enrol in these institutions without having to pay large fees, and has already taken steps in this direction with the abolition of fees for those students who qualify for assistance from the NSFAS. As funding becomes available, the DHET will progressively remove fees for all students in NCV programmes. As of 2011, the NSFAS allocation for FET colleges has been increased from just under R400 million to approximately R1.2 billion. This means that every student who qualifies under the NSFAS means test is eligible for a bursary if doing NCV or N programmes.

Flexible delivery: Over time the FET colleges will endeavour to become user-friendly by utilising a variety of delivery mechanisms. These should include components of distance education, mixed-mode provision, block-release provision, and evening and weekend classes to make access easier for students in a wide variety of circumstances.

4.2.5 Improving relationships with employers

Relationships between colleges and industries are, with some exceptions, weak. It is estimated that approximately 65% of students at colleges are unable to find workplace experience, which is required to complete N diplomas but valuable for all students. Most colleges have almost no formal linkages with industry, except where they are offering apprenticeships, learnerships or other skills programmes that have inherent practical workplace requirements. Unfortunately there is little interaction between the staff offering such programmes and the staff offering the main college qualifications. There is, however, evidence that SETA-sponsored partnerships between colleges and employers have been increasing since the adoption of NSDS III. This will be encouraged and strengthened, and built into the overall post-school system.

FET colleges will be encouraged to build partnerships with private providers to offer certain programmes where this is felt necessary. These partnerships, however, must use the strengths of both public and private partners and should help to build the capacity of the public colleges. Under no circumstances should SETAs accede to a situation where public colleges are reduced to mere agents in an arrangement where the actual training is provided by the private partner while the public college only earns a fee as a middle-man.

4.2.6 Improving information management

Central to strengthening the colleges as institutions is improved information to support management decision making. In order to provide this, the DHET will substantially improve data collection and management at both national and college levels, especially in the following areas:
- lecturer qualifications and competencies;
- financial status of colleges;
- student registration and assessment results;
- infrastructure and equipment, to determine capacity to deliver programmes and sub-system growth;
- student needs and support requirements;
- employer demand for vocational and occupational programmes.

The DHET has started to address urgent needs in a number of areas, including analysis of the following: progression and success in the sector in order to establish baselines (differentiated across subject areas and localities); performance in specific subjects nationally and across colleges; cohort progression, including the numbers of courses

that learners are "carrying"; the quality of passes; relative performance of students across different colleges and campuses; overall passes from year to year; and extent of repetition. In the light of the extensive nature of the data and information requirements and their related management processes, it is important that the DHET establishes a single information management system with a single information standard for all FET colleges and campuses. Data on private colleges should be collected and analysed in the same system. This information should be available at both college and departmental levels, and should be integrated into a comprehensive post-school information system which is discussed further below.

4.2.7　Increasing enrolments

The DHET's vision is that over the next twenty years we will dramatically increase the number of students enrolling in the FET colleges, to address the acute skills shortages of the economy and the learning needs of individuals. This includes students enrolled in the general vocational programmes (resulting in an NCV), in apprenticeship programmes, and in other occupational programmes. Some of these students will be full-time while others will be apprentices attending college for a few months a year or studying part-time on various short courses.

One option for expansion in the short term would be to expand provision of relevant short courses. Another would be to allow colleges to offer general programmes for adults, like the National Senior Certificate for Adults, and even adult basic education and training.

Most colleges may not be in a position to massively increase their enrolments immediately. Colleges with more capacity will increase enrolments in the short to medium term. It is estimated that 20% of colleges are reasonably able to meaningfully increase enrolments immediately. Those that cannot do so need to be supported and plans developed to ensure that they can also increase enrolments over time. This will include infrastructure development, strong mentoring and coaching for management and teaching staff, and development of management's financial and planning capacity.

The DHET is currently undertaking an audit of infrastructure, equipment and staff of all public FET institutions to establish which colleges can immediately increase their enrolments and those that will grow over time. This, together with more detailed labour market information, including local-level information, will lead by the end of 2012 to a broad indicative plan for a twenty-year expansion of FET college enrolments. This will include the establishment of new FET colleges and campuses, located in the areas of the greatest need for both students and employers.

Central to this planned expansion will be, over the next five years, a massive expansion of lecturer development for the colleges, as discussed above.

DHET strategies must always keep in mind that the rapid expansion of an education system carries with it dangers that quality will be compromised in the process. It is not enough to expand enrolments in the college system without simultaneously ensuring that the quality of the education and training that is offered is up to date and of a high quality. This will ensure that throughput rates – and therefore the output of qualified students – is maximised and that wastage of valuable resources is minimised.

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4.2.8 Funding

Strengthening and expanding our FET colleges must happen through efficient use of allocations from the fiscus, through sensible use of the levy-grant institutions' budgets, and through creative partnerships with the private sector. Funding modalities should be focused on building strong institutions to enable responsiveness, quality and long-term sustainability.

Funding for FET colleges from the fiscus is regulated through funding norms. Funding has been based on a post-provisioning model which distributes lecturers to each province on the basis of weighted full-time-equivalent (FTE) students, in which the weight depends on the type of programme. Non-personnel costs are allocated on the basis of simple FTE-based formulas which vary from province to province.

There are other problems in the current system. In the past funding has been allocated by the provinces, although the function will soon be shifted to the DHET. There have been various teething problems with the current systems. Firstly, there is insufficient capacity to monitor closely whether the provincial education departments spend appropriately the allocations that they receive for the FET colleges in the form of conditional grants. Secondly, pressure is created by unfunded enrolments which result from colleges getting permission to enrol 15% more than their budgets where there is high demand for a programme.

Another problem has been funding for the NCV versus the N courses. From 2008 programme-based funding was been geared to the NCV, and not the N courses. Based on the intention of the Department of Labour to completely phase out apprenticeships, N programmes were in the process of being phased out, and by 2010 they were no longer on the list of ministerially approved programmes and therefore could not be funded. Colleges with a relatively large number of N courses were thus disadvantaged by the new arrangements and had to run those courses with funding from student fees or from employers who wanted the courses for their apprentices or learners. With the new recognition that the apprenticeship system will remain, this has now changed, and all N programmes (N1-N6) are fully funded to allow colleges to continue offering the theoretical component of apprenticeships.

A difference in the financial years between colleges and the fiscus poses another challenge. Colleges enrol students at the beginning of the calendar year which they fund from the allocations that were based on the previous year's enrolments. If a college suddenly gets a large increase in enrolments, the funds for operational activities become inadequate in the first three months of the calendar year, before the allocations are adjusted. Some colleges are operating at a deficit. In most colleges, personnel commitments exceed their programme funding allocations, and some have staff complements far in excess of the values required by the funding norms.

A major problem is a lack of relationship between money from the fiscus and money from the levy-grant system. The learnerships and skills programmes (short courses funded by SETAs or employers) offered at FET colleges are also not catered for in the funding norms. Many colleges operate what is in effect a dual system, with some staff paid for by the fiscus via the funding norms, and others employed through funds obtained from the SETAs. These staff members teach entirely different programmes, and have no relationship with each other. This means that many of the programmes offered as part of a partnership programme with industry have little impact on the capacity of a college to offer its core programmes. Or worse still, it impacts adversely

where students attending programmes paid for privately have greater access to resources, and therefore practical training, than those undertaking the NCV.

Finally, the notions of cost recovery that underpin the current funding model need to be balanced against the need to dramatically increase enrolments in the coming two decades, especially in view of the fact that the target market consists largely of unemployed and disadvantaged learners.

In order to stabilise and strengthen colleges, the DHET must do the following:

First, the problems with wrong allocations and under-allocations must be resolved immediately.

Second, the funding approach for colleges must be revised to allow for some core funding. Basing funding only, or mainly, on the basis of learner enrolments is inappropriate, especially in weak institutions which are still expected to grow and diversify. Core funding is essential if colleges are going to be strengthened and stabilised, and if we are going to enable them to become responsive and dynamic educational institutions. This should include funding for staff, infrastructure and student support services. How this will be balanced relative to funding based on learner enrolment must be investigated by the DHET. A key principle to guide this process is that colleges must have a substantial core of their staff on long-term contracts.

Third, revised funding norms and standards must take into account money directly from the fiscus as well as money from the levy-grant system. Our funding model must allow for the same staff to teach across programmes, and SETAs must fund programmes at full cost. SETA-college partnerships must be developed mainly on the basis of training leading to occupational qualifications or legitimate upgrading for skilled or semi-skilled workers, and not on the basis of short courses which do not lead to qualifications. Too much focus on short-term contracts has the potential to turn college managements' attention away from their substantive educational work and into chasing tenders.

Fourth, funding for bridging programmes must be provided by the state.

4.3 OTHER PUBLIC COLLEGES

Many government departments have direct responsibility for post-school education and training through colleges, academies and other institutions training public service workers. These include: institutions under the national Departments of International Relations and Cooperation, Correctional Services, Defence, Police, Water Affairs, the Intelligence Services, and others. The Public Administration, Leadership and Management Academy (PALAMA) provides training across the public service. In addition, training institutions are operated by provincial governments and municipalities.

Government colleges also offer training in the fields of nursing and agriculture, some, but not all, of whose graduates go on to work in the public sector. However, some public colleges have been closed over the past fifteen years, and many others remain weak. These colleges are all currently controlled by their respective departments, but also have to comply with quality assurance institutions and the NQF, which has not always been straightforward.

Relationships between these various colleges and other public institutions are very weak. The DHET intends to build more coherent relationships with public colleges under other government departments. The first step will be a close engagement with the departments in question, specifically to explore the type of relationship between them and the DHET with regard to their colleges. This is especially relevant to the recognition of qualifications, quality assurance and staff qualifications. The DHET will suggest two possible options for strengthening these colleges, and rebuilding or reopening colleges, as part of a coherent post-school system.

Option one: Improving co-ordination between the DHET and other departments responsible for colleges. This would include working to ensure possibilities for these colleges offering general education programmes like the NASCA or a specially tailored NCV, and ensuring that quality assurance arrangements meet the needs of the different departments.

Option two: Shifting responsibility for some or all of these colleges to the DHET, but retaining a close relationship with their former departments, particularly regarding curriculum. The advantage of this option is that it would allow more coherence in the post-school system as a whole. For example, it would enable these institutions to, for example, offer the NASCA or other programmes, as part of a more vibrant college sector. This may enable a more rational use of resources – for example, where there is only one post-school institution in a particular geographical area, it could offer more than one type of programme.

Whichever option is adopted, the priority is developing a coherent framework that allows these colleges to fit into the post-school system to ensure greater coherence and articulation possibilities. It also allows us as a country to assess the participation rate in the post-school system as well as to gauge how these can be linked to the human resource development needs of the country.

4.4   COMMUNITY EDUCATION AND TRAINING CENTRES

4.4.1   Overview

South Africa has a long history of finding innovative ways to provide adults with opportunities to learn. These range from the first workers' night schools started in 1919, to myriad popular education programmes that were a key feature of the liberation struggle and sectoral organisations. These initiatives provided adults and young people with literacy, numeracy and communication skills, and developed their capabilities as individuals, sectors and communities to contribute towards social change and social justice.

Building on these experiences, the post-1994 education and training framework embraced the concept of lifelong learning, recognising that learning takes place throughout a person's life and in many forms. With regard to adult learning, this approach has taken the form of efforts to eradicate adult illiteracy through various campaigns. More specifically, since 2007 there has been the *Kha ri Gude* campaign as well as the provision of adult basic education in Public Adult Learning Centres (PALCs). Adult and youth learning also takes place through a variety of non-formal community and popular education initiatives and projects, run by community-based organisations (CBOs), trade unions, social movements and government departments.

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Public Adult Learning Centres are the only directly funded institutions that offer general education to adults. Currently there are over 3 000 centres across the country, which serve about 265 000 learners – a tiny fraction of the adults who have need of education and training. These centres may operate from public schools, community centres or other institutions. They are focused on offering adult basic education and training (ABET) qualifications, including the General Education and Training Certificate for adults, a qualification issued by Umalusi and assessed by the DHET. There is no core curriculum and there is insufficient standardisation of assessment across provinces.

Many learners who study at adult learning centres are enrolled for secondary schooling, and write the Senior Certificate examinations, although these numbers have declined significantly since the National Senior Certificate replaced the old Senior Certificate. This suggests that very few adults move up from ABET level 4 (equivalent to NQF level 1) to the next level, and that most learners enrolled for Grade 12 are school drop-outs or people who want to rewrite the Matric examinations. Public Adult Learning Centres are currently the only state provision for this purpose. Very few of them have the capacity to offer the newly developed NASCA, and this capacity needs to be built as the NASCA is more suitable for adults who are not just repeating a recently written NSC.

There are also private adult learning centres. This is a difficult group to categorise, as many providers have a diverse range of offerings which may include (consistently or inconsistently) formal provision towards the ABET GETC at NQF level 1. The DHET lists as private adult education centres those that function similarly to the public centres, including non-governmental organisations (NGOs) and community-based organisations. However, there is currently no national register for private adult education and training centres and this needs to be developed.

The majority of teachers in public and private adult learning centres are part-time contract workers without tenure, leaving the sector without a hub of permanent professionals. This severely affects long-term planning. It also has serious career development implications for educators, and affects the learning paths of learners. Most learners in the sector study part-time, a relatively slow learning process which requires long-term management and planning.

4.4.2 A vision for community education and training

The current system of provision for adult learners and young people who dropped out of school before completing is inadequate. Firstly, the exclusive focus in the current ABET approach on general education often means that programmes fail to attract large numbers of adults and young people interested not only in completing their schooling but also in gaining labour market and sustainable livelihoods skills, as well as those interested in learning for general self-improvement or cultural and community development. In addition, it does not acknowledge or harness the vast potential for development and social cohesion that exists in the various community and popular education initiatives.

The community education and training approach to adult learning internationally seeks to facilitate a cycle of lifelong learning in communities, and offers routes to enable the development of skills, (including literacy and numeracy skills) to enhance personal, social, family and employment experiences.   It further seeks to assist community organisations, local government and individuals to work together to develop and enhance their communities, by building on their existing knowledge and skills.

The DHET intends to absorb the Public Adult Learning Centres into a category of institutions provisionally named Community Education and Training Centres, which can cater for the provision of second-chance learning opportunities for out-of-school youth and adults. These CETCs will build on the current offerings of the existing PALCs, which offer general education programmes and could also offer knowledge and skills leading to sustainable livelihoods outside of the formal sector. They will be a diverse set of institutions, including public, private and community-owned establishments. A key issue to address will be the articulation and partnerships between these institutions and others in the post-school sector. These institutions will help create an expanded and strengthened post-school system which is integrated but diverse.

To assist in this process, a Task Team has been established to look into alternative institutional forms to address the needs of out-of-school youth and adults. Among other things, it is considering the scope and the policy and legislative implications of new institutions. It will investigate and eventually recommend relevant programmes that could be offered by CETCs. It will also explore funding modalities and governance mechanisms which will feed into the policy development and planning activities of the DHET.

The first step in this process is to identify the strongest PALCs, colleges under other departments, and FET colleges which could play some role in offering general adult education programmes as well as training and orientation for sustainable livelihoods. The second step towards building these institutions would be creating an institutional identity, providing core funding, and employing at least a core of educators on long-term contracts. These institutions would initially offer ABET and the National Senior Certificate for Adults, but would gradually increase to other offerings, such as skills and other programmes meeting local needs.

4.4.3 Funding

Public Adult Learning Centres are currently funded on a model based on learner enrolment. New Norms and Standards for Public Adult Learning Centres were published in December 2007, have been subjected to public comments, and were implemented in January 2011, although unevenly across provinces. As is the case for the colleges, the funding norms for Public Adult Learning Centres make provision for programme funding. One problem with this is that PALCs do not offer programmes but learning areas. Another is that in very weak institutions funding based on learner enrolment does not allow for the building of institutional capacity. Changing this funding model to ensure some core funding, supplemented by programme-based funding, will be an important first step in the process of building PALCs into Community Education and Training Centres.

4.5 PRIVATE COLLEGES AND OTHER PROVIDERS

Despite problems with the data, as discussed below, it is clear that the private post-school system is substantial and is expanding. A variety of organisations and institutions offer education and training outside of the formal post-school system in South Africa. This includes community-based institutions, non-governmental organisations, training entities located in companies, faith-based organisations, and for-profit private providers. These institutions provide an array of certified and non-certified training. Some of this is of a general nature, some leads towards national qualifications, and some is focused on

specific community, employment or self-employment-related needs. It includes full-time study, part-time study, ongoing professional development, short focused courses, courses contracted by employers, and less formal provision.

The most popular type of formal qualification offered by private FET institutions are "occupational" (SETA-accredited) qualifications, followed by the Report 191 N courses and NCV programmes. The most popular field of learning for private FET institutions offering the N courses is Business, Commerce and Management Studies. The most popular occupational (SETA) qualifications offered by private FET institutions appear to be in Physical, Mathematical, Computer and Life Sciences (especially Computer Science), and Business, Commerce and Management Studies. The highest enrolment at private FET colleges is from African students, but a comprehensive demography of the student population at private FET colleges needs further investigation.

Some providers offer adult education. For example, there are long-established NGOs at national level, as well as many regional and community-based ones, that have championed literacy and developed various approaches. Some of them have partnerships with adult education units in universities. Some provide language courses. Some provide courses meeting the needs of specific workplaces. Many providers do not have a consistent set of learning programmes that they offer. This could be because they design customised courses on a needs basis, or because their provision is determined by demand from clients. Providers who develop very specific fit-for-purpose courses, whether for community needs or for employment needs, have frequently found the unit-standards-based programmes inappropriate for their needs. Some niche providers with regular course offerings leading to their own certificates have experienced similar problems.

These institutions and organisations are funded from a variety of sources including government grants, client contracts, tenders, donor funds and learner fees. Institutions which are formal providers make use of different types of formal, legal registration including the following: company for profit, company not for profit, trust, close corporation. Many of these organisations are not primarily education and training organisations. For example, youth development organisations may include education and training as one component of the work that they do with youth.

This diversity of institutional configurations does not lend itself to easy accountability systems, and our current quality assurance regime has not done justice to these providers. Those institutions which have fitted in most easily to quality assurance systems generally offer similar qualifications to those offered in public institutions. They tend to be large, in most cases for-profit institutions, which offer formal qualifications or courses aligned to unit standards. However, the multipurpose nature of many of these institutions has sometimes meant that they are subject to complex accreditation requirements from different quality assurance bodies. For example, a provider can be "accredited" by one SETA ETQA and have some of its programmes "approved" by another ETQA. It can also deliver training that is quality assured by Umalusi or the HEQC. Some providers have found the quality assurance systems difficult to comply with because of implicit or explicit expectations from quality assurance bodies that courses should lead to unit standards or qualifications registered on the NQF.

While the levy-grant system has in some instances increased the possible resources available for providers, this has usually been at the cost of fitting into the qualifications framework and quality assurance system, even where this is manifestly inappropriate. Choosing not to apply for accreditation with a quality assurance body, failing to obtain accreditation, or giving up during the process of attempting to obtain accreditation has led to financial difficulties for many providers, as lack of accreditation makes it difficult for

them to apply for government and even international donor grants. In some instances employers who contract specific courses struggle to get their rebates back from the SETAs if the providers are not accredited. This poses particular challenges to institutions and organisations that must be non-formal and/or responsive to specific community, learner or employer needs, in a context in which there has been a steady loss of donor funding for educational and other non-governmental organisations.

The NSDS III allows SETAs and the National Skills Fund to support institutions that offer programmes and courses that are aligned to their aims including those that support workplace-based training. The NSF may also support the provision of professional development which does not necessarily lead to formal qualifications where such courses play a useful role in line with the NSDS III. Not all education has to be on the NQF, and not all quality education has to lead to qualifications.

Data on private providers is dispersed in various institutions and locations, making it difficult to build a coherent picture of provision, to eliminate duplications and overlaps, and to verify information across sectors. Furthermore, authorities (including the Quality Councils, quality assurance bodies, the DHET, and SAQA's National Learners' Records Database) conduct little regular analysis of the data they obtain from institutions, and do not have data easily or readily available for analysis. Data management in general appears to be weak. The DHET's Management Information Support Unit is starting to address this problem. While SAQA's data is arguably the most reliable, there are major gaps in respect of the datasets available for uploading. The DHET's Further Education and Training Management Information System (FETMIS), for example, is completely excluded from SAQA's current data, as is Umalusi's data. Problems with data collection and management of providers require urgent attention. Further studies must be undertaken in order to fully utilise the capability of the private post-school sector to contribute to the needs of out-of-school youth and adults.

4.6 SOUTH AFRICAN INSTITUTE FOR VOCATIONAL AND CONTINUING EDUCATION AND TRAINING

The Minister of Higher Education and Training intends to establish an Institute for Vocational and Continuing Education and Training. There is clearly a need for an institution to support the FET colleges and the development of the skills system, as well as the provision of general education to adults. A number of countries have such institutes which function very effectively to the benefit of vocational training. The DHET will examine these before developing a model for South Africa.

The types of activities the proposed institute could engage in include the following:

- Develop curriculum for FET colleges and adult education colleges, and ensure that curriculum development is institutionalised with long-term capacity. This would include continuously updating and improving the quality of FET programmes.
- Become a centre of excellence for research and innovation in the FET sector and possibly the levy-grant institutions.
- Undertake and promote research in the areas of teaching and learning in vocational and occupational programmes.
- Undertake and promote cutting-edge research for the progressive development of vocational and continuing education as a whole.
- Advise the Minister on vocational and continuing education at national level.
- Develop materials for college programmes.

- Develop materials for career guidance.
- Develop capacity and upgrade teaching staff skills in vocational and continuing education.
- Provide management training to the vocational and continuing education sector.
- Provide management training at all levels for SETAs.
- Promote dialogue between colleges and between colleges, employers and SETAs.
- Interact with professional councils and promote dialogue between them and education and training institutions, the levy-grant institutions and the DHET
- Conduct and promote labour market research.

A thorough feasibility study will be carried out soon in order to provide a clearer conceptualisation of and plans for the Institute. The identified functions may need to be phased in over time as the Institute grows and gains capacity.

5. WORKPLACE-BASED LEARNING

Most successful vocational or occupational learning takes place as a result of an integration of theoretical learning, workshop-based practical learning, and learning in the workplace. Thus, the DHET will place significant emphasis on workplace-based learning as well as on the promotion of work-integrated learning.

Employers need to take responsibility for developing their employees, both existing and potential, and the SETAs must play a role in facilitating and funding this wherever appropriate. There must be much better collaboration between organisations. The system must encourage employers to do more internally but also to collaborate. The government is now working through NEDLAC, other government departments, state-owned enterprises and other channels to re-establish and extend the central role that employers play in providing on-the-job training for skills development, especially through apprenticeships, learnerships and internships. The state-owned enterprises are particularly important in this respect, given the central role they played in training artisans in the past. Rebuilding the training capacity of the state-owned enterprises must be a priority for South Africa.

It is evident that state-owned enterprises, workshops of the Department of Public Works, government departments and state programmes such as the Extended Public Works Programme and all public infrastructure projects must play a more direct role in expanding workplace-based training. The public service should be a training space. It has the potential to absorb large numbers of young people for internships, learnerships and apprenticeships, as well as providing work experience for FET and university graduates. This should be assisted by government departments' payment of the skills levy and the strengthening of the Public Services SETA (PSETA). In addition, it is essential that the private sector also play a key role in providing workplace-based learning, with the assistance of the SETAs where necessary.

Unnecessary requirements for accreditation for government departments offering professional development must stop, as discussed in the section on quality assurance below. Only providers offering national qualifications or awards should have to be registered. Government departments must also be made aware that alignment with unit standards is not a requirement for training, as this appears to be a common misconception.

6. UNIVERSITIES

6.1 OVERVIEW

The last decade has seen numerous changes to the university landscape. Firstly, there has been the development of new institutional types as the result of a series of mergers and incorporations. South Africa now has 23 public universities. These comprise eleven universities (in the traditional sense), six universities of technology (what used to be known as technikons) and six comprehensive universities (that combine the functions of traditional universities and universities of technology). The eleven traditional universities offer various formative and professional Bachelor degrees as well as a small number of diplomas and certificates at undergraduate level. Postgraduate provision consists of honours, masters and doctoral degrees as well as a limited number of postgraduate diplomas and certificates. The universities of technology offer a number of undergraduate diplomas that are vocationally oriented, as well as a Bachelor of Technology degree. Postgraduate provision at universities of technology is limited to a relatively small number of masters and doctoral programmes. Comprehensive universities offer a combination of traditional university and university of technology programmes.

Over and above the 23 public universities are the two institutions in Northern Cape and Mpumalanga which serve as administrative hubs co-ordinating higher education provision through partnerships with universities elsewhere. A decision has been made that these institutes will become universities. Two task teams have been appointed to assess what is needed for this to be achieved.

The 2011 preliminary student head count for the 23 universities was 899 120, which includes both full-time and part-time enrolments for contact and distance study. (The figure for 1994 was 495 356. This represents an increase of almost 82% since the advent of democracy.) Nearly two-thirds – 62% – of students are undergoing contact-based study, with the remainder enrolled in distance education. Of the distance education students, 83% are at the University of South Africa (UNISA). For 2009, 82% of the total head count enrolment was at undergraduate level, while 5% were masters students and 1% were PhD students.

Redress policies seeking better access for blacks and women have clearly worked (see Table 2). In 1994, 55% of students at public universities were black (African, coloured and Indian), 43% were African and 55% were male. By 2010 these figures were 80% black, 67% African and 43% male. While the number of Africans has increased substantially, the level is still smaller than the proportion of Africans in the population. The proportion of males however, has decreased dramatically and must be a cause of some concern if the trend continues. Note that only 60% of graduates were African, although Africans constituted 67% of all students. This higher drop-out rate and poorer academic performance is due, at least in part, to a lower quality of schooling in townships and predominantly African rural areas.

The Soudien Committee, which investigated the transformation and social cohesion and the elimination of discrimination in universities, found that discrimination, in particular with regard to racism and sexism, is pervasive in our institutions. The recommendation of that Committee for the creation of transformation compacts between universities and the DHET should be adopted. Such compacts should be based on the general commitments to the development of a culture of human rights that are made in the

Constitution and should ensure clear targets on problem areas identified by all important stakeholder groupings in the institution. The Minister is planning to establish a permanent oversight committee to monitor the transformation of university education. This committee should submit an annual report to the Minister, who should make the report available for public discussion.

Table B. Headcount enrolment and growth by race 2000-2010

	Actual enrolment											Average annual increase
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
African	317,998	353,327	377,072	408,235	453,621	446,945	451,107	476,680	515,058	547,686	595,963	6.5%
Coloured	30,106	32,900	37,906	42,390	46,091	46,302	48,538	49,001	51,647	55,101	58,219	6.8%
Indian	39,558	43,436	47,567	51,611	54,326	54,611	54,859	52,579	52,401	53,629	54,537	3.3%
White	163,004	173,397	178,871	184,964	188,714	185,847	184,667	180,435	178,140	179,232	178,346	0.9%

Headcount enrolments for the field of Science, Engineering and Technology (SET) has grown by 4.4% per annum between 2000 and 2009, and graduation rates in these areas have grown by 5.5% per annum, indicating improving throughput rates (see Table C). In fact, every year since 2002, the number of graduates in SET has exceeded the number of graduates in Education or the Humanities. Despite these achievements, South Africa is still not producing enough SET graduates to meet its economic development objectives.

Table C. Graduate output and growth by major field of study 2000-2010

	Actual graduates											Average annual
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Science, engineering, technology	24,136	24,995	26,630	29,546	31,443	33,499	35,555	36,429	38,820	40,973	41,156	5.5%
Business/management	19,912	22,590	24,217	26,954	29,327	28,144	30,108	31,062	31,871	33,788	40,751	7.4%
Education	15,568	18,737	21,487	24,242	29,253	29,054	28,554	28,337	29,636	35,532	37,665	9.2%
Other humanities	28,581	25,236	24,955	24,988	27,060	29,355	30,404	30,788	32,844	34,517	30,015	0.5%

Excludes 3098 grads with unknown fields of study

In contrast to SET, Humanities graduates have only grown by 0.5% per *annum*. Two recent reports on the Humanities have highlighted a deep malaise in the Humanities in South African universities. One of the reports, by the Academy of Sciences of South Africa (ASSAf), calls it a crisis while the other, commissioned by the Minister of Higher Education and Training, states that the humanities and social sciences 'could and should be a lot stronger in order to play the role it could be playing in the development of our society, our economy and our intellectual life.' After public comments on the latter report and discussions the Minister will be having with the Minister of Science and Technology, the government will act on these reports to ensure that these important branches of scholarship are strengthened.

6.2 DIFFERENTIATION

The need for a differentiated system of university education has long been recognised. Not all institutions can or should fulfil the same role. This has been reflected in the *White Paper on Higher Education* (1997) and the discussion document of the Council on

Higher Education (CHE) on the *Size and Shape of Higher Education* (2000), among other documents. The reasons include, among others: to enable institutions to find their niches in a way that enhances their ability to meet national needs; to provide a diversity of programme offerings to learners; to provide for flexibility and innovation throughout the system; and to increase overall participation rates in higher education in South Africa.

Although the university sector is very diverse, current education policy – particularly as it is reflected in the funding formula – has not successfully accommodated a differentiated system of universities. Our universities have diverse histories and this accounts, in part, for inequities in the system as well as the challenges that institutions face. The historical factors are related to both the pre-1994 period and the restructuring of the university system between 2000 and 2005. The differences within each category of institution (universities, universities of technology and comprehensive universities) are often greater than those between categories. This is largely the result of the legacy of apartheid which has resulted in the historically black universities and technikons – particularly those in the former bantustans – still suffering from multiple forms of disadvantage. The mergers further complicated the picture, creating single institutions with marked inequalities between campuses. In this post-merger period, structural and systemic challenges still need to be addressed.

Post-1994, government policy has attempted to strengthen higher education provision, working with the reality of the existing differentiated system. However, a number of institutions, particularly the historically black universities, remain underfunded and under-resourced. Infrastructure and materials provision remain inadequate. Research output levels remain poor. Staff tend to be less qualified than the average in the university sector, and staff numbers are insufficient for the needs of the institutions. In addition, the students that historically black, especially rural, universities attract are often the poorest students, and so fees are low and the rate of non-payment is high. These students are generally also the academically least prepared for university studies. Management and governance structures in some institutions are weak. Mismanagement and in some cases corruption continue to plague certain institutions.

The development of a differentiated system for university education must take cognisance of both historical inequalities between institutions and in some cases between campuses within institutions, as well as existing institutional types. Central to this process is the need to ensure a meaningful and sustainable role for the historically black institutions which takes into account their history, the particular academic and developmental needs of their regions, and their institutional ambitions for development.

At the other end of the spectrum, a few relatively research-intensive universities are responsible for most of the postgraduates in the system, and are engaged in cutting edge research and innovation. They are clearly a valuable national asset and must continue to develop their capacities. They could play a crucial role in terms of improving the weaker universities (by improving the national cadre of Masters and PhD graduates), as well as contributing to the economy and to society. However, their needs must not be allowed to divert attention from the need for all universities – and particularly the poorer ones – to have sufficient resources such as adequate libraries, laboratories and lecture rooms, and sufficient staff to fulfil their allotted functions as effective institutions in a differentiated system.

Despite differentiation, collaboration between universities on research projects as well as teaching and curriculum development initiatives, can be mutually beneficial to all and should be encouraged.

The following principles should be adhered to in creating rational and suitable differentiation among universities that is responsive to contextual realities, including history, policy, infrastructure and material conditions:

- Further categorisation of institutions should be avoided. The current categories are relatively new, are useful, and should remain. It would be unacceptable and cause unnecessary conflict to create further categories on the basis of the levels of teaching and research specialisation.

- A variety of institutions are required in order to ensure that the sector serves national interests. Important for any institution is to have a clearly defined mandate and to carry it out well. Undergraduate and postgraduate programmes as well as academic and professional or vocational programmes are equally important to the country. The knowledge hierarchy that they represent should not be interpreted to represent a hierarchy of importance. The university sector should comprise a continuum of institutions, ranging from specialised, research-intensive universities to largely undergraduate institutions, with various levels of research focus and various postgraduate niches at masters and/or doctoral level.

- The mix and level of programmes offered at any institution should not be fixed, but should be capable of being developed over time to take in more or fewer postgraduate programmes or new disciplines.

- Whatever else they do, all universities in South Africa must offer a high-quality undergraduate education. This should be the first step in overcoming historical injustices inherited from apartheid and should also lay the indispensable academic foundations for students who wish to go on to postgraduate studies. Universities should be supported in offering and mainstreaming four-year undergraduate degree programmes where necessary.

- The university system must become an integral part of the post-school system, interfacing with FET and other vocational colleges, SETAs, employers, labour and other stakeholders. Such co-operation should be taken into account in the development of an institution's programme mix and planning.

- Differentiation needs to be accompanied by a funding regime that does justice to current individual institutional realities, and accepts the need for redress funding in the poorly resourced institutions, particularly for infrastructure, the establishment of effective administrative systems and the upgrading of staff qualifications. Subject to the resources available to government, adequate funding must be provided to each institution to meet the expectations for quality teaching and research, according to its agreed-upon outputs. Funding must be planned in the medium to long term so as to meet each institution's growth along a development trajectory agreed to between the institution and the DHET.

The process through which these principles will be realised must include both the universities and the DHET, working together to define the mission and role of each institution. In the near future, the DHET will initiate such a process.

6.3 STUDENT ACCESS

South African universities are characterised by relatively low success rates: 74% in 2010, compared to a desired national norm of 80%. This results in a graduation rate of

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15% – well below the national norm of 25% for students in three-year degree programmes in contact education.[3] In contact universities, well under a third of students complete their courses in regulation time and one in three graduates within four years. This represents a distressing blow to the ambitions of tens of thousands of drop-outs each year and as well as a waste of the resources of both parents and the state. Improvement of throughput rates must be the top strategic priority of university education. Among other things, this will allow us to increase the number of graduates disproportional to the increase in the relatively modest projected expansion of university enrolments.

Although Postgraduate enrolments in both masters and doctoral programmes remain low, they *have* been improving over the last fifteen years (see Table D). The proportion of black doctoral graduates has also been increasing. In 1995, South Africa produced 679 doctoral graduates and this had grown to 967 in 2000, 1 188 in 2005 and 1 420 graduates by 2010 (or 26 doctorates per million of the country's total population). In 2010, 48% of the doctoral graduates were white (compared to 87% in 1995), 38% were African (6% in 1995), 7% were Indian (3% in 1995) and 6% were coloured (4% in 1995). The number of Africans has likely been boosted somewhat by the increased numbers of foreign students from other African countries.

Approximately six out of ten doctoral graduates were male, indicating a need to increase the number of females studying for doctorates. In 2010, approximately equal numbers of doctoral graduates were produced in the human sciences (including Social Sciences, Humanities, Education and Business Studies) and in the natural sciences (including Pure Sciences, Engineering Sciences, Materials and Technologies), reflecting a slight swing towards the latter.

Table D. Postgraduate enrolment and growth by qualification type 2000-2010

	Actual enrolment											Average annual increase
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Postgraduate to masters level	49,971	53,506	58,081	61,815	69,320	61,436	58,510	59,185	66,915	74,495	80,321	4.9%
Masters	31,666	34,865	39,189	43,431	45,327	44,315	42,899	41,164	41,711	43,723	46,699	4.0%
Doctors	6,419	6,996	7,716	8,315	9,104	9,434	9,828	10,048	9,994	10,529	11,590	6.1%
Total postgraduate	88,056	95,367	104,986	113,561	123,751	115,185	111,237	110,397	118,620	128,747	138,610	4.6%

Despite the obvious progress with regards to the numbers of doctoral graduates, with 26 doctorates per million of the country's total population South Africa lags far behind countries such as Portugal (569 PhDs per million), the United Kingdom (288 per million), Australia (264 per million), the United States of America (201 per million), Korea (187 per million) and Brazil (48 per million).

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[3] Student success rates are determined as: FTE degree credits divided by FTE enrolments. These calculations, for a programme or for an institution as a whole, produce weighted average success rates for a group of courses. Graduation rates are calculated by dividing the graduates of a given academic year by the head count enrolments of that year. These graduation rates function as indicators of what the throughput rates of cohorts of students are likely to be.

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Barriers to increasing the productivity of PhD programmes at South African universities include financial constraints, the quality of incoming students, blockages in the graduate and postgraduate pipeline, and limited supervisory capacity. The DHET recognises that the provision of overall postgraduate provision deserves attention and that we need to drastically increase the number and quality of both the masters and the PhD degrees obtained, This includes providing assistance to some of those wishing to do postgraduate studies abroad as suggested by ASSAf. Improvement of undergraduate throughput rates must be a key strategy for increasing graduate outputs, for increasing the skills available to the economy, and providing larger numbers of students available for postgraduate study.

This strategy must be based on a good understanding of why undergraduate throughput remains so low. Inadequate student preparedness for university education is probably the main factor contributing to low success rates. Various approaches have been attempted by different universities to compensate for this problem. Unfortunately, there is no clear evidence of what the most successful routes are. Clearly, though, universities will have to continue to assist underprepared students to make the transition to a successful university career. This could involve foundation programmes, intensifying tutorial-driven models which enable small-group interaction, or increasing the duration of degrees. The funding system must support such initiatives. Universities and programmes differ in their student intakes, and each must tailor their support offerings to fit their needs. The university funding review will be required to make recommendations on the provision of resources and funding strategies to strengthen teaching in universities without in any way reducing the importance of research. The recommendations of the Soudien Committee with regard to student support must be implemented.

The calibre and workload of academic staff is obviously one of the most important factors influencing throughput, and this is discussed separately under Staff, below.

There are other problems which aggravate low throughput. University funding has not kept pace with enrolment growth. Anecdotal evidence indicates that the financial problems facing many students may be a contributing factor to high drop-out rates. A detailed research study to verify this is yet to be undertaken. In addition, there are resource constraints in many of the historically black universities. Many of them do not have adequately resourced libraries and laboratories, and have oversized classes.

Success rates are negatively influenced by poor living conditions due to the poor quality of residences both on and off campus. Student support services are often not well-integrated across the academic and administrative function. The improvement of existing student accommodation and the provision of additional accommodation have been prioritised by the DHET. Furthermore, the DHET has commissioned a task team to look into the condition of student accommodation facilities, and their findings will soon be released. Additional concerns relate to the poor nutritional value of the meals provided and the fact that, in many cases, the provision of a food allowance to students is not always appropriate as it is often spent on goods other than food. Anecdotal evidence of hunger among poorer students abounds. The recommendations of the Soudien Committee with regard to accommodation must be implemented.

We must address these problems. The expansion and improvement of student accommodation will become a priority for the DHET and will become a feature of the government's infrastructure development programme (in both universities and FET colleges). Student support at undergraduate level must be taken seriously as a vital and strategic activity of all universities.

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In order to ensure that quality education is an important part of our drive to create high-quality universities, our institutions must be given essential academic infrastructure, including laboratories, information technology (IT) systems, accommodation, classrooms and lecture theatres, libraries and other facilities. Though the last five years have seen a large financial injection into the sector, it has not adequately addressed the backlogs. The DHET will develop standards for equitable infrastructure to ensure that teaching and learning environments are broadly equivalent across the country, with due regard to each university's needs. Once such standards have been set and approved, the DHET will develop a plan of how to achieve this. Priority at this stage will be given to upgrading infrastructure and facilities at poorer universities so as to get them up to agreed standards. In particular there is a need to strengthen Internet access and ensure that sufficient connectivity is available at our more disadvantaged institutions.

The Ministry has allocated considerable funds for infrastructure projects at universities. The model of funding used is a partnership between the institution and the DHET in terms of contributions. The DHET will consider the development of an Education Investment Fund which would have a pool of funds available to deal with the growing need for upgrading and refurbishment. Priority will be given to partnerships with public finance institutions and where necessary the private sector as well.

The DHET must work in close co-operation with the National Research Foundation (NRF) and with universities to address the rising costs of provision of journals and other library material. It is recognised that knowledge resources have to be acquired equitably for all universities and that a shared cost model will alleviate pressure on funds. The cost-saving potential of central procurement of electronic journals for all institutions will be investigated. In addition the DHET must explore ways and means for the establishment of a state-led publishing house in order to address the need for more affordable and efficient production of learning materials.

6.4   RESEARCH AND INNOVATION

The DHET strategic plan identifies the following outputs needed to address the relevant Medium Term Strategic Framework (MTSF) priority:

> *Increase research, development and innovation in human capital for a growing knowledge economy, with a particular focus on post-graduate degrees, deepening industry and university partnerships, as well as increased investment into research development and innovation, especially in the areas of science, engineering and technology.*

The DHET's strategic plan understands that certain outputs are necessary if this priority is to be achieved. Central to our strategy is the objective of ensuring that the country is committed to sustaining and strengthening long-term research that is transformational, generates new knowledge and can work towards strengthening society and the economy. This will require working closely with primary partners like the Department of Science and Technology and the Department of Trade and Industry (DTI) to ensure that there is coherence and synergy in the distribution of funds.

The DHET will work with the DST to ensure increased support for postgraduate study and for senior researchers, as well as a more stable funding model for all educational institutions that conduct research. This is critical as it will ensure the development of potential new academics to service the envisaged growth of enrolments at the undergraduate level as well as the need for high-end research production. One of the

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government's aims, as reflected in the DST's *Ten-Year Innovation Plan* is to increase the number of patents and products developed by our universities and other research institutions. This will assist the realisation of the aims of the *New Growth Plan* and the *Industrial Policy Action II*, both of which identify research and technological innovation as important for job creation and for making South African industries more competitive globally.

There is a need to ensure greater coherence in an overall policy framework that governs such research and innovation activities, recognising that the prime source of funding for these activities is the DST. However, the core funding for the operation of universities and determination of the mission and strategic direction of the higher education system resides with the DHET. The strategy of establishing differentiation in the university sector must take into account the need for high-end scientific research in our system without losing sight of the priority objective of ensuring that *all* universities have the means to meet the expectations for quality teaching and research, according to its agreed-upon outputs.

The current policy and regulatory environment assumes that all universities should aim to have comparable research outcomes and performance should be comparable to that of the top performing institutions. This is unrealistic, given their differential capacities and histories, something that is recognised by the funding formula, which provides for research development funds to assist those institutions that do not meet the common benchmark. However, the underlying assumption remains, and does not sit comfortably with the aim of a differentiated institutional landscape. Research-intensive universities have a strong embedded research and development culture which includes harnessing and accessing funds, attracting researchers, supporting postgraduate students, and the availability of high-tech equipment and experienced researchers. This culture takes years to develop, is expensive and not necessary for all institutions. If our universities are differentiated in terms of mission, then the research and development policy for the DHET can be aligned accordingly. Universities with a relatively weak research culture and record should be assisted and funded to develop their research capacity in particular areas of specialisation so that their research culture can be built gradually over time. South Africa is not unique in having universities whose main focus is teaching and learning, and this is a legitimate mission for a university in a differentiated system.

6.5 ACCESS AND EXPANSION

The aim is to raise the participation rate in universities to 23% by 2030 from the current 16%. This expansion will be relatively modest as attention goes towards increasing throughput, as well as towards a large expansion of alternative study opportunities through the college system and other post-school opportunities. Growth predictions for the immediate future in the university sector are based largely on current institutional arrangements. However, there are some other areas that will contribute to the expansion of the system. These are:

- The National Institutes in Mpumalanga and Northern Cape have fairly small student populations. In the next three years, with the establishment of the new universities, a moderate growth is predicted.

- The establishment of a health care training facility at the present Polokwane campus of the University of Limpopo will allow some managed expansion as both facilities and infrastructure are developed over the next few years.

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- The proposed developments to the Medunsa campus of the University of Limpopo include expansion of current offerings in the domain of health sciences and complementary fields. This development will require additional funds for infrastructure and increased enrolments.

- The Teacher Development Plan signals exploration of new sites of delivery for teacher education and this will impact on student enrolments.

6.6 STAFF

The revitalisation of the academic profession is an ongoing but very pressing problem. Academics are both teachers and researchers, and their sustained contribution to knowledge creation, innovation and skills development at both individual and country-wide levels is critical. The total instruction and research staff complement for the 23 universities was 16 320 in 2009. Of this, 44% are women. However, at the higher end of the academic ranks, there are four times as many male professors as female professors. The age breakdown of instruction and research staff at these institutions is worrying. In 2009, almost 50% of staff were 45 years old or above. This shows that we have an aging academic population. Moreover, almost 55% of all permanent, professional staff at universities are white, while Africans make up less than 30%. Furthermore, the rapid expansion of the university sector in terms of enrolment has not been accompanied by an equivalent expansion in the number of academics. This means that academic staff experience rising workload pressures due to increased teaching loads. Although academic salaries in South Africa are comparable to salaries elsewhere, as demonstrated by a recent Commonwealth study of academic remuneration, they are below what similarly qualified people can earn in the private sector or government. Renewal of the academic profession is vital for the long-term sustainability of high-quality public higher education. The following factors and/or initiatives must be considered and ways found to pursue them:

- Academics should be incentivised by improving conditions of employment, to ensure that growth in student numbers is accompanied by growth in academic staff numbers. At the same time, there must be recognition of the fact that teaching is only one aspect of the work of the academic, and that research opportunities and funds must be made available to young academics.

- The DHET will work closely with universities to explore ways of ensuring a greater enrolment and through-flow of postgraduate students from whose ranks academics must come.

- A medium-term to long-term plan for renewing the academic profession must be developed. In this plan, reference will be made to: increasing the number of young academics; addressing racial and gender imbalances by increasing the number of black and women academics and researchers; addressing staffing shortages at universities; upgrading academics into masters and doctoral programmes locally and abroad; upgrading the teaching qualifications of academics; and improving the overall quality of academics.

- The extension upwards of the retirement age of academics and the greater use of retired academics in teaching and supervision on a part-time basis.

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- The recommendations of the Soudien Committee with regard to staff and post-graduate student support and development should be implemented.

Management problems continue to exist in some institutions. A number of universities have been subjected to some form of investigation or independent assessment in recent times. The viability of some of our institutions has been threatened by weak leadership, governance structures and procedures, as well as poor planning, corruption, autocratic management practices, and low levels of accountability. Thus a review of existing leadership and governance structures is central to any transformation agenda for universities. In a number of universities, leadership capacity within the different echelons of the institutional hierarchy is lacking, as is the practice of inclusive and democratic governance. This may necessitate a review of the legislation and accompanying regulations.

6.7 FUNDING

There are questions about the adequacy of the instruments within the funding framework to promote inter-institutional equity. It appears that the funding mechanism currently in place may serve to entrench and even accentuate inequalities between previously advantaged and previously disadvantaged institutions. Because of the high unit value per research output, the funding framework is biased towards rewarding research outputs at the expense of teaching. This has resulted in a very high increase of research output by advantaged institutions that have the means and capacity to "chase" research. The rigidity of the current funding system may serve to discourage mainstream implementation of a flexible curriculum framework (such as four-year undergraduate degrees) that can cater to the diverse needs of our students.

Earmarked funding is an important steering mechanism to ensure that some of the serious problems faced by our university system are addressed. The DHET aims to make greater use of such funding to introduce and develop key infrastructure programmes aimed at achieving greater institutional equity in the system, and to act as a catalyst for the transformation of the sector as a whole.

Funding for universities comes from multiple sources, at different junctures and for different purposes. Depending on an institution's context and capacity, the reliance on funding from the state varies, as does its ability to have a high fee contribution (because of the relative wealth of its student body). The ability to attract third-stream income also varies widely. A Ministerial Committee for the Review of University Funding has been appointed to review the current framework and to determine the university system's resource requirements over the next five to ten years. The following areas need to be addressed as a matter of urgency:

- If funding is to be a successful instrument for achieving the goals of the university system, then it is clear that new money has to be found to ensure that the current playing field is level. Current funding supports a planned growth of 2.8% and therefore does not allow for the expansion and demand as evidenced by the current growth of 4.6% within the system. Although infrastructure funding has provided some room for improving and developing facilities within our universities, it has not as yet enabled the creation of high-quality facilities at all institutions, nor has it addressed historical backlogs or enabled innovative ventures. This is evident especially in relation to increasing the numbers of students and consequently graduates in scarce and critical skills.

- Funding has not kept up with the rising costs of provision of university education, with the state contribution reducing quite sharply for all institutions. It is clear that state funding has not kept pace with the funding needed to support the increase in the volume of academic activity. This funding lag has contributed to an increase in fees.

- A significant component of existing funding is allocated on the basis of student numbers, with a two-year lag. The costing model for students works on the basis of a funding grid which allocates a weighting to specific fields. This model needs interrogation as it bears very little relation to the actual costs of teaching for a specific qualification.

- Research is an area that has multiple funders, with the DHET as a significant contributor, especially for postgraduate students. Stimulus funding is an area that needs to be explored, and requires fresh injections of funds as opposed to ear-marking existing funds for this purpose. It is critical that in order to ensure a continuous supply of academics who are active researchers, the DHET provides a pool of sufficient funds to trigger this within our institutions.

- The continuing high drop-out rate, low graduation rate and throughput rate suggests that there is still inefficiency and not enough support provided at the foundational and entry level. Significant progress *has* been made. There has been an increase of 5% in the national student success rate from 69% in 2004 (the introduction of the Foundation Provisioning and Teaching Development grants) to 73% in 2009. However, there is still an acute need for further improvement in performance, and this will require both funding interventions as well as focused attention on the part of institutions.

- Infrastructure broadly requires a dedicated fund which can be accessed by institutions to leverage external funding. It is also necessary to insert into the funding formula an allocation for the construction *and* maintenance of buildings and infrastructure.

- Student accommodation problems are very serious at a number of universities and make the development of student residence infrastructure a priority. Accommodation shortages and inadequacies result in a lowering of the quality of life of students, leads to social problems and militates against better academic performance. The study of the accommodation needs of students is currently nearing completion and will guide future plans.

- The affordability of fees must be examined carefully and consideration given to whether there is a need for government regulation of fees charged by universities. This could be done, for example, through a framework for fee-setting by institutions which could provide parameters and processes for fee increases.

6.8 STUDENT FEES AND NSFAS

Most institutions charge student fees. While they are essential to institutional survival in the current funding environment, in many institutions fees have been increasing dramatically and are a major barrier to access. The DHET remains committed to progressively introduce free education for the poor up to and including undergraduate level. This is the basis towards which the DHET needs to work.

The National Student Financial Aid Scheme of South Africa was created in 1999 through an Act of Parliament to provide a sustainable financial aid system for study loans and bursaries for academically deserving and financially needy students. It incorporated the Tertiary Education Fund of South Africa (TEFSA), a fund scheme set up shortly after the transition to democracy. TEFSA had struggled to meet the needs of students, leaving many universities to raise funds for needy students. Between 1999 and 2008 the funds managed by NSFAS grew from R441 million to R2.375 billion, providing financial aid to almost one-fifth of university students over this period. By 2011 the funds made available through NSFAS had grown to R6 billion and are expected to continue growing. These funds are largely allocated through the DHET, but include monies from other government sources. NSFAS has been instrumental in providing access to education for almost a million students from poor and working-class backgrounds who would otherwise not have been able to go to university.

Despite large increases in funds, NSFAS provisioning has not kept up with the increasing demand for higher education in South Africa. In 2009, the Minister of Higher Education and Training appointed a Committee to review the governance, management and operations of NSFAS. The review committee was mandated to examine the following: why the administrative capacity of the fund has not kept up with the growth in size of the fund; necessary growth requirements of the fund to increase access for poor students; and challenges relating to existing distribution and allocation policies and mechanisms. The Report was submitted and processed in 2010. Its recommendations included: expanding access to the fund; changing the institutional allocation formula to one that is class-based and not race-based; implementing an allocation formula that is student-centred rather than institution-centred; and changing the composition of the institutional allocation to cover the full cost of study. A comprehensive turn-around strategy was developed and is being implemented.

As mentioned earlier in this Green Paper, NSFAS has recently been extended to students in FET colleges. NSFAS also administers bursaries on behalf of other entities such as the Department of Social Development and the Funza Lushaka Teacher Education Bursary Scheme on behalf of the Department of Basic Education.

Starting from 2011, as part of government's policy of progressively introducing free university education to the poor, students in their final year of study who qualify for NSFAS assistance will receive the full cost of study as a loan. If the student meets the requirements for graduation in that year, then the loan will be converted to a bursary. The assumption underlying this incentive is that a number of students could then focus on completing their studies without worrying about the finances attached thereto, thus increasing the success and throughput rates. It is envisaged that this programme will steadily be introduced to cater for students in the pre-final years.

An important challenge that still remains is finding the resources to address those students who do not qualify for NSFAS loans because their families' incomes exceed the threshold of R122 000 per annum but who do not earn enough to qualify for commercial loans. This group includes the children of many teachers and civil servants – precisely the groups from whose children future professionals and academics come from in most countries. The government must find ways to meet this challenge.

6.9 PRIVATE HIGHER EDUCATION

The Bill of Rights in the South African Constitution (Act 108 of 1996) stipulates the right to establish and maintain independent educational institutions. The DHET recognises

this and the fact that independent (private) institutions play an important role in the post-school education and training environment. Any re-conceptualisation of a post-school education and training system would therefore be incomplete without reference to both public and private spheres. At the same time, the DHET acknowledges limitations in its understanding of the size and shape of the private higher education system. There are gaps, duplications and overlaps in datasets available through SAQA and the DHET. Indications are that there are between 8 000 and 12 000 private post-school education and training institutions. These institutions are of various shapes and sizes, the bulk of them being small or very small in size. There appears to be a significant not-for-profit contingent in the private higher education sector.

The Higher Education Quality Committee Information System (HEQCIS) developed by the Council on Higher Education has recently begun to collect and analyse data on private higher education institutions. As of 7 April 2011, there were 87 private higher education institutions registered with the DHET. However, the register only includes institutions that offer learning programmes which result in the award of whole qualifications at levels 5 to 8 of the NQF – in other words, certificates, diplomas or degrees at higher education level. This means that a considerable number of institutions offering qualifications based on unit standards (as reflected on the SAQA database) are not registered with the DHET. According to the SAQA database, there are at least 362 private higher education institutions. These include both for-profit and not-for-profit institutions.

The most popular type of qualification offered by private higher education institutions are Diplomas, followed by Bachelor Degrees, Certificates and Higher Certificates. In addition, private higher education institutions registered with the DHET are geographically concentrated in the provinces of Gauteng, Western Cape and KwaZulu-Natal. Student enrolment figures for these private higher education institutions range from fewer than 20 students to approximately 15 000 students. This exemplifies differences in the size of these institutions. Generally, private higher education institutions offer programmes in five broad fields of learning: culture and arts; business, commerce and management studies; human and social sciences; health sciences and social services; and physical, mathematical, computer and life sciences.

It is clear that the erratic nature of data in private higher education must be addressed. The DHET will investigate various data collection processes and structures. Part of this process will involve the need to integrate the SAQA and DHET datasets into a single, consolidated dataset.

It is also clear, despite the limitations of our current data, that a large number of post-school youth and adults are being serviced by the private higher education sector. As pressure to expand the public post-school education and training system mounts (specifically in relation to higher education), greater and better alignment between its public and private components becomes increasingly important.

The role of the private higher education sector, especially in terms of their specific contributions to increasing the participation rate and developing scarce skills, needs to be better understood by government and supported as far as possible. The DHET will develop a nuanced strategy to work with established private providers, especially those operating in priority areas, to strengthen and expand provision, ensuring that this occurs within the parameters of quality and accreditation requirements. The possibility of partnerships between public and private institutions should be explored within a clearly defined regulatory framework that sets out the parameters for operation.

The DHET understands that a more informed understanding of the private education and training sector is required, based on additional research, including, for example:

- An assessment of the scale of duplication and/or gaps in terms of data across the private higher education sector with the purpose of identifying mechanisms to bring all of the data ultimately under one authority.
- The strengths and weaknesses of the private higher education sector with the purpose of fully utilising the sector in terms of the needs of the post-school system as a whole.
- The typologies of institutions: When is an institution an institution? Can small or very small providers be considered to be institutions?
- The demographic features of students registering at private post-school institutions. The data seems to suggest, for example, that private higher education institutions attract a different student population than private FET and adult education institutions, with the most vulnerable groups to be found in the latter two sectors.
- The articulation and progression routes between and among private and public institutions. The lack of mobility of students between these two sub-sectors may constrain the achievement of an integrated, diverse system.

6.10 AFRICAN LANGUAGES IN UNIVERSITIES

The potential demise of African languages poses a threat to linguistic diversity in South Africa. Many African language departments at universities have closed down due to insufficient resources and diminishing student numbers. The DHET envisages a cross-disciplinary approach that concretises African languages as part of the formal programmes of institutions with targeted resources, materials and support. Some universities require that students of, for example, medicine or social work take a course in an African language. The extension of such a policy will be encouraged, and the DHET will investigate how to do so effectively.

In order to do justice to the language policy of the Department of Basic Education and to ensure that African children can be taught in their home language in primary schools, there is a need for universities to train teachers to teach African languages effectively as the language of learning and teaching. One way of ensuring better communication among all South Africans, as well as raising the status of African languages in our country, is by encouraging students to undertake at least one language course in the degree or diploma programmes. The DHET will engage with universities to find ways in which this can be done in a systematic fashion.

The Minister has recently appointed a panel to advise him on African languages in South African universities. The panel will examine and advise the Minister on policies to strengthen African language departments in universities and on ways to develop South African languages in science and academia.

6.11 INTERNATIONALISATION

The internationalisation of higher education has grown in the past two decades, and is a reflection of globalisation. It takes various forms. These include: cross-border movements of students and staff, including international exchange programmes; international research collaboration; the offering of joint degrees by universities in different countries; the establishment of campuses by universities outside of their home

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countries; the growth of cross-border education through satellite learning; the establishment of online distance education, including online educational institutions; arrangements between countries for the mutual recognition of qualifications; the harmonisation of qualification systems; and the increasing inclusion of an international, intercultural and global dimension in the curriculum.

Many of these international trends affect South Africa, largely to the benefit of our higher education system. In 2010, 66 113 foreign students were studying in South African universities. The vast majority (46 191 or 70%) were from countries belonging to the Southern African Development Community (SADC); most of the remainder (11 130) were from other African countries. In addition 3 653 came from Europe, 1 813 from Asia and 1 737 from North America. The remainder were from Australasia/Oceania, South America or were of unknown origin. In addition there were 6 000 foreign students in South African private higher education institutions. Unlike most countries which offer higher education to foreign students, in South Africa this is not a source of revenue but a cost as most foreign students cannot be charged the full cost of their studies. This is because the SADC Protocol on Education and Training requires all member countries to treat students from other member countries as local students for the purpose of tuition and residence fees.

Hosting tens of thousands of SADC students represents a major contribution by South Africa to the development of the sub-continent. It is also making a major contribution to the development of South Africa, because all countries in our region are interdependent and the strengthening of Southern Africa economies must inevitably result in the strengthening of South Africa's own economy. The presence of the future leaders of our sub-continent in South African universities is a great opportunity to build relationships which can flourish in the decades ahead, to the benefit of the entire sub-continent.

South African universities engage in collaborative research projects with other countries in many fields, and this plays an important role in ensuring that we participate fruitfully in international intellectual networks. These research links tend to be mainly with developed countries, but increasingly include collaborations with developing countries including India and Southern African countries. These linkages currently tend to be between the historically advantaged institutions and less so with historically black universities. The DHET will work towards facilitating stronger linkages between foreign universities and the historically black universities, and focus on the enhancement of teaching and learning as well as on research.

The establishment of the Southern African Regional Universities Association (SARUA) is starting to play an important role in promoting university linkages in the SADC region, and this has the potential to play an important developmental role in our region. The strengthening of all of these links is important. The state, through both the DHET and the National Research Foundation, should assist the development of collaborative intellectual and research networks, especially within the SADC region. The regular meetings of SADC Ministers of Education are another important forum for promoting co-operation between the universities – and indeed colleges – in Southern Africa.

The internationalisation of higher education could be used strategically to foster and strengthen both economic and political relations between South Africa and other countries. However, we must ensure that the strategic co-operative agreements we enter into are aligned to our foreign policy which places special emphasis on the promotion of regional partnerships, notably within SADC and the continent at large. The SADC region remains a number-one priority as far as our internationalisation efforts are concerned. This is in line with the SADC Protocol on Education and Training of which South Africa is a signatory. The Protocol aims to improve the standard and quality of

higher education and research by promoting co-operation and creating intra-regional synergies. This is happening in areas such as: the harmonisation, equivalence and eventual standardisation of entrance requirements; devising mechanisms for credit transfer; and encouraging the consistency of academic years to facilitate staff mobility and staff exchange programmes.

South Africa has a number of higher education programmes assisting African countries beyond SADC. An agreement with Rwanda, for example, allows 100 Rwandan students to study in South African universities on the same basis as SADC students, and has also provided study opportunities for students from other countries such as the Democratic Republic of Congo and South Sudan. Requests for similar assistance from the continent are growing and will need to be handled with care so that we assist those we can without unduly burdening our system.

Focus on the continent should, however, not be pursued at the expense of developing healthy alliances with the global North or new partnerships with developing countries such as the BRICS group of which South Africa is a member.

International co-operation which opens up opportunities for South African students to study abroad, especially for postgraduate, particularly doctoral, degrees could be of great assistance in producing high-level academic and technical personnel. It could assist particularly in producing the next generation of academics.

South Africa could, at least in the long term, begin to see the internationalisation of higher education as an opportunity to accrue revenue. This would entail attempting to attract foreign students to study in South Africa in the same way that universities in countries such as the USA, UK and Australia do, where higher education is a large earner of foreign revenues. Like these countries South Africa has the advantage of having English, which has become the dominant international language, as the main language of higher education. Part of the revenue generated from foreign fee-paying students could perhaps be directed into assisting needy students in South Africa or neighbouring countries.

This policy option has, however, to be explored with caution. Given the high demand for higher education places from South African students and the difficulty of our universities in meeting that demand, it may be counter-productive to treat higher education as the equivalent of an export industry. It is also true that, despite the advantages of educating SADC students in our universities, this is a costly exercise since, as noted above, they are subsidised in the same way as local students. This issue of using education as an income earner needs to be debated widely – not only in the higher education and training community but also by other government departments such as International Relations and Co-operation, Trade and Industry, Economic Development, Treasury and Home Affairs, as well as by organisations in civil society.

South Africa does not yet have a comprehensive, formal policy on the internationalisation of higher education. The only operational policy framework on international collaboration is the SADC Protocol on Education and Training. Thus, while internationalisation is a reality at individual institutional level, it remains uncoordinated, piecemeal and ad hoc at national level. There is a need to develop a national framework on the internationalisation of higher education. Such a framework would not only address itself to broader national imperatives but would also help to strengthen the existing international collaborative initiatives within the higher education system, particularly between South African and foreign universities. The framework would provide guidelines for new ventures, facilitate the recruitment of international staff and

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students and guide the development of government-to-government relations with other countries.

Any DHET internationalisation policy could only succeed if the Immigration Policy and rules pertaining to staff-student mobility are enabling. The restrictive aspects of the policy, which does not take into account the nature of international interaction specific to education, must be explored further with the Department of Home Affairs.

7. ADDRESSING DISABILITY WITHIN POST-SCHOOL EDUCATION AND TRAINING INSTITUTIONS

Currently, there is no national policy on disability that guides education and training institutions in the post-school domain. Individual institutions determine unique ways in which to address disability and resourcing is allocated within each institution accordingly. Levels of commitment toward disability vary considerably between institutions, as does the level of resources allocated to addressing disability issues. The DHET recognises that addressing disability is important, and thus is part of its policy and broader constitutional mandate.

For the DHET to effectively address disability as part of its policy framework, the scale of disability across the post-school education and training system needs to be determined. Existing data on disability is inadequate and often inaccurate. In light of this, the DHET intends commissioning a disability prevalence study across the post-school education and training sector so as to facilitate better planning at institutional and national levels. Subsequently, the study will be used to inform further policy on disability. Moreover, existing data management systems such as FETMIS and HEMIS will be improved to better monitor disability across the system.

White Paper 3 on the Transformation of the Higher Education System (2007) highlights the need for an equitable and just system of higher education that is devoid of all forms of discrimination including against the disabled. This is based on the principles of equity and redress. The principle of equity requires fair opportunities to enter higher education programmes and to succeed in them. This policy has clearly not been fully implemented, either by institutions or by the allocation of sufficient financial support by government.

White Paper 6: Special Needs Education: Building an Inclusive Education and Training System (2001) provides a blueprint for inclusive education in South Africa as a means to address the challenge of disability across the education landscape. However, the focus is very much geared towards schooling. Where there is mention of further and higher education, this is largely in relation to access. *White Paper 6* also calls for "regional collaboration" when addressing disability. In practice, this is restrictive in terms of access as it implies that institutions only cater for certain disabilities at the expense of others. However, the cost of provision is extremely high and this may be the best route in the immediate future.

Despite attempts to integrate disability into the broader policy arena, disability in post-school education continues to be managed in a fragmented manner separate to that of existing transformation and diversity programmes at the institutional level. As such, the DHET will work towards developing a *National Disability Policy and Strategic*

Framework, which will seek to create an enabling and empowering environment across the system for staff and students with disabilities. Institutions may then customise the policy in line with their institutional plans and strategies. Such a policy will also serve as a benchmark for good practice.

In addressing disability, the DHET must emphasise a holistic approach that moves beyond the built environment and the use of specialised technology and assistance devices geared for the disabled. It must also work towards a more integrated approach that recognises the importance of adapting teaching and learning methodologies where necessary. This will create more awareness of the needs of students and staff with disabilities, and build capacity to address disability at all levels of the institution including that of lecturers, support staff and management. This policy will be aimed at the integration of students and staff with disabilities in all aspects of campus life, including academic life, culture, sport and accommodation. Such an approach will attempt to prescribe guidelines for what may be described as "reasonable accommodation" practices for students and staff with disabilities.

In addition, the *National Disability Policy and Strategic Framework* will attempt to accurately define disability in a manner that takes cognisance of multiple types of disability, from the physical to the cognitive and psychosocial. Careful distinction will be made with respect to learning disabilities such as dyslexia and dyspraxia as these are often wrongly diagnosed as a language barrier. As part of the policy development process, the DHET will promote a multi-sectoral stakeholder engagement process that will involve collaboration with other departments – such as Health, Social Development and Basic Education – as well as various advocacy and rights-based organisations representing disability services within education and training institutions. Part of such an engagement process will be to ensure that students with disabilities receive quality education and training as well as health care.

As part of its commitment to drive the broad disability agenda of the DHET, a disability task team will be set up to look into various disability-related issues of concern. Part of the role of this task team will be how best to realign existing funding principles for public higher and further education and training institutions. Attention will be given to how best to support these institutions with respect to both the provision and maintenance of disability units, based on the number of disabled students enrolled.

Insufficient funding for and resourcing of disability units at historically black institutions compared to that for historically white institutions is a cause for concern. This situation has been exacerbated by the fact that disability grants have never been included in institutional subsidies from the state and have been dependent on individual institutions accessing external funding through fund-raising. Thus, a differentiated approach to disability, based on the existing resources and needs of these institutions, will be considered so as to meet the benchmarked standards outlined in the national policy framework on disability.

Furthermore, the DHET must commission research on disability so as to better inform its understanding of disability and its planning going forward. Special attention should be paid to the plight of women with disabilities, throughput rates of disabled students, and the need for sheltered training and work-based opportunities for students both during and upon completion of their programmes. The research will also address how best to utilise the *National Skills Development Strategy III* for this purpose. Curricula at existing institutions and skills development centres that provide such "sheltered employment" will also be revised.

8.   OPEN AND DISTANCE LEARNING: FLEXIBLE AND INNOVATIVE MODES OF DELIVERY

This document has noted the competing challenges to increase enrolment, throughput and curriculum relevance within a system and infrastructure that is already under strain. It has also highlighted the need for the post schooling system to cater for a very wide variety of potential student needs – including mature adult learners needing to learn and work at the same time, as well as younger people who may have dropped out of the schooling system due to financial, social, learning and other barriers to success.

Such students need access not only to a wide range of alternative kinds of programmes especially designed for their needs, but also to more flexible modes of delivery, which do not require them to attend classes very regularly, at fixed times and at central venues. Approaches based on distance education offer the potential to address these competing needs and challenges. Moreover, the emphasis that distance education places on well-designed learning materials allows for the possibility to achieve economies of scale. The challenge of turning the increased access into success requires substantial up-front investment in curriculum design and materials development. Attention must also be paid to issues of structure and pacing; meaningful formative assessment; investment in decentralised student support and increasing use of educational technology.

Programmes can be offered along a continuum ranging from provision based on a high level of contact and support on a regular basis (such as the Kha Ri Gude literacy programme) through to having contact in blocks or to more independent and decentralised approaches, supported by e-tutoring and mentoring. It is also possible to migrate between modes of provision based on changing needs.

The region already boasts examples of the successful use of such approaches. In South Africa over the last decade, distance education has accounted for nearly 40% of all public university headcount enrolments, equivalent to around 28% of full-time equivalent students. In 2009, this resulted in 25% of all public university graduates coming from distance education. On our borders, both Namibia and Botswana have successful open colleges (Namcol and Bocodol) which provide post-school opportunities for some 30 000 learners each.

8.1   NETWORK OF PROVIDERS AND SUPPORTING CENTRES FOR THE POST SCHOOLING SECTOR

Given the scope of the challenges in the post schooling sector, the potential of the above approach, and the increasing opportunities of educational technology, the DHET will now give serious consideration to creating a post-schooling distance-educational landscape consisting of
* a network of distance-education providers – described below – supported by
* a network of learning centres and/or connectivity for students, shared among the providers.

Advantages of this option include the development and availability of well-researched, high quality national learning resources (made available as open education resources for others to use), more efficient use of existing infra-structure for students, and an

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increasing emphasis on independent study as preparation for subsequent formal higher learning.

In due course, this network could include current, mainly face-to-face universities and colleges as more of them move to online provision.

8.1.1 A network of providers

In the university sector, distance education is increasingly well-served by Unisa, as well as the University of Pretoria, North West University, the University of KwaZulu-Natal and a handful of other public and private institutions. At this stage these providers tend not to collaborate on the offerings. However, the sector is poised to expand, with policy proposals being considered on how this may be achieved in a planned and systematic manner that enhances access with success, and on how they might share in the growth of both ICT infrastructure and learning centres. At a post-graduate level, increasing access to web technologies has already resulted in considerable growth of modes of delivery alternative to face-to-face. However, for the post-schooling sector below university level, there is currently little distance education provision.

In order to develop the provider network referred to above, consideration will be given to:

- Establishing national open college(s) offering a range of programmes from NQF levels 2-5, using distance education methods. Programmes could include those: targeted at South Africa's burgeoning proportion of youth who are unemployed and not in education, designed to enable them to become financially productive and socially invested members of society. They could offer: foundational skills at Grade 9 level; Senior Certificate subjects; NASCA and NCV programmes or parts thereof; and programmes offering access to university education which inculcate the necessary skills and discipline, and even include some university credits.
- Encouraging the Higher Education Institutes in Mpumalanga and Northern Cape as they conceptualize their growth to consider themselves as part of this growing network of distance providers in the post-schooling sector.
- Supporting the development and co-ordination of a network of online providers – both public and private - which would concentrate on specialized programmes that could increasingly become accessible to students through the use of technology at the learning centres.
- Encouraging existing and new providers to offer distance education programmes for professional development for existing educators and lecturers (including both FET college and university lecturers) across the post schooling sector. (For example, most of the tutors in the Kha Ri Gude programme were trained through Unisa's ABET programme.)

Essential to the effectiveness of the above providers would be the access to technology and the administrative and learning support provided by a growing network of shared learning and support centres.

8.1.2 Shared learning and support centres

Experience elsewhere shows that Open and Distance Learning (ODL) institutions that engage in inter-institutional cooperation in establishing and running study centres have sound student support services and reasonable student retention and throughput ratios

as a result. The Indira Ghandi National Open University (IGNOU), for example, has 3000 study centres across India and has a global presence in 66 countries. In Namibia, the Namibian Open Learning Network Trust (NOLNET) facilitates sharing of resources and minimises duplication of services and resources by open learning institutions in the country. There are 45 NOLNET centres across the country, over and above the more than one hundred study centres that are mostly located at existing formal schools – all of which are open for use by students of any of the institutional members of NOLNET. Bocodol in Botswana runs 75 fully functional study centres throughout the country.

There are a substantial number of learning centres throughout South Africa that could serve as sites for the support or provision of open and distance learning programmes. They could provide administrative and logistical support, as well as access to computers and online materials, including access to library online services. Possibilities for centres range over the nearly 2400 existing Public Adult Learning Centres (and the proposed Community Education and Training Centres). Another possibility is the use of the facilities at high schools, colleges and university campuses for contact sessions, particularly in the evenings and over weekends and school holidays. Multi-Purpose Community Centres could also be used.

However, with increasing access to wireless connectivity and mobile technology, in the medium to long term the emphasis of student support will shift from centre and contact-based approaches to on-line web-based approaches. The relative balance of investment in new centres and the upgrading of existing centres and investment in ensuring access for all post school students to mobile, connected technology needs to be carefully weighed.

8.1.3 Professional development

It will also be necessary to ensure continuing professional development for full-time staff in the post schooling sector, and for the increasing numbers of part-time (e-)tutors and (e-)mentors, in appropriate resource-based and/or distance education approaches.

8.2 IMPROVED ACCESS TO AND USE OF APPROPRIATE TECHNOLOGY

ICT is increasingly becoming a critical ingredient for participation in a globalised world, as well as being an indispensable infrastructural component for effective education provision, especially in the post schooling sector. South Africa's particular challenge is to ensure that this infrastructure is extended equitably to all post schooling students. Currently, access is grossly uneven, making it impossible for distance education and other providers to fully harness the potential.

Recent increases in the availability of bandwidth in South Africa and the increasing affordability of digital devices will require the DHET to develop plans to ensure that, within the foreseeable future, all post schooling students have meaningful access to appropriate learning technologies and broadband Internet.

Possible mechanisms include: