SOUTH AFRICAN QUALIFICATIONS AUTHORITY

TRENDS IN PUBLIC HIGHER EDUCATION IN SOUTH AFRICA 1995 TO 2004

Analysis of the
National Learners' Records Database

Report 1

MISSION

To ensure the development and implementation of a National Qualifications Framework which contributes to the full development of each learner and to the social and economic development of the nation at large.

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FOREWORD BY THE CHAIRPERSON

The publication of this second edition of ***Trends in Public Higher Education in South Africa*** is opportune as it comes at a time when the urgency of the need to understand what qualifications and capabilities South Africans have to help social and economic development is heightened. With the immediate prospects of the infrastructural development required to successfully host the 2010 Soccer World Cup, the South African Government is acutely aware of the skills and educational deficiencies in the country. In order to alleviate deep poverty economic development with the creation of many more jobs is high on the national agenda. To this end, the Government has launched the Accelerated and Shared Growth Initiative of South Africa (ASGI-SA), which is aimed at giving further impetus to economic growth and job creation. One of ASGI-SA's constituent programmes, the Joint Initiative for Priority Skills Acquisition (JIPSA), specifically endeavours to identify urgent skills needs and to find quick and effective ways to accelerate development in these skills areas. At the heart of the identification of skills needs is complete and reliable information about the demand for and supply of education and training.

Labour market information is equally important for national priorities such as the need to obtain greater equity in workplaces and to uplift the education and training levels of the workforce through the National Skills Development Strategy.

The South African Qualifications Authority (SAQA), as the statutory body responsible for overseeing the development and implementation of the National Qualifications Framework (NQF) and the custodian of the National Learners' Records Database (NLRD), is in a unique position to provide comprehensive information on the supply of education and training in the country, For this reason SAQA has committed itself to the regular analysis of data on the NLRD and the publication of information that will support national and sectoral objectives.

It is hoped that this publication will assist policy makers and planners at different levels to understand the supply side of our labour market and to identify the areas in need of urgent intervention. We are cogniscent of the fact that provision of a publication of this type is dependent on cooperation from a great many people supplying accurate data. We thank all those who have cooperated to make this publication possible.

Shirley Walters

PROF SHIRLEY WALTERS
CHAIRPERSON

FOREWORD BY THE EXECUTIVE OFFICER

The National Learners' Records Database (NLRD) is one of the key deliverables of SAQA. It is a complex, relational database consisting of variables such as unit standards and qualifications registered on the NQF, accredited training providers, registered assessors, and learners and their individual achievements. At this stage the database contains more than 10 000 registered unit standards and almost 8 000 registered qualifications. It also contains information on the learning achievements of more than seven million learners. As soon as the already diminishing data gaps in the NLRD have been filled, it will be the most comprehensive database on the supply of skills to the South African economy.

A crucial component of delivering the NLRD to South African society is the regular publication of aggregate statistical information that will assist decision-making in various spheres. The first publication of NLRD data entitled ***Trends in Public Higher Education in South Africa 1992 to 2001*** was released in 2004, launched by the Minister of Education, and taken to Cabinet immediately thereafter. SAQA has now added three years of higher education data (2002 to 2004) to the NLRD. This publication covers the period 1995 to 2004.

Over the past few years, the Public Higher Education Sector has been restructured and reformed. The stark differentiation that previously existed between universities and technikons (now universities of technology) has disappeared and some institutions now house elements of both. This edition of the publication reflects the new educational landscape and provides an integrated picture of graduation trends at all public higher education institutions. It also reflects the current structure of the NQF and reports on learner achievements at the different NQF levels.

The updating of the NLRD is not only the result of the work of SAQA and its own staff. The information that is contained in the database is obtained from educational institutions via the 31 Education and Training Quality Assurance bodies (ETQAs). The success of the NLRD thus depends on the cooperation of all these partners. We at SAQA are deeply indebted to those bodies that diligently submit information to the NLRD. For this publication we are especially indebted to the Council on Higher Education and the data obtained via the Higher Education Management Information System (HEMIS).

The NLRD is unique in the world and is potentially a powerful tool in the hands of labour market and education policy-makers and planners. We hope that we can continue our partnership with stakeholders, and we are confident that the NLRD will develop to its full potential.

SAMUEL BA ISAACS
EXECUTIVE OFFICER

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The South African Qualifications Authority wishes to thank the following:

- All the graduates of South Africa, especially those who maintained contact with the HSRC's Register of Graduates during the latter's existence.
- All clients who regularly commission assignments and data analysis based on the National Learners' Records Database (NLRD).
- Elize van Zyl of Independent Research Services (IRS) for the analysis of the NLRD learner data and the production of the information contained in this publication.
- The Human Sciences Research Council (HSRC), for maintaining the Register of Graduates from 1965 to 2001, and for transferring the data to the NLRD.
- The Department of Education's HEMIS Division, especially Jean Skene, for supplying information from 1999 onwards.
- The Education and Training Quality Assurance bodies (ETQAs), which regularly submit their records of learner enrolments and achievements to the NLRD.
- The Canadian International Development Agency (CIDA), for financing the original development and commissioning of the NLRD.
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- PricewaterhouseCoopers (Canada), especially James Stone, for developing and implementing the NLRD.
- Kirstin Barth of Praxis Computing, for ensuring the smooth uptake of HEMIS and other data, for her ongoing support as the NLRD's Database Administrator, and – together with Leeny Chacko – for the Praxis contribution to the further development of the NLRD.
- Diederik de Roos and Robin Naude of Octoplus, which develops and maintains the searchable databases of qualifications and unit standards, and supports the NLRD in numerous other ways.
- IBM, Faritec and Oracle South Africa, all of which play or have played important roles in developing and maintaining the NLRD system.
- The many professional councils and institutes that provide their registration totals from time to time, so that they can be compared with those of the NLRD.
- The NLRD Directorate at SAQA, including the incumbents of the *Information Administrator* Learnership.
- All other SAQA staff, for their ongoing support and their contribution to the understanding of the education and training environment.

Yvonne Shapiro
Director: NLRD

INTRODUCTION

THE NATIONAL LEARNERS' RECORDS DATABASE

The National Learners' Records Database (NLRD) has been developed by The South African Qualifications Authority SAQA to capture and store information on unit standards and qualifications registered on the National Qualifications Framework (NQF), as well as the educational achievements of learners in terms of these unit standards and qualifications. The database was established in 1997 and it was first populated with information on unit standards and qualifications in 2000.

The first information on learner achievements included in the database was historical information on the achievement of learners at universities, which had previously been stored by the Human Sciences Research Council (HSRC) in the Register of Graduates. This register was a comprehensive electronic database that captured its first information in 1965 when it was established by the National Department of Education (some of the information went back as far as 1914). The HSRC maintained the database from 1965 to 2001 when it was handed over to SAQA for incorporation into the NLRD.

New information on learner achievements is normally received by the NLRD from the various Education and Training Quality Assurance Authorities (ETQAs).[1] As learners add new achievements to their personal qualification portfolios, their personal records are updated in the NLRD via the ETQAs. Once this database is fully populated it will contain a complete record of the formal learning achievements of all South Africans – from their qualifications on exiting the school system to the last qualifications achieved in higher education or through learnerships, or through formal skills programmes offered by ETQA-accredited training institutions, or in the workplace.[2]

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[1] An exception is information on achievements in the Public Higher Education System which is received from the Department of Education's Higher Education Management Information System (HEMIS). The ETQA for higher education is the Council for Higher Education (CHE). However, as all information on learner achievements has to be submitted to HEMIS for subsidisation purposes, information for the NLRD is transferred directly from HEMIS to SAQA.

[2] Achievements in short courses and qualifications not registered on the NQF are not included. Qualifications from overseas institutions are currently only included in a learner's record on special application by the learner and after the evaluation of the qualification by SAQA. A future project will incorporate records of all qualifications that have been evaluated.

Overall, the NLRD will contain comprehensive and integrated information on education and training trends in all components of the education and training system and in all sectors of the economy. It is SAQA's intention to analyse this information on a regular basis and to make it available to stakeholders who may need it for research or for planning purposes.

BACKGROUND TO THIS PUBLICATION

This publication is the second of its kind. The first analysis of the NLRD data was published in 2004. Both publications focus on the part of the NLRD that at this stage is best populated in respect of learner achievements, namely the achievements of learners in the Public Higher Education System.

As a result of the incorporation of the HSRC's Register of Graduates into the NLRD, together with subsequent HEMIS uploads, it was possible to extract a comprehensive set of statistics on learner achievements at universities from this database. However, information on learner achievements at universities of technology (previously known as technikons) is available in the NLRD only from 1999 onwards. It was therefore decided – in order to provide an equally comprehensive overview of achievements at these institutions – to augment NLRD data with information from the South African Postsecondary Education Information (SAPSE) system.[3] Thus, in essence, this publication is based on a combination of information from three different data sources: the Register of Graduates, HEMIS and SAPSE.

METHODOLOGY

Definition of fields of study

The fields of study used in the previous publication were retained in this one. These fields were defined to relate, as far as possible, to the world of work. This was because most of the users of this statistical information need to look at it from a labour supply perspective. For example, educational planners and employers are both concerned about the extent to which the education system meets the needs of the labour market.

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[3] This system was the predecessor of HEMIS. It contained aggregated information on learner achievements at each educational institution, whereas HEMIS collects information on each individual learner.

In instances where professional disciplines were well defined, these definitions were used to demarcate fields. Field demarcations were also influenced by the way in which higher education institutions describe and combine fields of study. Field definitions were furthermore influenced by the field demarcations used in a similar publication produced in 1999 from the HSRC's Register of Graduates[4].

Classification of qualifications under fields of study

The first level of classification of qualifications was based on the names of the qualifications. Many higher education institutions use qualification names that clearly describe the field of study. However, some institutions use general qualification names only. These qualifications were initially classified under general qualification fields, for example general natural sciences or general engineering.

Classification of majors under fields of study

The courses or subjects taken by learners whose qualifications fell in the general qualification fields were then extracted from the database. The major subjects were subsequently classified under the particular fields of study.

Reclassification of general qualifications under fields of study

Based on the major subjects in a qualification, general qualifications were reclassified under fields of study where possible. This reclassification was based on the following principle: if all the majors taken by the learner in his/her final year fell in one field of study, his/her qualification was classified under that study field. If the majors fell in more than one study field, the qualification remained in the general field.

Broad fields of study

The publication is organised not only in terms of specific fields of study, but each of the fields is grouped under a broad field of study. The five broad fields are Natural Sciences, Engineering Sciences and Technology, Health Sciences, Business and Management Sciences and Social Sciences and Humanities.

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[4] Shapiro, Y and Jacobs, J. South African Graduate Statistics: 1999. Profiles and Recent Trends. HSRC, Pretoria, 1999.

Classification of qualification levels

In the analyses of individual fields of study, qualifications were grouped into three NQF levels – Level 6, Level 7 and Level 8 and above. Level 6 consists of national diplomas and three-year first degrees. Level 7 contains all higher diplomas, post-graduate diplomas, four-year degrees (including B Tech degrees) and honours degrees. Level 8 and above includes master's degrees and diplomas, leaureatus diplomas and doctoral degrees.

Estimates of missing data

Although the NLRD provides comprehensive data from 1986 onwards, there are certain "gaps" in the data. These are the result of universities that failed to submit their data to the HSRC Register of Graduates prior to 1999 and technikons that did not provide the Department of Education with the information required by the SAPSE system. From 1999 to 2004 all data were obtained from HEMIS and were complete.

Information gaps were filled by substituting missing years' data with data from the same institution for the previous year. In a few instances, institutions did not submit data for more than one year in a row. In such instances the data from the years preceding the particular period and those following the period were used for substitution purposes.

Calculation of graduation trends and availability

Two main concepts are used in the presentation of the statistical information: graduation trends and availability. The concept *graduation trends* refers to the number of qualifications conferred within a specific academic year, irrespective of the previous qualifications attained by the learners. Learners who had achieved more than one qualification in the period reflected in the statistics were counted each time they achieved a new qualification.

Availability, on the other hand, refers to the number of individuals with qualifications in a particular field. A person with a first degree, an honours degree, a master's degree and a doctorate in the same field of study was counted only once in that field of study. A person who had attained qualifications in more than one field of study was counted in all the fields, for example a person with a first degree in civil engineering and a master's

degree in business administration would be counted in the fields civil engineering and commerce, business management and business administration. The person would furthermore be counted against his/her highest qualification in that particular field of study.

In the first two files on the CD (All Fields of Study) graduates were counted only once in the fields of study of their highest qualifications. Thus, these file give a true reflection on the actual number of graduates available in the country.

PROBLEMS AND LIMITATIONS

A particularly challenging aspect of the preparation of this publication was analysing and then combining the qualification and course classification systems used in the three data sources in order to provide a consistent and reliable picture of learner achievements in the different fields of study. In a few instances it was not possible to include SAPSE information in the analysis because the fields of study used in this publication had been subsumed in broader categories in the SAPSE system. The reclassification of general degrees posed further problems. The course names and course codes used by higher education institutions are, in some instances, clear and easy to link to study fields and in other instances they are not. The results contained in this publication represent the best possible combination and analysis of the available information. Future analyses will no doubt become increasingly easier as qualifications become more uniform and information flowing into the NLRD becomes more standardised.

The estimates of the number of people with qualifications in a particular field of study should be seen as conservative. Prior to 1986, the HSRC Register of Graduates captured information only on university graduates who voluntarily responded to a request for information. Although response rates were high, a certain proportion of graduates were lost from the database. Since 1986, all the information regarding qualifications attained, has been received directly from the universities and captured and retained in the database. The growth in the number of graduates over the past ten years is also somewhat exaggerated because of the underreporting of graduates prior to 1986.

The analysis is based on the variables available in the database. Although the NLRD contains information on most people with higher education qualifications, various factors

not accounted for in these statistics impact on the availability of graduates for work in South Africa. For example, the availability of graduates may be affected by emigration or temporary residence overseas, mortality before the age of 65, disability or temporary withdrawal from the labour market to continue with further studies or to raise a family. On the other hand, availability could be increased by South Africans studying abroad and returning to the country, immigration and foreign nationals seeking employment in South Africa. The contribution of private higher education institutions to the pool of graduates has also not been taken into account.

COMPARISON WITH THE PREVIOUS PUBLICATION

If the figures presented in this publication are compared directly with the figures of the previous publication, some differences may occur. These differences are the result of improvements made on the NLRD. First of all, a number of learner records from the HSRC Register of Graduates that could not be loaded onto the NLRD at the time of preparing the previous publication, have now been loaded and were included in the current analysis. At the same time the NLRD's ability to identify duplicate records has been improved and a number of duplicate learner records have been removed.

FORMAT OF THE CD

This is a statistical publication with only a small amount of interpretative text. The graphs are intended to provide the reader with information on trends at a glance, while the tables provide actual figures.

The PDF files are grouped into six folders. The first folder contains a file that summarises the total output of the public higher education system. The other five folders contain the information pertaining to the five broad fields of study.

Each folder, on each broad field, contains a file that summarises the total field, followed by files that deal with specific fields of study within that broad field. Information on individual fields of study is presented in a uniform manner. First of all, an analysis is given of graduation trends and the availability of graduates at all NQF levels (at all institutions). Then information is given on the output of universities and universities of technology (technikons) separately. It must be noted that up to 2003 the data were not affected by the restructuring of the higher education institutions. In 2004 UNISA

submitted information that pertained to university and technikon qualifications as the institution became a merger between the old University of South Africa and Technikon SA. On the CD files UNISA's information for 2004 is excluded from both the university and technikon information but it is included in the first pages that deal with both types of institutions.

The information on universities and technikons is followed by specific information on graduation trends and the availability of graduates at Level 6, Level 7 and Level 8 and above. In the first files in each folder, i.e. in the summary of the total field, a distinction is made between qualifications at Level 8 and those above Level 8.

The analysis focuses on changes that occurred in the ten-year period 1995 to 2001. The change in the availability of graduates is analysed at five-year intervals: at the end of 1994, 1999 and 2004. This analysis shows how the total number of people with qualifications in a particular field grew over the ten-year period as a result of the changes that can be observed in the trend statistics. Graduation trends and availability are analysed from four perspectives: change in total numbers, in qualification levels, and in the population group and gender composition of learners. Population group and gender distributions are of particular importance for the assessment of the transformation of the higher education system as well as for skills planning and employment equity planning in the workplace.

The information summarised in this publication represents only a first level of analysis of a very complex and powerful database. More focused and in-depth analysis may be requested from SAQA. Requests for information will be charged individually.

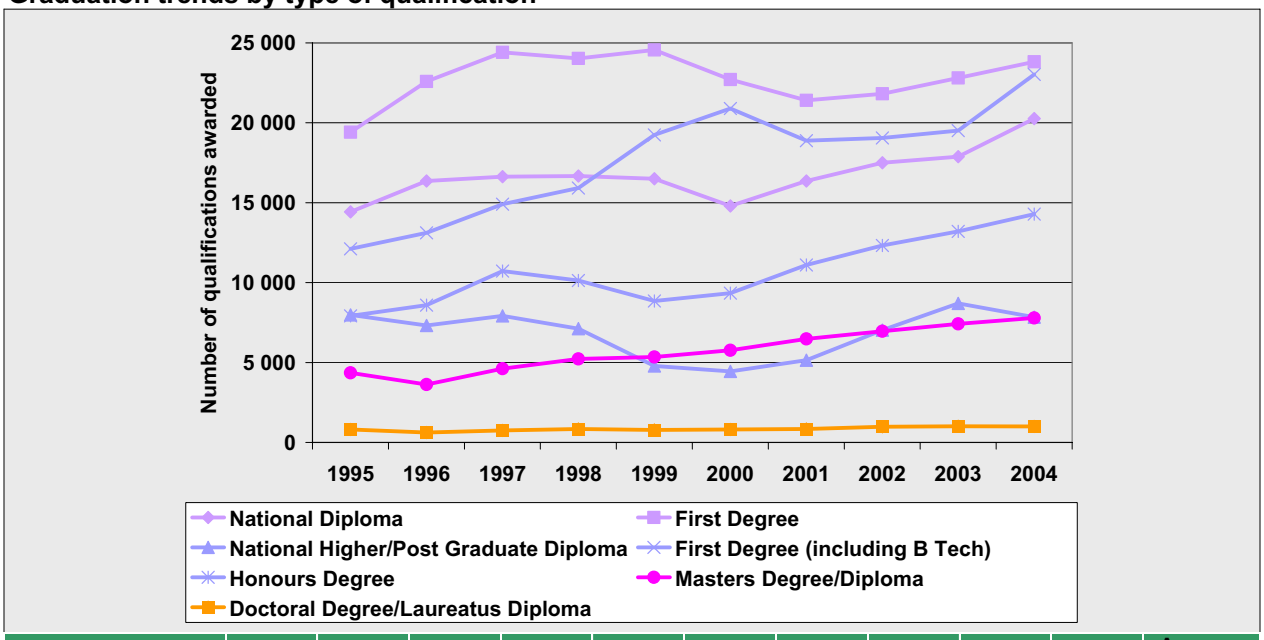
ALL FIELDS OF STUDY - OVERVIEW

GRADUATION TRENDS[1]

Trends by Qualification Type

The number of qualifications[2] that were awarded by South African universities grew at a steady pace over the review period, the decade from 1995 to 2004. The total number of qualifications awarded per year increased from 67 013 in 1995 to 98 029 in 2004. This constitutes an average annual growth rate of 4.3%. Three-year first degrees increased from 19 418 in 1995 to 23 823 in 2004: an average annual increase of 2.3%, while there was a slight decline in the number of National Higher Diplomas or Post Graduate Diplomas awarded over the period. The highest growth in qualifications per year occurred in four-year first degrees (7.4%), honours degrees (6.8%) and master's degrees/diplomas (6.7%).

Graduation trends by type of qualification



Type of qualification	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Average annual growth (%)
National Diploma	14 423	16 356	16 630	16 675	16 495	14 795	16 358	17 500	17 885	20 262	3.8
First Degree 3 years	19 418	22 591	24 412	24 025	24 561	22 710	21 402	21 817	22 807	23 823	2.3
National Higher/Post Graduate Diploma	7 976	7 320	7 917	7 114	4 787	4 443	5 149	7 026	8 705	7 836	-0.2
First Degree 4 years (including B Tech)	12 115	13 121	14 912	15 920	19 245	20 895	18 879	19 049	19 517	23 031	7.4
Honours Degree	7 921	8 593	10 727	10 135	8 851	9 345	11 103	12 327	13 206	14 286	6.8
Master's Degree/ Diploma	4 353	3 628	4 617	5 226	5 342	5 766	6 476	6 963	7 423	7 792	6.7
Doctoral Degree/ Laureatus Diploma	807	618	748	844	783	807	841	981	1 014	999	2.4
Total	**67 013**	**72 226**	**79 963**	**79 939**	**80 064**	**78 761**	**80 208**	**85 663**	**90 557**	**98 029**	**4.3**

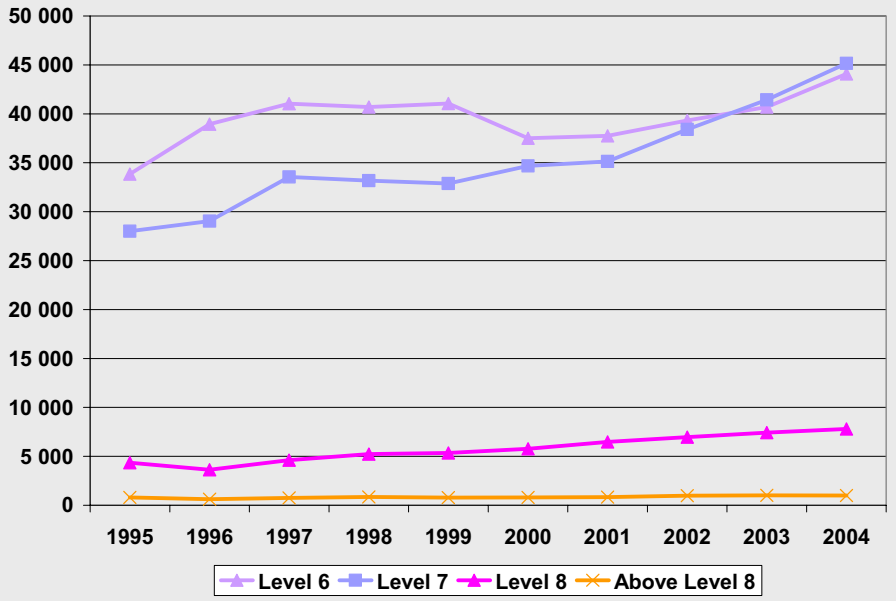
[1] The concept, 'graduation trends', refers to the number of qualifications conferred within a specific academic year, irrespective of the previous qualifications attained by the learners. Learners who have achieved more than one qualification in the period reflected in the statistics have been counted each time they have achieved a new qualification.

[2] The totals in this chapter will not necessarily correspond with the totals in the chapters where the separate fields are discussed. Some of the qualifications could not be coded into the respective fields of study, but they are included in this overview.

Trends by NQF Level

The highest growth (6.7%) in the number of qualifications awarded between 1995 and 2004 occurred at Level 8 (Master's degrees/ diplomas). This was followed by Level 7 qualifications (5.4%). Level 6 qualifications grew by only 3.0% per year, although this growth occurred from a large base (33 841 qualifications in 1995). Qualifications above Level 8 also showed relatively low growth (2.4%).

Graduation trends by NQF level of qualifications

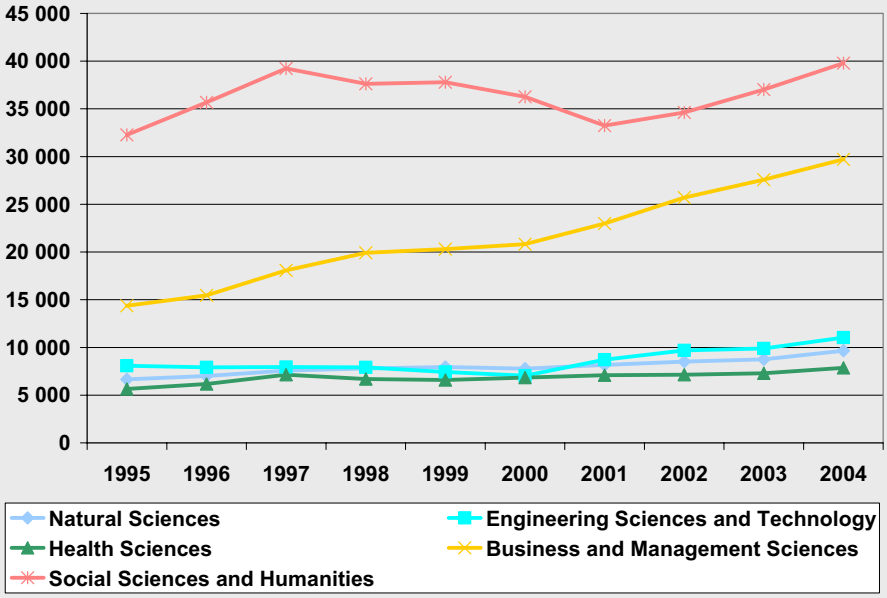


Level of qualification	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Average annual growth (%)
Level 6	33 841	38 947	41 042	40 700	41 056	37 505	37 760	39 317	40 692	44 085	3.0
Level 7	28 012	29 033	33 556	33 169	32 883	34 683	35 131	38 402	41 428	45 153	5.4
Level 8	4 353	3 628	4 617	5 226	5 342	5 766	6 476	6 963	7 423	7 792	6.7
Above Level 8	807	618	748	844	783	807	841	981	1 014	999	2.4
Total	**67 013**	**72 226**	**79 963**	**79 939**	**80 064**	**78 761**	**80 208**	**85 663**	**90 557**	**98 029**	**4.3**

Trends by Broad Field of Study[3]

The highest growth (8.4%) in the number of qualifications awarded between 1995 and 2004 occurred in the broad study field of Business and Management Sciences. This was followed by the Natural Sciences (4.2%), Health Sciences (3.7%) and Engineering Sciences and Technology (3.5%). Social Sciences showed the lowest annual growth (2.4%) over the period. However, this growth occurred from a large base (32 267 qualifications in 1995), while Health Sciences and Natural Sciences grew from bases of approximately one-fifth that of Social Sciences.

Growth in qualification by broad field of study



Broad field	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Average annual growth (%)
Natural Sciences	6 662	7 004	7 578	7 788	7 943	7 785	8 173	8 510	8 754	9 650	4.2
Engineering Sciences and Technology	8 079	7 917	7 944	7 918	7 428	7 047	8 720	9 685	9 897	11 038	3.5
Health Sciences	5 642	6 165	7 136	6 687	6 595	6 847	7 088	7 149	7 297	7 858	3.7
Business and Management Sciences	14 363	15 466	18 070	19 925	20 310	20 816	22 986	25 705	27 584	29 702	8.4
Social Sciences and Humanities	32 267	35 675	39 236	37 622	37 788	36 266	33 241	34 614	37 025	39 781	2.4
Total	**67 013**	**72 226**	**79 963**	**79 939**	**80 064**	**78 761**	**80 208**	**85 663**	**90 557**	**98 029**	**4.3**

[3] Broad field of study refers to the five broad fields used to group the information in this book. The five fields are Natural Sciences; Engineering Sciences and Technology; Health Sciences Business and Management Sciences; and Social Sciences and Humanities.

Trends by Population Group

The proportion of all qualifications awarded by South African universities to African, coloured and Indian (Black) learners increased from 44.9% in 1995 to 63.7% in 2004. However Black graduates' share decreased as the level of qualification awarded increased. For example, by 2004 more than two-thirds of the graduates who received qualifications at Level 6 were Black, 63.4% at Level 7 and only 47.7% at Level 8 and above. This was, however, an increase of 25.3%, while the other levels showed increases of just over 18%.

More than two-thirds of all qualifications awarded in the Social Sciences and Humanities in 2004 went to Black graduates.

Most professional qualifications, for example engineers, medical practitioners and accountants, are awarded on Level 7. The broad fields with the highest growth in Black graduates' share at Level 7 between 1995 and 2004 were Engineering Sciences and Technology: Black graduates' share increased from 18.9% in 1995 to 51.7% in 2004. In Business and Management Sciences their share increased from 19.6% in 1995 to 50.2% in 2004.

Black graduates' share in qualifications awarded according to broad field of study: 1995 and 2004

Broad field	Percentage of qualifications awarded to Black learners							
	Level 6		Level 7		Level 8 and above		Total	
	1995	2004	1995	2004	1995	2004	1995	2004
Natural Sciences	38.8	66.0	33.1	57.3	17.7	45.8	34.5	61.0
Engineering Sciences and Technology	26.9	74.6	18.9	51.7	15.1	37.9	22.1	63.3
Health Sciences	57.6	74.5	43.9	60.1	18.2	49.7	43.9	62.0
Business and Management Sciences	34.5	67.4	19.6	50.2	13.0	42.0	29.0	60.5
Social Sciences and Humanities	65.8	62.7	60.7	71.8	31.7	52.7	60.8	67.2
Total	**48.4**	**67.2**	**45.3**	**63.4**	**22.4**	**47.7**	**44.9**	**63.7**

Trends by Gender

Women gradually increased their share in the qualifications awarded over the decade under review. In 1994, 47.9% of all university qualifications were awarded to female graduates. Women's share increased to 56.0% of all qualifications awarded in 2004.

In 2004, women had the highest share (58.7%) in the total number of qualifications awarded at Level 7, while their share in the total number of qualifications on Level 8 and above was 43.1%. Women are still largely underrepresented in the broad field of Engineering Sciences and Technology (26% in 2004).

Women's share in qualifications awarded according to broad field of study: 1995 and 2004

Broad field	Percentage of qualifications awarded to Women learners							
	Level 6		Level 7		Level 8 and above		Total	
	1995	2004	1995	2004	1995	2004	1995	2004
Natural Sciences	50.2	57.2	44.9	51.2	34.7	42.9	46.7	53.7
Engineering Sciences and Technology	19.0	28.9	11.3	23.0	16.8	19.6	15.0	26.0
Health Sciences	62.4	79.6	64.7	73.2	44.6	60.1	62.3	73.1
Business and Management Sciences	44.7	57.0	40.2	48.4	20.8	30.2	41.8	52.6
Social Sciences and Humanities	57.8	63.8	57.9	66.4	48.1	50.8	57.1	64.1
Total	**48.8**	**55.8**	**49.1**	**58.7**	**36.6**	**43.1**	**47.9**	**56.0**

AVAILABILITY[4]

Availability by Qualification Type

The total pool of university graduates under the age of 65 grew by 116.9%, from 542 398 in 1994 to 1 176 496 in 2004. The largest component of the pool of graduates was those with three-year first degrees (286 329 graduates in 2004). The group that showed the highest growth (195.7%) was that of graduates with national diplomas while the graduates with doctoral degrees or laureatus diplomas grew by only 59.3%.

Growth in the number of graduates according to type of highest qualification: 1994 - 2004

Type of qualification	1994	2004	Growth (%)
National Diploma	76 684	226 741	195.7
First Degree 3 years	144 835	286 329	97.7
National Higher/Post Graduate Diploma	66 744	114 466	71.5
First Degree 4 years (including B Tech)	115 022	264 420	129.9
Honours Degree	87 635	177 036	102.0
Master's Degree/ Diploma	41 009	90 822	121.5
Doctoral Degree/ Laureatus Diploma	10 469	16 682	59.3
Total	**542 398**	**1 176 496**	**116.9**

Availability by NQF Level and Broad Field of Study[5]

The total number of university graduates grew by 116.9% from the end of 1994 to the end of 2004. Highest growth occurred at Level 6 (131.6%). At Level 7 the growth in the number of graduates was 106.4% while nearly the same overall growth occurred at Level 8 and above (108.8%), although growth took place from a much smaller base.

The broad field of study with the highest overall growth in graduates (153.8%) was Business and Management Sciences. From 1994, the Level 6 graduates in Business and Management Sciences grew by 164.4% and the Level 7 graduates by 146.2%. Social Sciences also showed high growth (118.1%) while growth in the Natural Sciences (99.8%), Engineering Sciences and Technology (92.0%) and Health Sciences (91.6%) was moderate.

Graduates with Level 6 qualifications in Engineering Sciences and Technology grew by 141.9%. However, those with Level 7 qualifications (i.e. engineering professionals and technologists) grew by only 60.8% from 1994.

[4] Availability refers to the number of individuals with their highest qualifications in a particular field – the "pool". In this chapter graduates were counted only once. The broad fields of study reflect the fields in which their highest qualifications were obtained. Similarly, the qualification types and NQF levels reflect the highest qualifications of the individuals. Availability was counted at the end of the years 1994 and 2004.

[5] Broad field of study refers to the five broad fields used to group the information in this book. The five fields are Natural Sciences; Engineering Sciences and Technology; Health Sciences; Business and Management Sciences; and Social Sciences and Humanities.

ALL FIELDS OF STUDY - OVERVIEW

Growth in the number of graduates according to broad field of study: 1994 - 2004

Broad field	Level 6			Level 7			Level 8 and above			Total		
	1994	2004	Growth (%)	1994	2004	Growth (%)	1994	2004	Growth (%)	1994	2004	Growth (%)
Natural Sciences	25 612	56 624	121.1	20 672	38 590	86.7	9 807	16 882	72.1	56 091	112 097	99.8
Engineering Sciences and Technology	27 009	65 348	141.9	41 258	66 359	60.8	6 255	11 356	81.5	74 522	143 062	92.0
Health Sciences	12 286	24 715	101.2	42 869	80 828	88.5	6 057	11 760	94.2	61 211	117 303	91.6
Business and Management Sciences	63 391	167 627	164.4	35 787	88 091	146.2	11 085	24 086	117.3	110 263	279 803	153.8
Social Sciences and Humanities	93 221	198 756	113.2	128 815	282 054	119.0	18 273	43 421	137.6	240 309	524 230	118.1
Total	**221 519**	**513 070**	**131.6**	**269 401**	**555 922**	**106.4**	**51 478**	**107 504**	**108.8**	**542 398**	**1 176 496**	**116.9**

Availability by Population Group

At the beginning of the ten-year period under review, black graduates constituted only 23.8% of the pool of university graduates under the age of 65. Since then the situation has changed dramatically. By 2004, Black graduates' overall share of the pool had increased to 46.3%. The increase in Black graduates can be ascribed mainly to an increase in the number of African graduates. However Black graduates' share decreased as the level of qualification increased. For example, 51.7% of all graduates whose highest qualifications were at Level 6 were Black, but only 27.1% of the pool of graduates with their highest qualifications at Level 8 and above was Black.

Black graduates were the best represented (56.3%) in the Social Sciences and Humanities while only 31.2% of all graduates with highest qualifications in Engineering Sciences and Technology were Black by 2004.

Black graduates as percentage of all graduates[6]: 1994 and 2004

	Level 6		Level 7		Level 8 and above		Total	
Broad field of study	**1994**	**2004**	**1994**	**2004**	**1994**	**2004**	**1994**	**2004**
Natural Sciences	23.9	47.0	13.4	34.7	6.4	23.0	16.9	39.1
Engineering Sciences and Technology	17.7	42.4	7.9	22.4	4.4	17.2	11.2	31.2
Health Sciences	42.8	60.2	22.4	40.2	8.5	24.7	25.3	43.0
Business and Management Sciences	19.1	47.9	10.2	30.5	4.5	20.2	14.7	40.0
Social Sciences and Humanities	38.1	58.5	33.1	58.0	13.1	35.7	33.4	56.3
Total	**28.7**	**51.7**	**22.8**	**45.1**	**8.4**	**27.1**	**23.8**	**46.3**

Availability by Gender

By the end of 2004, women constituted 48.4% of the total pool of graduates under the age of 65 with university qualifications. Of the total number of graduates with highest qualifications on Level 6 and Level 7, almost half were female.

From 1994, the highest growth in women's share of qualifications occurred in the broad field of Business and Management Sciences. Women remained a relatively small proportion of graduates in Engineering Sciences and Technology: in 2004 they formed only 16.0% of the graduates in this field.

Women as percentage of all graduates[7]: 1994 and 2004

	Level 6		Level 7		Level 8 and above		Total	
Broad field of study	**1994**	**2004**	**1994**	**2004**	**1994**	**2004**	**1994**	**2004**
Natural Sciences	46.6	51.7	35.8	42.4	24.5	35.4	38.8	46.1
Engineering Sciences and Technology	15.5	20.8	7.2	11.7	8.0	13.5	10.3	16.0
Health Sciences	68.6	74.5	51.0	60.7	27.1	42.3	52.2	61.7
Business and Management Sciences	37.5	48.5	23.6	37.5	9.3	20.5	30.1	42.6
Social Sciences and Humanities	53.6	56.9	54.9	60.1	39.8	48.0	53.3	57.9
Total	**44.4**	**49.8**	**41.3**	**49.6**	**25.0**	**35.6**	**41.0**	**48.4**

[6] The figures in the table include all graduates whose population group was known.
[7] The figures in the table include all graduates whose gender was known.