Teachers' level of education and employment over the last two decades

What can be learnt from labour force survey data?

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Teacher Demographic Dividend.

RESEP
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Executive Summary

A qualified teaching force can be counted amongst the most valuable resources of a nation. Unfortunately, the South African education system is failing to attract and retain teachers (Hofmeyr, 2015; Hugo, 2018). World Bank studies conducted in sub-Saharan Africa between 2005 and 2007 found attrition to range from 2% to 10% (Mulkeen & Crowe-Taft, 2010). Estimates from the 2015 CDE "*Teachers in South Africa"* report using Personnel Salary System (PERSAL) and Annual Surveys of School (ASS) data put gross attrition rates between 5% and 8%, and net attrition rates at around 3% (Hofmeyr, 2015).

The main challenge faced is that **many qualified teachers leave teaching permanently, and returning teachers tend to be less well qualified**. One of the reasons why qualified teachers that leave the system may be resistant to return is because it was never their chosen career path to begin with. The 2018 round of the Teaching and Learning International Survey (TALIS), for example, found that teaching was a first option for roughly half (49%) of teachers in South Africa.

This paper aimed to provide a 20-year view of teacher qualifications in South Africa using nationally representative labour force data. The South African Standard Classification of Occupations (SASCO) codes are used to identify teachers employed in basic education; that is, excluding pre-primary and post-secondary teachers. The findings from the labour force data are compared to existing evidence on teacher qualifications from nationally representative surveys and administrative data. Questions on field of study and occupation of previous employment (conditional on being currently unemployed or non-economically active) that are included in the Quarterly Labour Force Survey (QLFS) are used to identify trends to teacher training and employment.

How have teacher qualifications changed over time? According to PERSAL data for 2004, 50% of teachers were in possession of a Relative Equivalent Qualification Value (REQV) 14 qualification, the minimum required level of education to be registered as a fully professionally qualified teacher with the South African Council of Educators (SACE), whilst 10% of teachers were un- or under-qualified. These proportions are confirmed in the labour force data for 2000-2004. The labour data indicates a steady rise in the proportions of teachers obtaining at least a bachelor's degree or higher diploma over the 20 year period . **By 2016-2021, the proportion of fully professional qualified teachers had increased to 66%**. This is likely an under-estimate of the actual numbers of fully qualified professionals that could be identified in administrative data.

1-in-8 individuals born between 1980 and 1999 and achieving tertiary qualifications, pursued an education related field. There has also been a dramatic shift in the racial profile of those obtaining qualifications in education. In particular, black African and coloured women born between 1980 and 1999 were less likely to pursue studies in education when compared to their counterparts born two decades earlier. **Training and employment in education, however, remains highly feminized**. Women account for at least 70% of all teachers in basic education.

Tertiary training in education is related to better chances of employment. The unemployment rate amongst individuals aged 21- to 35-years-old with an education related qualification is 4 percentage points lower than the unemployment rate amongst all tertiary educated 21- to -35-year-olds. **48% of 21- to 35-year-olds were unemployed between 2016 and 2021, compared to 14% of 21- to 35-year-olds with tertiary training in education.**

1-in-10 teachers were trained in an education related field. However, 16% of employed 21- to 35-year-olds who obtained a tertiary qualification in education are employed in a non-teaching occupation. The proportion is higher amongst those aged 50 years and older (26%). Overall, **1-in-8 people** — equivalent to 40 000 – 50 000 — **that were employed between 2016 and 2021 and in possession of a REQV14 qualification in an education related field, were employed outside of education.** A large proportion of these (25-30%) people were employed in the community, social and personal services industry — under which education is also classified — in senior official, management and professional positions in central or local government.

In 2021, approximately 20 000 people with tertiary training in education reported being unemployed, roughly half of whom were previously employed as teachers. The number of formerly employed teachers reporting unemployment spells of a year or longer has risen since 2018. The numbers outside of the labour market (i.e. non-economically active) is even larger, although very few (<10%) are 35-years-old and younger. **The numbers of former teachers entering retirement more than doubled between 2016 and 2021.**

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1. Introduction

A qualified teaching force can be counted amongst the most valuable resources of a nation. Qualified teachers have a noticeable impact on how much students learn (Goldhaber, 2006), therefore ensuring a continued flow of skills into the economy. It is worth noting, however, that *quality* teaching does not depend on qualifications alone. Beyond academic knowledge teachers also require sound pedagogical knowledge, as well as a working environment conducive to engaged and effective teaching and learning, which is dependent on high quality school leadership.

Unfortunately, the South African education system is failing to attract and retain teachers (Hofmeyr 2015; Hugo 2018). World Bank studies conducted in sub-Saharan Africa found attrition amongst a group of Sub-Saharan countries to range from 2% to 10% (Mulkeen & Crowe-Taft, 2010). Estimates from the 2015 CDE "*Teachers in South Africa"* report using Personnel Salary System (PERSAL) and Annual Surveys of School (ASS) data put gross attrition rates between 5.4% and 8.3%, and net[1] attrition rates between 2.7% and 3.4%

[1] The gross attrition rate is the number of leavers divided by the number of employed teachers, while the net attrition rate subtracts the number of returning joiners from leavers.

(Hofmeyr 2015). Disaggregation by teacher qualification showed that the challenge of increasing the stock of qualified teachers is not due to qualified teachers not entering employment, but rather that many qualified teachers leave teaching permanently, and returning teachers tend to be less well qualified. As the technical report states: "The attrition of qualified teachers is so severe that the projected stock of qualified teachers in 2025 is [expected to be] only 7 per cent higher than in 2013" (Simkins 2015: 18).

One of the reasons why qualified teachers that leave the system may be resistant to return to teaching is because it was never their chosen career path to begin with. The 2018 round of the Teaching and Learning International Survey (TALIS), for example, found that teaching was a first option for roughly half (49%) of teachers in South Africa. This represented the lowest share of teachers among all participating countries and economies (OECD average 67%). The economic characteristics and working conditions of the profession was, however, rated as an important motivating factor for joining the profession by 90% of South African teachers; this is compared to an OECD average of 61%.

This paper aims to provide a 20-year view of teacher qualifications in South Africa using household survey data, specifically labour force data. The South African Standard Classification of Occupations (SASCO) codes are used to identify teachers employed in basic education — that is, primary and secondary school teachers. The findings from the labour force data are compared to existing evidence on teacher qualifications from nationally representative surveys and administrative data. Given that the Quarterly Labour Force Survey (QLFS) collected since 2008 also includes questions on field of study and occupation of previous employment (conditional on being currently unemployed or non-economically active), we are able to identify whether those who study education pursue a career in teaching, and whether training in education is related to better chances of employment.

2. Background to teacher qualifications and professionalisation pre- and post-democracy

2.1 Pre-1994

Teacher education programmes and teacher allocation to schools by qualification were highly racially segregated and unequal under Apartheid (Kruss 2008). Despite there being more than fifteen different employing authorities pre-1994 (mainly tied to the various provincial and homeland education departments), there was no cohesive national policy for teacher development nor a coordinated system of teacher accreditation. What did exist — such as the *Criteria for the Evaluation of South African Qualifications for Employment in Education* — was designed primarily to accommodate teachers trained for House of Assembly (HOA) schools designated for white South Africans (Reeves, 1993).

Prior to colleges of education in South Africa changing their minimum entrance requirements to a complete grade 12 (matric) in the 1980s, there were many black, predominantly African and coloured, teachers in the field who had completed two or three years of professional training with less than a matric (Reeves & Robinson 2010). Most of these teachers held a Grade 9/10 in combination with a two-year Teachers' Certificate (TC), although a three-year post Grade 8 TC was also an option (Christie and Collins, 1984).

Although provisions were made in the *Criteria for the Evaluation of South African Qualifications for Employment in Education* for teachers with M+3 to be trained to M+4 and teachers with M+2 to be trained to M+3, there were few if any provisions made for teachers with M+1 or less than matric (Reeves, 1993, Reeves, 1997). For example, within the Department for Education and Training (DET), teachers without a matric had no means to upgrade their qualifications unless they first completed matric. Completion of matric would put them at M+2, giving them access to a two-year full-time or four-year part-time Teachers' Diploma in Education (DE) to be fully qualified. Conversely, teachers in the House of Representatives (HOR) with less than a matric but a two-year TC were accepted as M+1, allowing them entrance to the second year of the DE. In-service DET and homeland teachers with a matric and no professional training had to first obtain three years of teaching experience followed by a one-year TC (M+1) to then qualify for a three-year full-time or six-year part-time DE.

According to the HSRC's 1981 "Provision of Education in the RSA" report, 85% of black African teachers (excluding independent homeland and tribal authorities) were underqualified. This was compared to only 3.4% of white teachers. In KwaZulu Natal, fewer than 2% of black African teachers were in possession of a degree, compared to 34% of white teachers (Pillay, 1984). By the late 1980s, only 5% of black African teachers were recorded to have a university degree — compared to 13% and 43% of coloured and Indian teachers, respectively — and approximately a third of black African teachers possessed less than complete secondary education, with or without formal training (Christie, 1991).

In addition to high numbers of un- and under-qualified teachers within the South African teaching force, the National Teacher Education Audit (NTEA) conducted in 1995 indicated "a highly fragmented provision of teacher education and training in a wide range of institutions" (Hofmeyr & Hall 1996). These included qualifications from more than a 100 state-funded Colleges of Education, universities and technikons, vocational or technical colleges, and other private and foreign institutions. Colleges were mainly responsible for initial teacher education (ITE) and the training of primary teachers, whilst secondary teacher training was generally the responsibility of universities (Reeves and Robinson 2010). Upgrading courses were mostly provided by correspondence through distance learning universities like Vista and UNISA, or distance learning Colleges of Education (Reeves 1993).

In accordance with the formal curriculum and syllabi of the DET, training institutions in the homeland authorities were provided a more limited curriculum that focused on the mastery of high school content and classroom management rather than conceptual and theoretical understanding (Walker 1991; Carnoy & Chisholm 2008). The President's Education Initiative research project (Taylor & Vinjevold 1999) found a lack of conceptual knowledge amongst a large number of educators to be a critical challenge facing teacher education in a post-1994 South Africa. Research further noted the role of qualification upgrading for salary recognition rather than on giving depth to areas of specialisation (Salmon & Woods 1991; Hofmeyr & Hall 1996). Reeves (1993), for example, notes the ad hoc introduction of subjects offered to in-service teachers that were neither taught in school not relevant to existing teaching posts, such as criminology and mercantile law.

2.2 Post-1994

The past several decades have been characterised by several government initiatives to advance *teacher professionalism* and *teacher qualification* in South Africa. This began with the consolidation of a highly fragmented teacher training sector that had existed under apartheid into the national higher education sector, the result of which was the amalgamation of 27 provincially run teacher training colleges with universities, as well as the closure of more than 70 teaching colleges. The Department of Education's "*Assessment of 10 years of Education and Training in South Africa*" (DoE, 2004) refers to this initial five-year period (1994-1995) of systemic change as a "literal reconstruction of the system" (p.13) during which it became evident that, despite early achievements of a consolidated teaching service and the establishment of a National Qualifications Framework, the "institutionalization of reform would take decades" (p.14)" and that accessibility to quality learning amongst particularly the poorest South Africans remained a serious challenge.

For example, whilst it was hoped that national control of teacher education and its concentration in universities would mean a shift in the focus of teacher training from the production of "docile and compliant workers who would implement… apartheid curricula" (Kimathi & Rusznyak 2018) to a greater emphasis on content knowledge and pedagogical reasoning (e.g. Taylor & Vinjevold 1999; Adler & Reed 2002; Morrow 2007), the waning geographical accessibility to initial teacher education (ITE) programmes, together with perceptions of the low status of teaching and improved career opportunities in alternative fields, arguably contributed to a significant decline in teacher education enrolments (Hofmeyr 2015). Furthermore, not all institutions — particularly those classified as historically disadvantaged — were able to offer the same level of training, engagement, or support to teaching educators and students.

During the second phase of change (1999 – 2004), the policy discourse moved from issues of access and participation[2] to that of sustained learner participation and improved effectiveness and quality of learning outcomes, thus putting the focus on teaching quality and learning processes. To meet its commitment of quality education for all, the DoE identified the need to attract (and retain) young, motivated, qualified, *and* appropriately trained people into the teaching profession. Since 2000, several policy frameworks have sought to regulate professional teaching standards in South Africa. These are: the Norms and Standards for Educators (DoE 2000); the SACE Code of Professional Ethics (SACE 2002); the criteria for performance evaluation of teachers in the Integrated Quality Management System (ELRC 2003), and (4) the Basic Competences of a Beginner Teacher (DHET 2015). Collectively, these four frameworks have stipulated expectations of teachers' conduct and have provided the criteria used to evaluate and remunerate teachers' work. They have also informed the design of pre-service teacher education curricula and the construction of continuing development initiatives for in-service teachers.

As laid out in the Norms and Standards for Educators (DoE 2000), all qualifying teachers were required to obtain a Relative Equivalent Qualification Value (REQV) of 13 or higher, or at least three years of initial

[2] By 2002, there was near universal enrolment in primary schooling and an 86 per cent gross enrolment ratio in secondary schooling.

teacher education (ITE) after the school-leaving certificate (M+3). Therefore, a teacher with a three-year Teachers' Diploma would have been considered as adequately qualified to teach and permitted registration with the professional body for teachers, the South African Council of Educators (SACE), a body established in 2000 to undertake promote the professional development of teachers and maintain and protect the ethical and professional standards of the teaching profession.

In 2000, 1 in 5 teachers were considered un- or under-qualified; this is compared to a ratio of 1 in 3 in 1994 (DoE, 2005). However, this number masked significant geographical disparities (Fiske & Ladd, 2005). The School Educator Survey (SES) conducted in 2005 by the HSRC indicated a significant decline in the numbers of un- and underqualified teachers to 8.3% by 2004. Disaggregation by phase revealed 11% and 2% of primary school and secondary school educators, respectively, to be un- and underqualified. Rates in rural areas (9%) also slightly exceeded that of urban areas (7.5%). According to PERSAL October 2004 data, approximately 37.5% of teachers were 'adequately' qualified (M+3), and 48% were in possession of a REQV14 and higher. Therefore, 14.5% of teachers could be classified as un- or underqualified, which is almost double the proportion indicated by the School Educator Survey.

Qualification and REQV levels do not, however, provide a full picture of teacher quality and competency. Despite the gains in teacher qualifications described above, a review of ITE programmes by the Higher Education Quality Committee (HEQC) in 2007 found only 40% and 32% of BEd and PGCE programmes, respectively, were worthy of full accreditation. The ultimate problem facing institutions was an "incapacity to meet minimum standards of internal coherence, alignment with purpose, and intellectual credibility" (CHE 2010: 95). Part of this challenge was met through stability in the set of higher education institutions responsible for training the majority of teachers and the introduction of a new national school curriculum (CAPS). However, admission requirements into ITEs remain low, and there continue to be substantial variations in the quality and relevance of programme offerings and work-integrated learning experiences across institutions. For example, the National Senior Certificate (NSC) 'admission points' requirement for entering the BEd degree is between 24 and 34, compared to 40 or more points for Commerce, Law and Science programmes (Deacon 2016).

The Initial Teacher Education Research Project (ITERP) survey conducted in 2013 provided the alarming finding that almost 40% of final year student-teachers had been admitted to ITE programmes without having achieved an NSC pass with bachelor's degree endorsement (Deacon 2016). A further finding of the ITERP survey as that almost two-thirds of newly qualified FET (i.e. Grade 10 – Grade 12) Mathematics teachers felt underprepared in terms of their subject knowledge. The Department for Higher Education and Training (DHET) announced that all ITE programmes had to be re-designed by July 2014, with specific emphasis placed on subject content and pedagogical content knowledge, and work-integrated learning. By February 2015, just fewer than three-quarters of ITE programmes were approved as conforming to MRTEQ and recognised as sufficient for graduate employment.

One of the recommendations to come out of the CHE's 2010 review of academic and professional programmes in education was the introduction of a flexible teacher education qualification policy. The National Policy Framework for Teacher Education (DoE 2006) and the Minimum Requirements for Teacher Education Qualifications (MRTEQ) (DHET 2011) replaced the Norms and Standards for Educators (2000) in its entirety, requiring all qualifying teachers to obtain a four-year Bachelor of Education (BEd) degree, or a three-year degree and one-year Postgraduate Certificate of Education (PGCE); that is, four years of ITE after the school-leaving certificate (M+4) assessed as REQV14. This implies teaching is a graduate profession.

Analysis of the DBE's 2013 Annual Survey of Schools data by Simkins (2015) indicated that approximately 1 in 6 teachers employed in 2013 met the requirements of full qualification (or what he called 'highly qualified'); that is, evaluated at a REQV14 or higher. This seems surprising given the statistic from the 2004 PERSAL data that 48% of teachers were evaluated at REQV14 or higher. It is important to clarify that REQV level is only one part of the definition of a 'qualified teacher'. The other part is that a teacher must have a professional teaching qualification. Simkin's definition of fully qualified includes educators with either a BEd, a degree plus a PGCE, or a three-year or better post-school diploma (N6 equivalent) *plus* a PGCE. This aligns with the revised MRTEQ policy (2015) that requires ITE to follow one of two routes:

1) Completion of a four-year Bachelor of Education (Bed) degree, and subsequent registration with the SACE.
2) Completion of an appropriate first degree followed by a one year Advanced Diploma in Education (ADE), or Post Graduate Certificate in Education (PGCE), and subsequent registration with the SACE.

Recent analysis by Van der Berg, Gustafsson and Burger (2020) focused on the teaching qualifications of recently graduated teachers joining PERSAL in 2017. The study found that 77% of all students with completed qualifications had obtained at least a bachelor's degree; that is, a BEd or a bachelor's degree plus a postgraduate diploma or certificate in education.

It is worth noting, however, that the minimum requirement for registration with the SACE remains REQV13 (M+3). Therefore, in theory, a REQV13 still signals an acceptable or adequate professional identify. This implies that, according to the 2013 ASA, two-thirds of teachers were adequately professionally qualified, and 12% of teachers evaluated at REQV13 and REQV14 were professionally unqualified.

This is in agreement with the Teachers Qualification Survey (TQS) conducted by the HSRC in 2009 for the DoE in which it was indicated that only 84% and 94% of teachers evaluated at REQV13 and REQV14, respectively, were in possession of a professional teaching qualification. The remaining 16% and 6% were placed at REQV13 and REQV14 because they had an academic degree or diploma with teaching subjects, or a combination of qualifications (e.g. two-year Teacher's Certificate and a partially completed degree) (Welch 2009). The TQS also indicated that only 18% of public-school teachers employed in 2009 were professionally qualified *graduates* (see Table 1 below), a number very similar to that found by Simkins in the 2013 ASS. Furthermore, just over half (55%) of teachers could be evaluated at REQV14 or higher, 33% at

REQV13, and 12% at REQV12 or lower. This represents a slight improvement from what was indicated in the PERSAL 2004 data.

Table 1: Distribution of Teaching Qualifications from the Teacher Qualifications Survey (TQS)

Type of qualification	**Description**	Proportion
Teacher's Certificate	Outdated two-year professional teaching qualification evaluated at REQV11 (M+1) or REQV12 (M+2) depending on whether the teacher had completed matric.	5
National Professional Diploma in Education	Upgrading qualification designed to upgrade a two-year qualification to a REQV13 (M+3). Since 2006, it was used by teachers without any professional qualification (i.e. M+0) to become professionally qualified.	7
Teacher's Diploma	Outdated three-year professional teaching qualification offered in former Colleges of Education for black students. Usually evaluated at REQV13 (M+3).	33
Higher Diploma in Education	Outdated four-year diploma offered mainly at Colleges of Education for white students. Usually evaluated at REQV14 (M+4).	12
Further Diploma in Education/Higher Diploma/Diploma in Special Education/Post-Professional Certificate	Outdated upgrading qualifications used by teachers to upgrade from M+3 to M+4.	13
Advanced Certificate in Education	Current upgrading tool from M+3 to M+4, especially amongst older in-service teachers with teaching experience.	12
Postgraduate Certificate in Education	Professional teaching qualification taken after a first degree or diploma, allowing for evaluation at M+4. One of the current routes to ITE for becoming a fully qualified teacher at REQV14 (M+4).	5
Bachelor's Degree in Education	Second route to ITE for becoming a fully qualified teacher at REQV14 (M+4).	13

Source: adapted from Welch (2009).

3. An updated view of teaching qualifications using labour force data

The previous section of this report aimed to provide the backdrop of teacher qualifications against which evidence from labour force survey data can be compared. The subsequent analysis makes use of the 1996 – 1999 October Household Surveys (OHS), the 2000 – 2007 Labour Force Surveys (LFS), as well as the Quarterly Labour Force Survey (QLFS) data from 2008 – 2021.

The first step in the analysis is identifying teachers in the data. According to the South African Standard Classification of Occupations (SASCO), teachers fall into one of two occupation levels: Professional (occupation code 2) and Associate Professional (occupation code 3). Table X details the 4-digit SASCO codes and associated descriptions that apply to *teaching* occupations within ordinary basic education; that is, teachers employed in primary and secondary schools, excluding those employed in special education. The PALMS data only captures SASCO 4-digit occupation data from 1996 onwards.

Table 2: South African Standard Classification of Occupations (SASCO) occupation codes

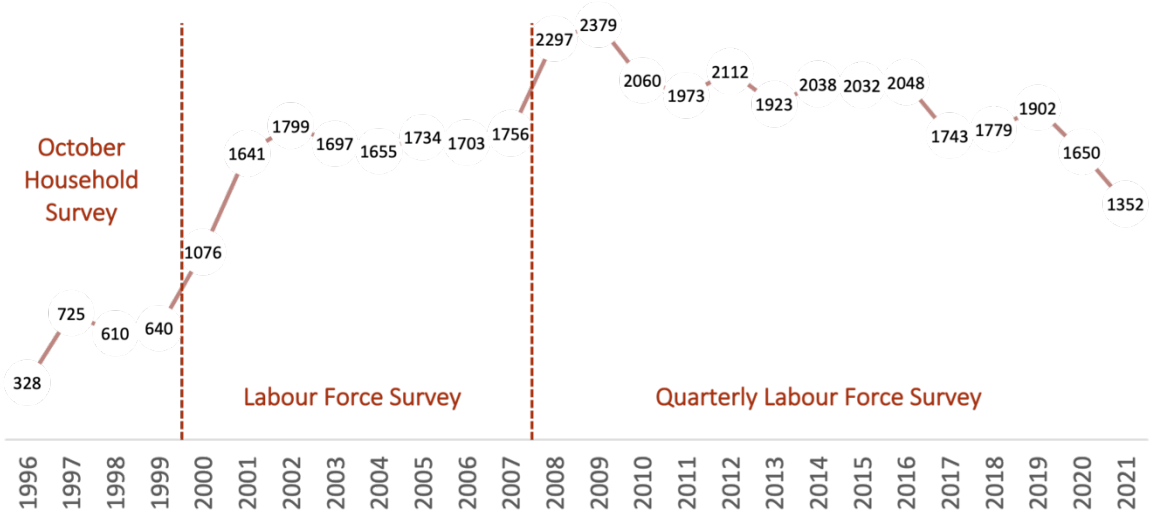
Professional occupations:	
Teacher, secondary education	2320
Teacher, primary education, professional	2331
Teacher, primary education, reading, professional	2331
Teacher, primary education, writing, professional	2331
Teacher, primary education, not elsewhere classified	2331
Associate professional occupations:	
Teacher, primary education, associate professional	3310
Teacher, primary education, reading, associate professional	3310
Teacher, primary education, writing, associate professional	3310

Source: Statistics South Africa (2012).

The number of teachers surveyed in each wave/year are indicated in Figure 1 below. Shifts in total numbers correspond with changes in data collection tools; specifically, data for the period 1996 – 1999 was captured by the October Household Survey (OHS), data for 2000 – 2007 the Labour Force Survey (LFS; collected twice a year), and data for 2008 onwards the Quarterly Labour Force Survey (QLFS; collected every quarter). Whilst each of the survey tools employed over time displays relative stability in the total numbers of teachers in basic education surveyed, Figure 2 indicates a greater sampling of teachers classified as associate professionals, and a lower sampling of teachers classified as professionals, between 2008 and 2014. It is most probably the case that teachers were mistakenly grouped together under an associate professional occupation code 3310, making it impossible to identify any teacher subclassifications for this period.[3] For consistency, any analysis by teacher subgroups (e.g. secondary vs primary, professional vs associate professional) will be restricted to the time periods 1999 – 2007 and 2015 – 2020.

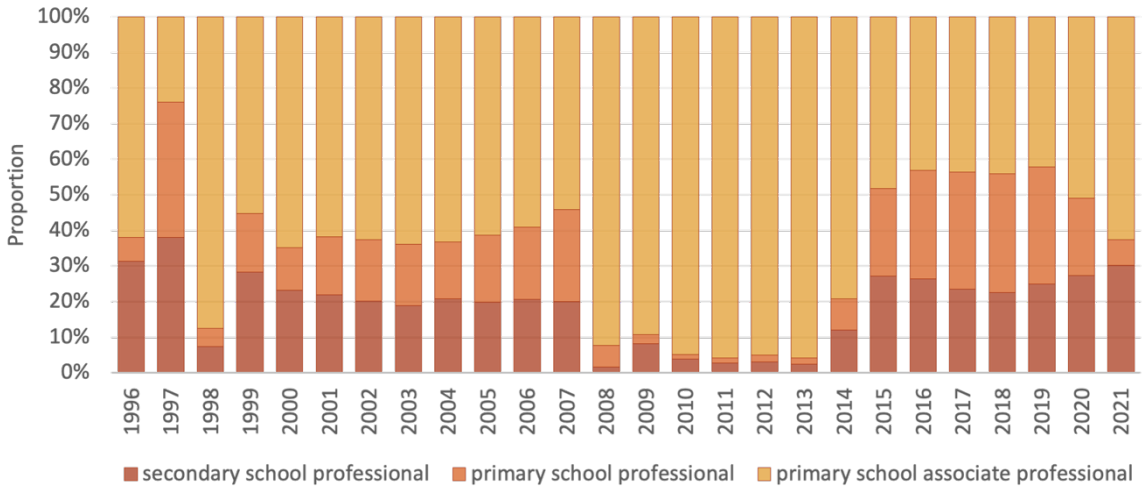
[3] A similar coding issue was found by Gustafsson and Maponya (2020) in the 2001 census data of South Africa.

Figure 1: Number of employed basic education teachers surveyed, 1996 – 2021



Source: OHS (1996 – 1999), LFS (2000 – 2007), QLFS (2008 – 2021).
Notes: Sample restricted to working age individuals.

Figure 2: Teacher type and occupation level, 1996 – 2021



Source: OHS (1996 – 1999), LFS (2000 – 2007), QLFS (2008 – 2021).
Notes: Sample restricted to working age individuals. Data is weighted using Statistics South Africa population weights.

The evaluation of teacher professional qualifications is made more complex in the labour force survey data owing to a lack of distinction in educational categories, as well as a shift in these categories across survey instruments over time. The OHS and LFS surveys only allowed for teachers to be classified in 1 of 5 qualification categories (see Table 3). The QLFS expanded the number of education categories such that distinctions across types of diplomas can be made. This proves important for evaluating the REQV levels of teachers; for example, it is impossible to distinguish a two-year and a three-year diploma based on the category “Diploma with Matric”. The inclusion of “Higher Diploma” as a separate category makes it clear whether an individual has completed a three-year diploma. Any teacher reporting a qualification F1, F2, G1 or G2 in Table 3 would be evaluated as REQV14, and teachers with F2, G1 and G2 would be classified as

qualified professional graduates. Teachers reporting qualifications D and E would be evaluated as REQV13, that is, adequately qualified.

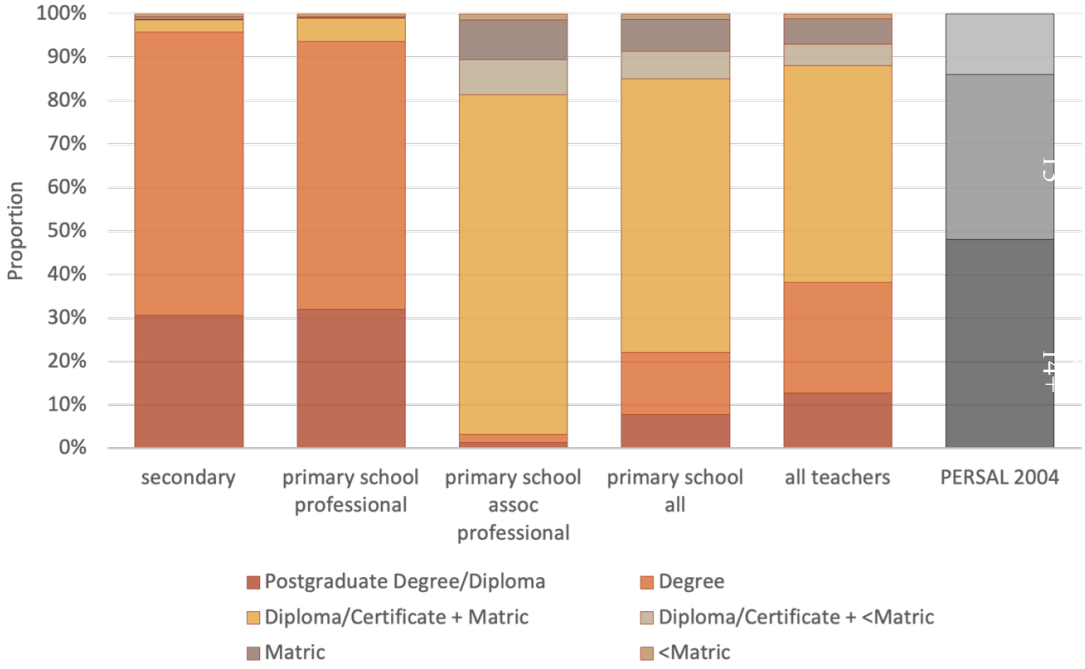
Table 3: Qualification categories included in labour force survey data

Type of qualification	OHS	LFS (2000–2007)	QLFS (2008 – present)
A. Grade 12/Matric	X	X	X
B. Certificate/Diploma with less than Matric	X	X	
B1. Certificate with less than Matric			X
B2. Diploma with less than Matric			X
C. Certificate/Diploma with Matric	X	X	
C1. Certificate with Matric			X
C2. Diploma with Matric			X
D. Higher Diploma			X
E. Bachelor's Degree	X	X	X
F. Postgraduate Degree/Diploma		X	
F1. Post Higher Diploma			X
F2. Bachelor's Degree and Postgraduate Diploma			X
G. Postgraduate Degree	X		
G1. Honour's Degree			X
G2. Higher Degree (Master's, Doctorate)			X

3.1 Trends in teacher qualifications, 2000 – 2021

As indicated in Figure 3, roughly 90% of teachers employed within the basic schooling sector between 2000 and 2004 reported to have at least a school-leaving certificate (matric) and a some post-secondary qualification. Distinctions by phase and occupation level indicates secondary school teachers and primary school teachers employed in professional occupations to be significantly more qualified than associate-professional primary school teachers. At least 75% of associate professional primary school teachers have a matric and a teaching certificate or diploma; this is compared to just more than 90% of secondary school teachers being in possession of at least a university degree. Comparing the distribution of qualifications in the labour force survey data to that indicated in the PERSAL 2004 data, we can see that the proportion of teachers with a matric and some post-secondary or tertiary qualification maps almost identically onto the proportion of teachers in the PERSAL with at least a REQV13.

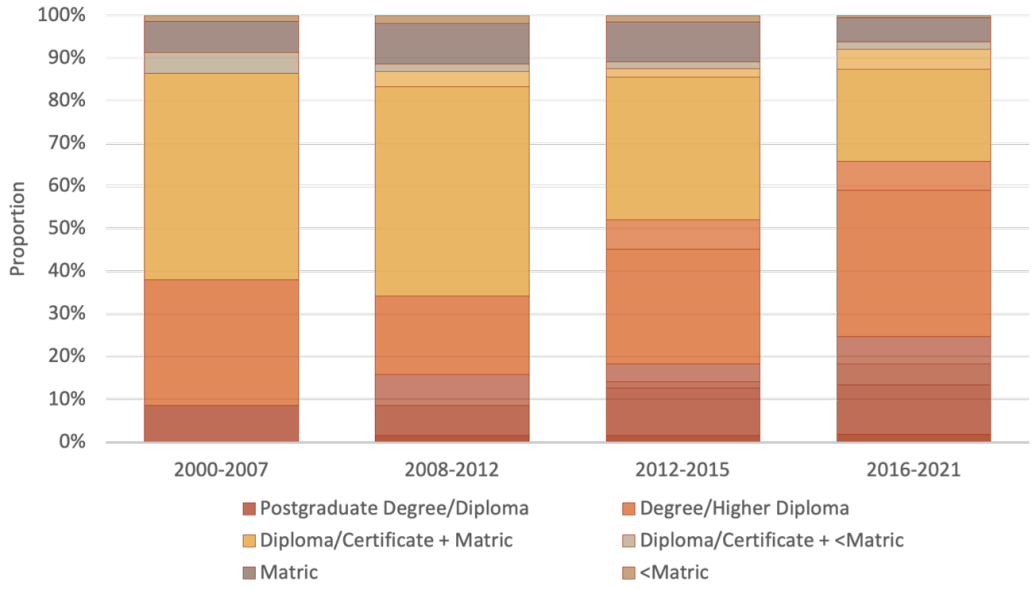
Figure 3: Highest educational qualification of basic education (Grade 1 – Grade 12) teachers, 2000 – 2004



Source: LFS (2000 – 2004); DoE (2005).
Notes: Sample limited to working-age individuals. LFS data is weighted using Statistics South Africa population weights.

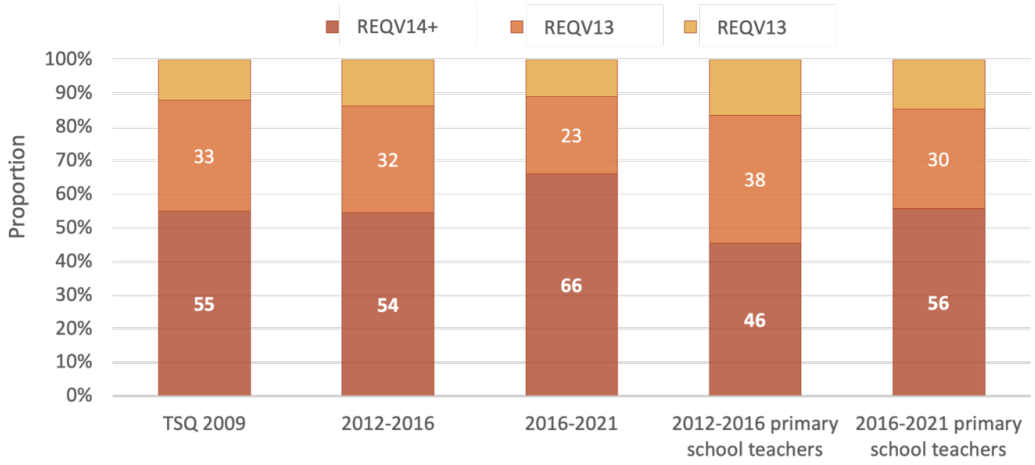
Figure 4 indicates how the qualification levels of teachers changed over the period 2000 to 2021. Using the same definitions from Table 1, the proportion of employed teachers with a REQV14 equivalent and higher increased from just less than 40% in 2000 – 2012 to roughly two-thirds by 2016 – 2021. In other words, at least 2 in 3 teachers employed in the basic schooling sector between 2016 and 2021 were fully professionally qualified, and 9 in 10 teachers were adequately qualified. It is, however, difficult to know with any certainty what proportion of these are professionally qualified *graduates*. According to the QLFS 2016 – 2021 data, 89.4% of employed teachers with a REQV14 or higher studied in an Education, Training or Development field. Furthermore, the proportion of teachers in possession of a post-graduate qualification doubled between 2000 – 2007 and 2016 – 2021. Comparing these figures to those provided by the PERSAL and HSRC TQS data indicates a steady rise in the proportions of teachers in possession of a REQV14 qualification and higher from 48% in 2004 and 55% in 2009, to 66% in 2016 – 2021 (Figure 5).

Figure 4: Highest educational qualification of basic education (Grade 1 – Grade 12) teachers, 2000 – 2021



Source: LFS 2000 – 2008, QLFS 2008Q1 – 2021Q4.
Notes: Sample limited to working-age individuals. Data is weighted using Statistics South Africa population weights.

Figure 5: Equivalent qualification value of teachers in basic education, 2009 – 2021

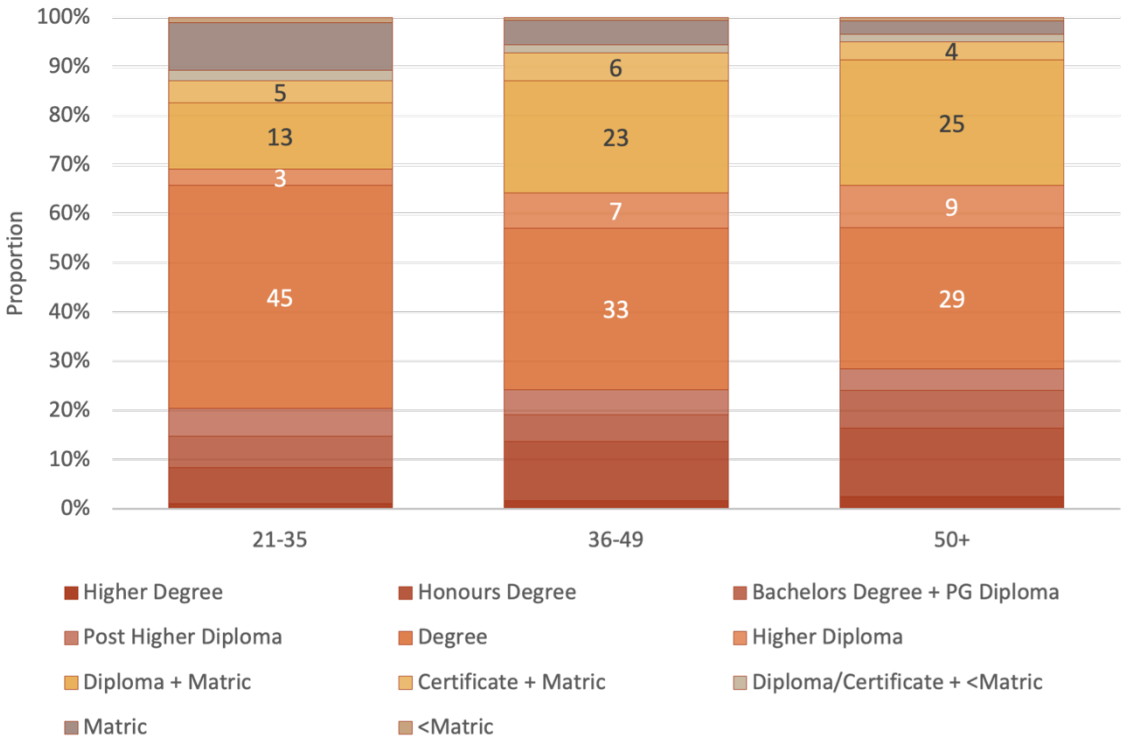


Source: QLFS 2012Q1 – 2021Q4, Welch (2009).
Notes: Sample limited to working-age individuals. Data is weighted using Statistics South Africa population weights.

It is worth pointing out that this estimate of 66% is likely to be lower than what might be found in PERSAL data, as it excludes individuals in non-educator and specialised roles in basic education. Unfortunately, the SASCO and industry codes applicable to school principals, department heads or head teachers in the basic education sector are indistinguishable from those of deans and departmental heads in the higher education sector.

Disaggregating teacher highest qualifications by age cohort (Figure 6), we find that younger teachers are significantly more like to have obtained a Bachelor's Degree when compared to their older counterparts, and significantly less likely to have obtained a Diploma. Roughly 70% and 65% of teachers aged 21 – 35 years old and older than 35, respectively, would be evaluated at a REQV14 or higher. The 10% of young teachers reporting to only have attained a matric is not wholly unexpected if they are working whilst completing their ITE. Excluding these individuals from the analysis — that is, focusing on those teachers who have at least acquired some post-secondary education — indicates 76% of teachers aged 21 – 35 years old to have a qualification of at least a REQV14 or higher. The equivalent proportions amongst teachers aged 36 – 49 years old and 50 plus are 62% and 60%, respectively.

Figure 6: Highest educational qualification of basic education teachers by age cohort (2016 – 2021)



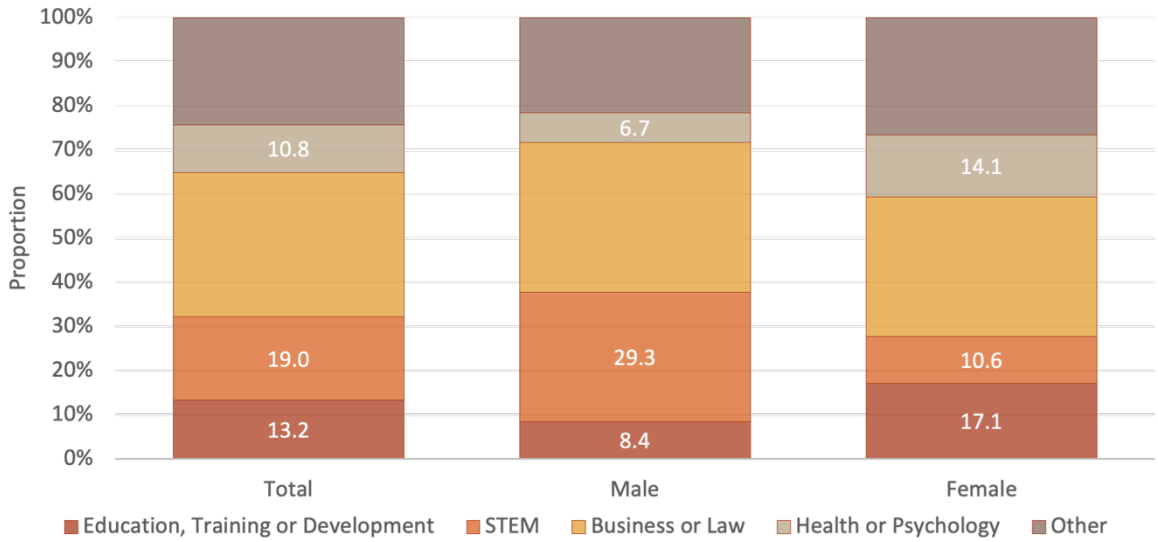
Source: LFS 2000 – 2008, QLFS 2008Q1 – 2021Q4.
Notes: Sample limited to working-age individuals. Data is weighted using Statistics South Africa population weights.

3.2 Education as a field of study

QLFS respondents that indicate a Diploma, Certificate or Degree qualification as their highest post-school qualification are queried about the field of study. Limiting the sample to working-aged individuals born

between 1980 and 1999 and surveyed in the 2016 – 2021 QLFS waves, it is found that 13.2% of individuals who obtained a three-year diploma or higher qualification after completing matric studied Education, Training or Development (ETD) (Figure 7). Disaggregating by gender indicates the proportion amongst women to be twice that amongst men. Skewed gendered representations are also found for study in STEM fields (women = 10.6%, men = 29.3%) and health care fields (women = 14.1%, men = 6.7%).

Figure 7: Distribution of study field of tertiary qualification, by gender

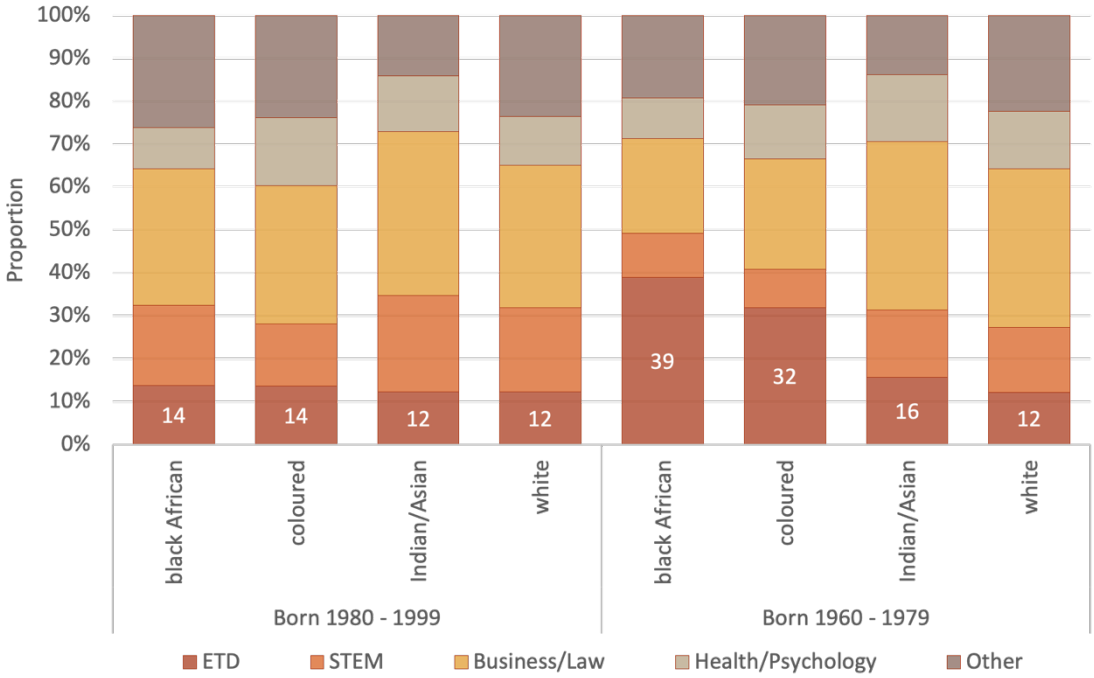


Source: QLFS 2016Q1 – 2021Q4
Notes: Sample limited to working-age individuals born between 1980 and 1999, and have obtained at least a three-year (higher) diploma after completing matric. Data is weighted using Statistics South Africa population weights.

Figure 8 indicates the distribution of study field by birth cohort and population group. There is very little racial difference in the proportions studying across fields amongst those individuals born between 1980 and 1999, and aged 21- to 41-years-old in 2016 to 2021. However, amongst those born in the two decades prior — and so aged between 37- and 56-years-old over the period 2016 – 2021 — there are marked differences: 30% of coloured and 40% of black African individuals from this birth cohort received their tertiary qualification in an ETD field, compared to 12% to 16% of white and Indian/Asian individuals.[4] This illustrates the difference in historical access to types of post-secondary education by different groups. Note that a drop in the *proportion* of individuals pursuing tertiary qualifications in a particular field of study does not imply a drop in the absolute numbers given substantial increases in the provision of and access to post-secondary education over the past several decades.

Figure 8: Distribution of study field, by race and birth cohort

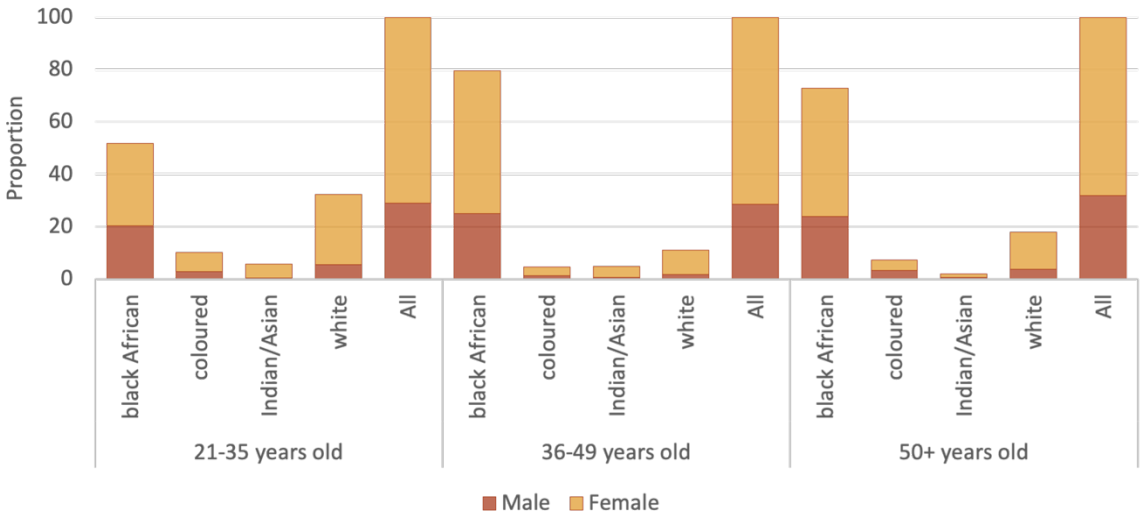
[4] The proportions are a bit lower if we expand the qualification levels to include those with and post-secondary qualification with a complete matric.



Source: QLFS 2016Q1 – 2021Q4
Notes: Sample limited to working-age individuals that have obtained at least a three-year (higher) diploma after completing matric. ETD = Education, Training or Development, STEM = Science, Technology, Engineering or Mathematics. Data is weighted using Statistics South Africa population weights.

These trends emerge in the 2016 – 2021 race and gender profile of teachers with tertiary qualifications (Figure 9). Whereas black African individuals make up 80% of teachers aged 36-years-old and older, this proportion is just over 50% amongst teachers aged 35-years-old and younger. White teachers make up a larger proportion amongst the younger cohort. The gender distribution, however, is the same across age cohorts. Therefore, whilst the teaching force remains feminised — women account for 70% of all teachers in basic education— there has been a slight shift in the racial distribution amongst younger cohorts. This could be due to increased access to opportunities for women of colour outside of, for example, teaching and nursing.

Figure 9: Distribution of gender and race amongst basic education teachers, by age cohort



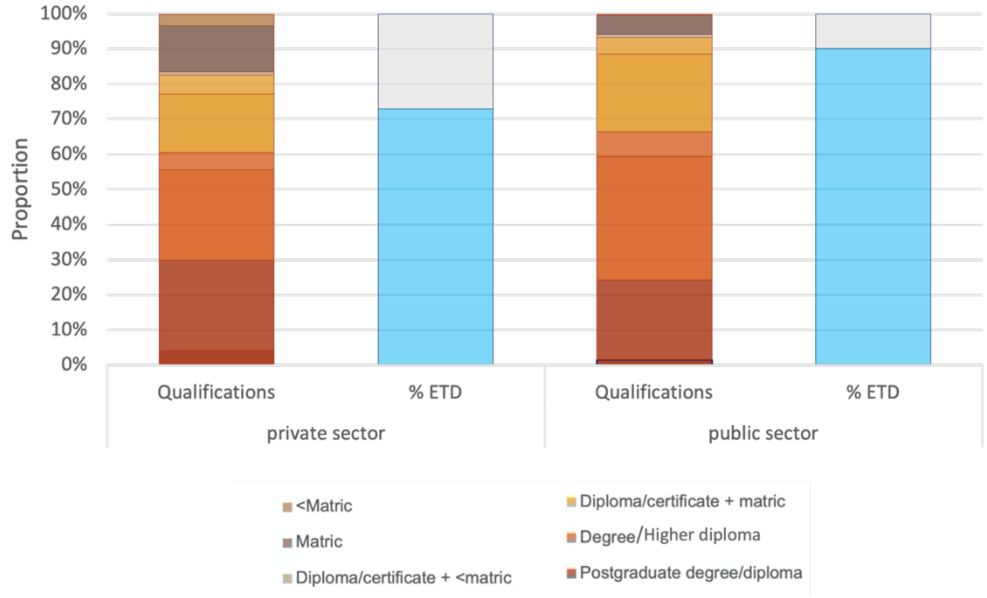
Source: QLFS 2016Q1 – 2021Q4
Notes: Data is weighted using Statistics South Africa population weights.

3.3 Teaching qualifications in the public and private sectors

One of the benefits of using the labour force data is the ability to distinguish those who are employed in private enterprises from those employed in public or government controlled enterprises. According to the 2016 – 2021 QLFS data, roughly 11% of basic education teachers are employed by a private enterprise or non-profit organisation; proportions are slightly higher amongst primary school teachers (12%). Figure 10 indicates the level of qualifications and field of study amongst teachers employed across the private and public sectors. There is a greater proportion (30%) of private sector employed teachers with postgraduate qualifications compared to the public sector (25%). However, a greater proportion of public sector teachers are in possession of bachelor's degrees and post-secondary diplomas. According to the QLFS data, roughly 1 in 5 teachers employed in the private sector are un- or under-qualified, and a larger proportion of private sector teachers received their post-secondary education in a field other than Education, Training or Development.

With regards to field of study, the vast majority of secondary and primary school teachers in public schools attained their post-secondary qualifications in an ETD field (see Figure 11). By comparison, just over a third of private secondary school teachers did not pursue a qualification in ETD, with almost half of these (15.5%) reporting to have studied in a STEM field. And although most (78%) teachers in private primary schools with post-secondary qualifications reported to study in an ETD field, roughly 4% of teachers reported to have studied in STEM, Business/Law or a health care field.

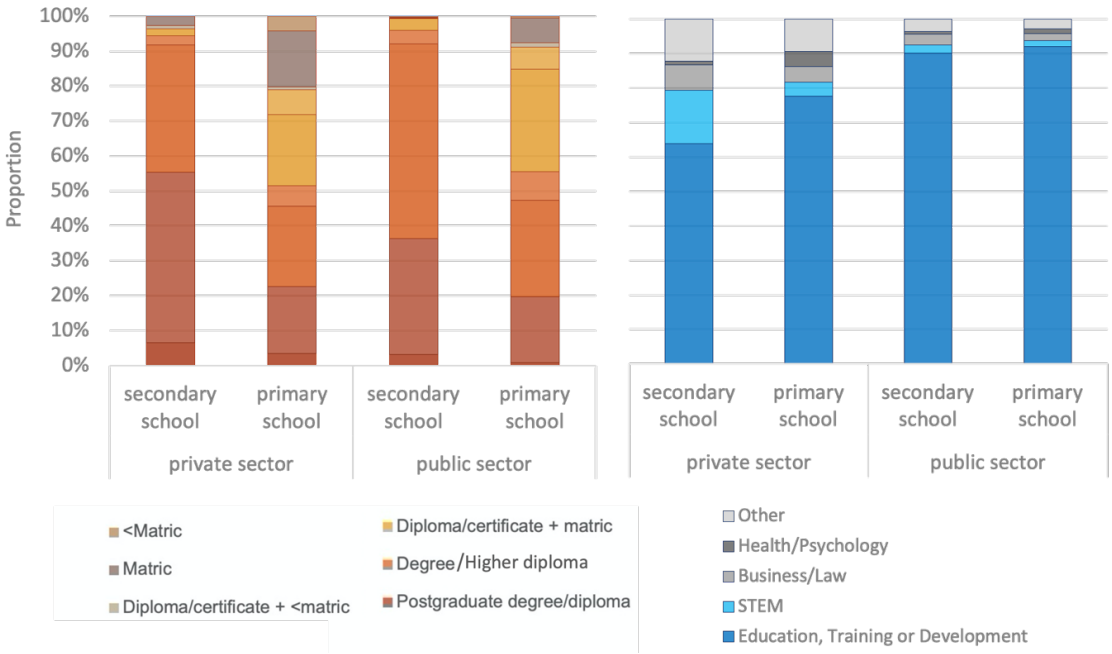
Figure 10: Teacher qualifications by sector of employment (2016 – 2021)



Source: QLFS 2016Q1 – 2021Q4.
Notes: ETD = Education, Training or Development. Data is weighted using Statistics South Africa population weights.

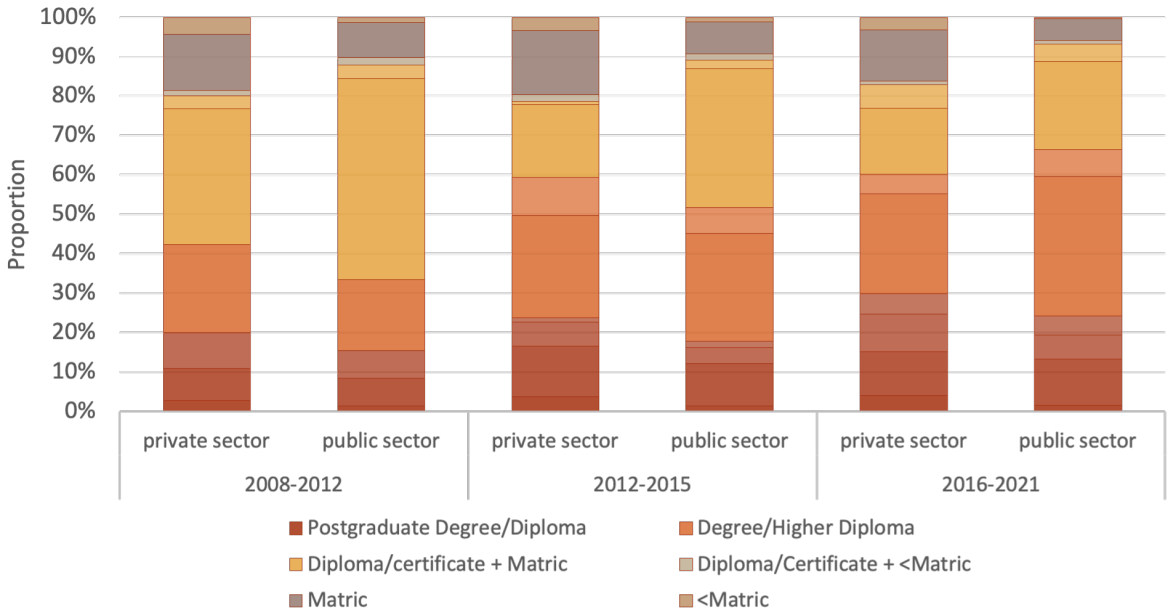
From Figure 12, we can see that similar proportions of secondary and primary school teachers within both the public and private sectors have qualifications at REQV14 and higher. However, at least half of the teachers employed in private secondary schools between 2016 and 2021 reported having attained a postgraduate qualification compared to just over a third of public secondary school teachers. Conversely, primary school teachers in the public sector have higher levels of qualifications when compared to their private sector counterparts. Observing trends over time, the proportions of teachers with qualifications at least equivalent to REQV14 and higher rose significantly in both the public and private sectors between 2008 and 2021. It is also worth noting that the qualifications of private school teachers remained fairly stable between 2012 – 2015 and 2016 – 2021, whereas education levels of public schools teachers rose. Whilst 1 in 10 teachers in public schools are un- or underqualified, the ratio is almost double in the private sector.

Figure 11: Teacher qualifications by sector of employment and school phase, 2016 – 2021



Source: QLFS 2016Q1 – 2021Q4
Notes: Data is weighted using Statistics South Africa population weights.

Figure 12: Teacher qualifications by sector of employment, 2008 – 2021



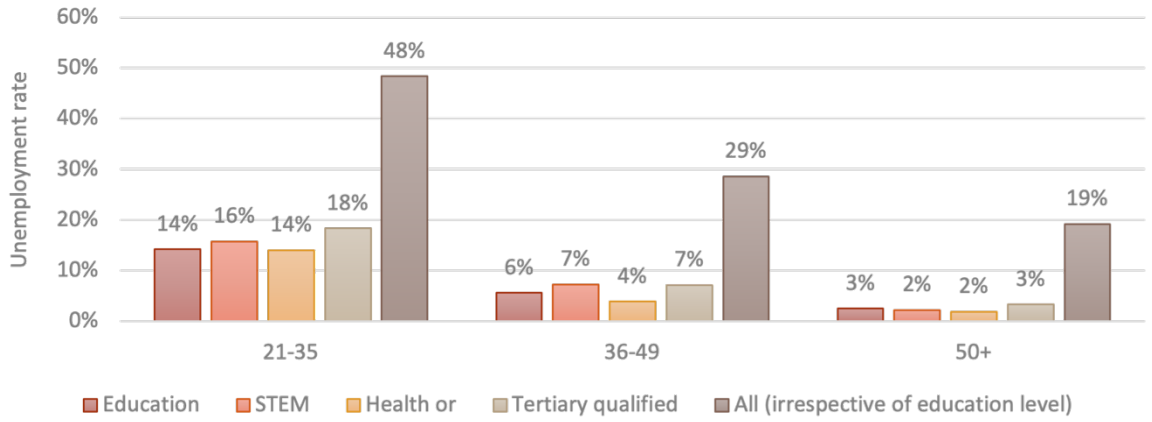
Source: QLFS 2008Q1 – 2021Q4
Notes: Data is weighted using Statistics South Africa population weights.

3.4 Do those who studied education teach?

Relating field of study to employment (Figure 13), we find the unemployment rate amongst individuals aged 21 - 35 years old with an ETD tertiary qualification to be 4 percentage points lower ($p < 0.01$) than that observed for their entire age and qualification cohort, and less than a third the magnitude of unemployment amongst all 21 – 35 year olds. Those aged 36-49 years old and in possession of an ETC tertiary qualification are significantly ($p < 0.05$) less likely to be unemployed than equally qualified individuals in their age cohort, and their unemployment rate is a fifth of that of their entire age cohort. Interestingly, the unemployment rates of those that studied ETD related fields are similar to those that studied STEM and health care fields.

Although education is associated with a lower likelihood of employment than a number of other fields of study, it is not necessarily the case that those who pursue studies in ETD fields end up teaching. Table 4 summarises the proportions of tertiary-educated individuals within the labour force, with distinctions made between those employed in basic education, other teaching roles in basic education (e.g. special needs teaching and non-specified teaching assistant roles), post-secondary teaching, and management within the education sector.

Figure 13: Unemployment rates by study field and age group



Source: QLFS 2016Q1 – 2021Q4
Notes: Sample limited to working-age individuals aged 21 years and older. Tertiary qualified indicates the attainment of at least a three-year (higher) diploma. ETD = Education, Training or Development, STEM = Science, Technology, Engineering or Mathematics. Data is weighted using Statistics South Africa population weights.

Roughly 9 in 10 tertiary-educated individuals employed as teachers in basic education reported their qualification to be in an ETD field. The proportion is lowest amongst teachers aged 21 – 35 years old (15.2%). Conversely, the proportion of those with ETD qualifications that are employed in teaching is lower amongst *older* age cohorts. For example, whereas 84.3%[5] of individuals aged 21 – 35 years with a tertiary qualification

[5] Computed as (9.2 + 1.5) ⎪(9.2 + 1.5 + +0.4 + 0.1 + 1.5)

in an ETD field are employed in a teaching related occupation, this proportion is 73.7%[6] amongst individuals aged 50 and older.

Table 4: Distribution of ETD trained persons amongst tertiary educated labour force (2016 – 2021)

	21 – 35 years old	36 – 49 years old	50+ years old	All
Employed	**81.6%**	**92.8%**	**96.7%**	**90.0 %**
Basic education teacher and studied …				
… ETD field	9.2	13.0	21.2	13.6
… non-ETD field	1.7	1.6	1.6	1.6
Proportion that studied ETD field	*84.9%*	*88.8%*	*93.2%*	*89.4 %*
Other teaching/child-care roles and studied …				
… ETD field	1.5	2.1	2.4	2.0
… non-ETD field	0.6	0.4	0.3	0.5
Proportion that studied ETD field	*70.1%*	*84.9%*	*87.4%*	*81.1 %*
Post-secondary education and studied …				
… ETD field	0.4	0.8	1.1	0.7
… non-ETD field	1.5	1.3	2.4	1.6
Proportion that studied ETD field	*20.9%*	*38.3%*	*30.9%*	*54.9 %*
Management in education sector and studied …				
… ETD field	0.1	0.7	2.7	1.0
… non-ETD field	0.0	0.1	0.2	0.1
Proportion that studied ETD field	*66.7%*	*82.7%*	*93.2%*	*88.8 %*
Non-teaching occupation and studied …				
… ETD field	1.5	2.0	4.6	2.5
… non-ETD field	64.7	70.4	60.1	66.1
Unemployed	**18.4**	**7.2**	**3.3**	**10.0**
… ETD field	2.1	1.1	0.8	1.4
… non-ETD field	16.3	6.1	2.5	8.6
Proportion of tertiary educated LF employed	81.6%	92.8%	96.7%	90.0 %
Proportion of ETD educated LF employed	85.8%	94.4%	97.5%	93.6 %

Source: QLFS 2016Q1 – 2021Q4

Notes: Sample includes working-age individuals whose highest qualification is at least a three-year (Higher) Diploma. Other teaching roles refer to teachers in pre-primary, kindergarten/nursery, remedial and special education. ETD = Education, Training or Development. LF = labour force. Management in education sector

[6] Computed as (21.2 + 2.4) ⎪(21.2 + 2.4 + 1.1 + 2.7 + 4.6)

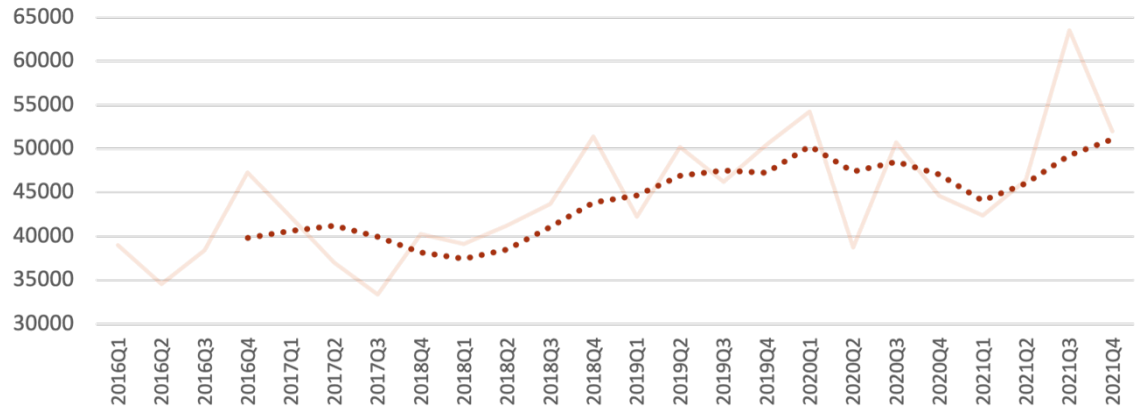
include occupations such as school principal, department head, university/college dean, etc. Data is weighted using Statistics South Africa population weights.

Some of this difference can be accounted for by individuals who studied an ETD qualification and are observed to be employed in post-secondary education or management positions within the education sector. Employment in these occupations represents a small component amongst younger cohorts. Discounting these occupations indicates that 12.0% of individuals aged 21 – 35 years old who studied in an ETD field were employed in an occupation outside of the education sector. This proportion is 10.9% amongst 36 – 49 year olds and 14.4% amongst those aged 50 years and older.[7]

Therefore, roughly 1 in 8 people employed between 2016 and 2021 and who possessed at least a REQV14 qualification in an ETD field were employed outside of education. This translates to a weighted population of about 40 000 – 50 000 people at each wave of data collection (see Figure 14). 20% of this group of individuals are younger than 35 and roughly half are older than 50. Furthermore, around 25-30% were employed in the community, social and personal services industry — under which education is also classified — in senior official, management and professional positions in central or local government (see Figure 15). This includes, for example, MPs, city administrators, curriculum developers and education planners. A further 10-15% were employed in the financial intermediation, insurance and real estate industry in management and professional occupations (e.g. accounting, labour relations/human resources and consultant), and another 10% in predominantly management and consultancy positions within the wholesale, retail and manufacturing industries. It also emerges from Figure 15 that the proportion of individuals entering associate professional, technician and clerical occupations has increased from 30% to 45%, with most of the change being driven by employment in administrative and sales occupations in the manufacturing and wholesale and retail trade industries. It is difficult to know whether this trend is driven by changes to the labour markets brought on by the COVID-19 pandemic, or even the switch to telephonic survey collection by Statistics South Africa as a result of the pandemic.

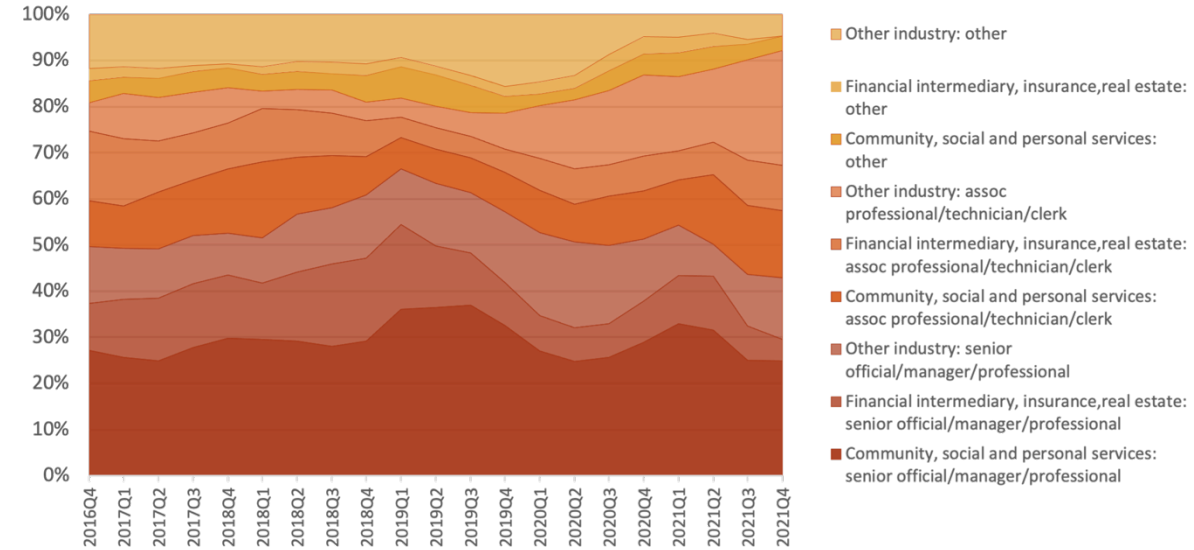
[7] If we extend the definition of tertiary educated to include those with at least a matric and some post-secondary qualification that is below a higher diploma, the proportion of ETD-trained individuals working outside of teaching and the education sector is slightly higher at 16.2% (21-35 year olds: 17.0%; 36-49 years old: 16.1%; 50 years and older: 15.9%).

Figure 14: Number of EDT tertiary-trained individuals working outside of teaching and education



Source: QLFS 2016Q1 – 2021Q4
Notes: Sample includes working-age individuals whose highest qualification is at least a three-year (Higher) Diploma in Education, Training or Development (ETD), and are not employed in teaching or within the education industry. Data is weighted using Statistics South Africa population weights.

Figure 15: Industry and occupation of individuals with tertiary ETD qualifications outside of education



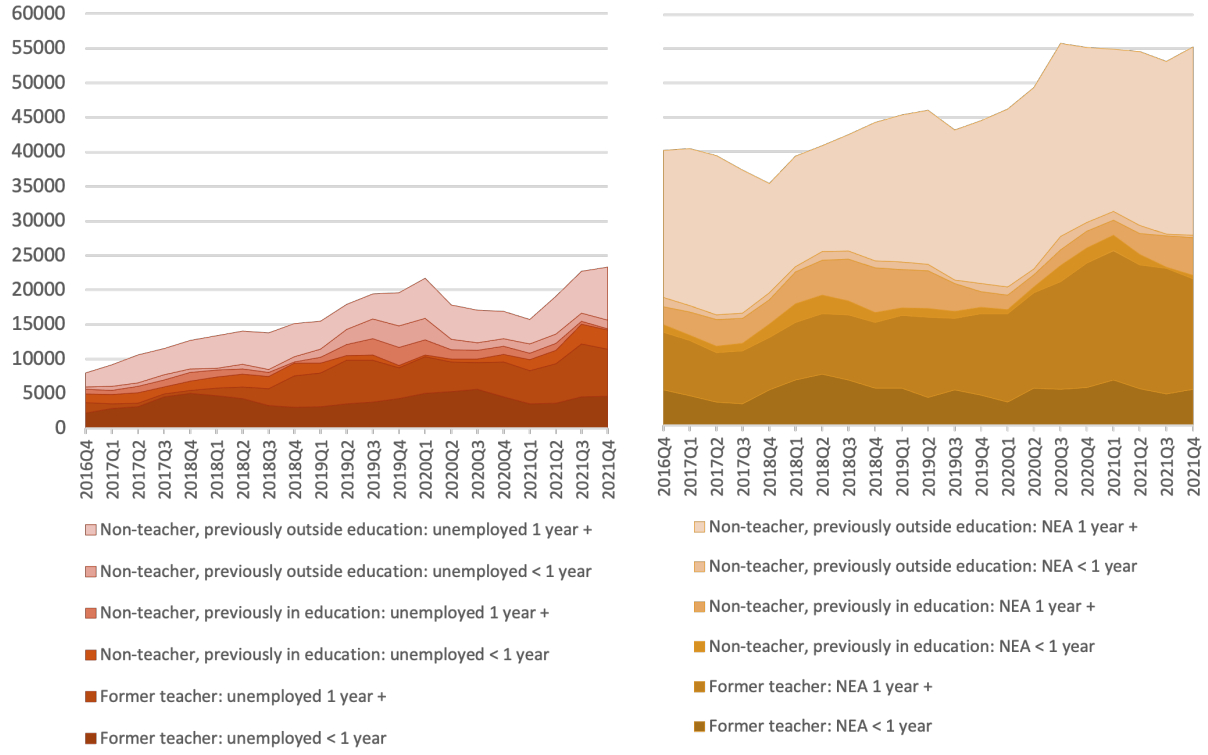
Source: QLFS 2016Q1 – 2021Q4
Notes: Sample includes working-age individuals whose highest qualification is at least a three-year (Higher) Diploma in Education, Training or Development (ETD), and are not employed in teaching or within the education industry. Numbers at each wave are determined using a four-period average, and data is weighted using Statistics South Africa population weights.

Figure 16 indicates the weighted numbers of individuals with at least a three-year tertiary qualification that are unemployed (graph on the left) or non-economically active (graph on the right) and were either (i) last employed as a teacher, (ii) last employed in the education sector and have training in ETD, or (iii) last employed outside of education and have ETD training.[8] For this analysis, less focus needs to be placed on the absolute numbers, and rather on the trends. The numbers of formerly employed teachers reporting

[8] The findings of this graph are similar if the analysis is extended to those with post-secondary qualifications i.e. certificates and diplomas below a higher diploma.

unemployment spells shorter than a year has remained fairly constant, whereas the numbers reporting unemployment for at least a year has risen. The latter group is mostly comprised of teachers aged 40 years and older.

Figure 16: Unemployed and non-economically active teachers and others with ETD qualifications



Source: QLFS 2016Q1 – 2021Q4
Notes: Sample includes working-age individuals whose highest qualification is at least a three-year Diploma. ETD = Education, Training or Development. NEA = Non-economically active. Numbers at each wave are determined using a four-period average, and data is weighted using Statistics South Africa population weights.

Conversely, the number of unemployed persons that were previously employed outside education has remained fairly constant. This group tends to be dominated by individuals younger than 40. Figure 16 also indicates the numbers of former teachers not actively participating in the labour market have risen over recent years. At least three-quarters of these individuals are aged 50 and older and report retirement as the reason for economic inactivity. It also emerges that, between 2016 and 2021, around half of the NEA with tertiary training in ETD were previously employed outside of education. Half of this group are retired persons 50 and older, whilst a further 25% report no longer working because they are a homemaker. Overall, only around 10% of NEA persons with a tertiary qualification in ETD are 35 and younger, and very little of the inactivity is short-term (i.e. less than 1 year).

4. Summary

This paper aimed to provide evidence for trends in teacher qualifications in South Africa over the last two decades using secondary data analysis of labour force data. Based on the descriptive analyses, it is clear that the level of teacher qualifications has risen. By 2016 – 2021, at least two-thirds of teachers reported

having a three-year diploma or higher qualification; this represents a more than 40% increase from 2004. This is likely to be an under-estimate if compared to administrative data (e.g. PERSAL), since the analysis here focused exclusively on basic education (grade 1 – 12) educators that could be identified using SASCO codes. In the period 2016 – 2021, almost 80% of teachers aged 21 – 35 years old who had completed a post-secondary ITE reported having attained a qualification that could be evaluated at a REQV14 or higher.

The analysis conducted in this paper also indicated unemployment levels amongst individuals receiving a tertiary equalification in Education, Training and Development (ETD) fields to be significantly lower than the expected levels for their age-qualification and age cohorts. Additionally, not everyone who studied ETD is employed in a teaching occupation, and not all individuals employed as teachers report having a tertiary qualification focused in ETD. Roughly 1 in 10 basic education teachers with at least a three-year (Higher) Diploma report their field of study to be in a field other than ETD. This is similar to the HSRC's 2009 Teaching Qualification Survey finding that 1 in 10 teachers evaluated at a REQV13 or higher did not possess a professional teaching qualification. Furthermore, although the teaching force remains feminized with a roughly 7:3 split between women and men in basic education, there has been a significant shift in the racial profile of those attaining tertiary qualifications in ETD as particularly black African and coloured women have gained greater access to fields of study outside of nursing and teaching.

Comparing teachers employed in the private and public sectors, roughly a quarter in the former did not obtain a qualification in an ETD field, whereas 1-in-10 amongst the latter are ETD trained. The differences are even greater amongst secondary school teachers: 1-in-5 private secondary school teachers report having received their tertiary qualification in a STEM or Business/Law related field. Trends in education levels over time indicates teachers in the public sector to have caught up to the qualifications of private sector teachers, with almost equal proportions of teachers indicating possession of advanced degrees by 2016 – 2021.

The analysis of this paper also explored the extent to which those who studied in an ETD field end up in teaching. In the period 2016 to 2021, approximately 1 in 8 people who reported to have achieved at least a REQV14 qualification in an ETD field were employed outside of education, and less than 20% were employed at occupation levels below associate professional. The largest proportion (40%) were employed in senior official, manager or professional occupations (e.g. city administrator, education advisor, and curriculum planner, or school inspector for central government and local authorities) within the same broad industry as education and childcare, that being community, social and personal services. The second largest industry of employment for ETD-trained persons is financial intermediation, insurance, and real estate.

The non-economically active with ETD qualifications are overwhelmingly made up of retired individuals older than 50. Amongst those aged 35 and younger — who represent only 10% of the NEA — fewer than 20% were employed as teachers in basic education prior to moving out of the labour market, and at least half appear to have had no prior labour market experience; this is because they are continuing to study or are homemakers. What the labour market survey data reveals, then, is that there is limited scope to recruit

professionally trained teachers, and in particular graduates, from the pool of unemployed and non-economically active.

References

Adler, J. & Reed, Y. (Eds.). (2002). *Challenges of teacher development: An investigation of take-up in South Africa*. Van Schaik: Pretoria.

Carnoy, M. & Chisholm, L. (2008). Towards understanding student academic performance in South Africa: A pilot study of Grade 6 Mathematics lessons in South Africa. Report prepared for the Spencer Foundation. Pretoria: HSRC.

Christie, P. (1991). *The right to learn: The struggle for education in South Africa*: 2nd Edition. Johannesburg: Raven Press.

Christie, P. & Collins, C. 1984. Bantu education: apartheid ideology and labour reproduction. In Kallaway, P. (Ed.), *Apartheid and education: the education of black South Africans*. Cape Town: Ravan Press. pp.160–183.

Council on Higher Education (CHE). (2010). Report on the national review of academic and professional programmes in Education. CHE Higher Education Monitor No. 11. Cape Town: CTP Book Printers.

Deacon, R. (2016). The initial teacher education research project. Final report. JET Education.

DoE (Department of Education). (2000). *Norms and standards for educators*. Government Gazette, Vol. 415 No.20844. Pretoria: Government Printer.

DoE (Department of Education). (2004). An assessment of 10 years of education and training in South Africa. Pretoria: DoE.

DHET (Department of Higher Education and Training). 2011. Minimum Requirements for Teacher Education Qualifications Government Gazette No. 34467, Notice No. 583. Pretoria: Department of Higher Education and Training.

DHET (Department of Higher Education and Training). 2015. *National Qualifications Framework Act, 2008 (Act No. 67 of 2008).* Revised Policy on the Minimum Requirements for Teacher Education Qualifications. Government Gazette Vol. 596, No. 38487. Pretoria: Department of Higher Education and Training.

ELRC (Education Labour Relations Council). (2003). *Integrated Quality Management System.* Collective Agreement No. 8 of 2003. Pretoria: Education Labour Relations Council.

Fiske, E. B., & Ladd, H. F. (2005). Elusive Equity: Education Reform in Post-Apartheid South Africa Human Sciences Research Council (HSRC), South Africa. Nexus.

Goldhaber, D. (2012). Teachers matter, but effective teacher quality policies are elusive. In *Handbook of research in education finance and policy* (pp. 168-187). Routledge.

Higher Education Quality Committee (HEQC). (2008). HEQC self-review report. Pretoria: Council on Higher Education.

Hofmeyr, J. (2015). Teachers in South Africa: Supply and demand 2013-2025. Report prepared for the Centre for Development and Enterprise, Johannesburg.

Hofmeyr, J. and Hall, G. 1996. The national teacher education audit: synthesis report. Johannesburg.

Hugo, A. J. (2018). Mentor teachers' feedback role in improving the training of Grades 1-3 student teachers in South Africa. *African Journal of Teacher Education*, *7*(2).

Human Sciences Research Council. (1981). Provision of Education in the RSA: Report of the Main Committee of the HSRC Investigation Into Education (Vol. 1). Cape Town: HSRC Press.

Kimathi, F., & Rusznyak, L. (2018). Advancing professional teaching in South Africa: lessons learnt from policy frameworks that have regulated teachers' work. *Education as Change*, *22*(3), 1-25.

Kruss, G. (2008). Teacher education and institutional change in South Africa. Cape Town: HSRC.

Morrow, W. (2007) *Learning to teach in South Africa*. Cape Town: HSRC Press.

Mulkeen, A., & Crowe-Taft, N. (2010). Teacher attrition in sub-Saharan Africa: The neglected dimension of the teacher supply challenge. France: UNESCO.

Pillay, P. N. (2015). The development and underdevelopment of education in South Africa. SALDRU report, University of Cape Town.

Reeves, C. (1993). Report on the feasibility study of UCT piloting an in-service diploma in (bilingual) literacy for junior primary teachers in rural and farm schools through distance education. Cape Town: Primary Education Project, University of Cape Town.

Reeves, C. (1997). An analysis of the impact of a transformative action reflection INSET model on teachers' understanding and classroom behaviour. MPhil thesis. Cape Town: University of Cape Town.

Reeves, C. & Robinson, M. (2010). Am I 'qualified' to teach? The implications of a changing school system for criteria for teacher qualifications. *Journal of Education*, *50*, 7-34.

SACE (South African Council for Educators). 2002. *Handbook for the Code of Professional Ethics*. Scottsville: Unilever Ethics Centre and University of Natal.

SACE (South African Council of Educators). 2009. *The Code of Professional Ethics* (As Amended). Pretoria: SACE.

Salmon, C. & Woods, C. (1991). Colleges of education: challenging the cliché. Mimeo. Durban: University of Natal.

Simkins, C. (2015). Teacher supply and demand in South Africa: 2013-2025. Technical report prepared for the Centre for Development and Enterprise, Johannesburg.

Taylor, N. & Vinjevold, P. (Eds.). (1999). *Getting learning right: report of the President's Education Initiative Research Project*. Joint Education Trust.

Van der Berg, S., Gustafsson, M., & Burger, C. (2022). School teacher supply and demand in South Africa in 2019 and beyond. Available at SSRN.

Walker, M. (1991). The material conditions of African Primary School teachers. In Flanagan, W. (Ed.), *Teachers and their work: case studies of in-service education in African primary schools*. Cape Town: Primary Education Project, University of Cape Town. pp.7–14.

Welch, T. (2009). Teacher education qualifications. Contribution made to the Working Document of Teacher Development Summit, 29 June to 2 July 2009.