

**ANNEXURE A: IMPLEMENTATION PLAN**

**COMMITMENT ONE: We will urgently overcome the shortages in the supply of people with the priority skills needed for the successful implementation of current strategies to achieve accelerated economic growth.**

**COMMITMENT ONE: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 1.1: To accelerate training output in the priority areas of design, engineering and artisans that is critical to the manufacturing, construction and cultural industries.</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
Increase the annual output of engineering graduates in higher education and training	Number of engineering graduates per annum
Increase the annual output of artisan graduates through targeted artisan training	Number of artisans certificated per annum
Increase the annual output of design graduates in FET	Number of design graduates from FET Institutions
Increase the annual output of design graduates in higher education and training	Number of design graduates from Higher Education Institutions
<b>Strategic Priority 1.2: Increase the supply of skilled personnel in the priority areas of design, engineering, artisans that are critical to manufacturing, construction and cultural activities through net immigration</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To increase the supply of engineers in shortage areas through targeted immigration of appropriately qualified people	Net difference between immigration and emigration of qualified engineers per year
To increase the supply of persons in areas identified in the immigration quota list through targeted immigration of appropriately qualified people	Net difference between immigration and emigration of qualified people in the listed areas per year

<b>Strategic Priority 1.3: To accelerate the number of new training graduates in priority economic sectors identified in ASGISA and the NIPF and IPAP</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To increase the supply of appropriately qualified people to meet the human resource demands in the areas of ICT	Aggregate national output of graduates with qualifications linked to demands in the areas of ICT in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Capital/Transport equipment & Metal fabrication industries	Aggregate national output of graduates with qualifications linked to demands in the Capital/transport equipment & metal fabrication industries in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Automotives & Components industry	Aggregate national output of graduates with qualifications linked to demands in the Automotives & Components industry in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Chemicals, Plastics Fabrication & Pharmaceuticals industries	Aggregate national output of graduates with qualifications linked to the demands in the Chemicals, Plastics Fabrication & Pharmaceuticals industries in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Forestry, Pulp & Paper, & Furniture industries	Aggregate national output of graduates with qualifications linked to the demands in the Forestry, Pulp & Paper, & Furniture industries in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the BPO&O industry	Aggregate national output of graduates with qualifications linked to the human resource demands in the BPO&O industry in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Tourism industry	Aggregate national output of graduates with qualifications linked to the human resource demands in the Tourism industry in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Biofuels industry	Aggregate national output of graduates with qualifications linked to the human resource demands in the Biofuels industry in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Diamond beneficiation & jewelry industry	Aggregate national output of graduates with qualifications linked to the human resource demands in the Diamond beneficiation & jewelry industry in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet the human resource demands in the Agro-processing industry	Aggregate national output of graduates with qualifications linked to the human resource demands in the Agro-processing industry in FET, HET and SETA facilitated training
To increase the supply of appropriately qualified people to meet human resource demands in the Film & Television industry	Aggregate national output of graduates with qualifications linked to the human resource demands in the Film & Television industry in FET, HET and SETA facilitated training

**COMMITMENT ONE: ACTIVITIES**

<b>Activity</b>
Establish credible technical capability within the HRDS-SA to monitor and facilitate special interventions for accelerating the adequate supply of priority skills (brief will include identification and facilitating resolution of impediments to efficient and integrated skills development in the country) [transact critical interface between demand side (economic strategies, poverty and employers) and supply side (DoL, DoE, private providers)]
Establish active collaboration between the HRDS-SA and the National Skills Authority to monitor and facilitate special interventions for accelerating the adequate supply of priority skills (brief will include identification and facilitating resolution of impediments to efficient and integrated skills development in the country) [transact critical interface between demand side (economic strategies, poverty and employers) and supply side (DoL, DoE, private providers)]
Ensure alignment and integration of targets across all areas of priority skills supply
Increase the capacity and resourcing of relevant engineering faculties to increase the output and quality of engineers in specific priority areas
Ensure that SETA's and FET colleges have demonstrable capability and efficacy in facilitating the acceleration of artisan training in relevant sectors
Reporting regularly on updated scarce skills studies
Incorporate adequate response to the demand for priority skills in credible FET planning and Institutional capacity development through FET recapitalization programme
Incorporate adequate response to the demand for priority skills in credible HE planning and Institutional capacity development
Ensure that the allocation decisions of the National Students Financial Aid Scheme for Higher Education and Further Education and Training is aimed at responding to the demands for priority skills urgently required by the economy
ICT skills development strategy developed and commence with implementation
Establish ICT Skills Development Council
ICT Skills Development Strategy accounted for in SETA SSPs, HE Plans and FET plans.

**COMMITMENT TWO: We will increase the supply of appropriately skilled people to meet the demands of our current and emerging economic and social development priorities.**

**COMMITMENT TWO: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 2.1: To ensure that skills development planning is credible, integrated, coordinated and responsive to social and economic demands</b>	
<b>Strategic Objective</b>	<b>Process Indicators</b>
To ensure that there is a coordinated and credible master scarce skills list that accounts for the imperatives of all key stakeholders and economic sectors	Master Skills List credibility accepted and is utilized by all major stakeholders
To ensure that enrolment planning for FET is guided by a coordinated master scarce skills list that sufficiently accounts for the imperatives of all key stakeholders and economic sectors	FET institutional planning and funding decision are informed by the Master Skills List
To ensure that enrolment planning for HET is guided by a coordinated master scarce skills list that sufficiently accounts for the imperatives of all key stakeholders and economic sectors	HET rolling plan, institutional planning and funding decision are informed by the Master Skills List
To ensure that planning for SETA skills development is based on a coordinated master scarce skills list that sufficiently accounts for the imperatives of all key stakeholders and economic sectors	SETA funding and training facilitation is informed by the Master Skills List
<b>Strategic Priority 2.2: To ensure that skills development programmes are demand-led through substantive and systematic input from employers in the determination of skills demands for the country</b>	
<b>Strategic Objective</b>	<b>Process Indicators</b>
To ensure that employers establish capability for the effective articulation of their assessment of projected demand for skills through annual WSP /ATR submission processes	Capability existing in all economic sectors for systematic and rigorous articulation of employer assessment of the demand for skills in the respective economic sectors
To ensure that the SETA Sector Skills Plans are based on credible and substantive input from employers	Employer input to the development of Sector Skills Plans are systematic, credible and rigorous
To ensure that the Master Scarce Skills List is based on credible and substantive input from employers	Employer input to the development of Master Scarce Skills List are systematic, credible and rigorous
To increase coverage and scope of employer reporting on workplace training activities and spending (including levy and non-levy funded training)	% of levy paying companies who report on total workplace training activities and spending

<b>Strategic Priority 2.3: To improve the employment outcomes of post-school education and training programmes</b>	
<b>Strategic Objective</b>	<b>Process Indicators</b>
Establish credible industry-institutional partnerships in FET	Each FET institution has at least one functional and sustainable industry-institution partnership aimed at enhancing the link between formal learning and the world of work and providing opportunities for placements
Establish credible industry-institutional partnerships in HET	Each of the occupational training focused faculties, schools or departments in the higher education system have at least one functional and sustainable industry-institution partnership aimed at enhancing the link between formal learning and the world of work and providing opportunities for placements
<b>Strategic Priority 2.4: To ensure that FET and HET is responsive to the skills demands arising from South Africa's social and economic development imperatives</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To ensure that FET graduation rates are responsive to social and economic skills demands	Ratio of the humanities; business and commerce; and science, engineering and technology graduations
To ensure that HE enrolment is responsive to social and economic skills demands	Ratio of the humanities; business and commerce; and science, engineering and technology enrolment
To ensure that HE graduation rates are responsive to social and economic skills demands	Ratio of the humanities; business and commerce; and science, engineering and technology graduation
To ensure that aggregate enrolment in further education and training is at optimal levels	Further Education and Training participation rate benchmarked against data for comparable and high-performing countries
To ensure that aggregate enrolment in higher education and training is at optimal levels	Higher Education and Training participation rate benchmarked against data for comparable and high-performing countries

**COMMITMENT TWO: ACTIVITIES**

<b>Activity</b>
Review and align National Scarce Skills list to arrive at a common official national skills list that is aligned to the country's social and economic priority goals (including Anti-poverty Strategy; ASGISA; NIPF; and IPAP) and which would guide all HRD activities in the country; especially with regard to HET, FET, immigration targets and SETA's
Review HET 5-year output trajectory against the national scarce skills list and account for projected shortfalls in output through adjustments to higher education rolling plans
Review FET 5-year output trajectory against the national scarce skills list and account for projected shortfalls in output through adjustments to FET enrolment planning
Review SETA's 5-year training output trajectory against the national scarce skills list and account for projected shortfalls in output through adjustments to Sector Skills Plans
Implement FET recapitalisation programme in a manner that is purposefully directed at improving institutional efficacy to meet the strategic objectives of the HRDS-SA
Implement Higher Education Institutional development programmes in a manner that is purposefully directed at improving institutional efficacy to meet the strategic objectives of the HRDS-SA
Take active measures to promote the emergence of sufficient capacity, quality and cost-effectiveness training providers in the area of skills development
Actively support the strengthening and growth of industry linked training institutions
Take active measures to ensure integration of education and training policy provisions, including as it pertains to skills development policy provisions and the functioning and policy frameworks for FET and HET institutions
Ensure that implementation of the FET Revised Curriculum is purposefully aimed at improving quality, responsiveness and relevance of education and training at FET Institutions
To increase the participation rate in higher education to meet the demand for high-level skills through a balanced production of graduates in different fields of study taking into account labour market trends.
To increase the number of graduates through improving the efficiency of the higher education system. To link improvements in efficiency to improvements in quality
To broaden the social base of higher education by increasing access to higher education of workers and professionals in pursuit of multi-skilling and re-skilling, and of adult learners who were denied access in the past.

**COMMITMENT THREE: We will ensure universal access to, and urgently improve, the quality of basic education and schooling (up to Grade 12) in a manner that is purposefully focused on achieving a dramatic improvement in the education outcomes for the poor, and on equipping learners with optimal capacity for good citizenship to pursue post-school vocational education and training or employment.**

**COMMITMENT THREE: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 3.1: To ensure equity in education inputs and learning outcomes</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To ensure that participation rates in quintiles one, two and three are commensurate with those for quintiles four and five	Ratio of Net Enrolment Rates of quintiles one, two and three (on the one hand) to quintiles four and five (on the other hand)
To ensure that all learners in quintile one and two do not pay school fees and have access to adequate levels of non-teacher inputs for effective learning	Percentage of quintile one and two schools complying with No Fee Schools policy and the per capita non-personnel expenditure at No Fee Schools as a percentage of an annual adequacy norm
To ensure that inequality of learning outcomes is significantly less than income inequality in the population as whole	Gini coefficient for the distribution of learning outcomes in the schooling cohort versus Gini coefficient for income distribution in the population
To improve learner performance in quintiles one and two	Learner performance in standardized tests for reading, writing and mathematics at Grades 3, 6 and 9
<b>Strategic Priority 3.2: To ensure that education outcomes promote values that are consistent with good citizenship and the provisions of the South African Constitution</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To achieve full coverage of learning sites that have active programmes aimed at promoting values in education	Number of schools that offer credible programmes aimed at promoting values in education
To ensure that all new entrants to teaching receive pre-service education and training programmes that are focused on the promotion of values in education through the curriculum	Number of pre-service educator education and training programmes that make credible provision for the promotion of values in education through the curriculum
To ensure that all serving educators receive regular in-service education and training programmes that are focused on the promotion of values in education through the curriculum	Number of educators who participate in at least one education and training programme that is focused on the promotion of values in education through the curriculum, every five years
To ensure that provisions for the promotion of values in education through the curriculum is actively implemented	The number of satisfactory lessons observed through regular sample surveys

<b>Strategic Priority 3.3: To improve learner performance and quality of education in the schooling system</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To dramatically improve learning attainment at all levels of the schooling system	Learner performance in standardized tests for reading, writing and mathematics at Grades 3, 6 and 9
To improve internal efficiency of the schooling system	Grade progression rate in schooling per year
To arrest and reduce the drop-out rate in the schooling system	Percentage of enrolled learners in a given year who do not return to school in the subsequent year
<b>Strategic Priority 3.4: To expand age-appropriate participation in Early Childhood Education</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To expand ECD provision to children up to age 4	% of children from birth to 4 years who are benefiting from credible ECD provision
To strive for universal enrolment in Grade R	% of children aged 5 years in the population in a given year who are enrolled in Grade R
<b>Strategic Priority 3.5: To improve the percentage pass rate in Grade 12 and ensure that the profile of passes is commensurate with the country's social and economic imperatives</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To improve the aggregate pass rate in Grade 12	Aggregate percentage of learners who pass the Grade 12 final examination
To increase the number of passes in the Grade 12 final examination with a 60% mark and above in Mathematics	Aggregate percentage learners who pass the Grade 12 final examination with a pass mark equal to or above a 60% in mathematics
To increase the number of passes in the Grade 12 final examination with a 60% mark and above in Physical Science	Aggregate percentage learners who pass the Grade 12 final examination with a pass mark equal to or above a 60% in Physical Science
To improve racial parity in the Grade 12 final examination results	Ratio of the percentage pass rate within each of four racial categories
To improve gender parity in the Grade 12 final examination results	Ratio of percentage pass rate for males to that of females
To continuously improve the performance of learners from schools in Quintiles One and Two in the Grade 12 final examination results	Aggregate percentage of learners in quintiles one and two who pass the Grade 12 final examination
To continuously decrease inter-provincial inequality in respect of the Grade 12 final examination results	Measure of inequality in the aggregate Grade 12 final examination results for the nine provinces



<b>Strategic Priority 3.6: To ensure that all learners, especially the poor, have access to basic interventions that are aimed at removing barriers to learning</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To ensure that all learners receive the full quota of compulsory inoculations	Percentage of age-appropriate children who have received the full quota of compulsory inoculations
To ensure that all schools have at least one visit per term by a team of health professionals from the local health facility for the purpose of screening, basic care and referrals.	Percentage of schools that have at least one visit per term by a team of health professionals from the local health facility for the purpose of screening, basic care and referrals.
To ensure that all qualifying learners benefit from an effective school nutrition programme	Percentage of qualifying learners who benefit from an effective school nutrition programme
To ensure that all schools have established programmes to address the needs of learners affected and effected by chronic illness and death	Percentage of schools that have programmes to address the needs of learners affected and effected by chronic illness and death

**COMMITMENT THREE: ACTIVITIES**

<b>Activity</b>
Expand access to Early Childhood Development both as part of the programme to improve the general education system and as part of the Expanded Public Works Programme
Implement educator professional development that are purposefully aimed at improving learner performance throughout the schooling system
Target 500 Dinaledi schools to double the Maths and Science high level output to 50 000 by 2008
Increase participation rates in Mathematics and Science
Update the schools register of needs and ensure safe classrooms and healthy environments such as access to clean water and sanitation
Allocate more resources to interventions in education and training, including additional support to poor areas (QIDS-UP)
Eliminate compulsory school fees in the lowest quintile of primary and secondary schools
Complete review of technical schools and implement interventions aimed at expanding access to (and achieving an appropriate mix of) technically-orientated learning programmes in the schooling system
Implement School evaluation programme and institutionalize to scale
Implement new remuneration and performance management system for educators and address matters pertaining to non-educator support staff
Accelerate the training of Family Social Workers at professional and auxiliary levels to ensure that identified households are properly supported and monitored
Ensure improvement in efficacy and expand roll out of the School Nutrition Programme
Implement effective measures to ensure that all learners from Grades 8 to 12 have access to career guidance
E-education policy and strategy developed and implemented – purposefully aimed at improving quality of learning and raising competence in application of ICT
ICT IN SCHOOLS: 1500 users by 2007; 50% of High schools connected 2007, all by 2008 - Connectivity and usage monitored 2010/2011
60% of schools supported with professional support, access to library services and curriculum advisors by 2010
Standards framework for special schools agreed 2007; Special schools developed as resources centres 2008/2009
500 schools participating in MSTs; Teachers in 500 Danaledi schools trained 2008 - MSTE strategy evaluated in 2009

**COMMITMENT FOUR: We will urgently implement skills development programmes that are purposefully aimed at overcoming the related scourges of poverty and unemployment.**

**COMMITMENT FOUR: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 4.1: To ensure that unemployed adults, especially women, have access to skills development programmes that are explicitly designed to promote employment and income-promoting outcomes</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To increase the number of unemployed adults who have access to employment and income-promoting skills development programmes	The number of unemployed adults who have participated in skills development programmes that are intended to be employment and income-promoting
To increase the number of unemployed women who have access to employment and income-promoting skills development programmes	The number of unemployed women who have participated in skills development programmes that are intended to be employment and income-promoting
<b>Strategic Priority 4.2: To ensure that all unemployed adults have access to training opportunities in Literacy and Adult Basic Education and Training (ABET)</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To roll out an extensive adult literacy campaign that will dramatically reduce the rate of adult illiteracy in the population	
To ensure that all unemployed adults have access to ABET programmes	
<b>Strategic Priority 4.3: To accelerate the participation and graduation rates of learners coming from poor families or households in FET and HET</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To improve participation rates in FET of poor learners coming from low-income geographic areas of the country	Percentage change in FTE enrolments of poor learners coming from low-income geographic areas of the country in FET institutions
To improve participation rates in HET of poor learners coming from low-income geographic areas of the country	Percentage change in FTE enrolments of poor learners coming from low-income geographic areas of the country in HET institutions
To progressively improve the retention and graduation rates of poor learners in FET coming from low-income geographic areas of the country	Percentage change in retention and graduation rates of poor learners in FET coming from low-income geographic areas of the country
To progressively improve the retention and graduation rates of poor learners in HET coming from low-income geographic areas of the country	Percentage change in retention and graduation rates of poor learners in HET coming from low-income geographic areas of the country

**COMMITMENT FOUR: ACTIVITIES**

<b>Activity</b>
Launch or expand labour-intensive projects which also provide opportunities for skills development for employment and self-employment and as one of the key programmes
Incorporate a system to provide micro-credit and relevant skills development programmes into the Expanded Public Works Programme
Occupational learning programmes implemented through to meet NSDS targets implemented.
Identify specific labour-intensive sectors for targeted employment subsidy aimed at Greenfield investments, with a target of say 100 000 jobs in various parts of the country over 5 years.
Continuously improve efficiencies of Employment Services System
Full implementation of DoE's ABET Strategy
Quality meals accessed by increasing numbers of poor children - 15 million by 2011

**COMMITMENT FIVE: We will ensure that young people have access to education and training that enhances opportunities and increases their chances of success in further vocational training and sustainable employment.**

**COMMITMENT FIVE: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 5.1: To accelerate the implementation of training programmes for youth that is focused on employment creation</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To increase youth participation in ABET programmes that facilitate access into further learning & other development opportunities	Number of people aged 15 to 24 years participating in ABET programmes that facilitate access into further learning & other development opportunities
To increase the number of youth who receive training that support employment and enterprise creation	Number of people aged 15 to 24 years participating in training that support enterprise creation

<b>Strategic Priority 5.2: To leverage public and private sector programmes to create employment opportunities and work experience for new entrants into the labour market</b>	
<b>Strategic Objective</b>	<b>Indicators/outputs</b>
To expand the Public Sector Internship Programme to provide opportunities to young unemployed graduates	Number of internships implemented for unemployed graduates in the public sector per annum
To implement large-scale internships programme within the SANDF that allows entrants to gain qualifications in employment-promoting skills	Number of interns who successfully complete the programme
To implement large-scale internships programme within the SANDF that allows entrants to gain qualifications in employment-promoting skills	Number of interns who successfully complete the programme
To implement a national programme of internship for young unemployed graduates within private sector enterprises	Number of internships implemented for unemployed graduates in the participating private enterprises per annum
To increase the enrolment of youth in the National Youth Service Programme	Number of youth enrolled in the National Youth Service
To strengthen capacity & diversify products & services of all 120 Youth Advisory Centres to include business support services, employment services, access to micro finance & career information	Percentage of Youth Advisory Centres offering a full bouquet of services at a satisfactory level of performance

<b>Strategic Priority 5.3: To improve the coverage and efficacy of vocational guidance and labour market information in a manner that promotes the optimal uptake of training and employment opportunities available to youth</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To improve the dissemination and availability of labour market information to youth	Percentage of Youth Advisory Centres and FET Colleges that offer systematic vocational guidance services to youth
To mobilize employer interaction with youth during pre-employment training to improve youth awareness about the world of work, career opportunities and expectations	Number of FET Colleges that have programmes that cater for employer interaction with youth during pre-employment training to improve youth awareness about the world of work, career opportunities and expectations

**COMMITMENT FIVE: ACTIVITIES**

<b>Activity</b>
Conduct a systematic assessment of the youth labour market for evidence-based decision-making (assessment to include determination of youth unemployment – including youth who have given up looking for employment; graduate employment outcomes; participation rates in education and training; gender and race dimension of youth labour market outcomes; determinants of occupational choice)
Intensify a campaign to link up unemployed graduates with economic opportunities
Integrate and synthesise information from the National Scarce Skills lists into the information programmes being implemented in Youth Advisory Centres and vocational guidance activities at education and training institutions. This will require that the information be packaged into an accessible form for this purpose
Intensify efforts to integrate youth development into the mainstream of government work, including a youth co-operatives programme, and the ongoing efforts to link unemployed graduates with employment opportunities
Measures to improve youth development include 100 new youth advisory centres, enroll at least 10 000 young people in youth service programmes, enroll 5 000 volunteers to act as mentors to vulnerable children, expand the reach of our business support system to young people, intensify the youth co-operative programme, and closely monitor the impact of our programmes on youth skills training and business empowerment as an integral part of our national effort.
To expand the reach of business development support systems, access to Micro Finance and intensify the Youth Co-operatives Programme
Enrol 30 000 volunteers in various community development activities & increase youth participation in national programmes that enhance Social Cohesion

**COMMITMENT SIX: We will improve the technological and innovation capability and outcomes within the public and private sectors to enhance our competitiveness in the global economy and to meet our human development priorities.**

**COMMITMENT SIX: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 6.1: To increase the supply of skilled personnel in areas of Science, Engineering and Technology</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To increase the number of Grade 12 Graduates with a result in Science greater than 60%	Number of Grade 12 Graduates with a result in Science greater than 60%
To increase the number of Grade 12 Graduates with a result in mathematics greater than 60%	Number of Grade 12 Graduates with a result in mathematics greater than 60%
To increase the percentage of Science, Engineering and Technology graduates as a proportion of aggregate annual HET graduations	Percentage of Science, Engineering and Technology graduates as a proportion of aggregate annual HET graduations
To decrease the number of unemployed science graduates	Number of unemployed science graduates (baseline to be determined from the SET unemployment register)
To increase reach of science awareness campaigns	Number of youth and members of public participating in science awareness campaigns
To identify and nurture talent and potential in science, engineering, technology and mathematics	Number of youth with talent and potential in science, engineering, technology and mathematics are identified and supported

<b>Strategic Priority 6.2: To improve South Africa's performance in areas of teaching, research, innovation and the commercial application of high-level science, engineering and technology knowledge</b>	
<b>Strategic Objective</b>	<b>Indicator/outputs</b>
To accelerate awarding of research chairs	Number of Chairs awarded (Baseline: 56 in 2006)
To accelerate awarding of research chairs in engineering (30% of awarded Chairs)	Number of Chairs in engineering awarded
To increase the number of students graduating with honours level qualification in Science, Engineering and Technology	Number of students graduating with honours level qualification in Science, Engineering and Technology (Baseline: 3200)
To increase the number of students graduating with Masters degrees in Science, Engineering and Technology	Number of students graduating with Masters degrees in Science, Engineering and Technology (Baseline: 2900)
To increase the number of students graduating with PhD degrees in Science, Engineering and Technology	Number of students graduating with PhD degrees in Science, Engineering and Technology (Baseline: 591)
To increase the number of researchers per 1000 people	Number of researchers per 1000 people (Baseline: 1.2)
To increase the percentage Global Share of Research Publications	Percentage Global Share of Research Publications (Baseline: 0,5%)
To increase the number of patent applications lodged by South Africans	Number of patent applications lodged by South Africans (Baseline: 4721 in 2002)

#### COMMITMENT SIX: ACTIVITIES

<b>Activity</b>
Increase the resource allocation for Research and Development and Innovation, and increase the pool of young researchers
Promotion of private sector investment in research and development in order to increase competitiveness and use of technological innovation to address the socio-economic needs of our country
Establishment of the SET HC Advisory Committee as a permanent sub-committee of NACI, with a straight line relationship with the Minister of Science and Technology. Its membership will be drawn from the current membership of National Advisory Committee on Innovation but will also include: <ul style="list-style-type: none"> <li>• representatives from the Department of Education, Labour and Trade &amp; Industry</li> <li>• representative of COHORT</li> <li>• representative from HESA</li> <li>• representative from the CHE</li> <li>• business sector representative(s)</li> <li>• representative from JIPSA</li> <li>• NRF</li> <li>• Presidency</li> </ul>



<ul style="list-style-type: none"> <li>• National Human Resource Development Task Team</li> </ul>
To sustain existing research capacity and strengths and to create new centres of excellence and niche areas in institutions where there is demonstrable research capacity or potential
Research concentration and funding linked to outputs
To facilitate collaboration and partnerships, especially at the regional level, in research and postgraduate training
To promote articulation between the different elements of the research system with a view to developing a national research strategy
<p>Implement a studentship programme to increase enrolments and throughput of students who have enrolled for studies in science, engineering and technology. Such a programme to comprise of:</p> <ul style="list-style-type: none"> <li>• A Government-funded four-year BSc (Hons) programme</li> <li>• A Government-funded four-year PhD programme</li> <li>• Mentoring</li> <li>• On-going monitoring</li> </ul>
Explore the feasibility and desirability of introducing a 4-year Graduate programme as a means of increasing the number of students who take and complete Masters degrees
Promotion of partnerships between public and private sectors to increase the R&D investment and efficacy of output
Implement DST Internship programme, Professional Development Programme and the Innovation Post Doctoral Fellowship Programme.
Explore institutional mechanisms and funding arrangements to promote research collaboration across Science Councils
Ensure strong alignment between the DST's Human Capital Development Plan and Ten-year Innovation Plan.
<p>Retention of high-calibre research staff:</p> <ul style="list-style-type: none"> <li>- Recognition and reward through research grants for young and un-rated scientists. Fast-tracking academic and research careers of young and recently-qualified PhD graduates</li> <li>- Recognition and reward of high potential individuals through awarding research chair under the SARChI at tier 2. This award is intended to retain high potential individuals by improving their access to substantial research grants</li> <li>- Recognition and reward of excellent of world-class standard</li> <li>- Promotion of centres of excellence</li> <li>- Fast-tracking of senior qualification attainment</li> </ul>
<p>Establishment of the Technology Innovation Agency (TIA) for the purpose of:</p> <ul style="list-style-type: none"> <li>- conducting and regionalizing research and innovation</li> <li>- providing innovation knowledge management services</li> <li>- facilitating national and international R&amp;D collaboration</li> <li>- conducting and regionalizing research and innovation</li> <li>- providing innovation knowledge management services</li> <li>- facilitating national and international R&amp;D collaboration</li> </ul>
Youth into Science Strategy

**COMMITMENT SEVEN: We will ensure that the Public Sector has the capability to meet the strategic priorities of the South African Developmental State**

**COMMITMENT SEVEN: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 7.1: To improve the credibility and impact of training in the public sector on improving service delivery</b>	
<b>Strategic Objective</b>	<b>Process Indicator</b>
To improve the performance within the public sector to determine service delivery training needs and to effectively procure training services	Development of relevant Workplace Skills Plans that are linked to relevant strategic plans
To ensure that human resource planning and development decisions are based on systematic and relevant evidence maintained in an appropriate Management Information System	Management Information System for the public sector HRD is developed and functional
To ensure that credible supply and demand projection models are developed and maintained for large occupational categories within the public sector (such as for educators, medical doctors, nurses, judicial officers, engineers, technicians, police and military)	Supply and demand projection model developed and operational in each of the large occupational categories within the public sector
To ensure that Government departments and entities invest more than statutory minimum stipulation of 1% of payroll costs in training	Level of compliance with the Skills Development Levies Act by Government departments and entities
To implement a compulsory induction programme for all new entrants to the public sector	Coverage to scale of the compulsory induction programme
To implement large-scale public service training for junior and middle managers in critical generic and functional management learning areas	Coverage of junior and middle managers who have undergone training in critical generic and functional management learning areas

<b>Strategic Priority 7.2: To leverage the Sector Education and Training Authorities to contribute optimally to capacity development in the public sector</b>	
<b>Strategic Objective</b>	<b>Process Indicator</b>
Ensure a dramatic improvement in the efficacy of the Public Sector SETA, sustainable leadership and operational effectiveness	Reformed and operationally effective and sustainable Public Sector SETA
Ensure the development of a credible and timely Sector Skills Plan for the Public Sector	Development of a public sector skills plan that is credible and responsive to the needs of the Developmental State
Ensure that departments and entities make an active and substantive contribution to relevant SETAs	Substantive and consistent participation by Government Departments in the governance structures of relevant SETAs

**COMMITMENT SEVEN: ACTIVITIES**

<b>Activity</b>
Skills audits and assessments, competency frameworks, and concrete support, capacity development
Skills development of local government through Project Consolidate as well as skills development plans for Provincial and National Government as well as development institutions
Greater articulation and more uniformity/ interface in the systems, processes and role of SETAs in relation to Government departments
Successful transition of PALAMA into a Public Sector Academy
Improved capacity in public sector for planning and procurement(delivery) of training (capacity and skills development) services
(i) Strengthening systems and establishing improved strategies for workplace learning and delivery of HRD initiatives & Integrated ABET framework (ii) Leadership development management strategies (iii) A more strategic role for professional bodies – Norms, Standards (iv) Capacity development (v) Promoting learnerships, internships & traineeships (vi) A National/Provincial Public Service Academy (vii) E-learning for the Public Service (viii) Fostering HEI and FETC Partnerships
Improving Human resource Planning (Supply & Demand Management) capacity in the public service
Implementation of credible sectoral HR plans (e.g. health, education, justice) and improvement of HR planning

capacity in the relevant departments
Improve Government's role in the functions of SETAs
Conduct an assessment of the feasibility and desirability of developing policy and legislative amendment that will allow Government Departments and Entities to make contributions to relevant SETAs in accordance with the Skills Development Levies Act. This assessment should specifically be focused on whether this change in policy would improve Government's role in the stewardship of SETAs and improve the credibility of Sector Skills Plans as they pertain to specific occupational categories and qualifications relevant to the public sector.

**COMMITMENT EIGHT: We will establish effective and efficient planning capabilities in the relevant departments and entities for the successful implementation of the HRD Strategy for South Africa.**

**COMMITMENT EIGHT: STRATEGIC PRIORITIES AND STRATEGIC OBJECTIVES**

<b>Strategic Priority 8.1: To improve the credibility, validity, utility and integrity of the various data and management information systems that are vital for successful planning and implementation of the HRDS-SA</b>	
<b>Strategic Objective</b>	<b>Process Indicator</b>
To establish a single, participatory and coordinated capacity for conducting labour market supply and demand forecasting modeling and relevant labour market studies	Capability established, institutionalized and used by all key HRD stakeholders to inform planning and evidence-based decision-making
To conduct regular surveys of employment outcomes of new graduates in priority skills areas using Panel methodology	Surveys designed and institutionalized with clear role allocation
To ensure that an explicit design and policy framework is established for the Management Information Systems maintained by the DoL, DoE, SAQA and STATS SA	MIS design specifications and policy framework developed and formally adopted by Cabinet for all the main stakeholders within the HRD enterprise
To ensure that effective integration of the above management information systems is achieved	Seamless integration of data fields across all datasets
To audit and establish a policy framework on the level of planning capacity required in the Skills Development Act Institutions (DoL, SETAs, NSA);GET; FET and HET for the optimal implementation of their mandates	Audit and policy framework developed and adopted
To implement the provisions of the guidelines contained in the policy framework on the level of planning capacity required in the Skills Development Act Institutions (DoL, SETAs, NSA);GET; FET and HET for the optimal implementation of their mandates	Substantive Policy framework guidelines implemented

## ANNEXURE B: ANALYSIS OF CONTEXTUAL ISSUES THAT IMPACT ON HRD IN SOUTH AFRICA

### The link between education and income in South Africa

Table 3: *Years of education and income*

KEY NATIONAL STATISTICS		
	<i>National average</i>	<i>Gini coefficient of inequality</i>
Years of education of adults aged 15 to 64 (2007) (Calculated from Labour Force Survey March 2007 dataset <sup>2</sup> .)	9.04 years	0.23
Years of education of the most educated person per household (2007) (Calculated from Labour Force Survey March 2007 dataset.)	10.41 years	0.16
Annual income per household (2006) (From Stats SA, <i>Income and Expenditure of Households 2005/2006</i> , pp. 9, 35.)	R74 589	0.73

Figure 5 below provides an illustration of the distribution of monthly income and the years of education of income earners in the country. (The size of each bubble is based on the number of people with a particular level of education, and with an income rounded off to the nearest R500.)

This illustration confirms the well-known trend that it is only once people have twelve years of education that their chances of entering into a higher income bracket rise noticeably. However, as the figure also indicates, having twelve years of education is by no means a guarantee of a substantially higher income; a significant number of individuals with twelve years of education remain at a low income level. The significance of twelve years of education is probably related to fact that the Senior Certificate ('Matric') has been the only certificate issued to learners currently by the schooling system; this makes its value in the labour market particularly high.

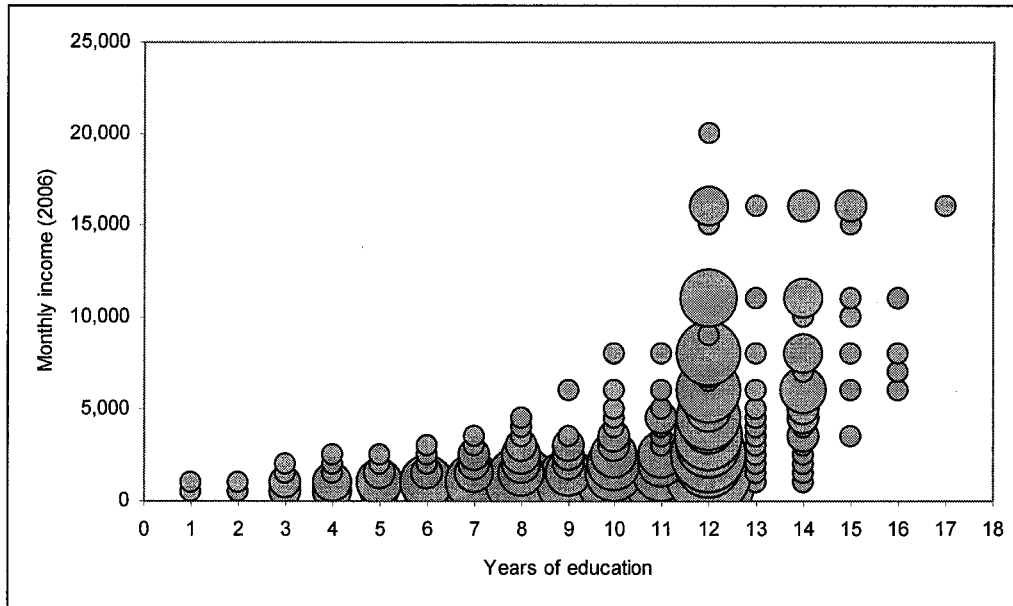
While Figure 5 focuses on individuals,

Figure 6 focuses on households. This approach results in a stronger concentration at the bottom of the graph, at the low income levels. This is because of a tendency in the data where highly educated individuals with a relatively high income belong to the same household. For the purposes of monitoring spread and outcomes of HRD, it is crucial to focus on what happens at the household level. From a policy point of view, the household is particularly important in the formulation and outcomes of policies that are intended to reduce income inequality.

<sup>2</sup> In using the typical STATS SA breakdown of the population by highest level of education, certain assumptions need to be made around the equivalence of the Stats SA educational categories, and years of education. For this calculation, knowledge of the education system, but also statistics on the probability of being employed, were used to attach years of education values to educational categories where the link was not obvious. The appendix provides details on this.

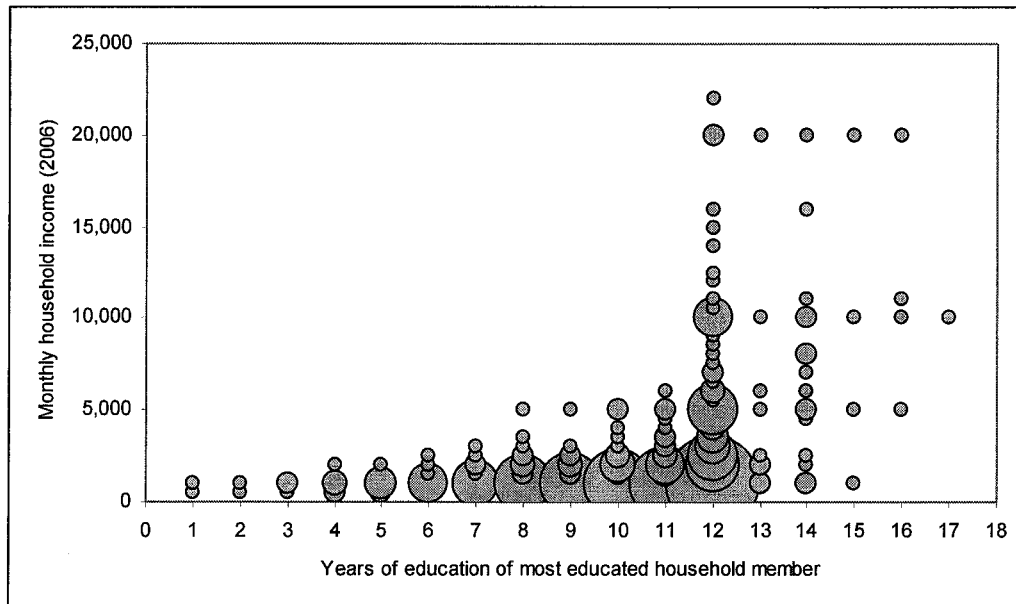
(Note: For the second figure, where GHS income values were missing, values were imputed using the household expenditure data.)

**Figure 5:** *Distribution of income and years of education (individuals approach)*



Source: Stats SA, General Household Survey, 2006.

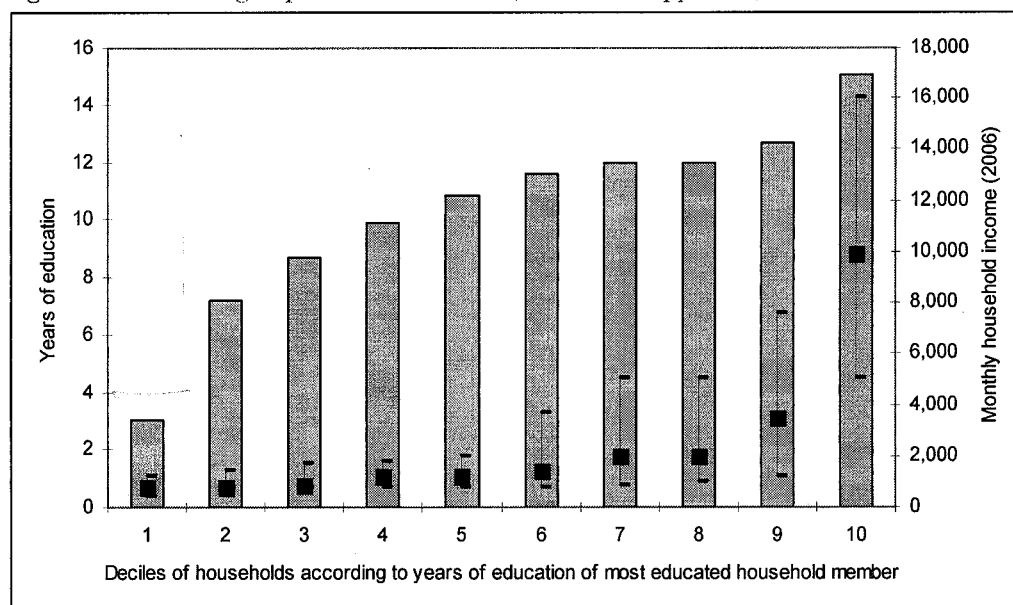
**Figure 6:** *Distribution of income and years of education (households approach)*



Source: Stats SA, General Household Survey, 2006.

The next figure illustrates the income-education link focusing on the household level. The grey bars indicate years of education, and should be read against the left-hand vertical axis. The black squares indicate median household income, and the 'whiskers' indicate the position of the 25<sup>th</sup> and 75<sup>th</sup> income percentile. This should be read against the right-hand vertical axis.

**Figure 7:** Education groups and their income (households approach)



Source: Stats SA, General Household Survey, 2006.

Figure 7 again confirms the importance of having twelve years of education with regard to income outcomes. Twelve years begin in about the 6<sup>th</sup> decile; this indicates that in around 50 per cent of households (deciles 1 to 5), the person with the highest level of education has not reached twelve years of education. For the purposes of the HRDS-SA, it appears that part of the solution to the inequality problem lies in a restructuring of the school qualifications system, in particular the introduction of a Grade 9 certificate. This restructuring is currently underway through initiatives taken by the Department of Education.

The Gini coefficient of inequality for the years of education computed using the statistics in Figure 7 **Error! Reference source not found.** is 0.16, which is much lower than the value for the income inequality of 0.73 across households. Even the Gini coefficient value for years of education of individuals, of 0.23, is considerably lower than the Gini coefficient for income. This is very positive from an HRD perspective as it suggests that improved equalities in the distribution of educational attainment (as compared to income) in the population could lead to a reduction in income inequality if the link between education and income is strong. This is indicative of a key challenge in the HRD process, namely to improve educational equity by raising the quality of education for the historically disadvantaged and poor, so that income returns to years of education for this target group improve.

The data represented in

Table 4 and Table 5 below suggests a definite link between education qualifications and employment as well as income status in the South Africa labour market.

**Table 4: Strict unemployment, by educational attainment**

<b>Educational attainment</b>	<b>1995</b>	<b>1999</b>	<b>2000</b>	<b>2005</b>
Incomplete secondary	74.0%	69.1%	70.5%	66.1%
Matric	22.4%	25.9%	24.3%	30.5%
Diploma	2.4%	3.2%	3.8%	2.2%
Degree	0.6%	1.1%	1.0%	0.7%
Unspecified	0.5%	0.8%	0.4%	0.4%
Total	100.0%	100.0%	100.0%	100.0%

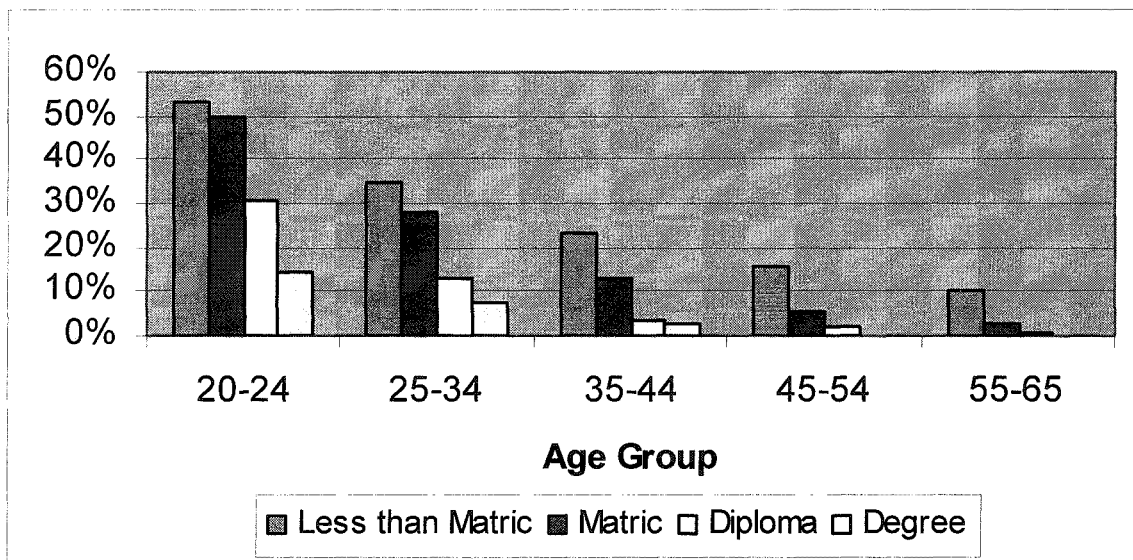
Source: Cited in Altman, 2007

**Table 5: Educational attainment of the working poor**

	<b>≤ R1,000</b>	<b>≤ R,2500</b>
	<b>%</b>	<b>%</b>
No education	13.3	9.7
Pre matriculation	71.5	68.0
Matriculation	13.0	18.7
Tertiary	2.2	3.5
Total	100.0	100.0

Source: Cited in Altman, 2007

Figure 8 below confirms further that the problem of unemployment is particularly manifest for the 20-24 year age group. It also suggests that the level of qualifications is a consistent predictor of employment status within each of the age groups indicated. The figure also suggests that over 50% of young people who have less than a Matric are unemployed. Notably, it appears that the possession of a matriculation certificate does not result in dramatically improved labour market outcomes, with just under 50% of 20-24 year olds with a matriculation being unemployed. While the unemployment figures for 20-24 year-olds who have a diploma and degree is still alarmingly high, they are considerably better than the rates for those whose higher qualification is a matriculation or less.

**Figure 8: Unemployment by Age group and education qualifications**

Source: Altman, 2007



The problem of unemployment remains the number one strategic priority for South Africa. The following salient issues, emerging from the above brief analysis of unemployment in South Africa, have particular import for this report:

- The rate of unemployment has maintained a high trend over a number of years. It is therefore an intractable challenge.
- The youth labour market is particularly affected by the problem of unemployment;
- Education does seem to have a positive impact on employment outcomes, but there appears to be significant scope to improve the extent of this impact; and
- Demographic factors such as race and age are significant variables to be accounted for in the effort to address the problem of unemployment.

### Education quality and the distribution of education outcomes

**Table 6:** *The quality of education and average per capita income*

KEY NATIONAL STATISTICS		
	<i>National average</i>	<i>Gini coefficient of inequality</i>
SACMEQ 2000 score (Grade 6 mathematics) <i>Source: Ratsatsi (2005: 5); Gini coefficient calculated from UNESCO, SACMEQ II dataset.</i>	486	0.12
PIRLS 2006 score (Grade 5 reading) <i>Source: Mullis, Martin, Kennedy and Foy (2007: 37); Gini coefficient calculated from PIRLS dataset (available at <a href="http://timss.bc.edu">http://timss.bc.edu</a>).</i>	302	0.25
TIMSS 2003 score (Grade 8 mathematics) <i>Source: Mullis, Martin, Gonzalez and Chrostowski (2004: 34); Gini coefficient calculated from TIMSS dataset (available at <a href="http://timss.bc.edu">http://timss.bc.edu</a>).</i>	264	0.34

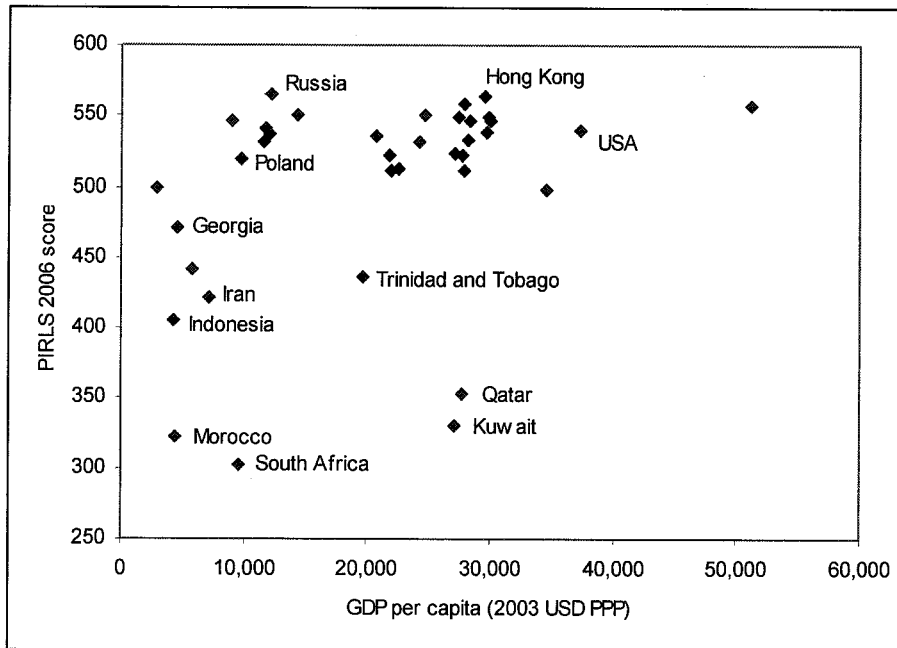
Even though the scale for the national average scores in the above table have been more or less adjusted to make the average for all participating countries equal to around 500, it is important to caution that these scores are not comparable to each other, as they follow slightly different scales. It should further be emphasised that the three programme runs referred to here, which had very different mixes of participating countries. SACMEQ had only developing countries (all African), PIRLS had a clear majority of developed countries, and TIMSS had more or less an equal mix of developed and developing countries.

In PIRLS and TIMSS, South Africa scored lowest out of 37 and 43 countries respectively. In SACMEQ, South Africa scored 9<sup>th</sup> out of twelve countries. (The ranking referred to here is with respect to the subjects indicated above. Where a second subject was also tested, the second subject resulted in an almost identical ranking.)

The three following graphs illustrate South Africa's location with respect to the other countries, using the national average scores as well as purchasing power parity (PPP) income per capita. There is an

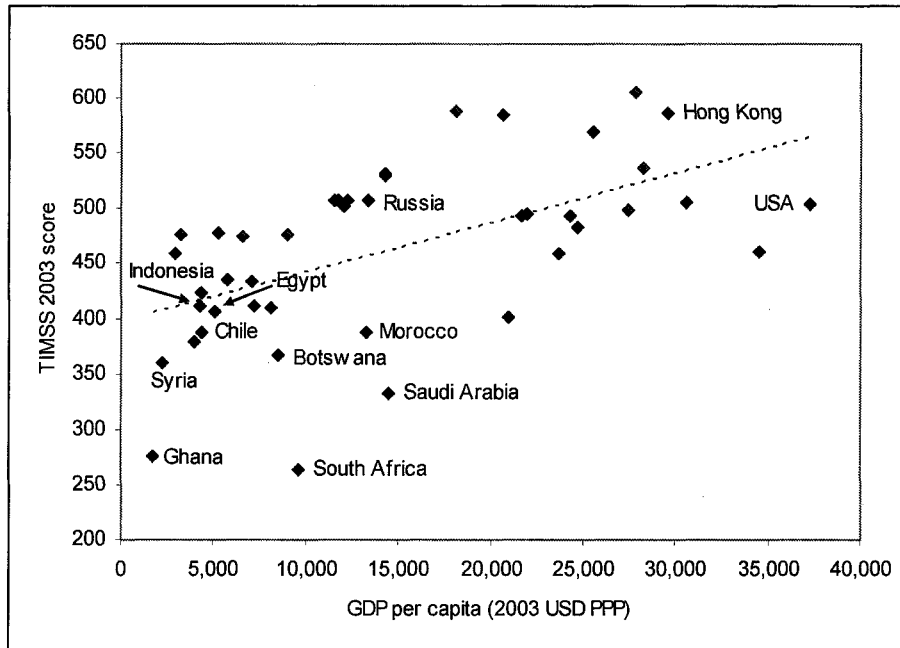
important and dynamic relationship between educational quality and income per capita. The quality of education (much more than years of education) is a strong predictor of the level of economic growth (see, for instance, Hanushek and Woessman, 2007). At the same time, improved income per capita allows for more resources to be devoted to education which, given the right circumstances, can lead to better educational quality. The last two graphs display fairly clear correlations between educational quality and income, and trend lines reflecting this have been inserted.

**Figure 9:** *PIRLS Grade 5 reading results relative to GDP per capita*



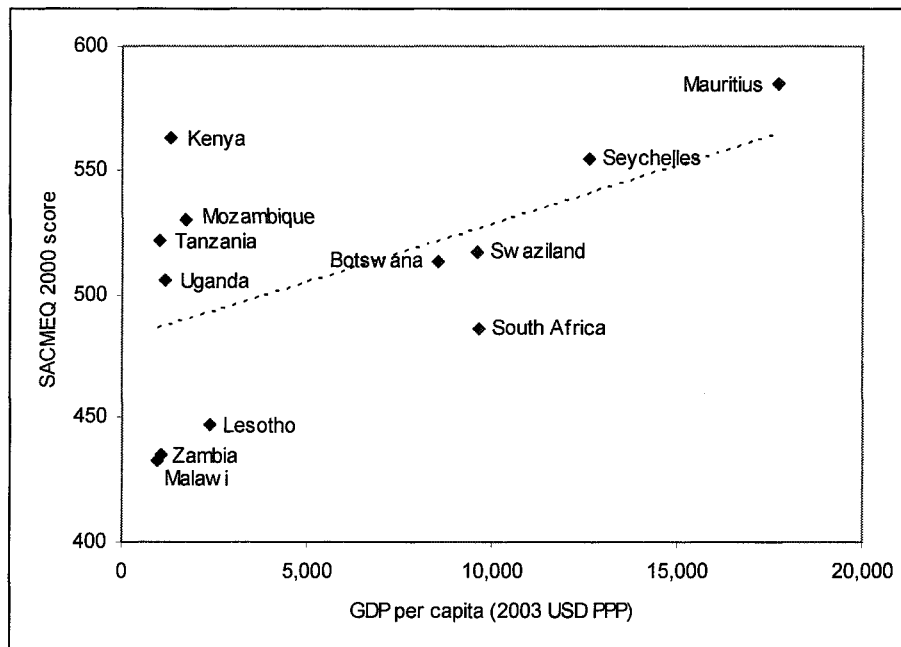
Source: Mullis, Martin, Kennedy and Foy, P. (2007: 37); Heston, Summers and Aten (2006)

Figure 10: TIMSS Grade 8 mathematics results relative to GDP per capita



Source: Mullis, Martin, Gonzalez and Chrostowski (2004: 34); Heston, Summers and Aten (2006)

Figure 11: SACMEQ Grade 6 mathematics results relative to GDP per capita



Source: Ratsatsi (2005: 5); Heston, Summers and Aten (2006)

The above figures provide a useful comparative indication of the extent of South Africa's education quality challenge. It is noteworthy that a number of countries with lower incomes per capita do better than South Africa, for instance Indonesia and Egypt (in TIMSS) and Kenya (in SACMEQ). South

Africa is not alone in experiencing a challenge in its quality of education. Botswana and Morocco, though they perform better than South Africa, perform at levels which are below what might be expected, given their income per capita.

#### Labour Market Participation

**Table 7: Labour market participation**

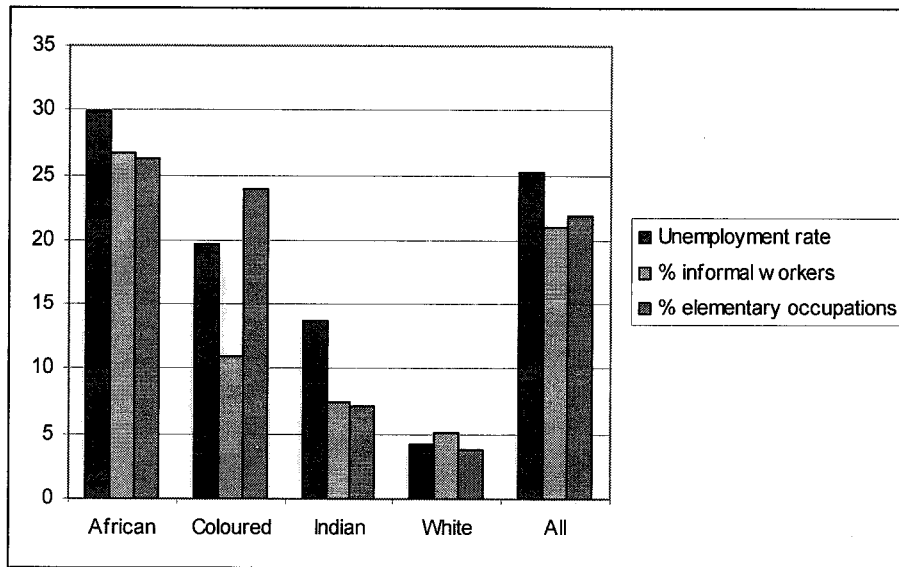
KEY NATIONAL STATISTICS	
Unemployment rate <sup>3</sup> (This and the next two statistics are calculated from Labour Force Survey March 2007 dataset.)	<i>National average</i> 25 per cent
Percentage of employed persons in informal sector	21 per cent
Percentage of employed persons in elementary occupations	22 per cent

South Africa's unemployment rate, whether one considers the official rate or the expanded rate, is high. Of those who are employed, around 80 per cent are in the formal sector, and around 80 per cent are in occupations above the elementary level, meaning that to perform their jobs, these people depend on job-specific skills training, of some variety that would have been acquired at some point in their lives.

**Error! Reference source not found.** Figure 12 below reflects to a large degree the apartheid legacy of unequal educational opportunities and unequal employment opportunities. This is reflected not only in the unemployment figures, but also in the larger dependence of Africans on informal labour, and the very low percentage of whites and Indians, in elementary non-skilled occupations. (Note that '% informal workers' and '% elementary occupations' is relative to all employed persons.)

<sup>3</sup> The unemployment rate given here is the official one, which considers only those who actively sought work in the previous four weeks as being unemployed. The expanded employment rate, which regards anyone who would like to work, whether they have actively sought work in the previous four weeks or not, as unemployed, is 38 per cent. In the breakdowns of the unemployment rate presented in this section, only the official rate is reported on.

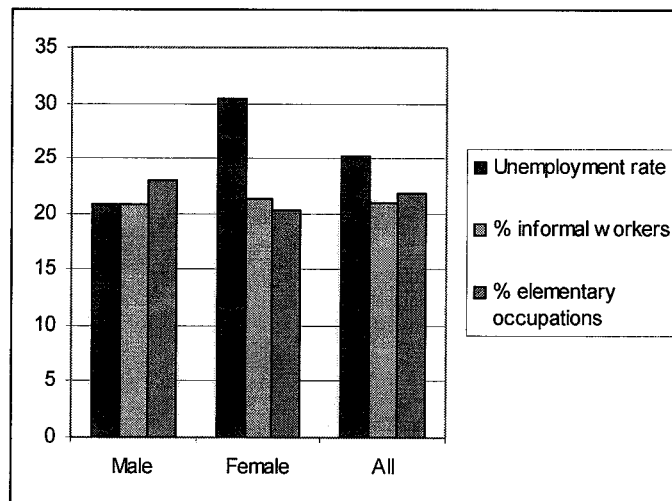
Figure 12: *Employment statistics by race*



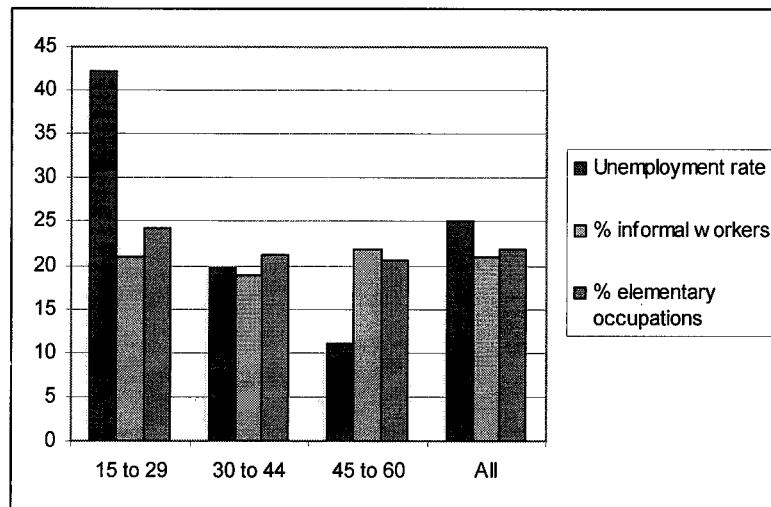
Source: Source: Stats SA, Labour Force Survey, March 2007

Figure 13 indicates that a significantly higher burden of unemployment is borne by women in the labour market, while Figure 14 reflects the very serious extent of youth unemployment.

Figure 13: *Employment statistics by gender*



Source: Stats SA, Labour Force Survey, March 2007

**Figure 14:** *Employment statistics by age group*

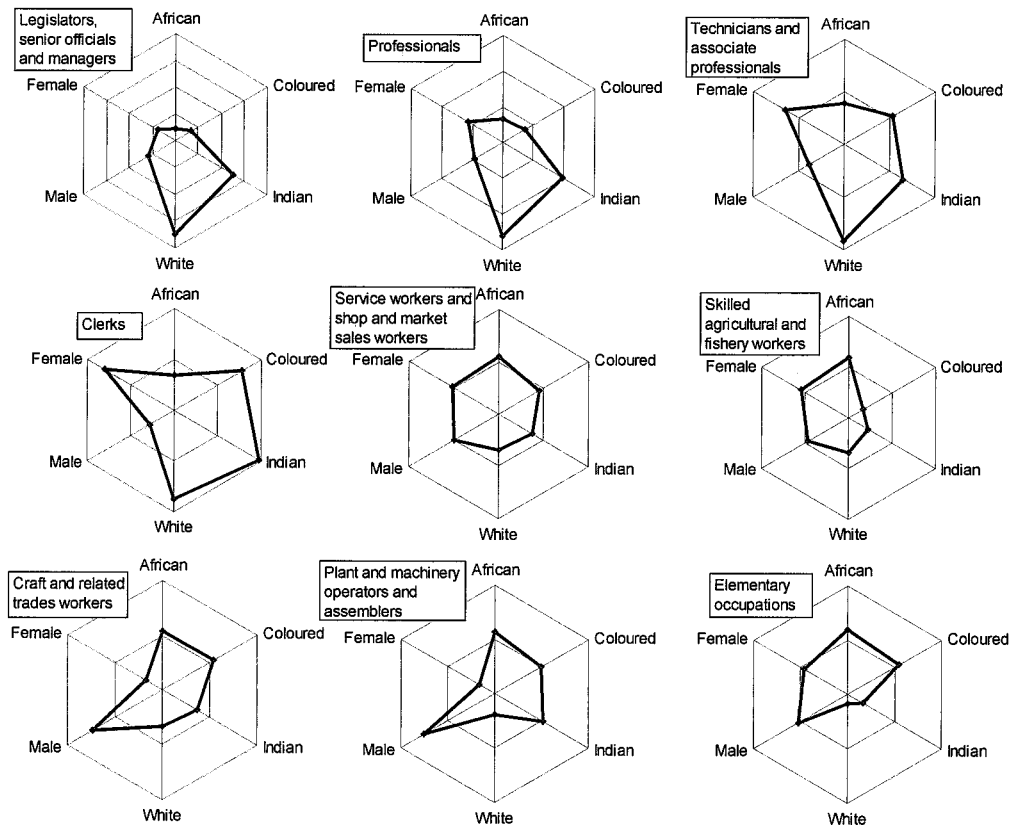
Source: Stats SA, Labour Force Survey, March 2007

### Demographic profile of occupational categories

Race and gender representivity in the nine occupational categories used in the Labour Force Survey is examined in some depth in the figures that follow. If the polygon follows closely the first ring, as is the case with the category 'Service workers and shop and market sales workers', this means the occupation is highly representative, meaning that the proportion of women in the occupation is close to the proportion of women amongst all employed persons, the proportion of Africans is close to the proportion of Africans amongst all employed persons, and so on.

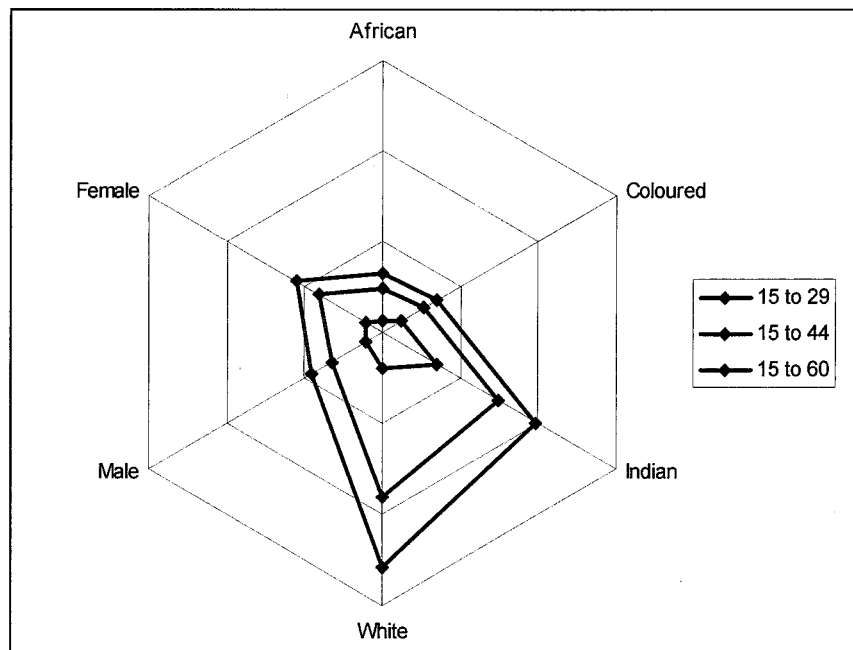
The over-representation of whites and to some degree Indians in high skills and high salaried jobs is evident. For example, the first 'radar graph' indicates that the proportion of whites in the category 'Legislators, senior officials and managers' is about 3.5 times as high as the proportion of whites amongst all employed persons.

Figure 15: Race and gender representivity across occupations



Source: Stats SA, Labour Force Survey, March 2007

When the above results with regard to race are analysed further to gauge the trends implied by differences between age groups in the workforce, a somewhat reassuring picture emerges for the medium-term. The following graph, which breaks the above diagram for professionals up by age category shows that whites are not as prevalent among young professionals as compared to the group of professionals as a whole. This implies that one can expect that over time there will be a move towards an overall profile that is more representative of the country’s population. The country is thus on the right trajectory in respect of this important policy objective for HRD.

**Figure 16: Race and gender representivity amongst professionals**

Source: Stats SA, Labour Force Survey, March 2007

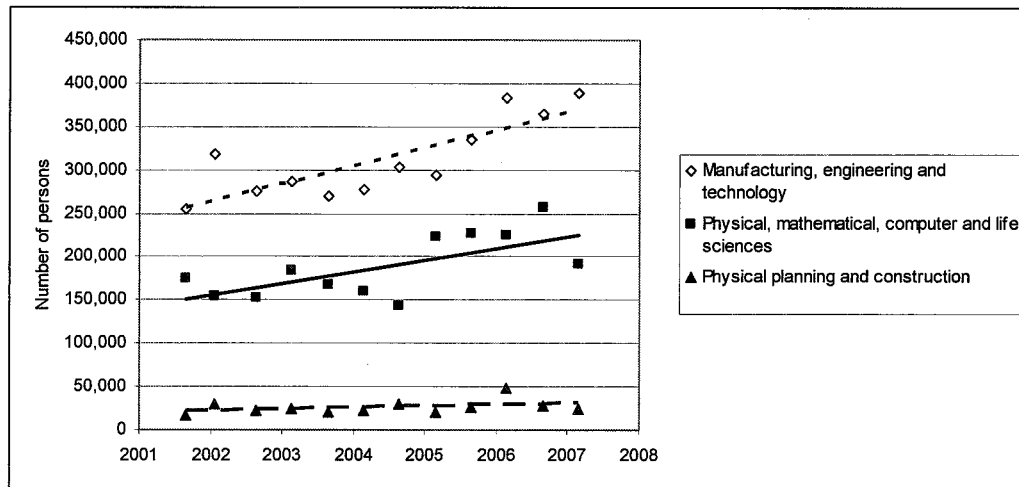
### Training Trends

The following graph illustrates the trend with respect to the number of people in the labour force who say they hold diplomas, certificates or degrees in the three areas of study specified in the graph. The trend is an upward one for all three areas, and very similar upward trends emerge if we express the numbers in the graph as a percentage of the adult population. The upward trend in the raw numbers is thus more or less in keeping with the growth in the size of the adult population.

A word of caution is however warranted when interpreting and using these numbers as they are derived from weighted individuals where the actual number of individuals in the survey is rather low. For example, the figure of around 350,000 people qualified in manufacturing, engineering and technology is based on only around 600 respondents. Similarly, the 25,000 with a physical planning and construction qualification is based on just 50 or so respondents in the survey.



Figure 17: Trend in holding of certain technical qualifications

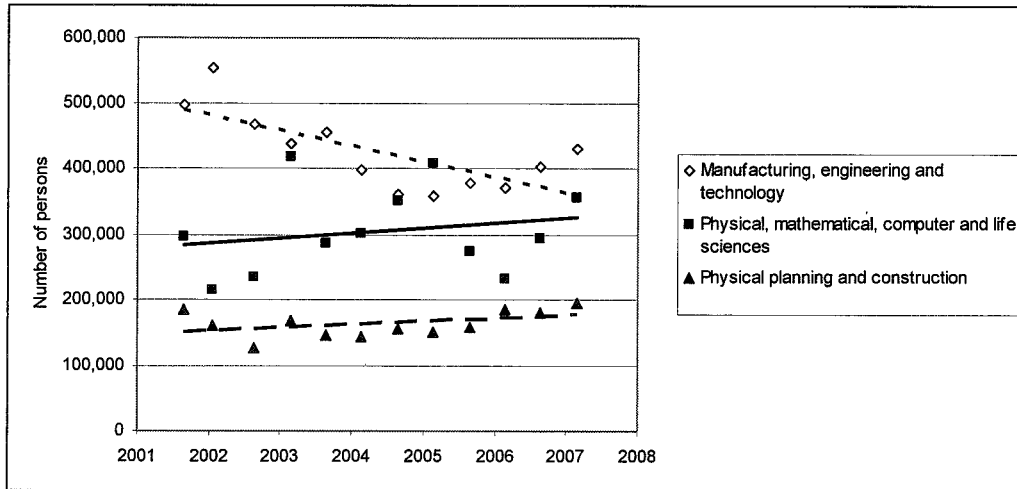


Source: Stats SA, Labour Force Survey, to September 2001 to March 2007

**Error! Reference source not found.** Figure 17 indicates that there has been an increase of around 20,000 per annum in recent years in the stock of people holding a qualification in the manufacturing, engineering and technology area. In recent years, approximately 10,000 graduates in this area have been emerging each year from the Higher Education sector, and around 20,000 from the Further Education and Training (FET) college sector (engineering has for many years accounted for just under half of FET college graduates). It seems likely that the increases we see in Figure 17 are the result of the substantial increases in the number of graduates emerging from FET colleges experienced since the late 1990s.

Figure 18 is based on the Labour Force Survey question that asks respondents (in a general way) whether they have received training in specific areas. In addition, respondents are asked what the duration of the most recent training undertaken was. The responses to this duration question appear to suggest that responses cover both the formal training reflected in Figure 17 **Error! Reference source not found.** and other informal training.

**Figure 18:** *Trend in any training in certain technical areas*



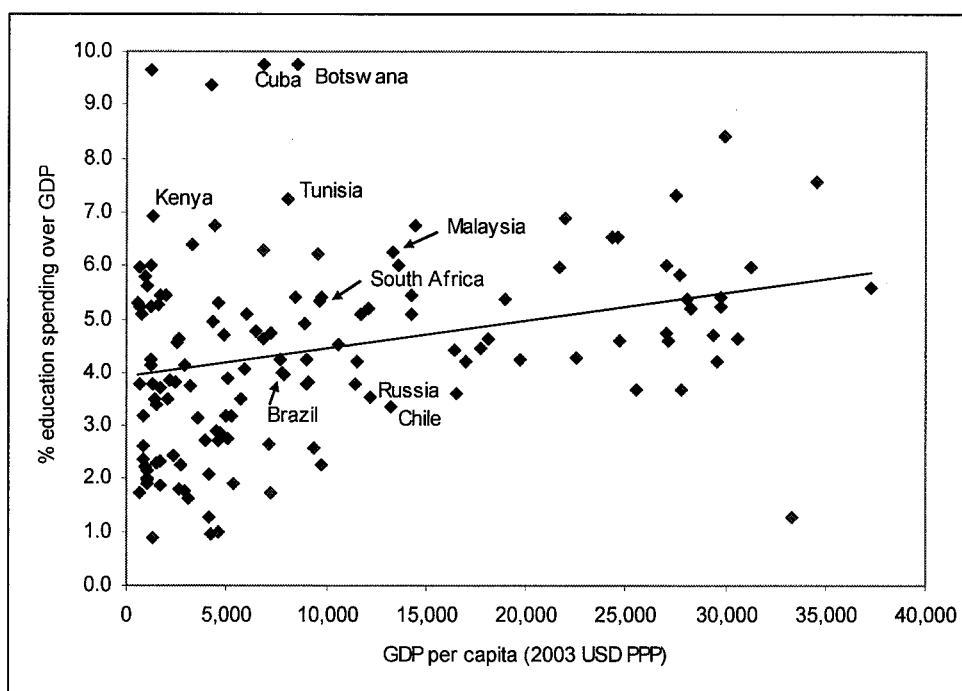
Source: Stats SA, Labour Force Survey, September 2001 to March 2007.

The numbers are higher than those for Figure 17, which seems to confirm the inclusion of formal training here. The somewhat erratic trends are difficult to interpret, partly because they are not statistically significant and partly due to possible ambiguities in the interpretation of the survey questions. These figures on their own do not therefore offer a basis for drawing any policy conclusions.

### Spending on Human Resources Development in South Africa

As can be seen from Figure 19, South Africa falls well above the world norm with respect to public education spending relative the GDP per capita (in PPP terms).

**Figure 19:** *Spending on education relative to GDP per capita*

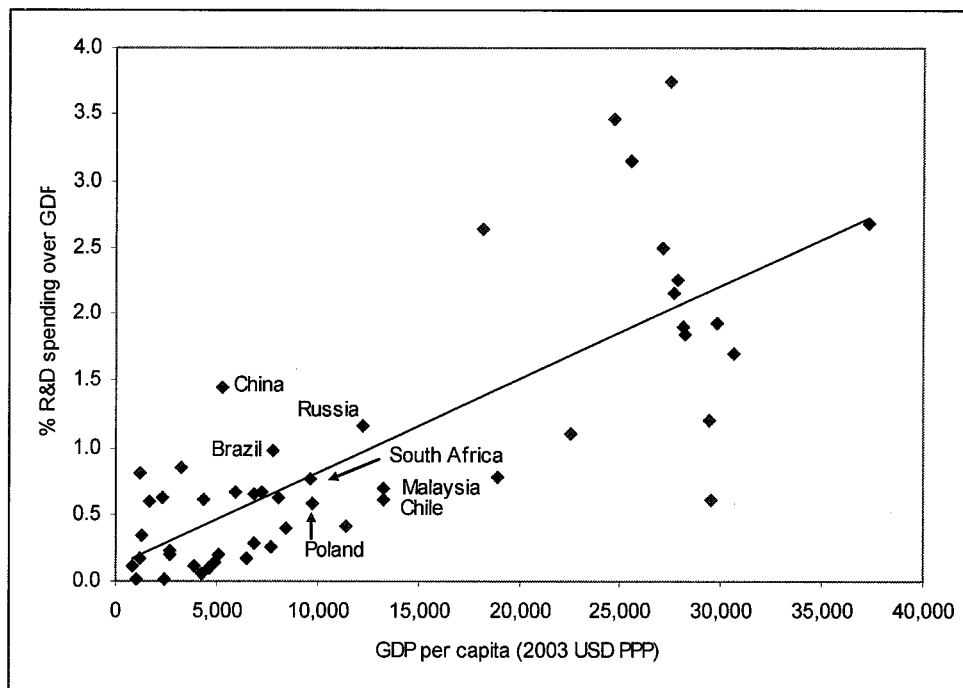


Source: UNESCO Institute of Statistics dataset available at [http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=136&IF\\_Language=eng&BR\\_Topic=0](http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=136&IF_Language=eng&BR_Topic=0); Heston, Summers and Aten (2006).

(Note: For both statistics the most recent value was used. All countries with a population over one million that also had the required data are included.)

**Error! Reference source not found.** Figure 20 illustrates spending on research and development (R&D) relative to GDP per capita (in PPP terms). The general trend is for the two statistics to increase jointly as countries develop. South Africa is situated on the world trend line. This suggests that, while our level of R&D spending is approximately equal to the world average, there is scope for an increase investment to improve economic competitiveness. This graph and the previous one, which reflect relatively favourable levels of investment, contrast sharply with the graphs on educational quality in Section **Error! Reference source not found.** above. This contrast suggests that quality or the outcomes of education is lagging behind the level of investment in the country. This phenomenon represents a challenge that is clearly one of the most important priorities for HRD in South Africa.

Figure 20: Spending on R&D relative to GDP per capita



Source: UNDP (2007: 273); Heston, Summers and Aten (2006).

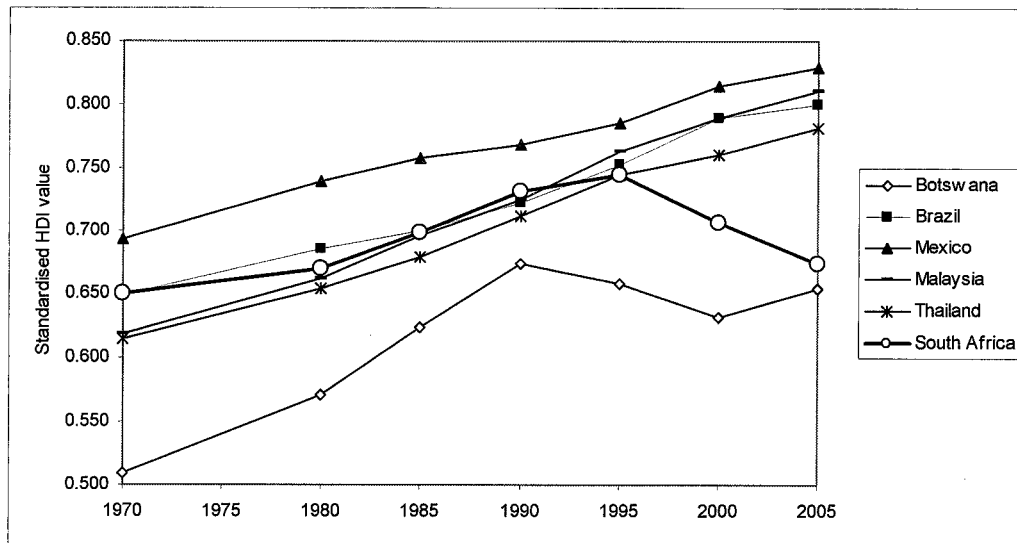
(Notes: For both statistics the most recent value was used. Also, countries included are those with the available statistics and with which South Africa is often compared.)

### Trends in South Africa's Human Development Index (HDI)

In an international comparison of human resources, it is difficult not to take into consideration the UNDP's human development index (HDI). This index, developed in 1990, is used extensively in debates on the level of human development of a country. Here we shall examine briefly South Africa's HDI, and why it has dropped so sharply in the last decade.

Figure 21 **Error! Reference source not found.** illustrates the long-range trend in the HDI values for a six middle income countries, including South Africa. All six countries experienced a substantial improvement between 1970 and 1990, but from 1990, South Africa and Botswana experienced precipitous falls in their HDI values.

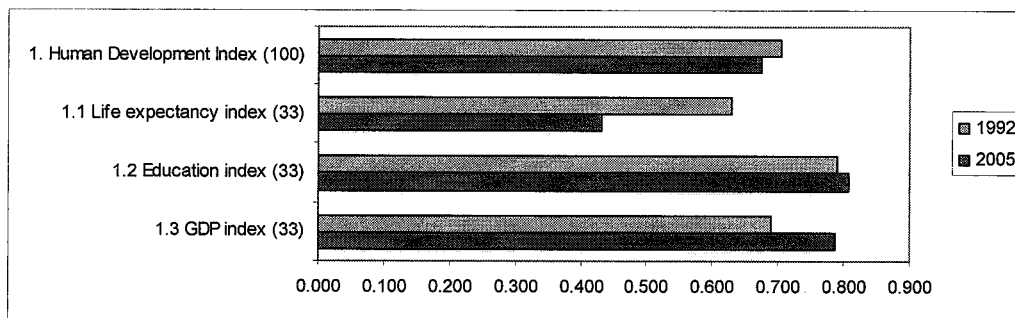
Figure 21: 1970 to 2005 trend in the HDI for selected middle income countries



Source: UNDP (2007, p. 234)

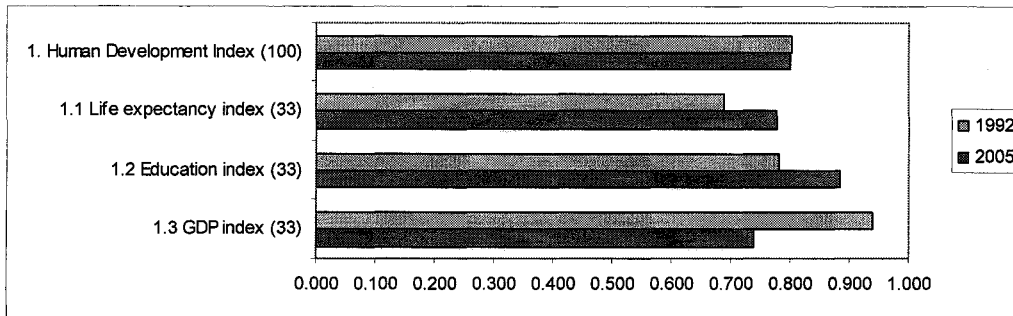
The following two graphs provide the values for the HDI itself and the HDI's three sub-indices (with values in brackets indicating the weight assigned to each sub-index out of 100) for South Africa and Brazil. What is clear is that the fall in South Africa's HDI value is mostly attributable to the fall in the life expectancy index, which in turn is highly sensitive to the impact of HIV/AIDs. South Africa's life expectancy value changed more than any other value from either of the two countries.

Figure 22: South Africa's HDI values in 1992 and 2005



Source: UNDP (1995); UNDP (2007)

**Figure 23:** *Brazil's HDI values in 1992 and 2005*

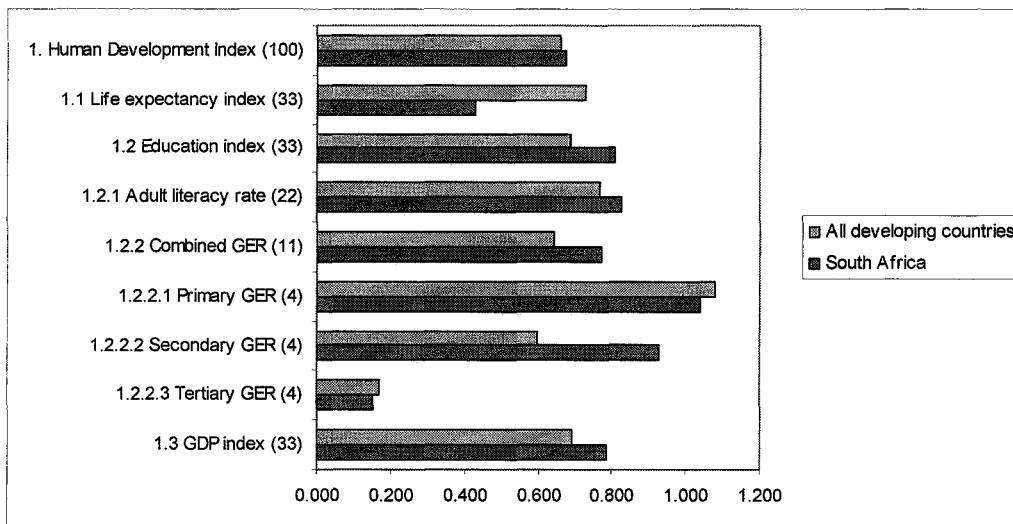


Source: UNDP (1995); UNDP (2007).

(Note: The 1992 HDI values indicated here are not comparable to the HDI values illustrated in Figure 23. The Figure 24 values are all from the 2007 Human Development Report, and are calculated according to a consistent method. In order to obtain the disaggregation of the above two graphs, it was necessary to consult two separate reports. The UNDP advises us against comparing figures from different reports, which could use different methodologies. However, for the purposes of this illustration, the comparison across reports seemed permissible.)

Figure 24 **Error! Reference source not found.** illustrates all the constituent parts of the HDI for South Africa, and for developing countries as a whole. South Africa has a significantly higher secondary school gross enrolment ratio (GER), compared to the average for other developing countries.

**Figure 24:** *Detailed decomposition of South Africa's 2005 HDI*



Source: UNDP (2007); UNESCO (2007).

(Note: The level-specific GER values were obtained from the UNESCO report.)

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