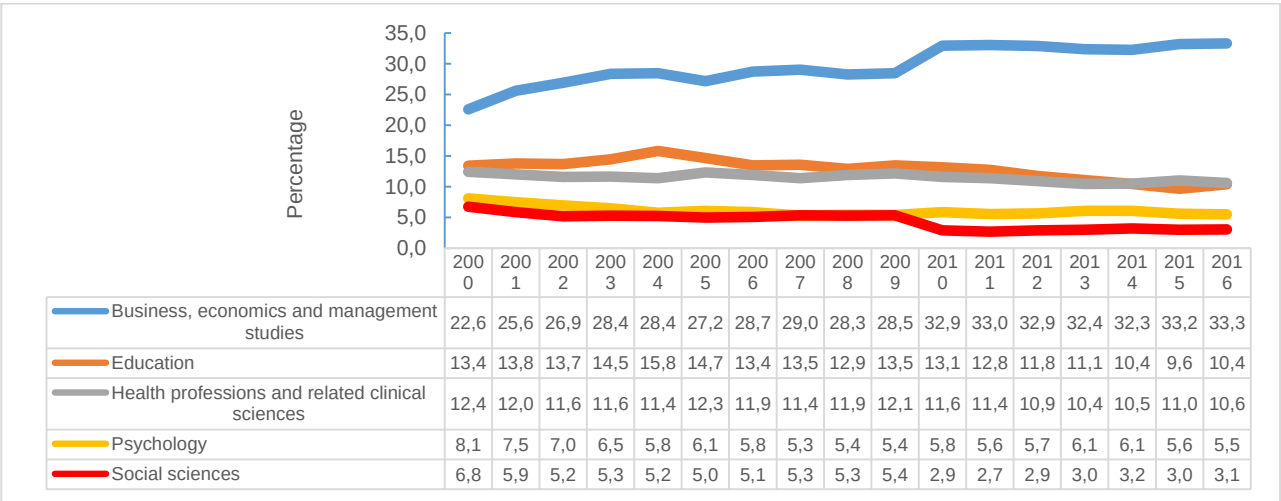


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Business, economics and management studies	18,4	20,4	21,1	22,5	22,4	21,3	22,6	23,2	22,4	21,8	25,0	25,6	26,2	25,5	25,5	26,3	25,9
Education	24,7	28,4	29,9	29,9	31,8	31,0	29,2	28,4	28,4	31,1	30,7	29,2	26,1	26,1	24,7	23,8	25,8
Health professions and related clinical sciences	10,2	9,6	9,1	9,2	9,0	9,7	9,4	9,1	9,5	9,3	8,8	8,8	8,7	8,2	8,3	8,8	8,2
Psychology	6,6	5,9	5,5	5,1	4,5	4,8	4,6	4,2	4,3	4,2	4,4	4,3	4,5	4,8	4,8	4,4	4,3
Social sciences	8,9	7,0	5,6	5,5	5,2	5,0	5,5	5,9	5,7	5,8	4,5	4,4	4,9	5,5	6,2	6,1	6,1

Source: DHET (HEMIS)

The figure above shows the main CESM categories of specialisation of female graduates from 2000 to 2016. According to the figure, the top two areas of qualification of female graduates were education and business, commerce and management studies. These two CESM areas have shown growth and reached some convergence in 2016. There has however been a decline of female graduates in health professions and related clinical sciences from 10,2% in 2000 to 8,2% in 2016; psychology from 6,6% in 2000 to 4,3% in 2016 and social sciences from 8,9% in 2000 to 6,1% in 2016.

Figure 4.8: Male graduates according to the top CESM categories of specialisation, 2000–2016



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Business, economics and management studies	22,6	25,6	26,9	28,4	28,4	27,2	28,7	29,0	28,3	28,5	32,9	33,0	32,9	32,4	32,3	33,2	33,3
Education	13,4	13,8	13,7	14,5	15,8	14,7	13,4	13,5	12,9	13,5	13,1	12,8	11,8	11,1	10,4	9,6	10,4
Health professions and related clinical sciences	12,4	12,0	11,6	11,6	11,4	12,3	11,9	11,4	11,9	12,1	11,6	11,4	10,9	10,4	10,5	11,0	10,6
Psychology	8,1	7,5	7,0	6,5	5,8	6,1	5,8	5,3	5,4	5,4	5,8	5,6	5,7	6,1	6,1	5,6	5,5
Social sciences	6,8	5,9	5,2	5,3	5,2	5,0	5,1	5,3	5,3	5,4	2,9	2,7	2,9	3,0	3,2	3,0	3,1

Source: DHET (HEMIS)

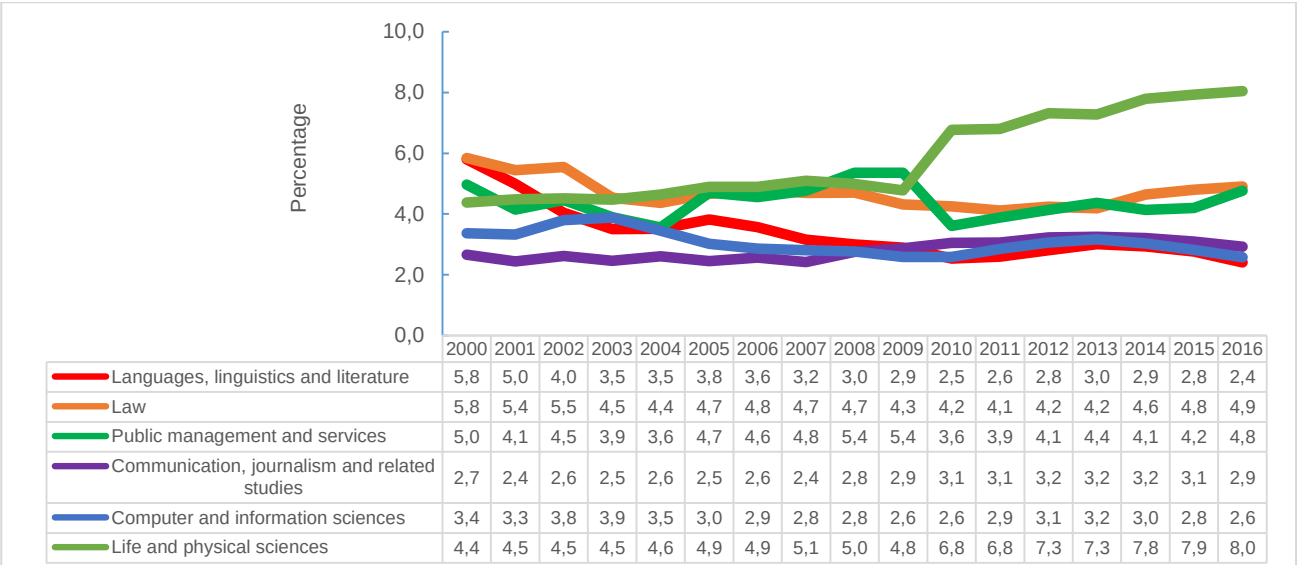
The figure above shows the main CESM categories of specialisation of male graduates from 2000 to 2016. According to the figure, the most important areas of qualification of male graduates were business, commerce and management studies which had grown from 22,6% in 2000 to 33,3% in 2016. Compared to females, males were less likely to graduate with an education qualification, but more likely to graduate in the health professions and related clinical sciences.

Figure 4.9: Female graduates according to the second highest CESM categories of specialisation, 2000–2016

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Languages, linguistics and literature	4,7	4,0	3,2	2,8	2,8	3,0	2,8	2,5	2,4	2,2	1,9	2,0	2,2	2,4	2,3	2,2	1,9
Law	4,8	4,3	4,4	3,6	3,4	3,6	3,8	3,7	3,7	3,3	3,2	3,2	3,4	3,3	3,7	3,8	3,8
Public management and services	4,1	3,3	3,5	3,1	2,8	3,7	3,6	3,8	4,3	4,1	2,7	3,0	3,3	3,4	3,3	3,3	3,7
Communication, journalism and related studies	2,2	1,9	2,1	1,9	2,1	1,9	2,0	1,9	2,2	2,2	2,3	2,4	2,6	2,6	2,5	2,5	2,3
Computer and information sciences	2,7	2,6	3,0	3,1	2,7	2,4	2,3	2,2	2,2	2,0	2,0	2,2	2,4	2,5	2,4	2,2	2,0
Life and physical sciences	3,6	3,6	3,5	3,6	3,7	3,8	3,9	4,1	4,0	3,7	5,1	5,3	5,8	5,7	6,2	6,3	6,3

Source: DHET (HEMIS)

Figure 4.10: Male graduates according to the second highest CESM categories of specialisation, 2000–2016

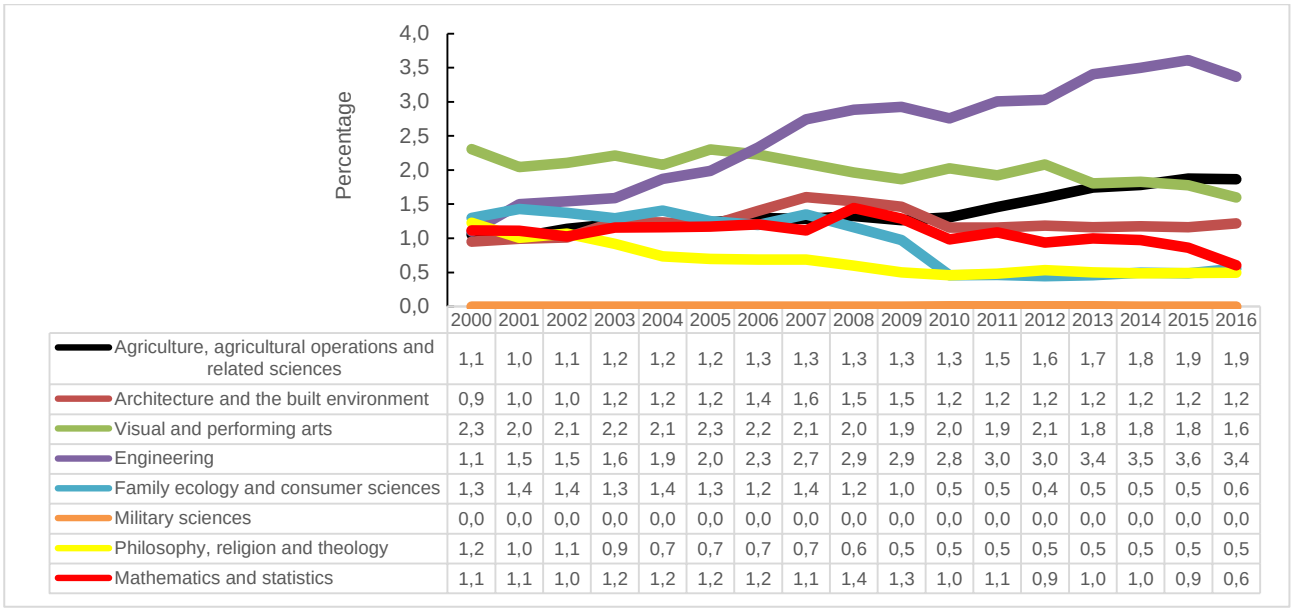


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Languages, linguistics and literature	5,8	5,0	4,0	3,5	3,5	3,8	3,6	3,2	3,0	2,9	2,5	2,6	2,8	3,0	2,9	2,8	2,4
Law	5,8	5,4	5,5	4,5	4,4	4,7	4,8	4,7	4,7	4,3	4,2	4,1	4,2	4,2	4,6	4,8	4,9
Public management and services	5,0	4,1	4,5	3,9	3,6	4,7	4,6	4,8	5,4	5,4	3,6	3,9	4,1	4,4	4,1	4,2	4,8
Communication, journalism and related studies	2,7	2,4	2,6	2,5	2,6	2,5	2,6	2,4	2,8	2,9	3,1	3,1	3,2	3,2	3,2	3,1	2,9
Computer and information sciences	3,4	3,3	3,8	3,9	3,5	3,0	2,9	2,8	2,8	2,6	2,6	2,9	3,1	3,2	3,0	2,8	2,6
Life and physical sciences	4,4	4,5	4,5	4,5	4,6	4,9	4,9	5,1	5,0	4,8	6,8	6,8	7,3	7,3	7,8	7,9	8,0

Source: DHET (HEMIS)

Similar patterns can be observed for both genders for graduates in the fields of life and physical sciences, as the percentages of male and female graduates in these fields had increased especially since 2010. However, the health professions and related clinical sciences showed that over the years, females were more likely to graduate in health studies than their male counterparts. The percentage of graduates in the other fields of qualifications presented in the above graphs have either remained stable or have declined for both genders.

Figure 4.11: Female graduates according to the lowest CESM categories of specialisation, 2000–2016

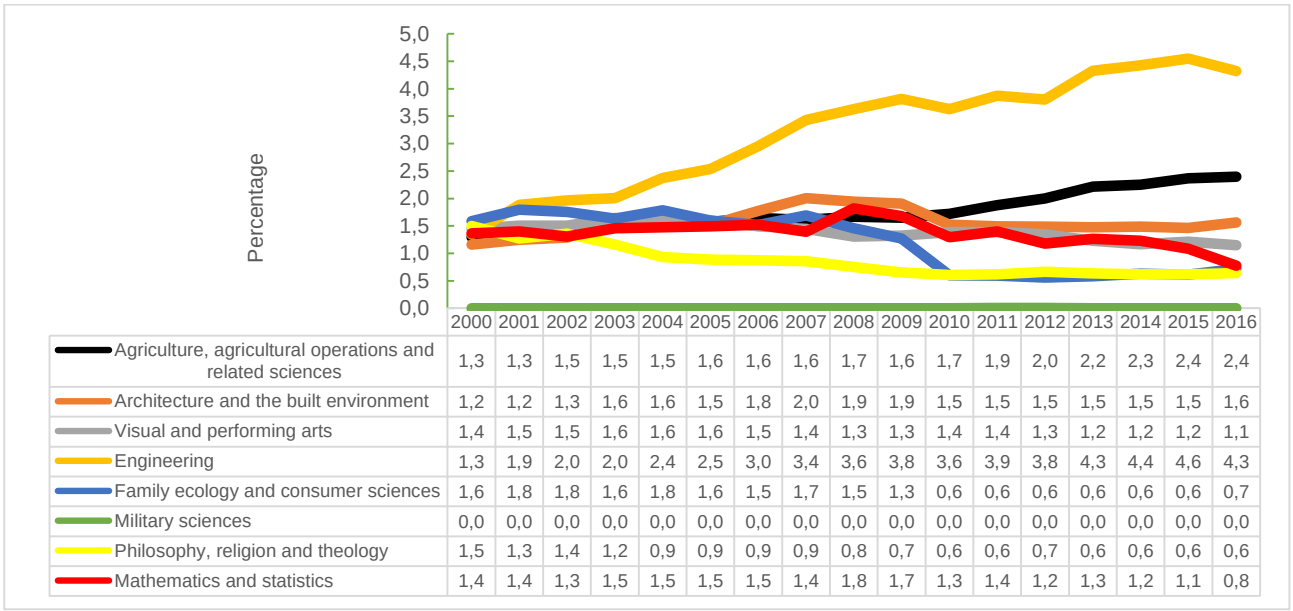


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Agriculture, agricultural operations and related sciences	1,1	1,0	1,1	1,2	1,2	1,2	1,3	1,3	1,3	1,3	1,3	1,5	1,6	1,7	1,8	1,9	1,9
Architecture and the built environment	0,9	1,0	1,0	1,2	1,2	1,2	1,4	1,6	1,5	1,5	1,2	1,2	1,2	1,2	1,2	1,2	1,2
Visual and performing arts	2,3	2,0	2,1	2,2	2,1	2,3	2,2	2,1	2,0	1,9	2,0	1,9	2,1	1,8	1,8	1,8	1,6
Engineering	1,1	1,5	1,5	1,6	1,9	2,0	2,3	2,7	2,9	2,9	2,8	3,0	3,0	3,4	3,5	3,6	3,4
Family ecology and consumer sciences	1,3	1,4	1,4	1,3	1,4	1,3	1,2	1,4	1,2	1,0	0,5	0,5	0,4	0,5	0,5	0,5	0,6
Military sciences	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Philosophy, religion and theology	1,2	1,0	1,1	0,9	0,7	0,7	0,7	0,7	0,6	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Mathematics and statistics	1,1	1,1	1,0	1,2	1,2	1,2	1,2	1,1	1,4	1,3	1,0	1,1	0,9	1,0	1,0	0,9	0,6

Source: DHET (HEMIS)

In 2016, fields like agriculture, architecture, philosophy, religion and mathematics and statistics were the fields in which the lowest percentage of degrees were awarded for both genders. Engineering was proportionately one of the fields that had more graduates for both genders, while agricultural studies had proportionately more male graduates compared to females. The percentage of female graduates in visual and performing arts declined between 2000 and 2016.

Figure 4.12: Male graduates according to the lowest CESM categories of specialisation, 2000–2016



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Agriculture, agricultural operations and related sciences	1,3	1,3	1,5	1,5	1,5	1,6	1,6	1,6	1,7	1,6	1,7	1,9	2,0	2,2	2,3	2,4	2,4
Architecture and the built environment	1,2	1,2	1,3	1,6	1,6	1,5	1,8	2,0	1,9	1,9	1,5	1,5	1,5	1,5	1,5	1,5	1,6
Visual and performing arts	1,4	1,5	1,5	1,6	1,6	1,6	1,5	1,4	1,3	1,3	1,4	1,4	1,3	1,2	1,2	1,2	1,1
Engineering	1,3	1,9	2,0	2,0	2,4	2,5	3,0	3,4	3,6	3,8	3,6	3,9	3,8	4,3	4,4	4,6	4,3
Family ecology and consumer sciences	1,6	1,8	1,8	1,6	1,8	1,6	1,5	1,7	1,5	1,3	0,6	0,6	0,6	0,6	0,6	0,6	0,7
Military sciences	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Philosophy, religion and theology	1,5	1,3	1,4	1,2	0,9	0,9	0,9	0,9	0,8	0,7	0,6	0,6	0,7	0,6	0,6	0,6	0,6
Mathematics and statistics	1,4	1,4	1,3	1,5	1,5	1,5	1,5	1,4	1,8	1,7	1,3	1,4	1,2	1,3	1,2	1,1	0,8

Source: DHET (HEMIS)

Table 4.2: Graduates according to CESM category of specialisation by population group, 2000 and 2016

CESM category	2000				2016			
	Black African	Coloured	Indian/ Asian	White	Black African	Coloured	Indian/ Asian	White
Agriculture and renewable resources	1,6	0,6	0,2	2,3	2,5	0,9	0,5	2,3
Architecture and environmental design	1,3	2,0	2,0	2,6	1,4	1,6	2,5	2,9
Arts, visual and performing	1,6	2,3	1,0	3,9	1,1	2,5	1,0	3,0
Business, commerce & management studies	17,6	25,7	28,6	27,2	27,6	26,5	33,1	26,9
Communication	1,9	1,1	1,4	1,8	2,2	1,8	1,2	1,4
Computer science and data processing	3,1	5,4	5,9	4,6	3,4	3,5	4,1	2,6
Education	29,8	8,1	6,3	5,8	23,3	19,5	13,3	14,9
Engineering and engineering technology	2,7	4,5	6,5	6,4	6,9	4,6	8,9	8,3
Health care and health sciences	6,7	9,2	16,0	10,0	5,7	9,3	11,6	8,8
Home economics	1,1	1,0	0,7	1,1	0,4	0,3	0,4	0,6
Language, linguistics, and literature	4,1	3,7	2,2	3,4	1,5	2,4	1,0	2,1
Law	4,7	7,6	7,3	7,0	3,6	5,2	5,2	5,7
Life sciences and physical sciences	2,8	5,1	4,4	4,7	5,7	6,2	7,7	8,8
Mathematical sciences	1,2	1,0	1,8	2,0	0,9	0,5	1,0	1,2
Military sciences	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Philosophy, religion and theology	1,1	2,5	1,0	2,2	0,5	1,3	0,4	1,3
Psychology	3,7	5,7	4,8	6,4	2,4	5,2	4,9	5,4
Public Administration and social services	6,2	6,0	2,4	1,9	5,0	3,5	1,4	0,8
Social sciences and social studies	8,9	8,3	7,3	6,7	6,1	5,1	1,9	2,8

Source: DHET (HEMIS)

Note: The following CESM fields of studies were combined for comparison purposes: (i) libraries and museums with social sciences and social studies; (ii) industrial arts, trades and technology with and arts, visual and performing; (iii) physical education, health education and leisure with education.

The table above shows the field of study by population group for 2000 and 2016. The percentage of black African graduates in business, commerce and management studies rose by ten percentage point from 17,6% in 2000 to 27,6% in 2016. However, during the same period, there was a reduction in the percentage of black African graduates in education from 29,8% in 2000 to 23,3% in 2016. The percentage of graduates in education for the other population groups more than doubled. The proportion of black African graduates in engineering, life and physical sciences almost doubled during the last 16 years; however, STEM fields such as computer science, data processing and mathematical sciences did not show growth in the percentage of graduates. Between 2000 and 2016, the percentage of graduates in health care and health sciences reduced for all population groups.

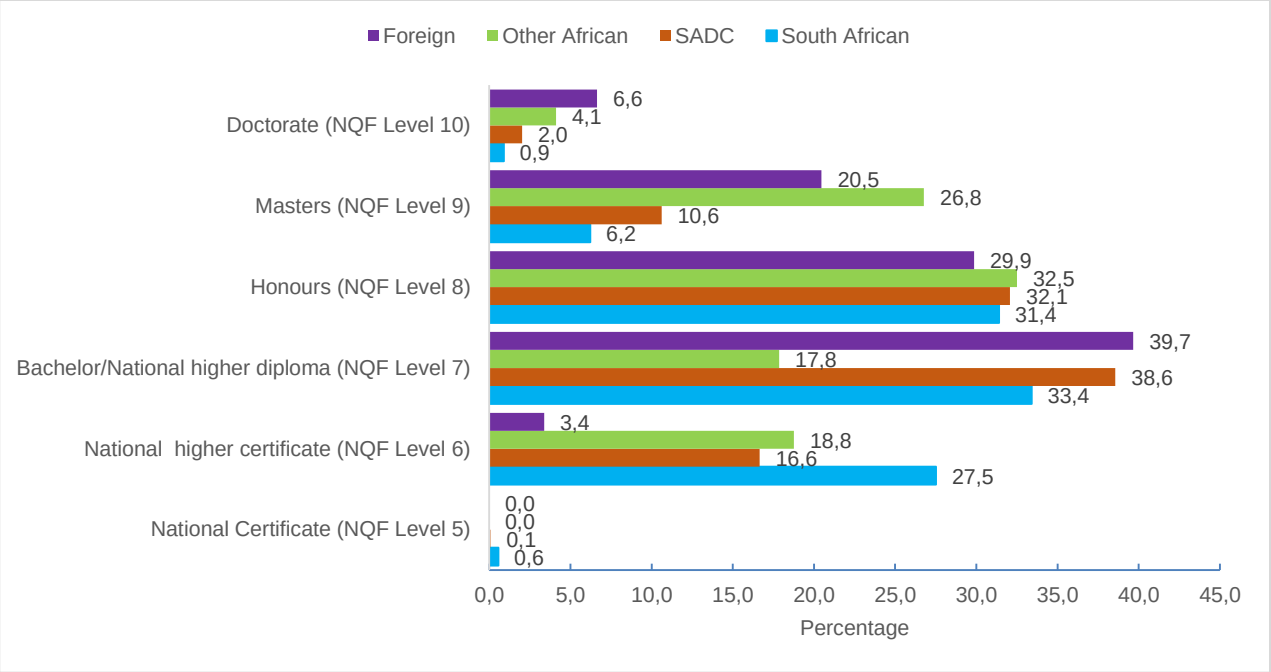
Table 4.3: Graduates from public universities and technikons by nationality, 2000 and 2016

Graduate's nationality	2000		2016	
	Number	Percentage	Number	Percentage
South African	85 988	92,6	187 721	92,4
SADC	2 473	2,7	11 169	5,5
Other African	439	0,5	2 715	1,3
Foreign	952	1,0	1 138	0,6
Unknown nationality	3 021	3,3	333	0,2
Total	92 873	100,0	203 076	100,0

Source: DHET (HEMIS)

The table above presents the number of graduates by nationality for 2000 and 2016. The number of South African graduates had more than doubled, whilst the number of graduates from SADC increased fourfold.

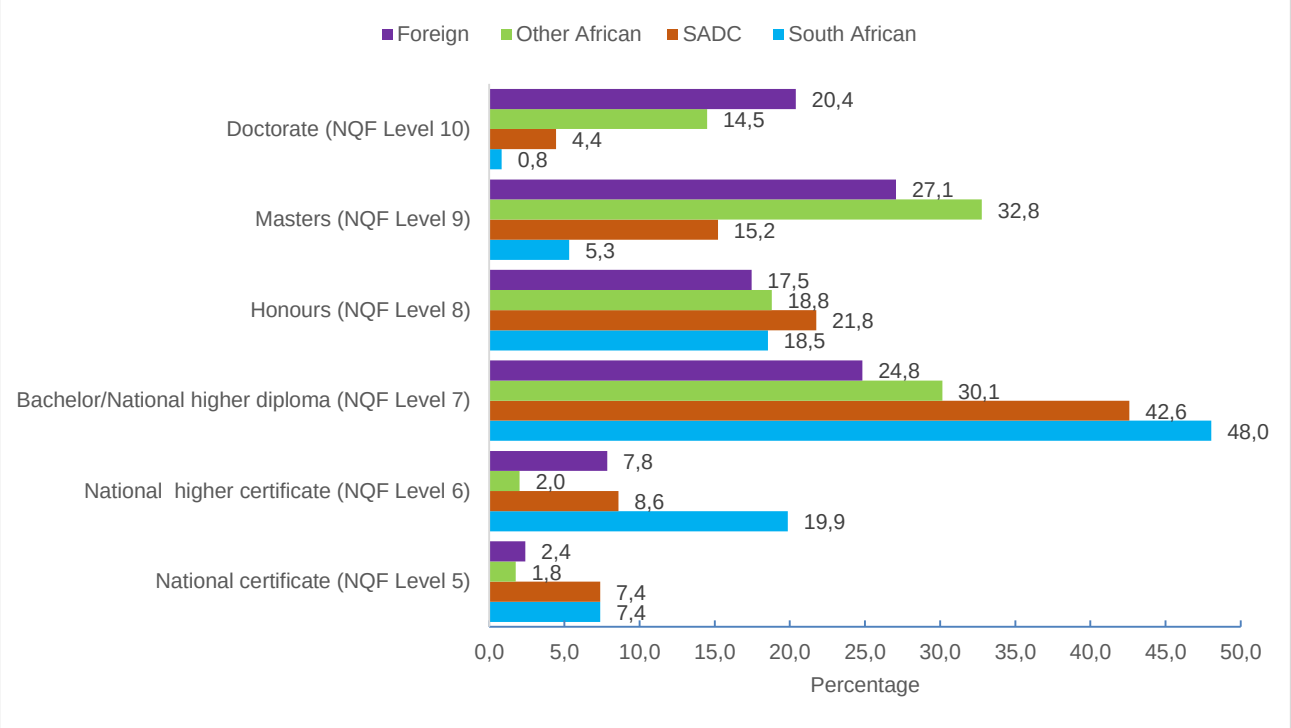
Figure 4.13: Graduates from public universities and technikons by nationality and qualification types, 2000



Source: DHET (HEMIS)

In 2000, close to one-third of South African graduates were more likely to achieve a bachelor degree or a qualification equivalent to NQF level 7 compared to 39% amongst SADC students and 40% amongst foreign students who achieved similar qualifications. Close to 28% of South Africans graduated with national higher certificates while close to 17% of SADC graduates, 19% of other African graduates and 3% of foreign graduates received such qualifications. Other African graduates were more likely to achieve honours (32,5%) or masters (26,8%) degrees.

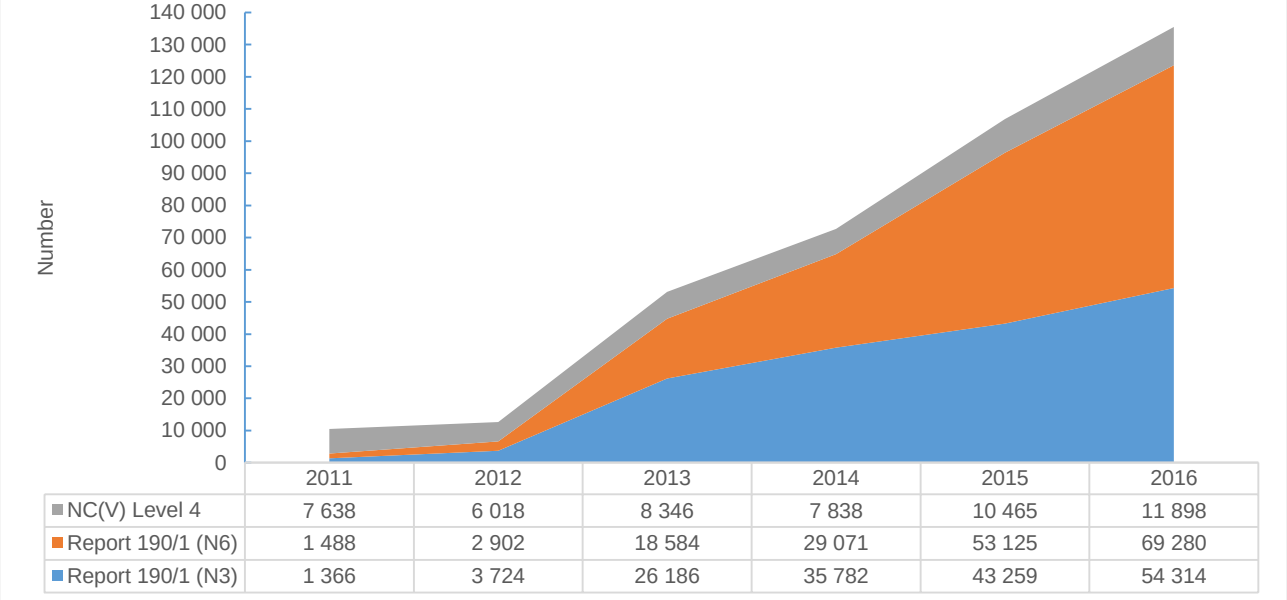
Figure 4.14: Graduates from public universities and technikons by nationality and qualification types, 2016



Source: DHET (HEMIS)

In 2016, while the percentage of South African graduates with bachelor degree or equivalent grew to 48% compared to 2000, the percentage of honours graduates declined by 12,9 percentage point between 2000 and 2016. Non-South African graduates were more likely to achieve masters or doctorate degrees. Furthermore, on in five South Africans who graduated in 2016 obtained national higher certificates (NQF level 6).

Figure 4.15: TVET and private college graduates by type of qualification, 2011–2016

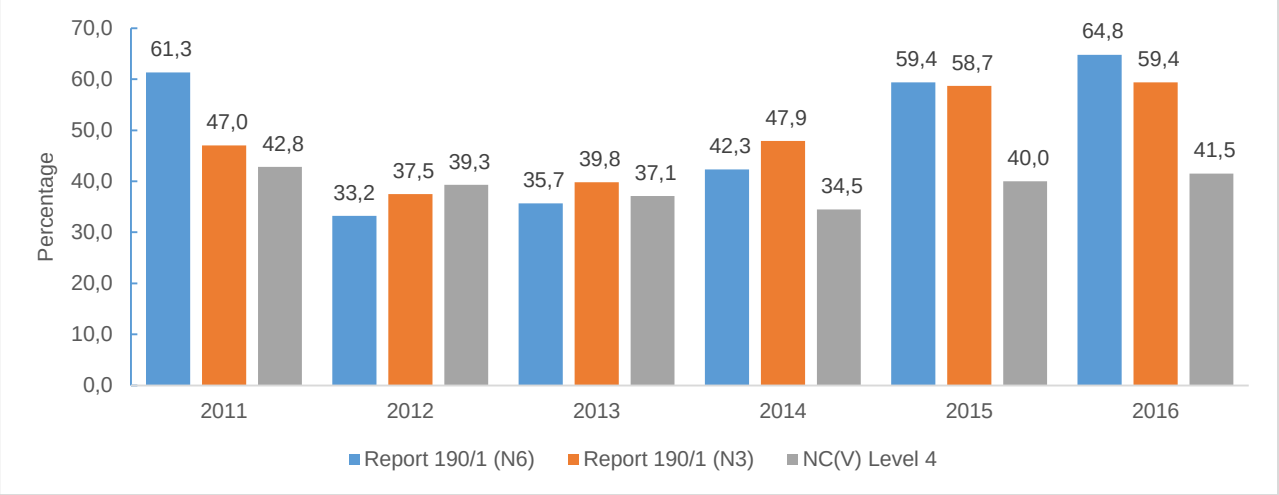


	2011	2012	2013	2014	2015	2016
NC(V) Level 4	7 638	6 018	8 346	7 838	10 465	11 898
Report 190/1 (N6)	1 488	2 902	18 584	29 071	53 125	69 280
Report 190/1 (N3)	1 366	3 724	26 186	35 782	43 259	54 314

Source: DHET (Statistics on Post-School Education and Training in South Africa, 2016)

Despite the surge in enrolment at TVET colleges less progress has been made in increasing the number of graduates from these institutions. As depicted in the above graph, the number of candidates who registered, wrote and qualified to graduate with the qualifications listed above were significantly lower than the number of individuals who registered for these programmes. However in 2016, Report 190/1 (N6) had the highest number of graduates when compared to the other types of qualifications. The NC(V) level 4 qualification had the lowest number of graduates in 2016 even though it started from a higher baseline in 2011.

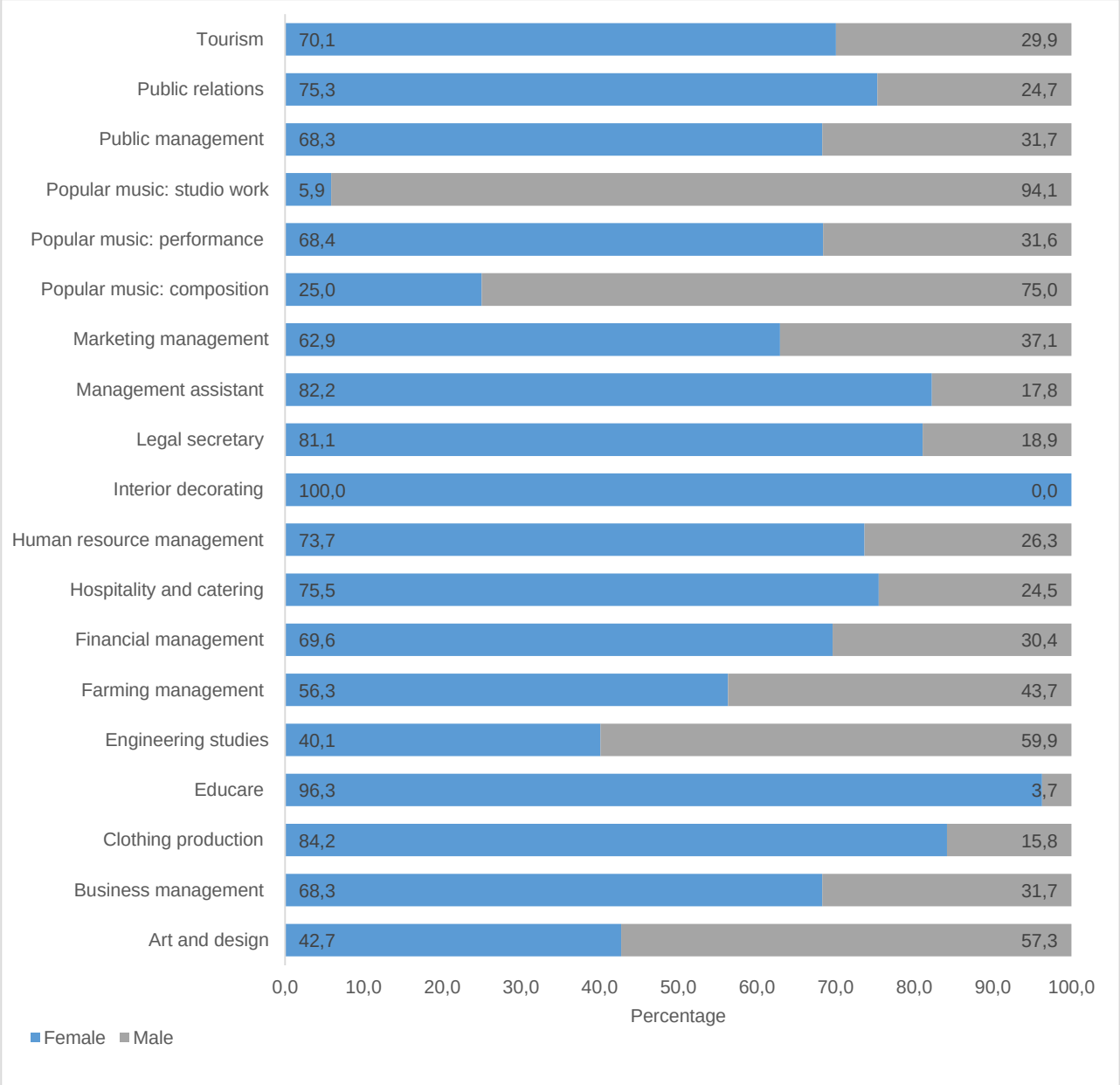
Figure 4.16: Completion rates of TVET and private colleges graduates by type of qualification, 2011–2016



Source: DHET (Statistics on Post-School Education and Training in South Africa, 2016)

Completion rates are calculated by the DHET as the number of students who successfully completed the relevant qualification, expressed as a percentage of the number of students who were eligible to complete the qualification and wrote the examination. Completion rates were fluctuating over the years, but 2012 and 2013 were the years with the lowest completion rates.

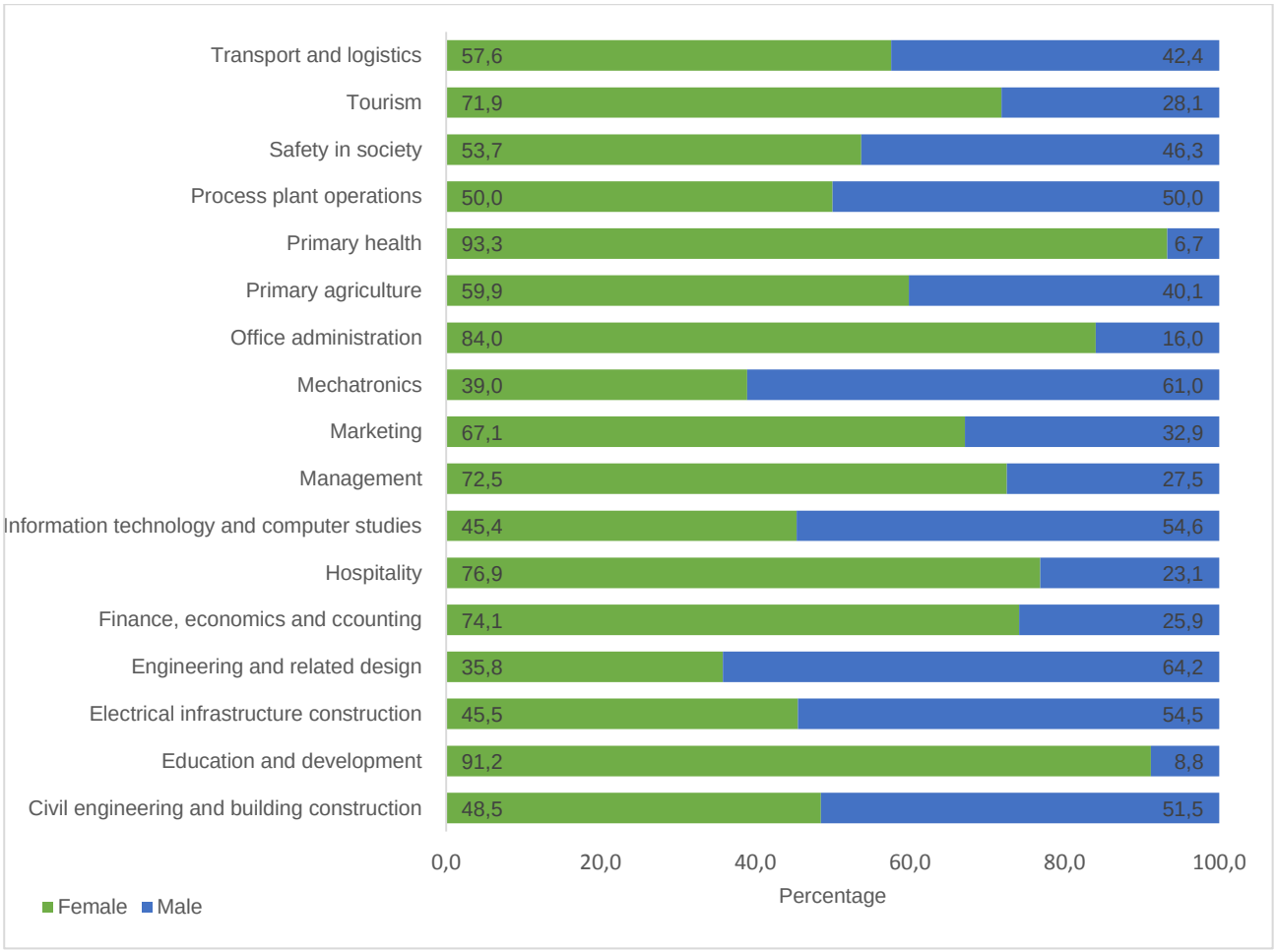
Figure 4.17: TVET Report 191 (N6) programme graduates by gender, 2016



Source: DHET (Statistics on Post-School Education and Training in South Africa, 2016)

The figure above shows that overall there were more female graduates in Report 191 (N6) programme. The graph also shows that almost all the fields of studies had more female graduates except for engineering studies (59,9%), art and design studies (57,3%), popular music composition (75%) and studio work (94,1%) that had more male graduates. Interior decorating and early childhood development studies had almost entirely female graduates only (100,0% and 96,6% respectively).

Figure 4.18: TVET NC(V) level 4 programme graduates by gender, 2016



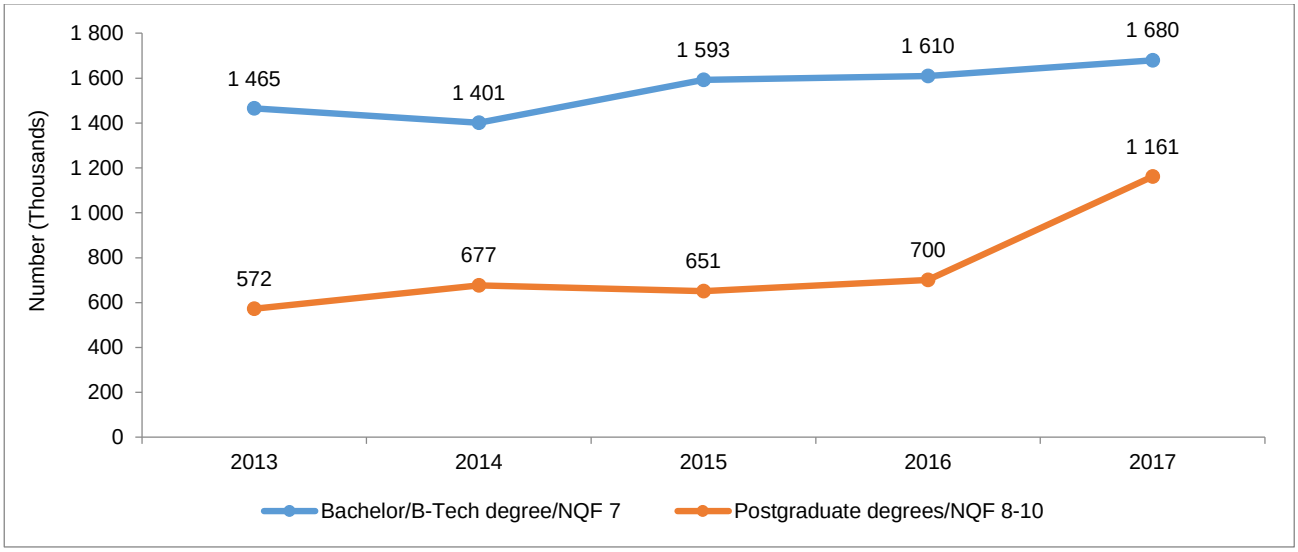
Source: DHET (Statistics on Post-School Education and Training in South Africa, 2016)

The figure above shows that overall there were more female graduates in NC(V) level 4 programme. Almost all the fields of studies had more female graduates except for mechatronics (61,0%), electrical infrastructure construction (54,5%), information technology and computer studies (54,6%), and civil engineering and building construction (51,5) that had more male graduates.

4.2 Educational outcomes in South Africa

The areas showing the greatest growth between 2000 and 2016 had been business, commerce and management studies, education and engineering while the least growth had been in computer and information sciences as well as the health professions. For a developing country like South Africa, the most important resource to tap into the opportunities presented by the fourth industrial revolution is the existence of a large stock of human capital that can support the necessary technological transformation. The section below describes household members' educational attainment using the GHS 2017 data.

Figure 4.19: Trends in highest level of educational attainment by individuals aged 20 and older by qualification type, 2013–2017



Source: GHS 2013–2017

The graph above illustrates the trends in higher education attainment for bachelor and postgraduate degrees. Overall the graph shows an upward trend for both qualifications types. However, there has been faster growth in postgraduates degrees, compared to the undergraduate degrees.

Table 4.3: Educational attainment among youth aged 20–24 years by household income quintiles[37], 2017

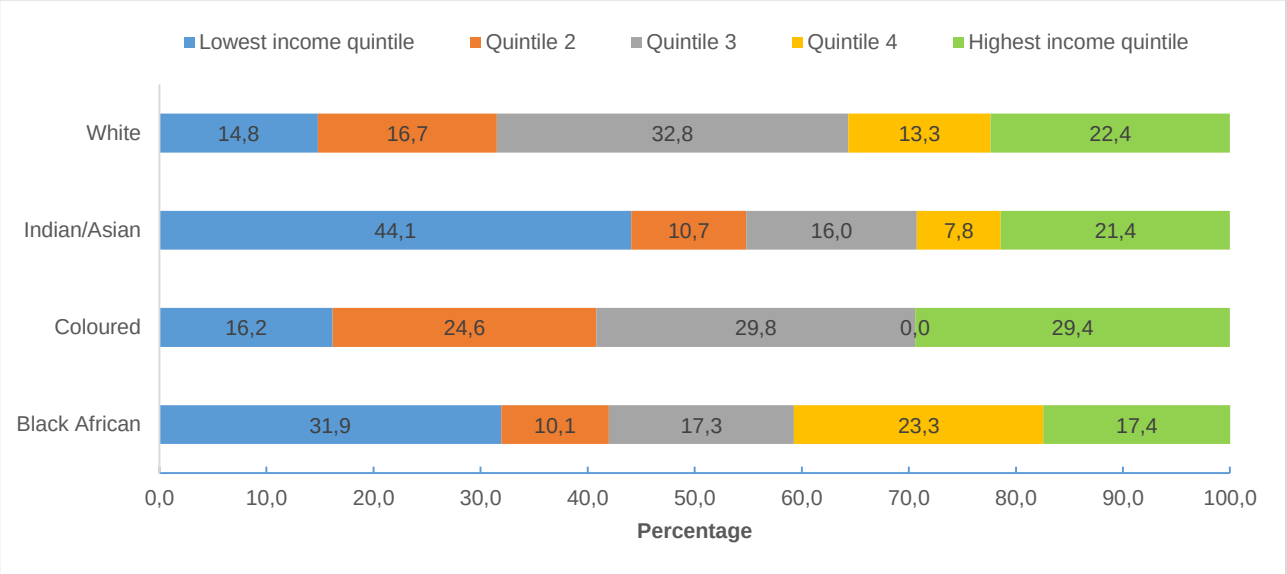
Income quintile categories	Less than degree/NQF 6 or less	Bachelor's degree/ Occupational certificate/NQF 7	Postgraduate degrees/ NQF 8-10	Total
	994 158	7 260	4 978	**1 006 396**
Lowest income quintile	20,7	7,4	10,1	
	961 941	10 112	1325	**973 378**
Quintile 2	20,0	10,2	2,7	
	965 119	22 099	14 529	**1 001 747**
Quintile 3	20,1	22,4	29,5	
	1 051 731	13 024	10 726	**1 075 480**
Quintile 4	21,9	13,2	21,8	
	837 462	46 307	17 679	**901 448**
Highest income quintile	17,4	46,9	35,9	
	4 810 410	**98 802**	**49 237**	**4 958 449**
Total	**97,0**	**2,0**	**1,0**	

Source: GHS 2017

[37] Income quintiles were calculated using monthly household incomes based on GHS data. Median per capita income derived using the Living Condition Survey 2014/2015 adjusted for inflation. Where total monthly household income values were missing or were less than R1 695, 34 monthly income values were imputed by using per capita median income multiplied by household size.

Individuals from middle and high income households were more likely than those from income quintiles 1 and 2 to have degrees. Close to 47% of youth aged 20–24 who held bachelor degrees or qualifications equivalent to NQF level 7 were from the wealthiest income quintile compared to only 7,4% with similar qualifications who were from the poorest quintile. Furthermore, close to 36% of youth holding postgraduate degrees or qualifications equivalent to NQF levels 8–10 belonged to the wealthiest household income quintiles.

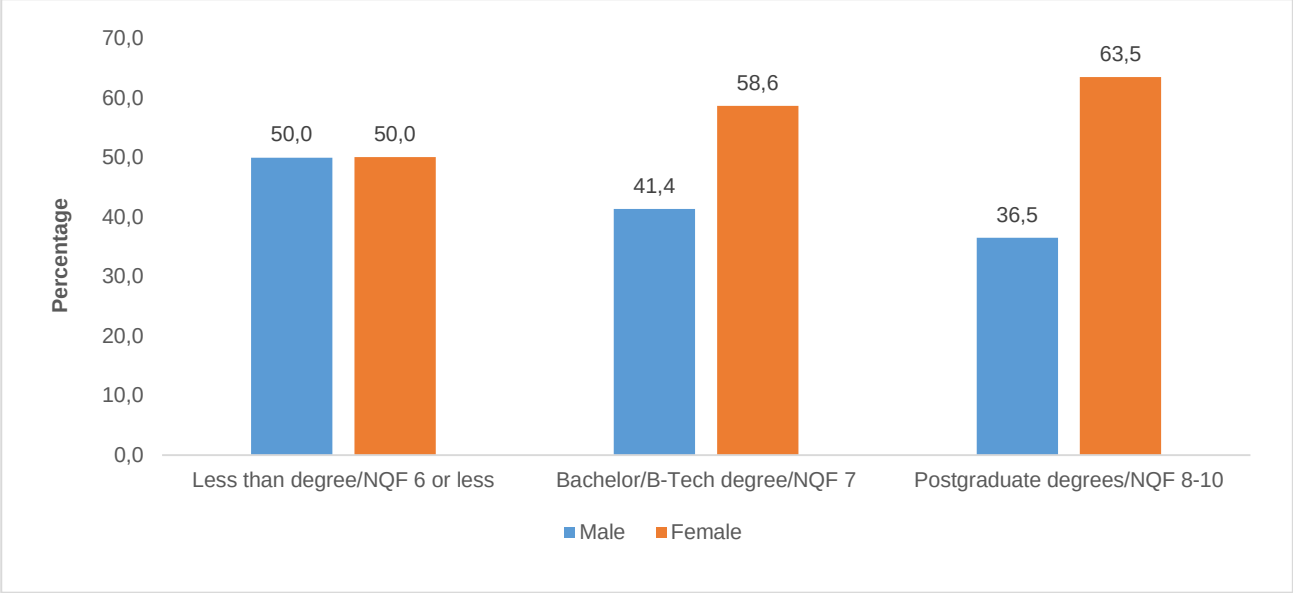
Figure 4.20: Youth aged 20–24 with educational attainment of NQF levels 7–10 by population group and household income quintiles, 2017



Source: GHS 2017

The figure above shows graduate youth aged 20–24 by population group and household income quintiles. Among black African youth graduates, the majority (32%) belonged to the poorest income quintile, while 58% were either in the middle or higher household income quintiles (quintiles 3–5). By contrast, three in five (60%) coloured youth graduates, belonged to middle or high income households. The same was true for close to 69% white youth graduates. However, 15% of white youth graduates were confined to the poorest household income quintiles.

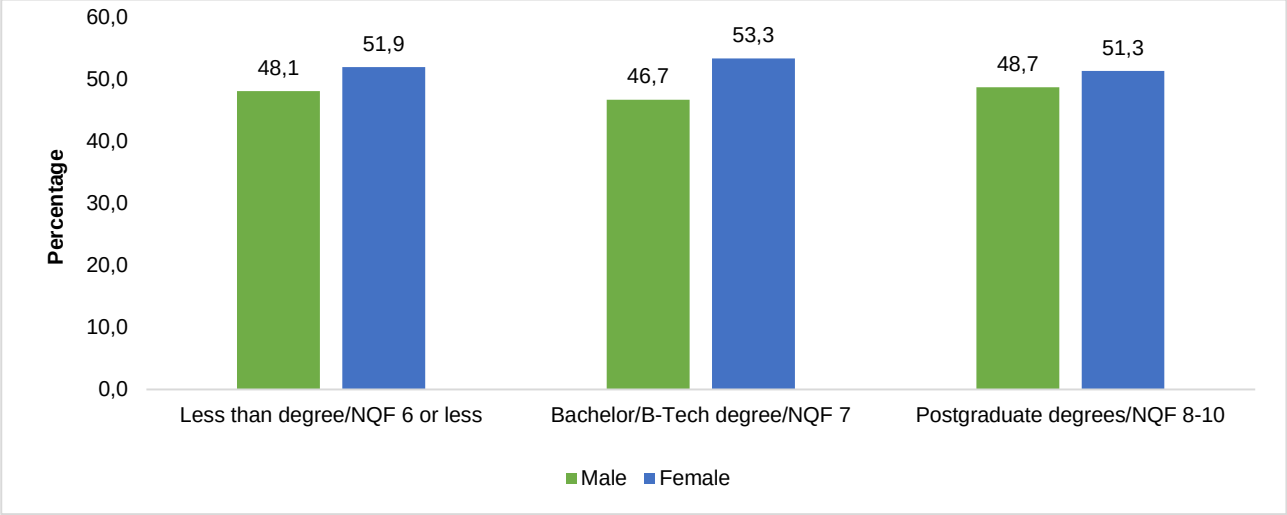
Figure 4.21: Educational attainment among youth aged 20–24 by gender, 2017



Source: GHS 2017

The figure above displays the existence of gender disparities in educational attainment among youth aged 20–24 except for those individuals with qualifications less than a degree. The largest gap between female (63,5%) and male (36,5%) individual's attainment was observed in postgraduate degree holders. However, bachelor degree attainment among youth was still largely dominated by females with close to 59% of females having such qualifications.

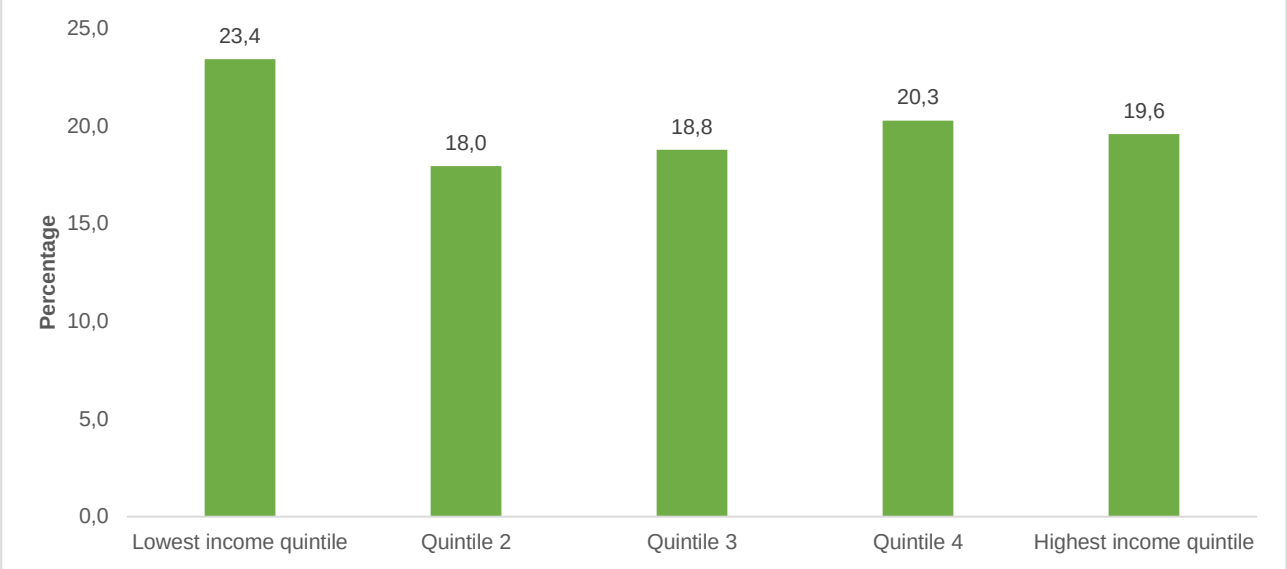
Figure 4.22: Educational attainment among individuals aged 20 years and older by gender, 2017



Source: GHS 2017

Females who were aged 20 years and older had more educational attainment in all NQF levels relative to males but with a narrow gap between the genders compared to the youth aged 20–24, especially for postgraduate qualifications. Indeed, while 48,7% of males aged 20 years and above had postgraduate degrees or 8–10 NQF level qualifications, the same was true for 51,3% for females. The percentage point difference between males and females NQF level 7 holders was 6,6%.

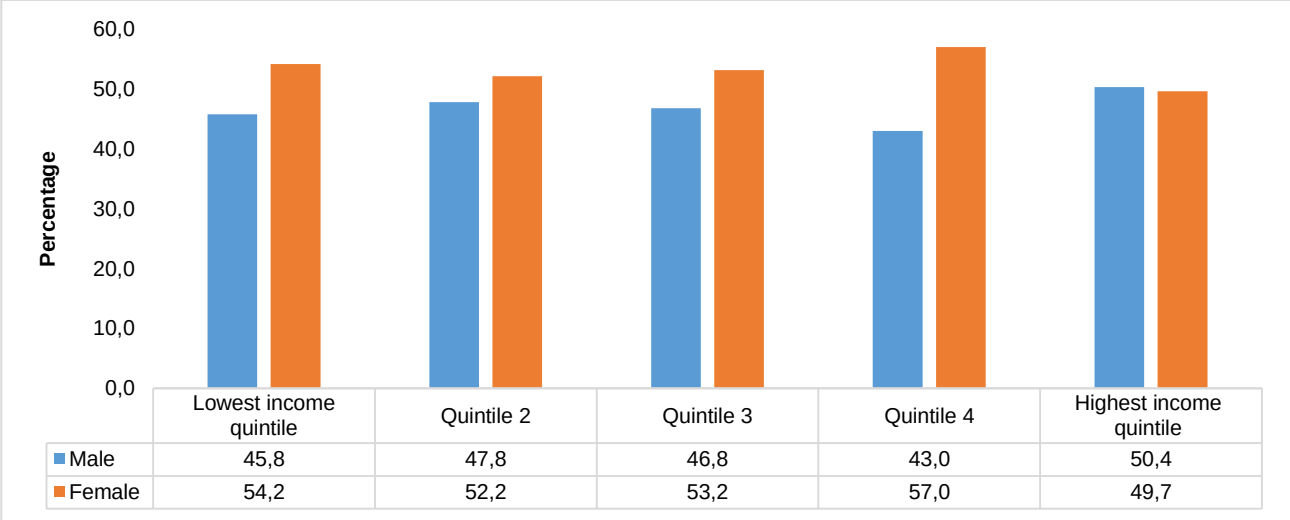
Figure 4.23: Individuals aged 20 years and older with NQF level 7 qualifications by household income quintiles, 2017



Source: GHS 2017
Note: NQF level 7 refers to higher diploma/occupational certificate or bachelor degree.

The figure above illustrates the distribution of individuals aged 20 years and older with NQF level 7 qualifications by household income quintiles. The percentage of individuals who attained NQF level 7 was the highest at the lowest income quintile (23,4%). Furthermore, close to 60% of such qualification holders belonged to the three lowest income quintiles (quintiles 1, 2 and 3) whereas the rest 40% belonged to the higher household income quintiles (quintiles 3 and 4).

Figure 4.24: Individuals aged 20 years and older with NQF level 7 qualifications by gender and household income quintiles, 2017

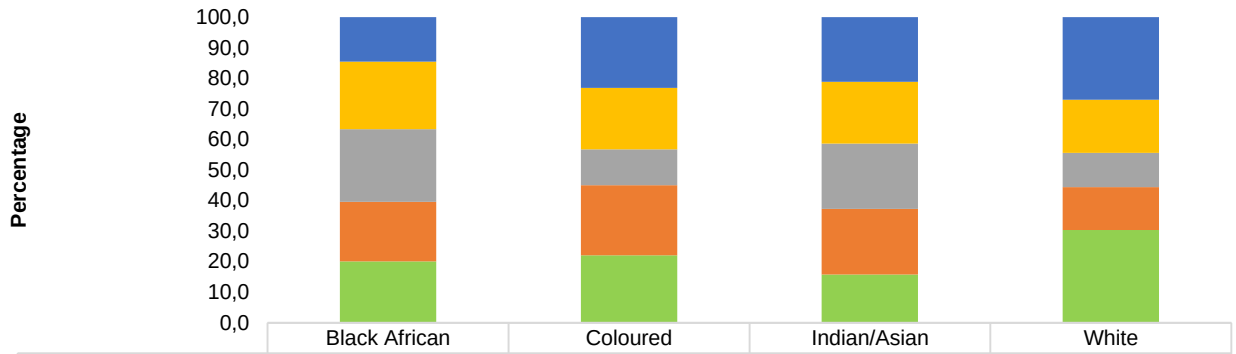


	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
Male	45,8	47,8	46,8	43,0	50,4
Female	54,2	52,2	53,2	57,0	49,7

Source: GHS 2017
Note: NQF level 7 refers to higher diploma/occupational certificate or bachelor degree

A breakdown of individuals NQF 7 qualification holders by gender and household income quintiles revealed that more females in the lowest income quintile had such qualifications (54,2%), compared to males (45,8%). However the gender gap in qualifications persisted among all income groups expect for the wealthiest income group and was the largest (14 percentage point) among individuals with quintile 4 household income. Males and females in the highest income quintiles had similar qualifications.

Figure 4.25: Individuals aged 20 years and older with NQF level 7 qualifications by population group and household income quintiles, 2017

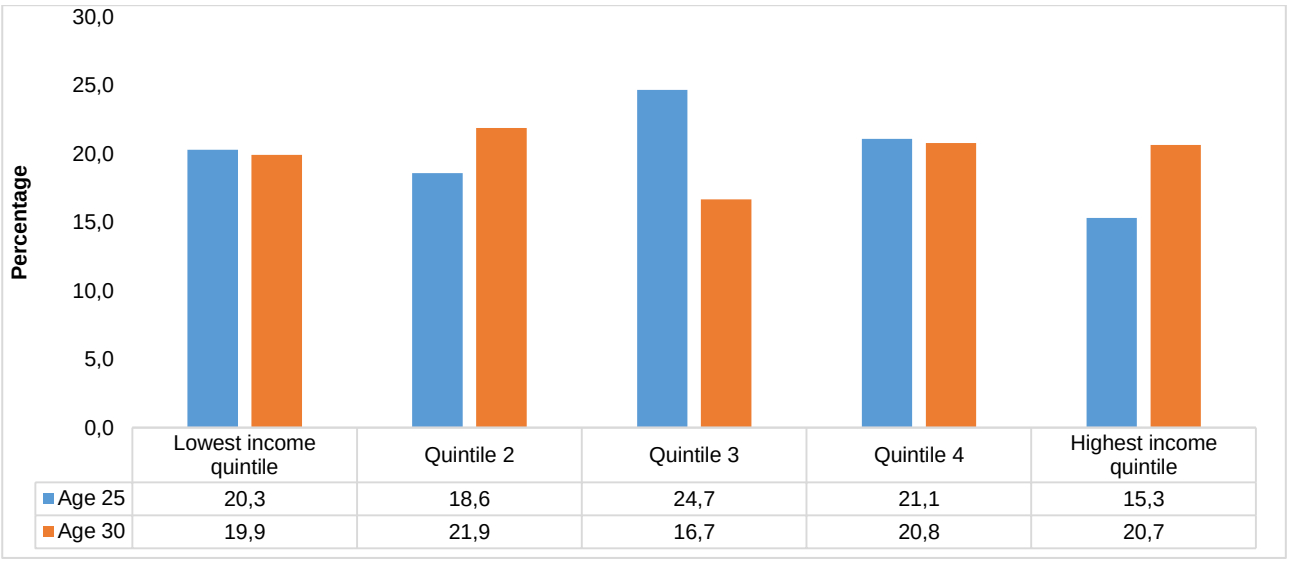


	Black African	Coloured	Indian/Asian	White
Highest income quintile	14,5	23,1	21,1	26,9
Quintile 4	22,1	20,1	20,2	17,4
Quintile 3	23,8	11,7	21,4	11,2
Quintile 2	19,4	23,0	21,5	14,0
Lowest income quintile	20,1	22,1	15,9	30,4

Source: GHS 2017
Note: NQF level 7 refers to higher diploma/occupational certificate or bachelor degree

Proportionally more white individuals aged 20 and older who completed NQF level 7 qualifications were found in the lowest income quintile relative to those in the highest income quintile as well as compared to other population groups (30,4%). In addition, more black Africans who attained NQF level 7 qualifications were found in quintile 3 (23,8%) than in any of the other quintiles. Indians/Asians with more or less NQF level 7 qualifications were evenly distributed across quintiles, whilst the coloured population was found in the middle and high income groups (quintiles 3,4, and 5).

Figure 4.26: Individuals aged 25 and 30 years old with NQF level 7 qualifications by household income quintiles, 2017



	Lowest income quintile	Quintile 2	Quintile 3	Quintile 4	Highest income quintile
Age 25	20,3	18,6	24,7	21,1	15,3
Age 30	19,9	21,9	16,7	20,8	20,7

Source: GHS 2017
Note: NQF level 7 refers to higher diploma/occupational certificate or bachelor degree

Overall there seem to be not much difference between the two age groups with respect to NQF 7 level educational attainment for the lower household income quintiles. Differences exist among individuals who belonged to middle or higher income households where in quintiles 3 and 4 individuals aged 25 were better educated than those aged 30. The reverse was true in the highest income quintile, where 21% of the individuals were better qualified.

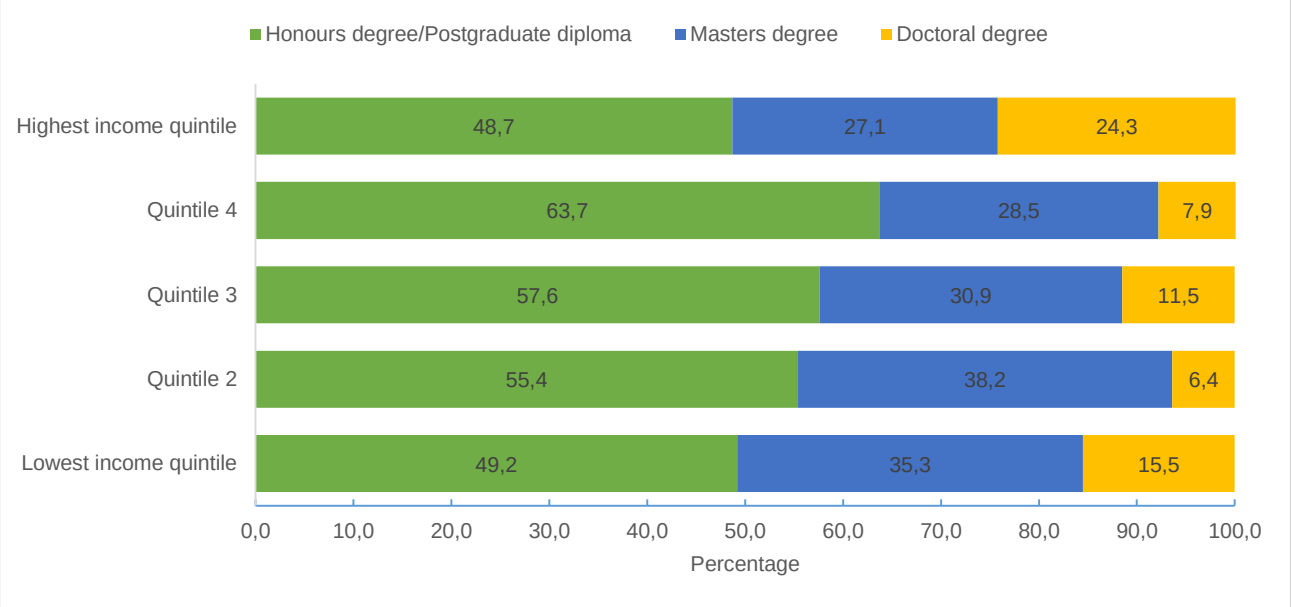
Table 4.4: Individuals aged 20–50 years with NQF level 6–10 qualifications by household income quintiles, 2017

Quintile	Higher diploma	Bachelor degree /National diploma	Honours degree/postgraduate diploma	Masters degree	Doctoral degrees	Total
Lowest income quintile	184 854	167 922	99 676	84 939	11 083	548 474
	33,7	30,6	18,2	15,5	2,0	
Quintile 2	116 720	91 146	56 071	46 427	6 472	316 836
	36,8	28,8	17,7	14,7	2,0	
Quintile 3	115 833	135 415	103 087	62 481	3 843	420 659
	27,5	32,2	24,5	14,9	0,9	
Quintile 4	91 384	143 542	124 483	53 023	15 640	428 072
	21,4	33,5	29,1	12,4	3,7	
Highest income quintile	74 763	134 171	124 791	63 586	25 454	422 764
	17,7	31,7	29,5	15,0	6,0	
Total	583 554	672 195	508 108	310 456	62 492	2 136 805

Source: GHS 2017

Out of the 21 million individuals aged 20–50 who attained higher education, the majority had bachelor degrees (672 195), followed by higher diplomas (583 554) and honours degrees (508 108). Close to one third of individuals (33,7%) that belonged to the lowest household income quintile had higher diploma while close to three in ten had bachelor degrees (33,7%). Individuals within the richest household income quintile mostly either had bachelor degrees (32%) or honours degree (30%). Doctoral degrees were mostly held by individuals residing in higher income households with those in quintile 4 accounting for close to 4% and those in quintile 5 accounting for 6%.

Figure 4.27: Individuals aged 50 years and older with NQF levels 7–10 qualifications types and household income quintiles, 2017



Source: GHS 2017

The above graph presents the distribution of graduate level qualifications among individuals aged 50 and older. Qualification type by the most individuals was an honours degree or a postgraduate diploma. Those within the fourth quintile were most likely (63,7%) to have such a qualification. The second most common qualification type among graduate individuals aged 50 and older across all household income quintiles was post higher diploma or masters degrees while the highest percentage of doctoral degree holders belonged to the wealthiest quintiles.

4.3 Summary and conclusion

Human capital theory and related literature indicate that having a tertiary qualification is an important feature in increasing lifetime income and quality of life. Furthermore, the negative effect of having a large, poorly educated population is a key factor which explains poor innovative performance leading to poor labour market outcomes. Despite the much increased financing of the higher education system in South Africa, it has not been possible to absorb the growing demand for access to higher education by the youth, and address the increased disparity on equity.

This chapter has shown that the highest percentage of graduates were females compared to males and their percentage has been rising since 2000. The report also shows that a large percentage of undergraduate students either dropped out without completing their qualifications or took up more than double the amount of time required to complete their studies.

Pubic higher education institutions mostly produce undergraduate certificate, diploma or degree holders. In 2016, 72,4% of graduates had such qualifications, amongst which 46,2% received undergraduate degrees. These degrees were mostly in business, economics and management studies (28%), education (21%) and engineering (7%); however the share of graduates in key STEM fields of study amounted to only 29% of all graduates.

Among youth aged 20–24, 97% had qualifications NQF level 6 or less, while 2% had bachelor degrees or NQF level 7 qualifications. Only one per cent had postgraduate qualifications. In addition, among youth with NQF level 7 qualifications, 7,4% were found in the lowest household income quintile, while 46,9% were from the highest income quintile.

Chapter 5: Conclusions and the way forward

South Africa has a post-school education system of good quality with a number of reputable public, higher education institutions. Oversight and accreditation of private higher education is also strong. There has been an increase in higher education participation rates, but the expansion did not meet the educational needs of all. This was due to several reasons including the poor transition of learners from the FTE phase, to completion of Grade 12, to writing and passing the NSC examination. Furthermore access to funding for tuition was a major concern for some of the youth who could not pursue higher education. Other barriers to higher education qualification attainments were poor performance resulting in high levels of drop out from tertiary institutions.

Challenges within the basic education system do hampers the transition of many learners to post-school education. In 2017, only three quarters of male students who attended Grade 10 in 2016 progressed to Grade 11, while the same was true for close to 87% female learners. During the same period, even less males (71%) who attended Grade 11 in 2016 progressed to Grade 12 the following year, while 76% of the females could do the same. The provinces that were most affected by these changes were Eastern Cape, Northern Cape and KwaZulu-Natal with obvious implications for the NSC performance in these provinces. While NSC performance was generally better among male learners, no gender gap was observed in terms of bachelor pass rates.

The general trend in participation in all institutions of post-school learning was upward with total enrolment in higher education institutions in 2016 amounting to 1 143 245, in TVET to 705 397, in CET colleges to 273 431 and private colleges to 168 911. Despite gains in higher education participation rates, gender disparity was still a challenge as well as participation equity concerns for students from low income backgrounds. Female participation in 2016 at public higher educational institutions (universities) was 58% and 57% at TVET colleges.

Among youth aged 18–24, who were not attending any educational institutions, 20% claimed that they did not attend because they have already completed or were satisfied with their level of education, while the majority (51%) said that they did not have money to pay the fees. Furthermore, 18% indicated that they were prevented from participating by their poor academic performance. More than three quarters of the black African, Indian/Asian and coloured 18-24 year olds who were not attending because they were happy with their level of education only completed secondary schooling. The comparative figure for whites was 64%.

Most students were enrolled in undergraduate NQF level 7 programmes at universities, mostly studying for qualifications in the fields of business, commerce and management sciences, education or engineering. Most students enrolled at TVET colleges in 2016 were studying for Report 191 qualifications. The higher education system still has challenges in terms of success - and poor completion rates. Many students drop out, without completing a qualification or take up to six years to complete a three-year qualification. Very few students progress to advanced NQF levels of study (NQF levels 8–10). Honours (19,8%), masters (6,3%) and doctoral studies (1,4%) accounted for a relatively small percentage of the overall tertiary qualifications awarded in 2016.

Increasing post-school participation has been associated with a rapid growth in public expenditure within the sector, with a doubling of costs as a proportion of the GDP since the 2010/2011 financial year. South Africa still needs more future growth in the post-school education sector to respond to the development needs of the country as well as the educational needs of youth. The NDP has made provision for interventions that accelerate efficiencies and progress in the sector and these are also reflected in the MTSF (2014–2019). The table below describes the current status in terms of selected targets set for 2030 and 2019 respectively.

Table 5.1 Current status of selected outcomes and targets on higher education and training related indicators

Outcomes	NDP targets by 2030	MTSF targets by 2019	Current status
Headcount enrolments	Enrolment in higher education sector to increase to more than 30% (1 620 000)	1 070 000 students enrolled in higher education studies at universities (2018 academic year, reported and verified by 31 October 2019)	1 143 245 students enrolled in higher education institutions in 2016
	Increase to 1,25 million enrolment in TVET colleges	1 238 000 headcount enrolments in TVET colleges by 2018	705 397 students enrolled in TVET in 2016
	Increase to 1 million enrolment in CET per year		273 431 students enrolled in CET
Certification rates for TVET qualifications		Certification rates in TVET qualifications- NC(V) L4: 65% by 2019	41,5% in 2016
		Certification rates in TVET qualifications- N3: 65% by 2019	59,4% in 2016
		Certification rates in TVET qualifications- N6: 65% by 2019	64,8% in 2016
Graduation rates	Increase to 75% the graduation rate from TVET colleges		135 492 graduates from TVET and private colleges in 2016 and TVET graduation rate of 62,2%
	Increase graduation rates at university to more than 25% (or 425 000 graduates)		203 066 graduates from public universities in 2016 39 686 graduates from private universities in 2016
		57 000 graduates in engineering sciences from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019)	43 145 graduates in engineering sciences from universities, cumulative from the 2014 to 2016 academic year
		45 000 graduates in human health and animal health from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019)	40 139 graduates in health professions and related clinical sciences from universities, cumulative from the 2014 to 2016 academic year
		36 000 graduates in natural and physical sciences from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019)	37 339 graduates in natural and physical sciences from universities, cumulative from the 2014 to 2016 academic year
		99 000 graduates in initial teacher education from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019)	115 836 graduates in education from universities, cumulative from the 2014 to 2016 academic year
		34 000 research masters graduates from universities (cumulative from the 2014 to 2018 academic year, reported and verified by 31 October 2019);	26 425 masters degree graduates from universities, cumulative from the 2014 to 2016 academic year
		Number of doctoral graduates from 2 400 per annum (12 000 cumulative from 2014 to 2018 academic year	7 585 doctoral graduates, cumulative from 2014 to 2016 academic year
Success rates		Higher education undergraduate success rate: contact 81%	83% contact public higher education undergraduate success rate in 2016
		Higher education undergraduate success rate: distance 81%	67,6% distance public higher education undergraduate success rate in 2016

The above table summarises achievements by 2016 with reference to both the NDP and MTSF targets. Despite the fact there are still a few more years until 2030, the MTSF targets lapse in 2019. While most of the outcomes presented are positive and on track, some of the MTSF targets might unfortunately not be met. The targets for enrolment were met for both the NDP and the MTSF in 2016. However, in 2016 targets for enrolment at TVET colleges and especially enrolment at CET colleges were still well below targets set for 2030. The targets set for certification rates for qualifications received at TVET colleges have already been reached in 2016 for the Report 190/1 (N6) qualification type. The TVET and university graduation rates are two of the NDP targets that could still be realised, provided that post-school institutions continue to expand their enrolment capacities, and improve efficiencies by reducing dropout rates, and increase the number of

graduates within the duration required for the qualification. Although the TVET graduation rate stood at 62,2% in 2016, the NDP target was set at 75%, which is 12,8 percentage point higher. The NDP target for the number of graduates is 425 000, while attainment in 2016 stood at approximately half of this target (242 752). The MTSF included targets for specific fields of study and university qualification types. The targets set for the number of graduates in natural and physical sciences as well as education were already achieved in 2016. The targets for engineering and health professions, as well as the number of graduates for masters and doctorate degrees will most likely be met by 2030. The MTSF targets for contact undergraduate success rates were already surpassed in 2016, but might not be achieved for distance learning undergraduates.

Appendix

Appendix A: Senior Certificate pass requirement

	Senior Certificate	National Senior Certificate
Subjects	6 subjects	7 subjects
	2 languages	2 languages
Minimum pass requirement	Pass 5 of the 6 subjects	Pass 6 of the 7 subjects
	Pass 2 of the languages	Pass 2 of the languages
	Pass 1 of the languages at 40%	Pass home language at 40%
	All other subjects can be passed at 25%	Pass 3 subjects at 40% and 3 subjects at 30%
	Aggregate mark of 720	No aggregate requirement
Bachelor pass	Pass 4 subjects with 40%	Pass 4 subjects with 50%
	Pass 2 of the other subjects at 33%	Pass 2 of the other subjects at 30%
		Pass home language at 40%
		Pass LoLT at 30%

Appendix B: NQF levels for qualifications from technikons

Type of qualification	NQF level
Occasional	Occasional Certificate (NQF Level 5)
National certificate	National Certificate (NQF Level 5)
National higher certificate	National Higher Certificate (NQF Level 5)
National diploma	National Diploma (NQF Level 6)
Post-dip diploma	Post-Graduate Diploma(NQF Level 8)
National higher diploma	National Higher Diploma (NQF Level 7)
Bacc. technologiae	Bachelor of Technology (B-Tech NQF Level 7)
Masters diploma in technology	Masters diploma In Technology (NQF level 8+)
Magister technology	Master in Technology (NQF Level 9)
Laureatus in technology	Laureatus in Technology (NQF Level 9)
Doctor technologiae	Doctorate in Technology (NQF Level 10)

Appendix C: NQF levels for qualifications from universities

Type of qualification	NQF level
UG Dip/Cert (1 Year)	Undergraduate Diploma/Certificate (1 year NQF Level 5)
UG Dip/Cert (2 Year)	Undergraduate Diploma/Certificate (2 years NQF Level 5)
UG Dip/Cert (3 Years)	Undergraduate Diploma/Certificate (3 years NQF Level 6)
1st Bach Deg (3 Years)	Bachelor's Degree (3 years NQF Level 7)
1st Bach Deg (4 Years or more)/NQF 7	Bachelor's Degree (4 years or more NQF 7)
1st Bach Deg (4 years or more NQF 8)	Bachelor's Degree (4 years or more NQF 8)
B Tech (1 Year)	Bachelor of Technology (1 year NQF Level 7)
Advanced diploma	Advanced Diploma (NQF Level 7)
Post graduate certificate in education	Postgraduate Certificate in Education (NQF level7)
PG/Dip/Post dip dip/Cert	Postgraduate Diplomas/Certificate(NQF 8)
PG Bach Deg/Adv Bach Deg	Postgraduate Degree or Advanced Bachelors degree (NQF 8)
Honours/NH Dip/(HEQSF PG dip)	Honours (HEQSF Level 8)
Masters/ Masters Dip research	Masters Degree (Research) (NQF Level 9)
Masters/ Masters Dip non research	Masters Degree (Non-Research) (NQF Level 9)
Doctorate research	Doctorate Degree (Research) (NQF Level10)
Doctorate non research	Doctorate Degree (Non-Research) (NQF Level 10)

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