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CONTENTS

GENERAL NOTICES

NOTICE 1438 OF 2008

DEPARTMENT OF EDUCATION

NOTICE NO OF.2008

NATIONAL EDUCATION POLICY ACT OF 1996

CALL FOR COMMENTS ON THE NATIONAL POLICY FOR AN EQUITABLE PROVISION OF AN ENABLING SCHOOL PHYSICAL TEACHING AND LEARNING ENVIRONMENT

I, Grace Naledi Mandisa Pandor, Minister of Education after consultation with the Council of Education Ministers and in terms of section 3(4) of the National Education Policy Act,1996(Act No 27 of 1996), hereby declare the National Policy for An Equitable Provision of an Enabling School Physical Teaching and Learning Environment, as set out in the schedule.

All interested persons and organisations are invited to comment on the policy, in writing and to direct their comments to-

The Director-General, Private Bag X895, Pretoria, 0001, for attention: Mrs E Mamathuba, tel 012 312 5954, email mamathuba.e@doe.gov.za, fax 012 312 6058.

Comments must reach the Director-General on or before 23 December 2008.

G.N.M. Pandor

GRACE NALEDI MANDISA PANDOR, MP
MINISTER OF EDUCATION
DATE: 14-11-2008

SCHEDULE

NATIONAL POLICY FOR AN EQUITABLE PROVISION OF AN ENABLING SCHOOL PHYSICAL TEACHING AND LEARNING ENVIRONMENT

TABLE OF CONTENTS

TABLES

TEXT BOXES

ABBREVIATIONS AND ACRONYMS

ABET	Adult Basic Education and Training
BMP	Basic minimum package
CEM	Council of Education Ministers
CPAR	Country Procurement Assessment Review
DoE	Department of Education
ECD	Early Childhood Development
ELSEN	Education for Learners with Special Education Needs
FET	Further Education and Training
GIS	Geographic Information System
GET	General Education and Training
HEDCOM	Heads of Department Committee
ICB	International Competitive Bidding
ICTs	Information Communication Technologies
IDIP	Infrastructure Development Improvement Programme
JIPSA	Joint Initiative for Priority Skills Acquisition
LPPP	Leveraging Private Purchasing Power
NEIMS	National Education Infrastructure Management System
NSNP	National School Nutrition Program
PDPW	Provincial Departments of Public Works
PEDs	Provincial Education Departments
PFMA	Public Finance Management Act
PPPFA	Preferential Procurement Policy Framework Act
PPP	Public Private Partnerships
PRPs	Physical Resource Planners
SCM	Supply Chain Management
SGBs	School Governing Bodies
SRN	School Register of Needs
TA	Technical Assistance

EXECUTIVE SUMMARY

1.1. ***Historical background:*** In 1994, South Africa's democratically elected government inherited one of the world's most inequitable education and training systems. Unequal education opportunities wee fostered mainly through unequal distribution of education resource inputs that are known to negatively impact on student learning. Student learning outcomes were understandably acutely inequitable. The physical teaching and learning environment—school infrastructure and basic services—has historically been one of the most visible indicators of inequitable resource inputs. The majority of our learners were taught in decrepit and unsafe buildings; their schools had no electricity, safe water, sanitation, telephones or co-curricula facilities and equipment.

1.2. ***Significance of the physical teaching and learning environment:*** Yet as recent studies show, there is a link between the physical environment learners are taught, and teaching and learning effectiveness, as well as student learning outcomes. Poor learning environments have been found to contribute to student irregular attendance and dropping out of school, teacher absenteeism and the teacher and students' ability to engage in the teaching and learning process. The physical appearance of school buildings are shown to influence student achievement and teacher attitude toward school. Extreme thermal conditions of the environment are found to increase annoyance and reduce attention span and student mental efficiency, increase the rate of student errors, increase teacher fatigue and the deterioration of work patterns, and affect student learning achievement. Good lighting improves students' ability to perceive visual stimuli and their ability to concentrate on instruction. A colorful environment is found to improve students' attitudes and behavior, attention span, student and teacher mood, feelings about school and reduces absenteeism. Good acoustics improves student hearing and concentration, especially when considering the reality that at any one time, 15 percent of students in an average classroom suffer some hearing impairment that is either genetically based, noise-induced or caused by infections. Outdoor facilities and activities have been found to improve student formal and informal learning systems, social development, team work, and school-community relationships.

1.3. Inequalities in the teaching and learning environment may therefore frustrate core sector policies to improve education quality, equity of inputs and equity of outcomes.

1.4. ***Prior efforts to track provision:*** Cognizant of this reality, the Department of Education (DoE) set off to systematically document the extent and nature of provision of the physical teaching and learning environments that we inherited in 1994. Two years after the transition to freedom, DoE published the first ever school register of needs (SRN) that revealed stark inequalities and inadequacies in the teaching and learning environments of most our learners. Since then, the SRN had been updated in 2000 and then again in 2006. In-between these surveys, the DoE doubled efforts to close the gap in resource provision. These efforts were buttressed by the government's readiness to substantially increase resource allocations for school infrastructure and basic services from R 352 million in 1995/1996 to R500,000.00 to R 4.95 billion in 2008/2009. They were also enabled by the joint DoE and national Treasury interventions to strengthen institutional delivery capacities.

1.5. ***Progress and persisting challenges:*** Progress is evident, albeit inadequate and uneven. Inadequacies are stark in some aspects like the provision of school libraries where nearly 80 percent of schools are still without science laboratories, lack of computers for teaching and learning in 68 percent of our schools, and inadequate classrooms leading to overcrowding in nearly a quarter of our schools.[1]

1.6. Consultations on leading to the development of this policy highlighted that a typical South African school still does not provide a physical environment that enables effective implementation of core sector policies, such as the progressive curricula, co-curricula activities and the level of quality, equity, efficiency, relevance, and values.

1.7. Inadequate though current provision may be, the situation has phenomenally improved over the first decade and half of freedom. However, these improvements have progressed without a clear policy framework. The risk is that more resources may be invested without a clear definition of what constitutes an enabling physical teaching and learning environment in South Africa's schools of the future, without a clear benchmarking of progress toward the attainment of that environment, and without a clear monitoring of the impact of that environment on the attainment of our core sector policy targets and outcomes.

1.8. ***Policy rationale, goal and objectives:*** The development of this policy is therefore prompted by a dual need to more clearly and systematically define what constitutes an enabling physical teaching and learning environment for all South Africa's learners, and to ensure that future investments are aligned with that definition.

1.9. An overarching goal of this policy is to guide the provision of an enabling physical teaching and learning environment equitably for ***all*** learners in South Africa.

1.10. Specific objectives are to facilitate the attainment of:

- broad-based access to education, training and skills development opportunities,
- equity and redress of inherited inequities in provision and associated outcomes,
- quality and effectiveness of education, training and skills development,
- functional relevance / responsiveness of the physical teaching and learning environment,
- efficiency of provision, management and usage of elements of the environment, and
- national values (democracy, excellence, accountability, social cohesion, diversity, innovation and creativity, critical thinking and judgment, cooperation, etc.)

1.11. ***Process followed in developing this policy:*** The process of articulating this policy has been consultative and collaborative. The DoE was supported by the World Bank which worked very closely with South Africa's experts at the central level and in provinces. The DoE also worked in close consultation with other key departments such as Treasury and Public Works. Consultants included curricula experts at the national and provincial levels, physical planners at all levels, and the Council of Education Ministers (CEM). The latter accepted this policy as robust and sound enough to guide future and equitable provision of an enabling physical teaching and learning environment.

1.12. ***Conceptualization of an enabling physical teaching and learning environment:*** In the process of articulating this policy, the DoE recognized that the current conceptualization of the physical teaching and learning environment as pertaining to school infrastructure and basic services was too narrow to facilitate and even reinforce the level of education and training that reflects the needs of our economy. Over the past year, the DoE therefore elaborated its concept of the physical teaching and learning environment to include: school infrastructure, basic services, furniture, equipment, co-curricula facilities, books and instructional materials.

1.13. ***Key areas requiring strategic and operational policy direction*:** The consultative and collaborative process also identified 6 principle areas as required for a clear national strategic policy direction and 2 principle areas for a clear national operational policy direction. In that order, these are:

- the authority for setting norms and standards that should guide the adequacy, equity and fit-for-purpose of the physical teaching and learning environment,
- a system for setting priorities for provision, and in a manner that facilitates the actualization of key sector policies—which are: quality, equity, relevance, efficiency, and values,
- a system of planning to address identified priorities,
- a contextually adaptable system for standardizing architectural designs that respond to core sector policies, teaching and learning requirements, set priorities for provision, and that ensures effective cost management and cost control,
- a system for timely and cost-effective management and maintenance of assets created as part of an enabling physical teaching and learning environment that optimizes usage and longevity,
- diversification of funding sources that is financially feasible, sustainable, and that eases the burden of provision on the government,
- a system for ensuring the adequacy of capacity to deliver the required elements of the environment, and
- a system for effective management of procurement procedures required to assure time and resource efficiency, transparency, cost management, and quality of services and outputs.

1.14. ***Policy statements:*** The 6 strategic and 2 operational policy statements are summarized as follows:

Policy Statement # 1: Nationally established norms and standards for an enabling environment

1.14.1. Effective from 2008, norms and standards for the physical teaching and learning environment will be set at the national level by the Department of Education. National norms and standards will set and express in terms of minimum and optimum provision. Along this continuum, norms and standards for school safety, functionality, effectiveness and enrichment will be explicitly defined at a national level by the Department of Education. The DoE will also set clear target dates by which a set proportion of schools will meet each level of enablement in its environment. The DoE will also set a clear date by which ***all*** *South Africa schools will meet norms and standards for effectiveness.*

1.14.2. National norms and standards will be developed during 2008, and fully adopted by the end of 2009.

1.14.3. Provinces may adapt national norms and standards to their contexts without prejudice to set minimums. Effective from January 2010, all provinces will have aligned their provision programs to national norms and standards and set targets. By the end of the current strategic plan period—2008 to 2012—all schools will meet inputs and process norms required for safety, functionality and effectiveness.

1.14.4. As need arises, national and/or sector strategic development priorities will be translated into enrichment norms and standards as defined by the Department of Education. These norms will be defined in response to current national and sector development imperatives. Such dictates may be the need to ramp up certain outputs such as in the Dinaledi project. It may be to fast track reaching international benchmarks

required to be competitive. It may be 'catching up with international developments' such as the mooted 'schools of the future'. It may be to create regenerative capacity that can later be applied to ramp up equitable quality such as in the creation of pockets of excellence. It may be to ride a global market tide as in the case where a certain skills mix is required within a short period of time. It may be the need to level the playing field where the floor is too low relative to the ceiling and needs to be raised within short time spans, etc.

1.14.5. The national Department of Education will execute the meeting of enrichment norms and standards.

1.14.6. Access to and benefits from enrichment norms will be equitable. In real terms, if going beyond the norm is creating justified inequality, the justification has to be explicit, transparent, and owned by a reasonable threshold of stakeholders. Such strategic inequalities should therefore be "mandated inequalities". The process and decision on who has the mandate or how the mandate is created will be transparent. Such a mandate will vest in the Office of the Minister of Education—because it is responsible for overall sector development.

1.14.7. Because even "mandated inequalities" may violate the national and sector "norm of equal opportunity" the distribution of opportunities to schools and/ or programs that go beyond effectiveness criteria will itself be explicitly and transparently equitable. Criteria will therefore be equity based. Proposed principal criteria are aptitude, exceptional achievement, and redress.

Policy Statement # 2: Systematized establishment and prioritization of infrastructure needs

1.14.8. Effective from 2010—criteria and procedures for the identification and prioritization of the teaching and learning environment needs will be nationally standardized by the Department of Education. Provinces may adapt national procedure to reflect their unique contexts. Provincial adaptations may not lower the national minimum criteria, but may only pertain to enrichment but not diminution. Irrespective of the source—individual school funds, donor funding, public funds—all resources available to Provinces have to first be applied toward meeting nationally set priority needs. Except where nationally set priorities are fully met, Provinces may not apply funds for enrichment purposes.

Policy Statement # 3: Planned development of an enabling environment

1.14.9. Effective from 2010, the DoE will adopt a "planned development" of the physical teaching and learning environment. A national strategic plan will be developed in line with critical sector and thematic policy priorities. The national plan will be prepared on a long term—20 years—medium term—5 years—and short term basis—1 year. It will set national and provincial strategic objectives and targets to be achieved within each plan period. The strategic plan will provide the substantive base for investment planning. Irrespective of the source, the financing of the physical teaching and learning environment will be provided within the framework of the strategic plan.

1.14.10.In addition to the strategic plan, the development of the physical environment will be guided by mandatory recurrent planning instruments vis annual implementation plans, procurement plans, financial and disbursement plans. The national department will also develop mandatory medium term and short term results frameworks that will guide the monitoring and evaluation of the development of the physical environment.

1.14.11.Consistent with the national approach provinces will adopt a "planned development" of the physical teaching and learning environment. Provincial plans will be set within the same terms as the national plan. They will reflect strategic objectives and targets as set in the national plan. Likewise financial provision will be provided only within the framework of the provincial plan.

1.14.12.Provinces will also develop all plans that are mandatory at the national level. Their provision program may not be funded before clearance of mandatory plans by a set authority.

Policy Statement # 4: Standardized architectural designs

1.14.13.Effective from the new strategic plan period, all new construction and extensions will follow standardized designs. To the extent possible, major rehabilitation will integrate key elements of the standard designs—e.g., accessibility. The national department of education will produce prototypes of standard designs to match the typology of schools. The designs will be a product of a clear analysis of key education functions and activities to be carried out within proposed physical spaces. Design prototypes will respond to core activities and facilitate them. Standard designs will also be guided by core sector policies such as physical access and substantive relevance. Provinces may adapt standard designs to specific geographical contexts and to specific construction sites. Such adaptations will not digress from the essence of the design, and especially not reduce responsiveness to policy priorities and sector needs.

1.14.14.Standardized menu of prototypes will be used to create cost maps and to control construction costs. An allowable margin of variance from the cost maps should be determined and circulated. Any new construction that goes beyond allowable variance will be subject to prior review—by proposed head of provincial department—and clearance. The clearance system will be embedded in the procurement process and become part of the criteria for bid evaluation.

Policy Statement # 5: Management and Maintenance

1.14.15.By the end of 2010 the DoE will have developed a national policy on the management of immovable assets. Minimum parameters of that policy will include: standardized acquisition of assets; standardized and current register of assets, current information and data base; standardized recording and tracking of the value of assets; insurance of the assets; efficient usage, timely and adequate maintenance, rehabilitation, and disposal. This policy will be under implementation by provinces and schools by the start of the new strategic plan period.

1.14.16.Within the same time span, the department of education will also develop a comprehensive maintenance policy for school infrastructure, basic services, furniture and equipment. The policy will entail norms and standards for preventive and corrective maintenance as well as replacements. It will entail the allocation of responsibilities for certain types of maintenance in terms of financing, execution and quality assurance. Thresholds for certain types of maintenance will also be included. This policy should be effective from 2010.

Policy Statement # 6: Diversification of funding sources

1.14.17.The department will institute a differentiated diversification of funding for the physical teaching and learning environment with a target to source a minimum of 25

percent of the current capital fund from non-public sources by 2010. A range of non-public financing mechanisms will be tapped and mapped to appropriate contexts. Among the range of financing mechanisms, we will consider: private public partnerships (PPPs), leveraging private purchasing power (LPPP); international donors, securitization, guarantees for commercial banks lending to schools; privatization of the management of public schools; national lenders and international lenders. Provinces will also aim to reach the same level of national target using similar approaches.

Policy Statement # 7: Demonstrated delivery capacity

1.14.18.The DoE will intensify the devolution of responsibility, authority and accountability for the provision of school infrastructure to the lowest feasible level in the education system which is the school. The definition of functions to be devolved will be explicitly and uniformly specified based on best practices for effective delivery and not on current capacities of levels of devolution. A capacity development program will be developed and implemented to ensure a roll out of the devolution process in accordance with the plan. Full implementation of the plan should be completed by 2012.

1.14.19.The DoE will integrate all infrastructure delivery functions which are currently carried out by different agencies and unify responsibilities and accountabilities. All infrastructure provision operations managed and coordinated under Treasury, other than the actual provision of funds, should be moved to the DoE. Equally, all infrastructure operations managed by the DoPW should be moved to the DoE. At provincial level, the coordination and management of all operations should be in the hands of the PEDs.

1.14.20.A comprehensive capacity development program should be developed and implemented immediately to enable the DoE and PEDs to effectively and efficiently deliver key elements of the teaching and learning environment.

1.14.21.The DoE and PEDs should retain full authority to appoint agents to augment their delivery capacity for key elements of the teaching and learning environment. Such agents should be under the full supervision of the DoE and PEDs.

1.14.22.During peak periods, the DoE may create an agency centrally to manage the delivery of key elements of the teaching and learning environment. Such an agency should report to the national and provincial departments of education. The agency will be dissolved at the end of the peak period and full responsibility for delivery will revert to the national and provincial departments of education.

Policy Statement # 8: Systemysed procurement management and procedures for the sector

1.14.23.Effective from 2012—procurement of all elements of the physical teaching and learning environment will comply with the standardized sector-specific procurement procedures. These procedures will be developed by the DoE, in compliance with the overall national procurement policy and procedures. All provinces will comply with set sector-specific procedures.

1.14.24.*Effective from the new strategic plan period 2010—responsibility and accountability for the actual execution of procurement procedures will be with PEDs and not with a multiplicity of agencies as is currently the case.*

1.14.25. *Effective from the new strategic plan period 2010—authority for procurement execution will be devolved to the lowest appropriate operational level.*

1.15. This rest of this document presents the country and sector context of this proposed policy, its rationale and strategic direction, objectives, 6 strategic policy statements, and 2 core operational policy statements essential for effective implementation of the 6 strategic policies.

1.16. For each policy statement, key challenges that it seeks to address are presented, prior and ongoing efforts to address these challenges, persisting challenges that provide the justification for that specific policy statement, policy actions required to enable the implementation of that specific policy statement, expected benefits of each policy statement, expected costs, key risks and strategies that have to be put in place to mitigate those risks.

1.17. The DoE is pleased to present this proposed ***national policy on equitable provision of an enabling school physical teaching and learning environment*** for public comment.

CHAPTER 1: HISTORICAL CONTEXT

Introduction

1.1. The 1994 transition to freedom came with as much opportunities as it did with challenges. Among key challenges that we inherited was an education, training and skills development system (ETSDS) that was designed to provide the majority non-white population with inferior education opportunities and experiences. One of the forceful tools the apartheid regime used to foster unequal education opportunities was the unequal and unjust distribution of fiscal resources. For instance, prior to independence in 1991, per capita spending on a white child was 350 percent more than on a black child.[1] For the majority of learners, this skewed financing translated into acute shortage of resource inputs that are known to impact teaching and learning. Examples include inappropriate and ill-balanced curricula, unqualified and ill-prepared teachers, ill-prepared school managers, inappropriately used school inspection, limited books and instructional materials, overcrowded and unsuitable teaching spaces to name a few. As a consequence of inferior education opportunities, the majority of learners realized much lower learning outcomes than their well-resourced and well-catered-for counterparts.

1.2. This situation could not continue under a democratically elected government that espoused the norm of equal opportunity for ***all.*** Equality of education opportunity was, and is still deemed critical, not only because it is one of the constitutional rights, but also because education is the single most powerful determinant of other life opportunities, including the opportunity for education itself! For that reason, equity and redress rank high amongst principles that permeate our sector policies, strategies and programs.

1.3. During the first decade of freedom, the Department of Education (DoE) focused mainly on the development of overall sector policy, legal, institutional and financing frameworks that give effect to the norm of equal opportunity. Significant progress has been registered. A unitary ETSDS was established from the fragmented apartheid system; access was broadened at all levels of the ETSDS; provision of resource inputs has become more equitable; and progress toward equity of learning outcomes is evident. By 2006, per capita spending on a white child had declined to 22 percent more than on a black child.[2]

1.4. With the basic frameworks in place, during the second decade of freedom, the focus of attention turned to the development of specific sub-sector, thematic and topical policies. As a result, there are now policies on early childhood development and pre-primary education, ABET and inclusive education, to name a few.

1.5. This policy addresses one of the thematic areas that has historically been one of the most visible indicators of unequal resource provision: *The physical teaching and learning environment.*

1.6. For purposes of this policy, *the physical teaching and learning environment* is broadly conceived as comprising school infrastructure; basic services; furniture; equipment, books, teaching and learning materials, and co-curricula facilities and equipment. School infrastructure is broadly conceived to include the physical teaching and learning spaces (classrooms, laboratories, computer laboratories; workshops and other specialized teaching rooms); spaces that support teaching and learning (media rooms, multi-purpose resource centers, multi-purpose school halls, gymnasia, libraries, counseling centers, health centers); sport facilities; school administrative facilities; facilities for school nutrition and feeding

programs; and teacher housing etc. Basic services include clean and safe water, electricity, access roads, sanitation, telephone and/or other communication systems.

Systematic tracking of the state of provision

1.7. From the onset, it was recognized that accurate and reliable data is critical for tracking progress toward *equitable provision of an enabling physical teaching and learning environment.* In 1996, two years after the democratic transition, the DoE launched the first ever school register of needs (SRN) survey. The survey covered the conditions of school buildings, and available facilities in all the 26,734 ordinary schools. The 1996 SRN provided an invaluable baseline database on the provision of school infrastructure and basic services. Since then, the data was updated and elaborated on in 2000 and again in 2006.

1.8. The 2000 SRN covered 27,148 ordinary public and independent schools. It went further than the 1996 survey to include 3000 institutions previously not covered and 390 schools for learners with special needs.

1.9. In addition to public schools, the 2006 survey (referred to as the National Education Infrastructure Management System [NEIMS]) covered public early childhood development (ECD) centers, adult basic education and training (ABET) centers, centers for the education of learners with special needs (ELSENs), and education offices operated by the DoE.

1.10. Other than broadening coverage of the series of SRNs, the DoE has continued to refine the methodology and scope of the surveys. Reflective of its label, the NEIMS adopted a systemic approach that differs from the first two surveys. Its invaluable additions include standardized assessment instruments; a web-based database from which data on the overall national education asset register can be imported; and a GIS-based infrastructure management system that will become an integral part of the overall facilities management system. It also took a more specific approach to assessing the condition of each element of the infrastructure. This specificity allows for better estimates of the investment required to address the poor condition of infrastructure, estimates of condition backlog values and estimates of replacement values.

1.11. The NEIMS also included information and functions that enable timely and sustained monitoring of the state of provision. These functions allow for immediate remedial action which was not possible based only on the 1996 and the 2000 surveys. For instance, the 2000 survey showed a substantial increase in the construction of classrooms and the delivery of basic services since 1996. However, it also documented significant deterioration in the conditions of schools owing to poor maintenance. With the functions provided in the 2006 survey, such deterioration might have been remedied on time; had the same functions been available earlier.

1.12. Collectively, the three surveys provide for the tracking of improvements in *equitable provision of an enabling physical teaching and learning environment* over the decade (1996 to 2006). Table 1 presents highlights of progress made; albeit inadequate and uneven.

Table 1: Trends in Provisioning School Infrastructure and Basic Services

Year	Total [3]Ordinary Schools Surveyed	Schools without Electricity	Schools without water on site or near	Schools without toilets on site	Schools without telephone	Schools without computers for teaching & learning	Schools without library	Schools without labs	Classrooms with 45 or more learners

1996	26734	59.2%	34.1%	12.2%	60.6%	68.6%	82.1%	75.6%	56.6%
2000	27148	44.6%	28.8%	9.2%	35.5%	67.0%	81.2%	75.9%	42.2%
2006	25095	17.1%	12.6%	6.1%	9.1%	68.0%	79.6%	60.5%	24.3%

1.13. The progress in Table 1 is attributable to a combination of factors; including overall economic growth, government readiness to significantly increase budget allocations for school infrastructure, and institutional capacity strengthening. The budget allocation for school infrastructure increased from R 352 million (0.06% of the GDP) in 1995/1996 to R 4.95 billion (0.24% of the GDP) in 2008/2009. This constituted an increase from about 1.67 percent of the total capital expenditure in the sector in 1995 to 5.22 percent in 2008/2009.

1.14. Increases in budget allocations were not always met with commensurate absorptive capacity at the provincial level. In response, the DoE strengthened institutional delivery capacity by establishing the Physical Planning Directorate in 2001, and established designated positions of Physical Resource Planners (PRPs) in PEDs. In 2005, the National Treasury established the Infrastructure Development Improvement Project (IDIP) to augment efforts of the DoE and further strengthen the delivery and absorptive capacity of the PEDs.

Rationale for policy and strategic direction

1.15. The progress as outlined above was realized without specific national or provincial policies or strategies to guide and support the development of the physical teaching and learning environment. Because of unclear policy and strategic guidance, objectives and targets, it has been difficult to assess the current environment as adequate or inadequate against clear benchmarks which had been pre-set. It has also been difficult to find robust evidence against which an assessment of the technical efficiency and substantive responsiveness of the current environment can be made. This has made it difficult to clearly and operationally define what constitutes an enabling physical teaching and learning environment for South Africa's future schools.

1.16. Evidence collected during the process of developing this policy suggests that the environment is neither technically efficient nor substantively responsive. In addition, current provision of the physical teaching and learning environment remains uneven and inequitable. A current average school in South Africa does not provide a physical environment that facilitates effective teaching and learning; effective curricula delivery, effective implementation of key sector policies and programs, or promotes adequate student health and safety. It is even more doubtful if the environment provided by our schools can efficiently enable South Africa to take its ETSDS to the level of quality, equity, efficiency, cultural and value sensitivity, and development responsiveness of countries of comparable economic stature, let alone facilitate the transition to such levels.

1.17. While during the past decade enormous progress was recorded toward improving provision and redressing inequalities, substantial effort is still required to transform South Africa's schools into enabling physical teaching and learning environments.

1.18. The NEIMS showed that in 2006, a substantial proportion of schools could not be classified as providing an enabling physical teaching and learning environment. Nearly 15 percent of learners were taught in environments that expose them to danger and to potential health hazards. About a quarter of classrooms were overcrowded. Intolerably high proportions of schools lacked facilities that are critical to teaching and learning such as libraries, science laboratories, computers and other ICTs. Data on the adequacy of books and instructional materials is at best scanty. About 62 percent of schools had no arrangements for sewage disposal. Nearly 80 percent of schools had more than 50 learners per toilet. Of the schools that reportedly had a source of safe water, 56 percent were served by the municipality of which nearly 17 percent experienced unreliable water supplies. Unreliable supply of electricity was

also common among schools that reportedly had it. While school construction had increased, maintenance had deteriorated. In 1996, 11 003 schools were reportedly in excellent to good condition. By 2000, the number had dropped to 5 078. In 2006, 26 percent of schools were in either poor or very poor condition.

1.19. Not surprisingly, persisting inadequacies in the physical teaching and learning environment have gained significant media and political attention, even prominently featuring in the Presidential State of the Nation Address of February 2005.

1.20. In response, the 2008/20012 strategic plan of the System Planning and Monitoring branch of the DoE identifies the development of norms and standards as well as the Basic Minimum Package (BMP) for the provision of school infrastructure as a first priority policy issue. It also identifies the development of "physical resources for quality education especially school infrastructure" as a second strategic priority action One of the key actions under this strategic priority is the development of a comprehensive investment plan "based on agreed norms and standards...."

1.21. This policy responds to persisting challenges in the provision of an enabling physical teaching and learning environment. It builds on successes of the past decade and endeavors to address persisting gaps. It takes the future development to the next level that should enable South Africa to equitable and efficiently provide high quality learning environments, culturally sensitive values and development-related education, training and skills development experiences for ***all*** its learners. The policy seeks to transform the environment into an enabler for effective implementation of sector policies, effective curricula delivery, and effective teaching and learning processes.

CHAPTER 2: SECTOR CONTEXT: ENABLING THE IMPLEMENTATION OF SECTOR POLICIES AND PROGRAMS

Introduction

2.1. The first decade of freedom witnessed the development of a rich base of sector-wide policies, legal and financing frameworks, and institutional development. Curricula and pedagogy have been improved, as well as student and system evaluation mechanisms. A key feature of these policies, programs and legal instruments is their interdependence on effective implementation and desired impact. Like all other aspects of the system, the physical teaching and learning environment may facilitate or impede the implementation and desired impact of sector policies, programs and legal instruments. In this particular case, the current environment, if not urgently attended to, may often play an impeding rather than facilitating role.

2.2. This policy is expected to facilitate the implementation of existing policies, programs and legal instruments in two principal ways: Firstly, it addresses elements of the physical teaching and learning environment that constrain effective policy and program implementation. Secondly, its strategic direction may set new parameters for existing policies and programs. From this perspective, this policy may improve the realism and/or feasibility of existing policies, their currently set strategic targets and the scale and nature of programs. This may particularly be the case where the demands of existing policies on the teaching and learning environment cannot be met- cannot be met within a specified time frame, may not be met at the level of set targets, or are dissonant with non-negotiable tenets of this policy. This latter situation may induce or cause a revision and/or reconsideration of existing policies, programs and/or their strategic targets. The reverse, it should be noted, may also be the case.

Responding to the demands of existing sector policies and programs

2.3. One of the key rationales for this policy is to guide future provision of the environment and to ensure that it adequately responds to the demands of, amongst others, the following key policies, programs and legal instruments.

2.4. ***The Constitution:*** The constitution, specifically section 29 (1) of the Bill of Rights, states that everyone has the right to basic education, including adult basic education and to further education which the state, through reasonable measures, must make progressively available and accessible. The constitution provides for compulsory primary education. However, in real terms, the Bill of Rights obligates the government to take appropriate/reasonable measures to make secondary and further education progressively accessible to ***all***. Section 9 (2, 3, 4, and 5) of the constitution further obligates the state to attain equality of opportunity and to be non-discriminatory.

2.5. ***The South Africa Schools Act:*** Section 3 of the 1996 South Africa Schools Act (SASA) provides for a compulsory general education phase for ages 7 to 15 or grade 1 to 9. Provincial

MECs are responsible for providing school places for every child of eligible age for the compulsory GET. Other than legal instruments, South Africa's skills shortage and the overall development imperative suggest that quality senior secondary education should be accessible to ***all*** eligible learners.

2.6. ***Student Admission Policy:*** The 1996 SASA also guarantees that "... no learner may be denied admission to an ordinary school on any grounds, including grounds of disability, learning difficulty or pregnancy".

2.6.1. ***Implication for the teaching and learning environment:*** The above three legal instruments demand that education, training and skills development opportunities should be extended to ***all*** South African learners in an equitable and non-discriminatory manner. The currently wide disparities in the provision of the physical teaching and learning environment violate the rights of citizens enshrined in these instruments in two principal ways: Firstly, by affecting physical access to education and training. This may be the case where schools are not within walking distance from learners and where there are no alternative means of access such as hostel accommodation or learner transportation. It may also be the case where learners with physical challenges do not have real access to facilities. Secondly, by affecting the quality of instruction learners are exposed to, thus leading to unequal opportunity. This may be the case where intolerable differentials in the environment—classrooms, special teaching rooms, laboratories, co-curricula facilities, libraries, books and instructional materials, equipment etc.—lead to substantial differences in learning outcomes. Equity in the provision of an enabling physical teaching and learning environment is therefore a constitutional right and not just a desirable state.

2.6.2. From a political and social angle the conditions under which some learners are taught are simply unacceptable. It is reminiscent of the old regime and socially and politically intolerable.

2.7. ***Early Childhood Development and Pre-Primary Education:*** The government has adopted a pro-poor expansion of universal access to quality ECD. The DoE aims to reach universal access to 1.7 learner years of quality ECD to 5-year olds by 2011. In real terms this means an expansion of substantive access (not just nominal access) from about 200,000 children at present, to the full 900,000 children of eligible age.

2.8. Meeting the demands and targets of this policy has enormous implications for the provision of infrastructure and/or efficient use of existing infrastructure. There are also significant implications for the provision of furniture, equipment, books and instructional materials.

2.9. ***Inclusive education:*** *White Paper No. 6: Special Needs Education, Building an Inclusive Education and Training System* underpins the development of an inclusive education and training system. Guidelines for the implementation of this policy have also been articulated. The 2008/2012 sector strategic plan targets that by 2012, 400 special schools would have been reviewed, rationalized and upgraded to offer quality education and support as resource centers that provide professional support to ordinary schools. These centers will also provide support to an estimated 280, 000 out-of- school youth with disabilities. In addition, 80 percent of all schools will be adequately resourced to provide inclusive education by 2012. 500 Primary schools will be converted into full service schools.

2.10. In addition to the inclusive education policy, ***the National Building Regulation of 1986*** stipulates that all new buildings must be accessible to all. Designated full service schools that were built before this date should therefore be adapted to comply with this regulation. All new

schools should take accessibility into account. More than just the infrastructure, some furniture may need adjustment to allow for easy movement and seating.

2.10.1. ***Implication for the teaching and learning environment:*** Table 1 in Chapter 1 points to the level of effort required to give full effect to the admissions policy, inclusive education policy and to the national building regulation. At the same time, the feasibility of the set policy targets may need to be reconsidered as their cost implications on the physical environment and their demand on implementation capacity are evident.

2.11. ***E-Education, reading, mathematics and science education:*** The Joint Initiative for Priority Skills Acquisition (JIPSA) and the current sector strategy prioritize mathematics, science, and reading. To facilitate reading, the sector strategy will among others, ensure that by 2012, all grade 10, 11, and 12 learners receive a minimum of 7 textbooks each. The provision of libraries and library stocks will be substantially enhanced across all schools.

2.12. As part of the JIPSA projects, the first implementation phase of the mathematics science and technology improvement strategy (referred to as Dinaledi Schools) was launched in 2001. The project is expected to improve student learning outcomes in mathematics, science and technology significantly. It mostly caters for disadvantaged learners with demonstrable potential in these subject areas. Relative to the rest of our schools, these schools are adequately resourced to become centers of excellence in these subjects. Their impact is beginning to show.

2.13. The 2004 White Paper on e-Education sets out to transform teaching and learning through ICTs. The target is to have every learner in the GET and FET band ICT capable by 2013. In addition, the 500 Dinaledi schools and 50 FET colleges will be connected and capable to enhance administration and management functions by 2009. By 2011, the same set of Dinaledi schools and FET colleges will have ICT infrastructure for teaching and learning purposes and 35 percent of the schools will be e-ready. By 2010, all high schools will be connected, have access to the internet and use ICTs for management and administration. By 2010, 50 percent of all schools will be connected, have access to the internet and use ICT for management and administration. In addition, high quality electronic curriculum content resources will be increased and the portal will be extensively used as a curriculum content resource for communication. Within this strategic plan period, the capacities of ICTs for the national and provincial structures will also be substantially enhanced.

2.13.1. ***Implication for the teaching and learning environment:*** A significant improvement of the reading scores of our learners will require substantial improvements not only to the provision of textbooks but also to the provision of supplementary materials through well stocked libraries and/or innovative mechanisms of bringing library stocks to learners. Yet as shown in Table 1, a substantial numbers of schools do not have libraries. While it can be noted that it may not be feasible for all schools to have libraries, the provision of adequate library stocks in hard and/or electronic form to ***all*** learners is an equity imperative.

2.13.2. Improvements to student learning outcomes in science have implications for the provision of science laboratories or at a bare minimum, equipment that allows for the simulation of science experiments for learners' virtual experience. Yet, Table 1 shows that 60 percent of schools do not have science laboratories and/or suitable substitutes. On top of all this, the expansion of Dinaledi schools demands heavy investment in laboratories, equipment, instructional materials and consumable.

2.13.3. Effective implementation of the e-education policy implies substantial investments in suitable infrastructure for ICTs and in appropriate equipment. There are also implications for the provision of such basic services as reliable and affordable power supplies and telecommunication systems. As presented in Table 1, nearly 70 percent of schools do not have computers for teaching and learning purposes currently. A significant number of schools rely on cell phones for their daily communication. Connectivity is not readily possible for a fair number of schools. Where available, sustained affordability of connectivity is in even greater doubt. Power supply is still unreliable, not only for schools but even for the whole country. These constraints point to improvements required in the environment if this e-education policy is to be implemented effectively, its targets to be attained and its impact to be realized in an equitable manner.

2.14. ***Curricula and pedagogical reforms such as the OBE and NCS:*** The introduction of OBE and learner-centered pedagogy imply the need for more generous classroom spaces and furniture that allow for flexible seating and grouping arrangements. They also imply better equipped classrooms and special teaching areas, more flexible multi-purpose learning areas, learning resource centers, library stocks, ICTs and more enriched teaching and learning environments.

2.14.1. ***Implication for the teaching and learning environment:*** Effective implementation of these reforms suggests dramatic changes to the physical teaching and learning environment. As shown in Table 1, a little more than a quarter of classrooms are overcrowded, there is shortage of laboratories and other relevant equipment, library stocks remain scarce, even for schools with library buildings. Without adaptations to norms and standards for provision of these elements, there is a clear risk of failure to attain the intended benefits of such curricula and pedagogical reforms.

2.15. ***Sport in education:*** The priority accorded to sport education has implications for school sites, sport facilities and equipment. The same will apply for the emerging emphasis on art and music. A large proportion of schools do not have adequate grounds for learners to play safely, let alone sports facilities and equipment. This priority program will not realize its intended impact if adjustments are not made to norms for the size and appropriateness of school sites. In particular, it is difficult to see how farm schools and small rural schools could prioritize sport if no serious adjustments and/or innovations are made.

2.16. ***National school nutrition program (NSNP):*** In 2004, the DoE took over responsibility for this program from the Department of Health. Adopting a pro-poor sequence, the DoE seeks to ensure that 60 percent of the poorest grades R to 7 learners receive a nutritious meal per day. The current strategic plan targets to have a little over 8 million learners receiving quality meals at schools that serve the poorest communities by 2012. Within the same period, the DoE plans to have 13, 500 food production projects in place in nodal and other schools where there is severe need. The ultimate indicator of progress in this area is to have 345 000 learners making improvement in good nutrition and healthy lifestyle by 2012.

2.17. These programs require the availability of reliable drinking and cooking water supplies, cooking facilities, equipment, utensils and food supplies. During inclement weather, some rural and farm schools have to use classrooms as kitchens. Perennially, these schools use classrooms as storage space for food supplies and cooking utensils. This inappropriate use of physical spaces has a double burden of insufficiently serving the purpose for which they are used while displacing learners from the much needed teaching and learning space. The NSNP is aligned with the Integrated Food Security Program that promotes the establishment of food gardens in schools and communities. This implies adequate and suitable grounds to provide space for these gardens. Yet there are no clear norms on the size and suitability of school sites.

2.18. ***Guidance and counseling and pastoral care:*** In the face of HIV/AIDS and the accompanying physical and psychosocial stress on learners and educators; school health and counseling programs are critical necessities. These factors necessitate holistic counseling and pastoral care. As part of the improvement of counseling and pastoral care, 36, 000 learners will be reached through the harmonized peer education care and support program targeting Grades 6 to 12 across all provinces.

2.19. Complex career choices and rapidly changing labor market needs impel sophisticated career counseling services for learners. These services require physical spaces and facilities that provide for privacy of service. Currently, most schools do not have such spaces. This may constrain student uptake of services, especially where their privacy is at stake.

2.20. ***Student health and safety:*** As noted, nearly 15 percent of the learners are exposed to environments that pose both a safety and health hazards. Ablution facilities are particularly inadequate. Nearly 80 percent of schools have more than 50 learners per toilet. For the girl child in particular, such constraints may adversely impact on attendance and consequently in schooling and learning outcomes. Inadequate provision may translate into denying these children substantive access to ETSD, and thus violating their constitutional rights.

2.21. During the current strategic plan period, DoE will strengthen the coordination and monitoring of the implementation of the framework on health and wellness in education. The target is to have the framework implemented in 2 000 of the nodal and other schools by 2012. 30, 000 Grade R to 4 learners in nodal and farm areas will be screened for minor ailments.

2.22. In terms of safety, the NEIMS showed that by 2006, only 5.5 percent of assessed schools had a functional gate and fence. Even fewer had burglar bars and/or alarm system. This is in times of serious concerns for student safety in some areas, and whilst 32 percent of schools show some evidence of vandalism, and whilst. 585 schools were identified as presenting high levels of crime and violence. To make these schools and indeed all others a safe learning environment, DoE will have to strengthen the implementation of school safety programs and integrate school safety as a key component of school management.

2.23. ***Strengthening school-community relationships:*** The current sector strategy prioritizes the need to strengthen school-community relationships. This is a dual relationship in the sense that communities are critical contributors to the development of their children's schools, education processes and outcomes. At the same time, communities are also benefit from their schools. There is still a challenge of providing adequate facilities in schools that communities could use. It is equally challenging to design schools in a manner that are culturally inviting and appropriate for community usage. The new norms and standards will address this area.

2.24. ***Schools of the future***: Although not yet in policy documents, some provinces are beginning to explore the concept of schools of the future. These may remain under the rubric of "special programs". If adopted, they will demand a serious re-thinking of the provision of the physical teaching and learning environment. As South Africa's intends to advance the teaching of science and technology, such global developments need further investigation for possible inclusion in future policies.

2.25. ***Overall:*** Other than the specific demands of each policy, an added challenge is that, at present, the DoE do not have a robust framework and tools for prioritization of these policies and their targets. It has been noted that debate on policy and on trade-offs among the above policy targets needs strengthening. As such, the set of sector policies does not provide an obvious guidance for the prioritization of elements of the teaching and learning environment. Within a context of scarce resources, it would be difficult to avoid trade-offs. A specific policy and

strategic guidance on the physical teaching and learning environment is therefore required to not only respond to the demands of the above sector policies, programs and legal instruments, but to motivate them into some form of prioritization. As part of this proposed policy, a simulation model that can help us cost our policy choices, assess the feasibility of our policy targets and provide us different workable scenarios for reaching priority targets has been developed.

Conclusion

This proposed policy, the accompanying norms and standards and the long-term investment plan provides a map on the basis of which the issues addressed in this chapter can be tackled.

CHAPTER 3: STRATEGIC POLICY DIRECTION AND OBJECTIVES

Introduction

3.1. The strategic direction of this policy is derived from policy tenets that permeate national and sector policies because specific policies, programs and targets reviewed in Chapter 3 are bound to change over time,. These canons are what all national, sector, sub-sector and thematic policies endeavor to contribute towards their actualization. They constitute the strategic direction and core objectives of each policy. These enduring policy tenets include the improvement of:

3.1.1. broad-based access;
3.1.2. equity and redress;
3.1.3. quality and effectiveness;
3.1.4. functional relevance / responsiveness;
3.1.5. efficiency; and
3.1.6. national values (democracy, excellence, accountability, social cohesion, diversity, innovation and creativity, critical thinking and judgment, cooperation, etc.)

Policy objectives

3.2. The following indicates how these canons provide a conceptual framework and strategic objectives for this policy:

Facilitating broad-based access, equity and redress

3.3. ***The first strategic objective of this policy is to facilitate broad-based and equitable access to education, training and skills development opportunities.*** The ease or lack thereof of physical access to teaching and learning spaces is still the dominant determinant of equity of access. Proximity to or distance from schools is a strong determinant of whether or not children will enroll, enroll at the right age, consistently attend, stay engaged, or eventually survive or drop out of school. The design of school infrastructure determines whether learners with special needs will enroll and effectively participate in school. The availability or lack of certain physical facilities—e.g., ablution—is a strong determinant of gender patterns of participation and completion rates in education, training and skills development. Children who enroll in incomplete schools are more likely to drop out of school between cycles than those that are enrolled in schools that provide a full cycle. *For these reasons the first proposed policy area relates to the definition of norms and standards for equitable access.* Among others the proposed norms will include a specification of adequate distance from school. The policy under this area sharpens the current zoning or catchment area system by defining a clear norm for reasonable distance from school. Learners, especially in rural and farms areas reported walking diversely varied distances with the worst reported as 34 kilometers per day to and from school.

3.4. Where ease of physical access to schools is not financially feasible, proposed alternatives include the provision of transport, provision of hostels, and/or the provisioning of special schools.

3.5. The provisioning of physical teaching and learning space in the form of classrooms, teaching rooms and schools remains the most dominant and traditional tool for broadening access to education, training and skills development. The pace with which systems can construct teaching and learning spaces is essentially the pace with which they can broaden access to ETSD services. These spaces guarantee nominal access without which substantive access is impossible. *For this reason, the second*

Policy identified in the next chapter which requires a policy direction at a national level is the systematization of the process for identifying priorities for provision that guarantees nominal access as the basic entry point to substantive access. Policy statements under this area address the need to have a clear, systematic and systemic approach to prioritizing the provision of key elements of the physical teaching and learning environment. A clear policy on this area will reduce destructive and inequitable variations in provision.

3.6. The third and less used alternative mode of bringing education, training and skills development services close to learners is the use of ICTs. Except in higher education, South Africa is yet to exploit the full potential of this alternative. Binding constraints include availability and affordability of sources of power. Affordability not only of the hardware but also of connectivity. With other forms of ICTs (e.g. radio and television) there are still issues of affordability, maintenance and upkeep with recurrent costs. As outlined above, our current strategic plan sets bold targets for mainstreaming ICTs in the curricula, pedagogy and management of the education, training and skills development system.

Improving quality and effectiveness in an equitable manner inclusive of past inequities

3.7. ***The second objective is to improve the quality and effectiveness of teaching and learning and thus improve learning outcomes.*** Physical or nominal access is an essential but inadequate condition for quality education, training and skills development. Full provision of the right to education requires substantive access. Contrary to common wisdom from the first generation of production function analysis, recent analyses show that the physical environment affects teaching, learner engagement, learning and potential learning outcomes (see Box 1). In contrast to earlier findings that school factors are weak determinants of student learning outcomes, follow up and more

Box 1: The impact of physical environments on teaching and learning effectiveness

Poor learning environments contribute to:
- irregular attendance and drop out
- teacher absenteeism, attrition and turnover
- a poor state of students and a poor ability of teachers to engage them in learning

The age /physical appearance of school buildings influences:
- student achievement
- the attitudes of teachers' toward the schools

Extreme thermal conditions of the environment:
- affect academic achievement
- affect student ability to grasp instruction
- temperatures above 27 degrees Celsius tend to produce harmful physiological effects on students
- increase annoyance and reduce attention span and mental efficiency of all, especially in situations where learners are performing tasks calling for quick recognition and response
- increase errors in performing tasks
- increase teacher fatigue and deterioration of work patterns

Good lighting contributes significantly to:
- the aesthetics and psychological character of the learning space
- students' ability to perceive visual stimuli and to learn
- student ability to concentrate on instruction

Color influences:
- student attitudes, behaviors and learning
- students' attention span as well as the teacher's sense of time
- student and teacher mood
- absenteeism and feelings about school

Good acoustics improves:
- Student ease of hearing and concentration especially when considering that at any one time, 15 percent of students in an average classroom suffer a hearing problem that is either genetically based, noise-induced, or caused by infection

Outdoor activities contribute to:
- formal and informal learning systems
- physical education
- social development
- team work
- school community relationships
-

sophisticated analyses suggest that earlier findings could have been a function of the degree of variance in predictor variables. Developed country systems that have managed to reduce variation in school factors, render these factors less powerful predictors of student learning. For developing countries however, where there is still a wide variation in provision, school factors tend to be more powerful predictors.

3.8. As noted, progress has been made in improving provision, but the technical adequacy and the substantive responsiveness of this provision remains doubtful. Potential substantive inadequacy partly arises from the exclusion of educators from processes that determine specifications of teaching and learning environments. Because inequalities and unwarranted variations in the physical environment may risk equitable provision of quality education, the following chapter highlights both process and participation in the determining norms and standards for the teaching and learning environment as a matter that requires standardization /formalization through policy. Such processes should take the elements in Box 1 into consideration.

Enhancing relevance / responsiveness

3.9. ***The third objective is to enhance the responsiveness of the physical teaching and learning environment to core demands of the education sector:*** As the dictum goes, "form follows function". It is recognized that physical environments should respond to the core business that is to be transacted in those environments. In Chapter 3, it was argued that these environments should facilitate effective implementation of sector policies, programs and legal instruments. It is recognized that in this specific case, the main business to be transacted in the environment in question is teaching and learning. It has also been noted that sources consulted suggest that this environment does not adequately take into account teaching and learning processes. In the past, educators have not been adequately consulted in the design of teaching spaces. The views of key users—teachers, learners, administrators, communities—were not rigorously taken into account. Designs did not adequately reflect the complex needs of learners including private spaces such as for counseling, health consultations, and sick bays. Despite South Africa's complex curricula, the environment has hitherto lacked a systematic way of responding to curricula or their pedagogical imperatives. At best, the relevance or responsiveness of the system to core functions of schools and to primary users has been weak.

Increasing efficient utilization and management of facilities

3.10. ***The fourth objective is to increase efficiency in the utilization and management of elements of the physical teaching and learning environment.*** As noted in the foregoing introduction, the government is allocating a substantial amount of resources to the improvement of the teaching and learning environment. Physical facilities—buildings, equipment and furniture, claim the highest proportion of our sector development budget. Efficient and/or inefficient use of these facilities translates into huge resource wastage. Poor management and maintenance of these facilities also accrue very high costs and translate into unaffordable resource wastage. The NEIMS suggests that poor management and maintenance of infrastructure may have trapped the country into perpetual and unaffordable refurbishing and even replacements of school infrastructure. It has been noted that the current lack of life-cycle management of assets, equipment, and instructional materials leads to further loss of much needed resources. As outlined above, the negative impact of poor physical teaching and learning environment on education quality affects internal efficiency of the education, training and skills development system. Poor quality or ineffective teaching and learning environment generate high failure, repetition, and drop-out rates and the resultant inefficiencies in the use of education resources.

Promoting espoused values

3.11. ***The fifth objective is to promote key values that are to be promoted through the sector:*** The design and usage of key elements of the current physical teaching and learning environment does not adequately give effect to South Africa's cherished values, and especially values espoused by the sector. The diversity of South Africans could be better reflected in architectural designs. The very creation of the designs could better reflect democratic values through inclusive consultation. The stimulation of well designed and used environment could lead to innovation. School community relationship and open communication between the two could yet be other values expressed through designs. The way schools are designed, and policies on the usage of school facilities could cement or hamper effective school/community relationships. As such, promoting espoused values is another key objective of this policy.

CHAPTER 4: POLICY AREAS AND POLICY STATEMENTS

Introduction

4.1. Against the historical context guided by national and sector demands and the above-outlined policy objectives, 6 areas requiring a clear strategic policy direction and 2 areas that require clear and consistent operational policies—hereafter referred to as policy areas, were identified. Strategic policy areas are those that require national and high level decisions to regularize them and to align them with national and sector policy priorities. They are fundamental for the attainment of policy objectives outlined in Chapter 3. From a cost-benefit point of view, strategic areas are those whose adoption will bring about significant benefits in terms of the actualization of national and sector policies. Strategic policy areas also have a high efficiency factor in the sense that they contribute to the attainment of several national and sector policies.

4.2. In contrast, operational areas are of a lower level but are still significant enough to warrant regularization at a national level. They are enablers of the first 6 strategic areas. They have been highlighted because, if not addressed, will frustrate the effective realization of strategic policy areas.

4.3. The 8 policy areas requiring strategic and operational policies are detailed in this chapter and in their sequential order as follows:

4.3.1. authority for setting norms and standards for an enabling environment
4.3.2. authority and the process of setting priority needs for the environment
4.3.3. the extent of planning for the provision of an enabling environment
4.3.4. whether or not to standardize architectural designs
4.3.5. the nature and system for asset management and maintenance
4.3.6. sources of funding for the environment
4.3.7. assuring effective capacity to deliver elements of the environment
4.3.8. sector procurement procedures and procurement management

4.4. For each of the above areas, the document presents the actual statement of the policy which will hereafter guide the provision of an enabling teaching and learning environment. The document also identifies specific policy actions required to actualize each of the 8 policy statements. These actions are what will make it possible to implement each and every policy as stated. Expected benefits of each stated policy are also clearly delineated in the policy. Key risks associated with each policy and strategies to mitigate risks that may abort and/or frustrate expected policy benefits are also identified.

4.5. While each policy area has specific benefits, a prime benefit of the national policy is guidance of future provision of an enabling physical teaching and learning environment, ensuring equity of provision and effective facilitation of national and sector policies, strategies and programs. This national policy is also not intended to stifle constructive or enriching variations in provision, but rather to regularize and systematize variations and inconsistencies that risk the attainment of policy objectives presented in Chapter 4.

4.6. The realization of expected policy benefits will also depend on the ability to effectively implement the national policy detailed below. It is for this reason that concerns for delivery capacity has been elevated to a level of a national operational policy (policy areas # 7). At the same time, this policy will guide long-term strategic plans and a series of implementable medium term programs. Medium term programs will provide a base for strengthening implementation support tools such as: implementation plans; procurement plans; financial and

disbursement plans, national and international benchmarking; monitoring and evaluation; and impact evaluation.

4.7. The realization of expected policy benefits will also demand a more efficient use of resources. To that end, close attention has been paid to cost control measures, especially within the second operational policy (policy area # 8). Beyond efficiency measures, effective implementation of this policy may require additional resources. To this end, policy area # 6 highlights the need to diversify funding sources and to ease the burden on government. This policy therefore guides the development of a 20-year investment plan for an enabling physical teaching and learning environment presented as a different output.

4.8. This national policy is therefore setting in motion not only a future strategic policy direction, but also practical steps to ensure effective policy implementation and the monitoring of its expected development impact.

Policy areas and policy statements

Policy Area # 1: Nationally established norms and standards for an enabling environment

Background

4.9. In Chapter 2 it was noted that the degree to which schools can equitably deliver expected educational outcomes, partly depends on the adequacy of inputs they are provided and processes they use to mobilize those inputs into results. As presented in Chapter 3, this policy is guided by expert knowledge on the link between certain education resource inputs and processes on the one hand, and learning outcomes on the other. Specifically, current knowledge guides the link between core elements of the physical teaching and learning environment, and effective teaching, effective learning and learning outcomes. This knowledge is what guides the selection of a minimum and optimum basket of inputs and processes that each school must have if it is to be held accountable for a certain level of outcomes. The strategic plan refers to a Basic Minimum Package (BMP) below which no school should operate. Within this policy statement, the idea of a BMP is further developed to speak of a minimum and optimum mix of education resource inputs.

4.10. A well defined basket of inputs will constitute minimum and optimum norms and standards for an enabling physical teaching and learning environment. Along a continuum from minimum to optimum, the environments of our schools will be graded as meeting the criteria for safety, functionality, effectiveness and enrichment. A national consultative process on the norms and standards will generate agreed operational definitions of these gradations of the environments. However, by way of example,

4.10.1. ***safety*** entails the bare minimum inputs below which a school will be deemed inoperable and immediately closed. For example, if a school does not have safe water, sanitation facilities that meet national health standards, if students are exposed to intolerable elements such as intolerably bad weather, toxic substances in their environment; extremely unsafe building structures that could crumble onto students, classrooms overcrowded beyond a pre-defined threshold of classroom size, etc.

4.10.2. ***functionality*** entails adequacy of inputs that make the school functional but not necessarily effective. Among others, the school will have to meet minimum safety norms and standards and have the basic facilities that enable it to carry out its core

functions of teaching and learning. Examples include a school that has adequate classrooms, ablution facilities, textbooks, basic supplies of fundamental teaching aids like rulers, etc;

4.10.3. ***effectiveness*** is the level where we want all our schools environments to be. This level entails both safety and functionality. Additionally it will meet core facilities like classrooms that enable the recommended—not just tolerable—class size, specialized teaching spaces, staff preparation room, administration block, multipurpose learning resource center, multipurpose school hall, laboratories and/or alternatives, adequate equipment, library or library stocks that are regularly renewed, accessibility for all, etc; and

4.10.4. ***enrichment*** levels pertain to special programs which may be launched from time to time as needs arise. A current example will be the Dinaledi project. From time to time a decision will be made on the thrust of these enriched environments, their duration, participation levels and the proportion of schools at any one time that should have such environments. Enriched environments are not intended to apply to all schools.

4.11. Optimum norms and standards are those that meet the effectiveness criteria.

Key challenges addressed by this policy

4.12. The fact that most countries do not explicitly define minimum input and process norms required to realize results within their specific contexts is seen as the first challenge. It is more common to define financing norms in the form of funding formulae and/or per-capita financing. However, the emerging adoption of performance-based systems and accountability systems make it more and more important to define the "tools" required to deliver on expected performance and to define resources for which system are held accountable.

4.13. Within a context like South Africa where unthinkable levels of deprivation co-exist with rare levels of resource endowment, where the need for equity and redress is as compelling as the need for global competitiveness; setting input and process norms and standards is a major challenge. The key challenge is to ensure equity without reducing every school to the lowest common denominator. It is to set standards while not losing sight of the diversity and uniqueness required to promoting innovation. Equally, it is to ensure equity while not losing sight of the need to accelerate development.

4.14. The second challenge is to therefore develop "balanced" norms and standards. This policy area is the step in the direction of that crucial balance. The concept of balance is about proportional responsiveness of norms and standards to their context of application.

4.15. The third key challenge is affording the set of endorsed norms and standards. Like any policy instrument, real norms and standards are what get implemented, not what is on paper. Often countries set norms and standards but do not adequately fund them. Often, shortage of funds leads to a gap between "official and funded norms and standards" with the latter being far less than the former. For instance, resource norms and standards implied in special projects like Dinaledi may make them unaffordable and/or unsustainable, despite whether of not more schools meet the 'admission' criteria.

4.16. The fourth challenge is capacity to implement norms. Even where funding may not be a binding constraint, implementation capacity may create a gap between "funded" and "practiced" norms; creating a third level of diminution. For instance implied or tacit pedagogical process norms made it very difficult for South African schools to effectively implement OBE as originally designed.

4.17. The fifth challenge is inconsistency of norms generated at different levels of the system. In some provinces for instance, a wide gap between the official and the practiced admission policies has led to a gap between a tacit norm for catchment area and the practiced norm. In another province, the norm for optimum school size clashed with the national norm for school managers' salaries increase. This clash resulted in the violation of the former.

4.18. The sixth challenge is the need to balance equity with development.

4.19. The seventh challenge relates to norms that are not sensitive to the wide variation in the education contexts of South Africa's schools. For instance, the size of some schools may make certain inputs norms inefficient and/or impracticable. However, learners in such schools have the same rights as their counterparts in other settings. The challenge is to develop norms that allow for contextual adaptability that ensures learners comparable ETSD experiences. It is about developing norms that observe equitable quality while not violating efficiency and development responsiveness.

4.20. The current impression is that this country faces all the above outlined challenges. As elaborated below, the first challenge applies to the national department of education and less so to provinces. The rest—inadequate balance, resources, capacity, and inconsistencies apply to both levels.

Prior and ongoing efforts

4.21. In absence of national norms and standards, provinces have developed their own norms and standards, generating a set of 9. What is in question is the adequacy of those norms and standards and, the extent to which they are actually applied. The current level of variation warrants a policy direction.

Persisting challenges

4.22. Because of the lack of national norms, provinces are without guidance for the minimum limits. They are also without guidance on the optimum mix of inputs that should best facilitate desired results. Naturally, the set of 9 norms reflects the diversity of provinces. In general, the coverage of norms is limited. Invariably, they entail a specification of the size of facilities by band, school type and school size. The most elaborate specification of norms is perhaps from the Orange Free State and Gauteng provinces. The latter explicitly uses curricula as determinants of the type of learning spaces to be provided.

4.23. The current range of norms poses a serious challenge in the need to balance between equity and development. Hardly any province includes processes—specification of norms, consultation, delivery cycle, supervision of construction—in its specification of norms and standards. It is also uncommon for provincial norms to fully cover elements of the physical environment—infrastructure, furniture, equipment, etc. There is also a wide range of the detailing of norms and standards. In some provinces, covered aspects are very well developed in others they are vaguely stated. Across all provinces, the norms and standards are not products of a robust analysis of education needs—refer to Policy Area # 2—to be met through those norms. Except for the Gauteng province, even the space norms are divorced from the activities that actually take place inside those spaces. Prepared norms tend to be disconnected from core sector policies. This makes them a very weak instrument for operationalizing policies.

Policy statement

4.24. Effective from 2008, norms and standards for the physical teaching and learning environment will be set at the national level by the Minister of Education. National norms and standards will be set and expressed in terms of minimum and optimum provision. Along this continuum, norms and standards for school safety, functionality, effectiveness and enrichment will be explicitly defined at a national level by the Ministry of Education. The Ministry will also set clear target dates by which a set

*proportion of schools will meet each level of enablement in its environment. The Ministry will also set a clear data by which **all** South Africa schools will meet norms and standards for effectiveness.*

4.25. National norms and standards will be developed during 2008, and fully adopted by the end of 2009.

4.26. Provinces may adapt national norms and standards to their contexts without prejudice to set minimums Effective from January 2010, all provinces will have aligned their provision programs to national norms and standards and to set targets. By the end of the current strategic plan period—2008 to 2012– all schools will meet inputs and process norms required for safety, functionality and effectiveness.

4.27. As need arises, national and/or sector strategic development priorities will be translated into enrichment norms and standards as defined by the Ministry of Education. These norms will be defined in response to current national and sector development imperatives. Such dictates may be the need to ramp up certain outputs such as in the Dinaledi project. It may be to fast track reaching international benchmarks required to be competitive. It may be 'catching up with international developments' such as the mooted 'schools of the future'. It may be to create regenerative capacity that can latter be applied to ramp up equitable quality such as in the creation of pockets of excellence. It may be to ride a global market tide as in the case where a certain skills mix is required within a short period of time. It may be the need to level the playing field where the floor is too low relative to the ceiling and needs to be raised within short time spans, etc.

4.28. The national Department of Education will execute the meeting of enrichment norms and standards.

4.29. Access to and benefits from enrichment norms will be equitable. In real terms, going beyond the norm is creating justified inequality, the justification has to be explicit, transparent, and owned by a reasonable threshold of stakeholders. Such strategic inequalities should therefore be "mandated inequalities". The process and decision on who has the mandate or how the mandate is created will be transparent. Such a mandate will lie with the office of the Minister of Education—because it is responsible for overall sector development.

4.30. Because "mandated inequalities" violate the national and sector "norm of equal opportunity" the distribution of opportunities to schools and/ or programs that go beyond effectiveness criteria will itself be explicitly and transparently equitable. Criteria will therefore be equity based. Proposed principal criteria are aptitude, exceptional achievement, and redress.

Key policy actions

4.31. *Adoption of a common and broadened approach / methodology for defining minimum and optimum norms and standards:* The current state of weakness in the articulation of norms and standards demands the articulation of a very clear methodology for articulating comprehensive norms and standards. In its initial form, such a methodology has to be based on international best practice and current provincial efforts at developing norms and standards.

4.32. *Adaptation of the approach to South Africa's context:* The adopted methodology will be adapted to fit the context of South Africa and to later fit the context of diverse provinces.

4.33. *Adoption of a process for defining norms and standards:* Because of the technical nature of the work, the proposed process for defining national and even provincial norms and standards will entail the setting up of technical working groups supported by international expertise. At a bare minimum, working groups will have representation of physical planners, experts that can effectively

represent subject groups and learning areas; sub-sector specialist; and specialists from critical thematic areas. The decision making process will be the same as proposed for Policy Area # 2.

4.34. *Assessment of the realism and feasibility of proposed norms and standards:* The feasibility of proposed norms and standards will be systematically checked before they can be submitted for decision and final adoption. This will be done with an aide of a simulation model. Minimum parameters will include: technical efficiency, resource efficiency, management efficiency, affordability, sustainability, and implementability, and monitorability.

4.35. *Establishment of capacity to effect norms and standards*: Where norms and standards fail a feasibility test a plan and program will be prepared to ensure feasibility.

4.36. *Establishment of a process for periodic updating of norms:* As contexts change, and as lower level challenges are met, norms and standards need to be updated to reflect current realities. Norms and standards will not be revised upward to fit resource availability or for other frivolous reasons. They will be revised upward or downward to meet priority needs and to optimize results. Norms and standards will be revised twice within each strategic plan period: Midway along with the mid-term review of sector performance against its set targets, and at the end of the period as an entry to the next planning cycle.

Benefits

4.37. If implemented, minimum norms and standards are the first practical step to ensure equity in the provision of the physical teaching and learning environment, and associated benefits. If anchored in core functions of schools, norms should facilitate quality of the teaching and learning environment and the consequent impact on learning outcomes. If well articulated with policy priorities, norms and standards should facilitate efficient use of resources to realize strategic policy objectives. Implemented norms and standards should substantially reduce resource constraints for policy implementation. Process norms should reduce variance in the results realized through comparable inputs, thus further improving efficiency in resource utilization. Ability to link results to inputs and processes is a powerful tool for accountability. It is difficult to be accountable if enablers are not clearly defined.

Risks and risk mitigation

4.38. *Complexity and delayed results [Low*]: Determining a minimum mix of inputs and processes required to enable schools to deliver on results is complex and may require long test periods. Even with the world's knowledge on the types of inputs and processes that facilitate results, application contexts differ. There is therefore a risk that expected results may only be realized after extended test periods and several adjustments.

4.39. Failure *to sustainably fund norms [Low]:* Failure to finance adopted norms poses a political risk, especially because such failure is associated with the sustenance of inequalities. In the case of South Africa, this risk is low because of high government commitment to redress and the general predictability in the flow of funds.

4.40. *Perverse incentive for underperformance [Moderate*]: Norms and standards are like a social contract between the provider of inputs and those who mobilize them to bear results, or implementers. Even where not warranted, implementers may use unfunded norms and standards as an excuse for underperformance. This risk may be high where, for whatever reasons, there are substantial financial cut-backs.

4.41. *Interest-based resistance to enrichment norms [high]:* Even with all the consultation, transparency, and public education, enrichment norms will always be a source of political expediency. Political pressure groups will always package these norms as elitist and self-serving. Parents are also

likely to oppose these norms on the grounds of equity. This risk would escalate where benefits are not equitably and transparently distributed.

4.42. To mitigate the above-outlined risks, the development of norms and standards will be presented to stakeholders as a process and not an event. Constant consultation will be maintained and adequate lead time will be provided to trial test norms and standards before they are formally adopted.

4.43. To mitigate the political risk, robust feasibility tests of norms and standards will be conducted before public expectations are raised.

4.44. Opportunities to benefits from enrichment norms will be transparently and equitably distributed.

4.45. Norms and standards are not a substitute for sustained performance management and performance evaluation. They are only enablers. These systems will therefore be strengthened to ensure that norms and standards enable expected results. They will also be strengthened to ensure that norms and standards are not used as an excuse for under-performance.

Policy Area # 2: Systematized establishment and prioritization of infrastructure needs

4.46. The significant investment to be made has to be based on a clear understanding of the needs to be addressed and on clear prioritization of those needs. Several reasons necessitate clarity of needs and prioritization of those needs. First, is that where resources are limited, applying those resources toward meeting real and urgent needs becomes an imperative. Second, is accountability for use of scarce public resources. Third, is the need to realize the best value for money. As noted, investment in elements of the physical teaching and learning environment is justified by their relative contribution toward the realization of core national and sector policies. Limited funds should therefore be spent on elements that have the highest contribution toward realizing policy objectives. Money spent on desirables while real needs remain unmet is money lost. Fourth is the equity imperative. It is easy to ensure equity of provision where needs are clearly defined and prioritized.

Key challenges addressed by this policy

4.47. Despite these compelling reasons, the substantial and increasing investment in elements of the physical teaching and learning environment has mostly proceeded without a systematized process for prioritizing needs. Part of the reasons behind inconsistencies in setting priorities has been the lack of national norms and standards, and the weak definition of targets toward meeting those norms. Thus, the current strategic plan sets a target to establish national norms within 2008.

4.48. Lack of a national and/provincial priority setting system has left provision vulnerable to all sorts of pressures. Real ones include unplanned settlements that sometimes lead to expansion of schools beyond the efficiency and effectiveness norms; political pressure, unmonitored projects which sometimes lead to duplication of provision.

4.49. Because needs are relative, the lack of a national system to identify and prioritize needs risks the perpetuation of inherited resource inequalities across schools. It is also possible that resources could be inefficiently utilized or applied on areas of least impact.

Prior and ongoing government efforts

4.50. At the national level, the best indication of some system for identifying and prioritizing needs is implied in the current version of National Norms and Standards for School Funding. Herein, priority is accorded to areas where there is first: total lack of a school and/or overcrowding in existing schools. The norms further stipulate that in allocating funds to new schools priority should be given to facilities that serve the compulsory GET and extensions to existing schools except where such extensions would lead to unmanageable, ineffective and inefficient school size. These criteria are then applied to rank geographical regions from the most to the least needy.

4.51. Provinces have also come up with diverse ways of identifying and prioritizing their needs. For instance, infrastructure priorities for the Gauteng province are derived from a list of needs identified by districts and transmitted through physical resources planners. Criteria applied by districts remain unclear. The ultimate selection of priorities seems to be dictated by the available budget for the particular year.

4.52. The North West Department of Education sets annual priorities. For instance, their priorities for the 2004/05 financial year comprised intensive infrastructure development emphasizing on the provision of sanitation facilities; provision of new schools and extensions; and the provision of information and communication technology; and, the improvement of libraries, equipment and the refurbishment of laboratories. Again, criteria remain unclear.

4.53. Similarly, the Limpopo Department of Education sets annual priorities. For FY 2005/06, these were: provision of classrooms where learners are being taught under trees; the building of classrooms where children were housed under unacceptable conditions (i.e. converted buses, poorly constructed corrugated iron buildings); and overcrowded classrooms (> 40 learners in primary and > 35 learners in secondary learners per classroom). In contrast to the list from the North West province, this list seems to be dealing with rudimentary needs.

4.54. For the KwaZulu-Natal Department of Education, priorities are based on a regular gap analysis of the available classrooms and the need for classrooms at existing facilities using information captured in the EMIS or by tracking new developments. An overcrowding index is used to identify the need for additional classrooms. As with Limpopo, the priority here seems to be the eradication of classroom shortages.

4.55. The Eastern Cape Department of Education focuses on the eradication of overcrowding. This is along similar lines as Kwa Zulu Natal, Limpopo and the Eastern Cape. They make use of information from their Education Facilities Management System and their EMIS. Unlike the bottom up process followed in Gauteng, priority lists are generated at the provincial levels and then discussed with districts to explain the rationale for selected priorities and consulted information sources. The final draft is send to the Superintendent General (Head of the Department) and the MEC for approval.

4.56. The Northern Cape Department of Education base their priorities on a consideration of three data sets: the latest population statistics and trends from the latest census data; information regarding the number of learners per school from the EMIS data as well as the resource targeting table (this lists all schools in the province and their conditions as well as the poverty level of the community).

4.57. In Mpumalanga priorities are influenced by a range of factors including the State of Nation Address; State of Province Address; policy and budget speeches by the national and provincial Ministers of Education. There was a point where priority was accorded the removal of learners from underneath trees, from unsafe structures and from overcrowded structures. While it is not clear if these challenges are surmounted, priority has currently shifted to the creation of Grade R centers. This is a clear demonstration of how new sector policy directions may sway provincial priority setting processes. As noted in Chapter 3, the lack of clear prioritization and trade-off across sector policies is in itself problematic. From a priority setting point of view, a question needs to be debated whether removing children from unsafe environments and from underneath trees should take precedence over

the provision of Grade R places or vice versa. This is a policy debate whose locus and authority is not clear.

4.58. All the same, in Mpumalanga, priorities are set at the regional level by physical resources planners in coordination with circuit managers and then sent to the provincial office. This is some what similar to Gauteng province but not quite identical. As in most provinces, priorities do drive the budget. Instead, the available budget determines the ultimate list of priority projects.

4.59. In the Western Cape, schools that fall below their funding norms are accorded priority. The norms are based on the quintile. The rest of the provision is driven by the available budget. Priorities are set at the district level and forwarded to the provincial office where verification and budgeting is done.

Persisting challenges

4.60. A picture that emerges is that of substantial inconsistencies in the criteria and processes for setting priorities. It is quite possible that there are as many processes and criteria as there are provinces. Below the province, the criteria that districts/regions follow in setting priorities are even more unclear. Even more, the criteria and processes that provinces set for themselves are not always adhered to. One of the constraints is lack of timely and accurate data. Sometimes, this leads to locating provisions in areas of relatively less need. As provincial officials admitted: "most times is the voice of the loudest that gets heard". Anecdotal evidence from provinces also suggests that crisis remain a key determinant of priorities. Resources tend to follow crisis and crisis determine priorities. In absence of crisis, there is ample room for political pressure. It is not uncommon to find schools built in areas of low demand while areas of high demand are neglected. Children from the latter then later get bussed to under-utilized schools. Provincial officials also repeatedly acknowledged that it is the "loudest that gets heard". Areas with strong advocates get prioritized despite their moderate to low needs. Provincial officials also admitted that new schools tend to be prioritized. Provincial officials also indicated that they ordinarily "over-resource" new schools against dire needs of old schools that may have been pending for long periods. This perceived preference accorded new schools comes through as intended inequity of resource distribution. Overall, there is justification for a national policy intervention to regularize this process.

Policy Statement

4.61. Effective from 2010—criteria and procedures for the identification and prioritization of the teaching and learning environment needs will be nationally standardized by the Department of Education. Provinces may adapt national procedure to reflect their unique contexts. Provincial adaptations may not lower the national minimum criteria. Provincial adaptations may only pertain to enrichment but not diminution. Irrespective of the source—individual school funds, donor funding, public funds—all resources available to Provinces have to first be applied toward meeting nationally set priority needs. Except where nationally set priorities are fully met, Provinces may not apply funds for enrichment purposes.

Key policy actions

4.62. The regularization of need identification and prioritization will demand the following key actions:

4.63. *Systematization of information and data sources to be consulted:* The minimum criteria for qualitative sources to be consulted will be: *curricula, pedagogy, co-curricula activities, management, the needs of learners and what facilitates learning, educators' needs in terms of what facilitates teaching, staff development, lesson preparation, student tutoring etc. and communities.*

4.64. Curricula, co-curricula and pedagogical imperatives will rank high among priority needs for the provision of school infrastructure, furniture, equipment, books and instructional materials. At present, the provision of the teaching and learning environment does not take serious consideration of curricula, co-curricula and pedagogy, yet the primary reason for providing this environment is to facilitate the delivery certain curricula to learners using certain pedagogy. It is not surprising that educators see the current physical environment as inhibiting rather than facilitating teaching and learning.

4.65. The case is very different for equipment, books and instructional materials. A major constraint here is shortage, not lack of responsiveness. School infrastructure will also meet the needs of school management. It will reflect consideration for *learners* in terms of their age and what facilitates learning (ref. conceptual framework); *educators* in terms of what facilitates teaching, student academic, health and nutrition, psychosocial and pastoral support; staff development activities; preparations for teaching; *managers* in terms of what facilitates school management; and *communities* in terms of what transforms a school into a center of community life.

4.66. School infrastructure that does not take into account minimum needs identification and prioritization criteria outlined above will not be cleared for funding. Additional criteria are: technological advancements and how they may change priority needs for infrastructure provision.

4.67. At the bare minimum, the following sources of quantitative data will consulted: *community demographics, enrolment projections* and implied future demand for schooling; *migration patterns* and the likely change in demographics; *stability of community demographics* and implications for the most responsive and efficient infrastructure provision; *internal system efficiency indicators;* and baselines on current supply—NEIMS is kept current.

4.68. *Systematization of data and information collection:* Data and/or information are as useful as the way they were collected. To this effect, data collection instruments and guidelines will have to be prepared and training conducted to ensure the integrity of data. Information and data sets will have to be kept current and accurate.

4.69. *Strengthen data analysis and information processing; targeted dissemination and application:* Information and data remain a potential until they are analyzed to bear a substantive and applicable meaning. Applicable meaning also remains a potential until it is in the hands of those with the power and mandate to apply it. The definition and prioritization of needs will therefore be informed by systematic data analysis, information processing, targeted dissemination.

4.70. *Systematize data / information currency:* Data/information is as useful as it is current. Core data bases such as the NEIMS and EMIS will have to be kept current. Systems for keeping them current will have to be developed and effected.

4.71. *Systematize participation and decision making:* As noted, needs identification and prioritization has to be based on broad based consultation. Critical participants in this process need to be stated. The proposed minimum participants are: educators, learners, communities—through some legitimate representative body—and physical planners. It should however be clear that participation is not decision making. Thus, the process of translating inputs from participants into a decision on priority needs has to be clear, transparent and accountable. The proposal is that following nationally set criteria, the head of the PED will prepare the priority list in collaboration with her/his structures. The list will be proposed to the MEC for clearance and then sent to the DoE for ratification.

4.72. *Systematize process:* As noted different provinces follow difference processes for defining priority needs. Future process will be a combination of top-down and bottom-up processes. The latter will start at the lowest operational level which is a school. It will be guided by real and felt needs that have a direct bearing on performance. Each operational level—school, circuit, district, province—will

standardize its own process of identifying priority needs including participation and decision making. The compilation of needs will cascade upwards from schools to provinces using a representational participatory and decision making process. Thus, some representation of schools will be at the circuit level when needs are prioritized and forwarded to the district etc. The top-down process will start at the national level. It will be informed by broader national policies and even by broader policies on international benchmarking and best practices. This process will ensure consonance between the final list of priorities and overall national policies and priorities.

4.73. *Gradate prioritized needs and define backlogs:* Once the needs are clearly identified and prioritized, a gradated list will be prepared to reflect the severity of needs. The proposed list will range from: a *total absence of school infrastructure where it is needed; unsafe, overcrowded, functional, effective, enriched, and special programs*. Each category will be operationalized to avoid ambiguity. This national list will be used to operationally define backlogs, and to prepare a program for the provision of an enabling physical teaching and learning environment. The list will provide a backbone for a national strategic plan for equitable provision.

4.74. **Key considerations:** The provision of basic services entails the participation of other public departments. Core departments will be added to the participation criteria as follows: water, electricity, communications, health, etc.

4.75. Another consideration is **special projects** intended to balance equity with development imperatives such as the Dinaledi project. Clearly, minimum criteria would not apply. However, there will be clear and transparent criteria. Most importantly, there should be clear and transparent criteria for equitable admission into, and benefit from such projects.

Benefits

4.76. The standardization of need identification and prioritization is expected to improve equity in meeting the needs of the physical teaching and learning environment. This is particularly critical in the case of South Africa where the priority needs for some schools are simply leisure items for others, and yet all children are constitutionally promised equal education opportunity. The second benefit is that it is easy to link priorities to areas that are likely to bring the best value for money in terms of inputs that have the highest potential to bring about desired results. Improved results will necessarily mean improved sector policy impact. This will improve technical efficiency. The third benefit, and related to the second one is that there will be a systematic and transparent way of ensuring and monitoring equity in the use of scarce resources. This will improve resource efficiency. The fourth benefit is that the gradations of levels of provision are possible when criteria are clear and standardized. In turn, clear gradations make national and international benchmarking feasible. Clear benchmarking greatly facilitates termed strategic planning, monitoring and evaluation, and public accountability. Those in office are best able to account to the public when they set clear benchmarks for their own performance.

Costs

4.77. The upfront costs of standardization is time invested in participatory processes and in establishing systems, protracted consultations required to get stakeholder buy-in, and ongoing consultations around changes impelled by evolving contexts. There are also up-front financial costs in setting up systems, but this is offset by the long term benefits accrued from these systems.

Risks and risk mitigation

4.78. *Provincial perception of loss of autonomy [Moderate]:* Provinces may interpret the proposed policy as a diminution of their autonomy. To mitigate this risk, the DoE will ensure that processes for setting priorities follow normal consultative and participatory procedures and channels.

4.79. *Reduced financial contributions [Low]:* Communities, individuals and donors with 'pet' projects may reduce or withdraw their contributions. To mitigate this risk, the DoE will ensure that key stakeholders are substantively consulted in the process of setting and adopting criteria for priority setting. Both the national and provincial departments will not change criteria for setting priorities without the participation of key stakeholders.

Policy Area # 3: Planned development of an enabling environment

Background

4.80. As alluded to under Policy Area # 2, elements of the physical teaching and learning environment account for the highest proportion of the sector development budget. Over the first decade of freedom, this investment grew manifolds from about R 352 million to about R 4.95 billion. With the urgency accorded the redress of inequalities in the provision of infrastructure and other elements of the physical environment, this allocation can only be expected to increase more exponentially. This growing investment continues to be made within a very weak culture of planning. As outlined under Policy Area # 2, there is no clear mechanism of clearly identifying and prioritizing needs. Strategic planning seems to be underplayed also because of a sense that urgent needs are so many that the risk of attending to low priority needs before high priority needs is slim. However, evidence from the field suggests the contrary. It could actually be argued that it is exactly when the needs are many that strategic planning is even more critical. In essence, strategic planning is about identifying priorities and making strategic choices and trade-offs among them. Without strategic planning any need is as important as the other.

Prior and ongoing efforts

4.81. Provinces produce their own annual plans for the provision of school infrastructure and basic services that are identified at different levels: circuit, district/regional and provincial. These plans provide a platform for a service contract with the Departments of Works or with the implementing agent. However, the reality on the ground is that these plans are technically deficient and not always produced on time. The IDIP is working toward improving planning for the provision of school infrastructure. Each province is provided a technical assistant to improve planning and overall service delivery.

Persisting challenges

4.82. As outlined under Policy Area # 2, the first constraint to strategic planning is the lack of a system for identifying and prioritizing infrastructure needs. Without clear priorities there is no need to plan. The second challenge is the lack of capacity for strategic planning. Several studies have noted that in general, physical planners are ill prepared for their functions. In most cases, physical planning functions are executed by trained teachers, with very little preparation for their new function. For the best part, this weakness has been documented but little to no action has been taken to address it. Effective strategic planning is also constrained by lack of accurate and timely data, low capacity for data analysis, and low capacity for translating data into strategic objectives and targets. Without strategic plans, the provision of infrastructure is prone to political influence. Priorities tend to be decided along the way, allowing pressure groups to determined priorities. Lack of strategic plans also makes it difficult to tie budgets to strategic policy priorities, especially when the latter is unclear. Without strategic plans, it is difficult to set targets against which provision could be monitored. Under the circumstance, accountability for policy implementation is significantly weakened.

Policy statement

4.83. Effective from 2010, the DoE will adopt a "planned development" of the physical teaching and learning environment. A national strategic plan will be developed in line with critical sector and thematic policy priorities. The national plan will be prepared on a long term—20 years—medium term—5 years—and short term basis—1 year. It will set national and provincial strategic objectives and targets to be achieved within each plan period. The strategic plan will provide the substantive base for investment planning. Irrespective of the source, the financing of the physical teaching and learning environment will be provided within the framework of the strategic plan.

4.84. In addition to the strategic plan, the development of the physical environment will be guided by mandatory recurrent planning instruments vis annual implementation plans, procurement plans, financial and disbursement plans. The national department will also develop mandatory medium term and short term results frameworks that will guide the monitoring and evaluation of the development of the physical environment.

4.85. Consistent with the national approach provinces will adopt a "planned development" of the physical teaching and learning environment. Provincial plans will be set within the same terms as the national plan. They will reflect strategic objectives and targets as set in the national plan. Likewise financial provision will be provided only within the framework of the provincial plan.

4.86. Provinces will also develop all plans that are mandatory at the national level. Their provision program may not be funded before clearance of mandatory plans by a set authority.

Key policy actions

4.87. *Strengthening capacity for strategic planning and for physical planning*: A tailor-made training program will be developed for officials responsible for physical planning. By 2010 all practicing physical planners will have completed the training program. No more new officials will be recruited into the position of physical planners if they have not completed the training program and/or its equivalent.

4.88. Regularizing *the strategic planning process*: The development of a national strategic plan and other plans will follow a combination of a top-down and bottom-up approaches similar to those outlined under Policy Area # 2.

4.89. *Systematizing information and data sources for forecasting the demand and supply of teaching and learning environment*: Strategic planning is as sound as its information and data base. In addition to data sources outlined under Policy Area # 2, proposed key sources of data will include economic growth forecasts and assumed growth scenarios.

Benefits

4.90. Plans guide implementation. In this regard, strategic planning is the first step toward effective implementation of proposed policies. Strategic planning also ensures relevance to strategic priorities. Without planning, infrastructure program may loose responsiveness to strategic sector priorities. Clear plans also increase the agility to strategically adapt to changing contexts. Without plans, tactical changes may incrementally lead development off course. The integration of strategic plans with budgets ensures and reduces the risk of un-funded priorities. Planning is also a key tool for resource efficiency. Planning also facilitates the monitoring of results and accountability for results.

Risks and risk mitigation

4.91. A key risk to the adoption of planned development is perceived concentration of power and control at the center. It may be interpreted by some as a reversal of decentralization and its perceived benefits.

4.92. To mitigate this risk, the strategic planning process will be used to strengthen rather than polarize the provincial and the national level. This can be attained through genuine consultation and a real—not symbolic—combination of top-down with bottom-up planning processes.

Policy Area # 4: Standardized architectural designs

Background

4.93. Architectural designs are a spatial and aesthetic response to sector policies priorities outlined in Chapter 4 and priority education needs implied in Policy Area # 2. Because form should follow function, architectural designs will respond to priority functions and activities to be performed within designed physical spaces. Other than functions, architectural designs are also an expression of local, national and international construction standards. They are an expression of the demands of diverse end-users from learners to communities. Because of diverse standards and contexts that designs have to respond to, and because designs are as functional as they are aesthetic, there is a wide scope of variation in the designs of physical teaching and learning spaces. Variation in designs leads to variation in climatic and contextual suitability; effective functionality; construction time, materials and costs; intensity of construction supervision and management; ease and cost of maintenance; etc.

4.94. To narrow this variation, and the burden it places on the government, most education, training, and skills development systems develop standard architectural designs to which all buildings must adhere. Because of the range of education needs and institutions, and because of the range of context, standard designs are developed as a menu from which diverse contexts may choose. This menu constitutes what is referred to as a menu of prototypes. To further ensure responsiveness to specific and unique contexts and sites, parameters are set for the adaptation of prototypes into specific designs right up to sites.

Key challenges addressed by this policy

4.95. In contrast to international practice, infrastructure development in South Africa seems to be proceeding without a menu of prototypes that suit specific contexts. Yet, the very social, geographical and sector diversity offered by South Africa seems to warrant such an approach. Without some form of standardization of designs, un-tempered variation seems to be the norm. Unwarranted variations are not only across provinces, but across service providers. Diverse consultants design to their taste, diverse projects design to their judgment of suitability, etc. Such diversity leaves the government with the burden of having to manage implications of these designs for climatic and contextual suitability; technical and substantive responsiveness; construction time, materials and costs; intensity of construction supervision and management; ease and cost of maintenance; etc

Prior and ongoing efforts

4.96. Overall, provinces have standardized designs—mainly traditional classroom blocks—which they seem to apply across diverse contexts; albeit very unevenly. There seems to be no national and/or provincial efforts to develop a menu of prototypes that respond to priority sector policies, the core functions of schools and the diversity of school types and the diversity of contexts.

Persisting challenges

4.97. The most critical challenge is diversity, not in itself, but because of its implications. Lack of standard designs leaves infrastructure development highly prone to irrelevance to education policy priorities. Lack of responsiveness of designs reduces usability; it makes for a less conducive teaching and learning environment and the consequent adverse effects on learning outcomes. To the extent that variations in elements of standard designs affect teaching and learning (ref. Chapter 3), lack of standard designs is a key cause of inequalities in the distribution of learning outcomes. Without standard designs it is very difficult to control the construction costs. In one visited province, wide variations in construction costs were attributed to differences structural designs and construction norms. Clearly, such variations make it difficult to estimate unit costs and to map levels of delivery to available resources. Wide variations in designs also make it difficult to articulate service standards and to keep delivery timelines. They are particularly time inefficient because each construction process has to start with the design phase which is not necessary. Complex designs will take longer to deliver than simple one. Variations and complexity of designs could also lead to maintenance costs downstream and to difficulties in sourcing local labor to do what could have been simple maintenance. All these factors translate into inefficient resource utilization and difficulties in planning service delivery. Without standard designs consultants may showcase their designs without much consideration for sector policies or end users.

Proposed policy

4.98. Effective from the new strategic plan period, all new construction and extensions will follow standardized designs. To the extent possible major rehabilitation will integrate key elements of the standard designs—e.g., accessibility. The national department of education will produce prototypes of standard designs to match the typology of schools. The designs will be a product of a clear analysis of key education functions and activities to be carried out within proposed physical spaces. Design prototypes will respond to core activities and facilitate them. Standard designs will also be guided by core sector policies such as physical access and substantive relevance. Provinces may adapt standard designs to specific geographical contexts and to specific construction sites. Such adaptations will not digress from the essence of the design, and especially not reduce responsiveness to policy priorities and sector needs.

4.99. Standardized menu of prototypes will be used to create cost maps and to control construction costs. An allowable margin of variance from the cost maps should be determined and circulated. Any new construction that goes beyond allowable variance will be subject to prior review—by proposed head of provincial department—and clearance. The clearance system will be embedded in the procurement process and become part of the criteria for bid evaluation.

Key policy actions

4.100. *Development of a menu of prototype designs:* A broad base of expertise in the field will be tapped to contribute to the development of a menu of prototypes. Such a base will include the physical planning units of the national and provincial departments; association of architects; consultants and consultancy firms; and educators.

4.101. *Creation of cost maps:* Based on their textured knowledge of their contexts, provincial departments will lead the creation of cost maps. Provinces will in turn forward these maps to the national department for review, inputs and adoption. Once adopted, provinces will take primary responsibility for monitoring adherence to cost maps.

Benefits

4.102. Expected benefits of design prototypes and cost control are: increased efficiency in the use of available resources; improved responsiveness of designs to priority sector policies and sector needs, and easier maintenance.

Risks and risk mitigation

4.103. *Reverse impact on construction costs [Moderate to high]:* In a context of scarcity of suppliers such as in South Africa, cost control measures may repel potential suppliers and limit competition. The end result could therefore be increased costs accrued from limited competition, which is the reverse of the policy intention. This risk could be high if the education sector is the only one instituting cost control measures.

4.104. *Reduced quality of construction [Moderate to high]:* Constricted competition could also risk the quality of construction if skilled suppliers go where there is less cost control.

4.105. To mitigate the above risks, the application of cost maps will have to flexibly follow market demand and supply. In times where there is high demand, it may be wise to ease the application and let the market determine the price. More open procurement methods than currently used could be used to mitigate this risk. Specifically international competitive bidding (ICB) could be applied to expand the supply. PEDs could enter into negotiations with suppliers' associations and/or professional bodies to secure more favorable responses within the parameters of their cost control.

4.106. Policy Area # 5: Management and Maintenance

Background

4.107. Elements of the physical teaching and learning environment constitute the largest proportion of the sector's immovable assets—land, buildings, etc. These assets appreciate in value. However there is no policy on the management and maintenance of these assets. Although these assets hold substantial value, there is no mechanism for capturing, tracking, and accounting for their value. There are also no mechanisms for securing their value. It is not clear if these assets are insured and what happens if they are exposed to risk that leads to substantial damage—the often cited floods—or even total loss. Beyond the financial value, immovable assets provide the physical space that translates into education access. If well maintained and managed, they provide conducive environments that translate into quality education. If well maintained and utilized, they can realize substantial efficiency gains. Participation in their management and/or maintenance can contribute to national poverty alleviation goals. It can also deepen national and sector values of school-community relationships and community ownership of schools.

Key challenges addressed by this policy

4.108. A key challenge is that there is no national and/or provincial policy on the management and/or maintenance of immovable assets. A weak policy environment leads to weak planning for and weak budgeting for asset management and maintenance. It is clear that poor asset management and maintenance translates into unaffordable resource wastage. There is no single province that seems to adequately manage the use of, and the maintenance of its assets. The proportion of buildings that are in a state of disrepair as registered in the NEIMS bears evidence of the results of poor maintenance. Poor maintenance results in a shortened life-span of assets which trap scare resource in perpetual major repairs or even replacements. It would be difficult to observe norms and standards for the durability, life-span and replacement of assets if they are either mismanaged or not well maintained.

Severe states of degradation of assets poses health and safety hazards for learners and educators. Both the NEIMS and anecdotal evidence bear evidence of mismanaged assets. For instance under-utilized and over-utilized school infrastructure, equipment and furniture are common place. Assets that are poorly managed or maintained translate into a sub-optimum teaching and learning environment. Mismanagement and ill maintenance of assets violates the nation and sector resource efficiency goal. The conceptual framework presented in Chapter 4 suggests that such environment have adverse effects on teaching and learning. They work against efforts to improve education quality. Wide variance in the quality of education that learners are exposed to contradicts the norm of equal opportunity enshrined in national and sector policies.

Prior and ongoing efforts

4.109. The national department has made several efforts to establish and maintain baselines on the level of provision and state of immovable assets—among others. This has taken the form of two school registers of needs (SRNs) and lately, the NEIMS. On the negative side, prior efforts at establishing baselines do not seem to have translated into sustained and current registers. The NEIMS was designed to address this weakness. In terms of management, provinces and schools make inadequate and uneven effort to manage immovable assets. Anecdotal evidence shows that a lot of schools and provinces maintain current asset registers. Both levels also make inadequate and uneven effort to maintain assets. Provinces have maintenance manuals for buildings, but it was not clear if they have the same or equivalents for furniture and equipment.

Key achievements

4.110. Although too early to tell, all indications are that the NEIMS will translate into an enduring and current database of fixed and other assets. If used to its capacity, and kept current, mined and analyzed, NEIMS could be used to inform policy and strategy on provision.

4.111. At the provincial level, the North West Province developed a draft policy on the management of immovable assets. However, this policy has remained in draft. It does not seem to be owned by the province, it seems to not be adopted and under implementation.

4.112. While provinces and schools make effort to keep current asset registers, it is not clear if and how the value of these assets is reflected in the financial management systems.

4.113. Through their School Governing Bodies (SGBs), communities have shown varying efforts to raise funds for the maintenance of immovable assets. In addition, the maintenance of immovable assets is one of the core activities that seem to effectively concretize community participation. Although marginal, community participation in the maintenance of assets contributes to a broader national poverty alleviation goal.

Persisting challenges

4.114. The lack of policies on asset management and maintenance allows for the wide range of practices and performance. In the case of maintenance, inadequate financing continues to be a binding constraint. Where funds could be adequate, poor budget management practices have allowed for their use of funds on other activities such as the construction of new schools or urgently needed replacements.

Policy statement

4.115. By the end of 2010 the DoE will have developed a national policy on the management of immovable assets. Minimum parameters of that policy will include: standardized acquisition of assets; standardized and current register of assets, current information and data base; standardized

recording and tracking of the value of assets; insurance of the assets; efficient usage, timely and adequate maintenance, rehabilitation, and disposal. This policy will be under implementation by provinces and schools by 2010, or at the start of the new strategic plan period.

4.116. Within the same time span, the department of education will also develop a comprehensive maintenance policy for school infrastructure, basic services, furniture and equipment. The policy will entail norms and standards for preventive and corrective maintenance as well as replacements. It will entail the allocation of responsibilities for certain types of maintenance in terms of financing, execution and quality assurance. Thresholds for certain types of maintenance will also be included. This policy should go into effect by 2010.

Key policy actions

4.117. *Verification and validation of baseline data*: The NEIMS provides a good starting point for systematizing, validating and maintaining data on the current state of immovable assets. It is urgent that a system is set up for keeping this data current.

4.118. *Analyze NEIMS*: Further analysis of the NEIMS will be conducted and targeted to facilitate policy development and strategic planning.

4.119. *Technical support for provinces and schools* will be provided to enable them to set up their asset registers, to accurately record the value of their assets and to integrate these values into regular asset and financial management.

4.120. Provinces and schools will also be provided technical support with policy implementation.

Benefits

4.121. Expected benefits of an asset management and maintenance policy include: prolonged life-span of assets and higher value for money; efficient utilization and better value for money; improved learning environments and the resultant education quality; if evenly implemented, improved equity of inputs and outcomes.

Risks and risk mitigation

4.122. There are no envisaged risks for this policy.

Policy Area # 6: Diversification of funding sources

Background

4.123. It would appear that at present, the government finances more than 90 percent of the capital investment in school infrastructure, basic services, furniture, equipment, books and instructional materials. Two key public financing mechanisms are equitable share and conditional grants. As noted, the level of investment in infrastructure alone has phenomenally increased over the past decade and is bound to keep growing. Given competing demands on public resources, it is prudent for the government to aggressively diversify sources of funding for not only the physical teaching and learning environment, but also for the sector as a whole.

Key challenges addressed by this policy

4.124. Most provinces are reluctant to diversify funding sources for their development project. Non-public funds, especially donor funding is not preferred for its unpredictability and the consequent uncertainties in provincial plans. Lack of experience in raising non-public funds remains a challenge. In the near past, a key challenge of the National and Provincial Treasuries was how to effectively disburse resources allocated to the sector—giving rise to the IDIP. Given the demonstrated low absorptive capacity and South Africa's middle income status, the sector does not attract as much external funding as its needs warrant. This is a critical challenge, especially given the reality that external donations may quickly wane as the post-apartheid years increase and South Africa is more and more seen as having had adequate time to redistribute its undisputable wealth. South Africa does very well in leveraging the private purchasing power for sector services. However, the reality is that real private purchasing power is still in the hands of a limited minority. The thin resource base of some households and communities severely constrain their contribution. In fact income inequalities remain a key challenge to attaining equity of resource distribution within the sector. An institutional challenge is South Africa's tendency to set up extremely complicated institutional arrangements for raising funds and accessing them. The SETAs provide such an example. Caution needs to therefore be sounded to avoid similar situation with respect to this initiative.

Prior and ongoing efforts

4.125. It first needs to be acknowledged that this very exercise is the ongoing national department's effort at diversifying funding sources for school infrastructure. The National Treasury has already set up structures and systems for diversifying funding sources for not only school infrastructure but infrastructure as a whole. This is in the form of a PPP unit at the central Treasury. Within the sector, several efforts are also ongoing to diversify sources of funding. School heads and SGBs continue to receive training in resource mobilization—albeit very limited.

Achievements

4.126. Through the initiative of the National Treasury, the financial absorptive capacity of provinces is expected to substantially improve. The department of education attracts modest donor funding for school infrastructure such as the EC funding. Despite income difficulties among many households, South Africa, and the department have maintained the self-reliance value in the sourcing of funds from communities and households. Although the results are very uneven, there are very clear pockets of excellence with schools, communities, and SGBs that manage to raise substantial funds for their school infrastructure projects. It is also commendable that South Africa and the department have not followed the international development agencies push for free education. Commendable achievements are being registered in the complex but necessary task of balancing of need-based public financing and affordable private financing of education and training services.

Persisting challenges

4.127. While improving the absorptive capacity of the national and provincial department of education is still an impediment to raising both public and non-public financing. The apparent lack of clear efficiency controls is also a deterrent to potential non-government contributors. Perceived financial self-sufficiency is a persisting challenge. Most provinces do not show the need or urgency to raise non-public financing. The limited resource base for the majority of households will remain a challenge for a long time to come.

Policy statement

4.128. The department will institute a differentiated diversification of funding for the physical teaching and learning environment with a target to source a minimum of 25 percent of the current

capital fund from non-public sources by 2010. A range of non-public financing mechanisms will be tapped and mapped to appropriate contexts. Among the range of financing mechanisms that will be considered: private public partnerships (PPPs), leveraging private purchasing power (LPPP); international donors, securitization, guarantees for commercial banks lending to schools; privatization of the management of public schools; national lenders; and international lenders. Provinces will also aim to reach the same level of national target using similar approaches.

Key policy actions

4.129. The most significant action is for the national and provincial departments to set up a sub-structure and charge it with responsibility for resource mobilization. Performance targets will be set for these sub-structures and they should be held accountable for delivery.

Benefits

4.130. An expected benefit of the policy is the reduced financial burden on the government. Other benefits are the fast tracked delivery and expected development impact; expanded and elevated delivery of elements of the physical environment and the resultant impact of learning outcomes and education quality; improved efficiency gains in the use of resources; and, if equitably distributed, improved equity of inputs and hopefully outcomes.

Risks and risk mitigation

4.131. If successful, policies to diversity sources of capital budgets can lead to unsustainable recurrent budget implications for the government.

4.132. To reduce this risk, proper simulation will be used to avoid over-committing the government to expenditures it cannot sustain.

Policy Area # 7: Demonstrated delivery capacity

Background

4.133. Effective implementation capacity is critical for the above outlined policy areas to take effect and for expected benefits to be realized. Key capacities required for effective delivery of an enabling environment include: long term strategic planning for policy implementation; the development of feasible medium term programs; planning for program implementation, procurement and disbursement planning and management, financial management, timely collection of accurate data to support sustained monitoring of program implementation, analysis of data to inform policy implementation and core decisions, and periodic evaluation of policy impact.

4.134. Currently these capacities ought to be at different levels of the systems. The DoE should have effective capacity for strategic planning, development of national medium term implementable programs that provinces can adapt to their contexts, timely collection of accurate data to support sustained monitoring of program implementation, analysis of data to inform policy implementation and core decisions, and periodic evaluation of policy impact. For its success, the DoE depends on the support of other national departments key among which are Treasury and Public Works.

4.135. The PEDs on the other hand ought to have capacity for the development of provincial infrastructure programs and for their implementation. This places responsibility for core

implementation functions on provinces. Specific capacities should include planning for implementation, procurement, and disbursement; monitoring program implementation at the provincial level, and periodic reporting on implementation progress. For their success, provinces depend on the support of other provincial departments particularly Treasury and Public Works; lower levels of the provincial structures from districts to schools, the DoE and private consultants and firms.

4.136. Both the DoE and the PEDs require strong organizations with very clear division of labor to undertake their respective mandates, the right numbers of human resources with skill mix that are appropriately matched to organizational mandates, sufficient non-human resources—fiscal, time, equipment, materials—to execute the mandate, and appropriate procedures that facilitate the execution of the mandate. In addition, both the DoE and PEDs depend on a broader enabling national environment such as the availability of appropriate skills in the labor market, availability of materials, and the right regulatory framework.

Key challenges addressed by this policy

4.137. Currently the delivery of infrastructure does not seem to have the benefit of a strong organizational structure with a clear division of labor across all levels. The delivery of infrastructure is currently fragmented amongst three different departments at national and provincial level, they are namely; DoE, DPW and Treasury. Fragmentation complicates coordination, creates role conflicts, tends to duplicate efforts, weakens accountability, and slows down implementation.

4.138. The second most critical challenge is the shortage of human resources with the right skills mix to execute organizational mandates.

Prior and ongoing efforts

4.139. The DoE has devolved authority for implementation to the provinces. Further, there is a fairly clear division of labor between the DoE and the PEDs.

4.140. PEDs and Provincial Department of Public Works (PDPWs) are currently the core implementing institutions in the 9 provinces.

4.141. Through the IDIP, National Treasury provides Technical Assistance (TA) to strengthen the capacity of the core implementing agents. PEDs and PDPWs augment their capacities by using diverse implementing agents including communities, school governing bodies (SGBs), and private consultancy firms.

Persisting challenges

4.142. Within PEDs, authority and decision making powers seems to be still concentrated at the top level of management. There seems to be no clear division of labor or devolution of authority to lower levels within provinces.

4.143. On average provincial departments of education and of public works are understaffed in both quantitative and qualitative terms. This makes effective delivery a critical challenge. For some provinces shortage of critical skills—engineers, architects, high level construction companies—in the open market is a critical constraint to effective delivery.

4.144. Some aspects of the broader national environment also constrain effective delivery. Most provinces experience shortage of construction materials, exacerbated by the 2010 construction boom. This is another constraint to their effective delivery.

4.145. While the IDIP is strengthening the implementation capacity of PEDs and PDPWs, substantial attention still needs to be paid to planning for implementation. Systems for integrated and collaborative planning still need to be developed. Poor implementation planning remains a key cause of implementation delays. Implementation delays routinely lead to delays in disbursements, and sometimes, to the loss of funds that were supposed to be used within the financial year. On the other hand, PEDs often note the slow implementation pace of PDPWs which lead to poor delivery of planned infrastructure. In some instances, albeit very rare, PDPWs are reputed for substantial implementation delays, but also for delivering less output at a much higher costs than PEDs.

4.146. Procurement planning is another weak point in the delivery system. In some cases, provincial officials did not seem to make a distinction between overall implementation planning and procurement planning. With this lack of clarity, it is difficult to coordinate implementation plans with procurement and disbursement plans. Other than weak planning capacity, procurement actions undertaken by diverse units are not well coordinated. Because of lack of coordination, critical inputs—classrooms, furniture, books—are not always delivered at the same time as they should. Partly because of weak procurement planning, procurement actions are not closely monitored. In some cases, implementation plans identify 'completion dates' as the 'year' not even the specific month when work will be completed.

4.147. The DoE also has weak capacity for strategic planning and medium term programming. Capacity for timely collection of accurate data, data analysis and sustained monitoring of implementation progress is also weak.

Policy Statement

4.148. The DoE will intensify the devolution of responsibility, authority and accountability for the provision of school infrastructure to the lowest feasible level in the education system which is the school. The definition of functions to be devolved will be explicitly and uniformly specified based on best practices for effective delivery and not on current capacities of levels of devolution. The devolution will adopt a phased process based on current capacity of levels of devolution. A capacity development program will be developed and implemented to ensure a roll out of the devolution process in accordance with the plan. Full implementation of the plan should be completed by 2012.

4.149. The DoE will integrate all infrastructure delivery functions which are currently carried out in different agencies and unify responsibility and accountability for them. All infrastructure provision operations managed and coordinated under Treasury, other than the actual provision of funds, should be moved to the DoE. Equally, all infrastructure operations managed by the DoPW should be moved to the DoE. At provincial level, the coordination and management of all operations should be in the hands of the PEDs.

4.150. A comprehensive capacity development program should be developed and immediately implemented to enable the DoE and PEDs to effectively and efficiently deliver key elements of the teaching and learning environment.

4.151. The DoE and PEDs should retain full authority to appoint agents to augment their delivery capacity for key elements of the teaching and learning environment. Such agents should be under the full supervision of the DoE and PEDs.

4.152. During peak periods, the DoE may centrally create and agency to manage the delivery of key elements of the teaching and learning environment. Such an agency should centrally report to the national and provincial departments of education. The agency will be dissolved at the end of the peak period and full responsibility for delivery will revert fully to the national and provincial departments of education.

Key policy actions

4.153. In order to ensure the success of the devolution plan, the DoE and PEDs should undertake their functional analyses. The results should be used to guide the devolution plan.

4.154. As part of the preparation for policy implementation, a comprehensive capacity analysis covering—human resources, organizational, institutional and national capacities—should be undertaken. The results should be used to develop a comprehensive capacity development program that will underpin policy implementation.

Benefits

4.155. An expected benefit in the proposed policy is; improved capacity in PEDs, clear accountable agency for infrastructure and maximized efficiency, this will also save cost and the time taken to deliver projects

4.156. An optimal division of labor has the following characteristics: (a) it places work as close as operationally possible to those affected by it – the clients or beneficiaries; (b) it places decision-making as close as operationally possible to where the information needed is to be found; (c) it avoids unnecessary fragmentation and retains unitary accountability as far as possible; and (d) it seeks to maximize efficiency.

Risks and risk mitigation

The key risk of devolution of functions and unitary accountability is the capacity of infrastructure units at all levels of management at DoE and PEDs.

4.157. To mitigate the risk DoE will design and implement capacity building programs for itself and for PEDs.

Policy Area # 8: Systematized procurement management and procedures for the sector

4.158. In most cases, procurement is the last consideration of sector policies, strategies and programs. Yet in real terms, procurement ought to be an integral part of these instruments. Procurement policies and systems of a country reflect broader national policies and strategies for development. For instance the South Africa procurement system supports the broader national black economic empowerment (BEE) policy. It also supports the overall national strategy for promoting transparency, accountability for use of public resources, and good governance.

4.159. Specific to programs, procurement ought to be an integral part of program design and implementation. Procurement plans support and give effect to implementation plans. Procurement plans also drive disbursements. Appropriate procurement methods can improve the quality of goods and services rendered; technical, time, and resource efficiency in the provision of goods and services; equity in the benefits accrued from procurement processes; and consolidation of national policies and values. The policy framework therefore integrates procurement at this early stage in recognition of its importance.

Key challenges addressed by this policy

4.160. The main challenge is that the education, training and skills development sector seems not to have a systematic and systemic procurement management system and procedures. This is in spite of importance of procurement in national and sector policies, strategies and programs. Without a system that can be followed by the sector, there are bound to be inconsistencies that are not necessarily constructive. Without a system there are real risks of no attaining the benefits of a robust procurement system outlined above. These inconsistencies and the risks they pose to key national policies is what gives rise to the need for a policy(ies) that can regularize practices and support broader national policies.

Prior and ongoing efforts

4.161. Notable efforts to improve procurement are at the national level. Through the agency of the National Treasury, government has instituted progressive procurement reforms starting just one year after democratic rule, in 1995. These reforms are underpinned by two broad principles: good governance and equal opportunity. Adopted measures are relevant to procurement policies and institutions concerned with procurement. They focused on the attainment of: quality of goods and services; time and resource efficiency in procurement; responsiveness / relevance to national needs; recognition of national values; improved equity in procurement processes; and credibility and transparency. A number of legal frameworks have been instituted to enforce adopted reforms; including the Public Finance Management Act (PFMA) and the Preferential Procurement Policy Framework Act (PPPFA).

4.162. Reforms were underpinned by substantial analyses of the public procurement system. For instance in 2001/2002 the government undertook a Country Procurement Assessment Review (CPAR) with technical support from the World Bank. This review revealed a number of deficiencies that needed to be addressed in order to strengthen governance and to improve the interpretation and implementation of the PPPFA and regulations. The following actions were recommended:

4.162.1. For uniformity and equity, announce a single national legislative framework in terms of section 76(4)(c) of the PFMA to guide uniformity in procurement reform initiatives in the different spheres of government.

4.162.2. Replace the outdated and inefficient procurement and provisioning practices in government with a supply chain management function and a competitive system for the appointment of consultants fully integrated with the financial management processes.

4.162.3. Prescribe minimum norms and standards to promote uniformity in bid documentation, advertising, receipt and adjudication procedures.

4.162.4. Monitor value for money performance.

Key achievements

4.163. In 2003, the government adopted a *strategy to promote uniformity in the procurement reform processes.* A range of actions outlined below were initiated by and are at differing stages of implementation:

4.164. *An integrated supply chain management function is introduced:* In September 2003, Cabinet adopted a Supply Chain Management (SCM) policy to replace the inadequate procurement and provisioning practices across government. The observed inadequacies were in the areas of (i) procurement, (ii) contract management, (iii) inventory/asset control, and (iv) obsolescence planning.

The new SCM function is an integral part of financial management and conforms to international best practices. The new arrangements are expected to promote uniformity in SCM processes and in interpretation of government's preferential procurement legislation and policies. These arrangements mean that responsibility and accountability for SCM-related functions will be devolved to accounting officers/authorities.

4.165. The Supply Chain Management system provides for procurement that is fair, equitable, transparent, competitive and cost-effective. It has introduced internationally accepted principles of best practice. The SCM system is designed to achieve effective, efficient and innovative process for (a) demand planning, (b) procurement (including strategic sourcing), (c) contract management, (d) inventory/asset control, and (e) obsolescence/disposal planning.

4.166. *A national legislative framework is introduced* to enforce minimum norms and standards and uniformity in respect of SCM practices and interpretation of policy objectives. The framework established the policy parameters for the repealing of the existing Tender Board legislation and prescribed minimum norms and standards for SCM practices in government. It also empowered the National Treasury to arrange for transversally used "term-contracts" where it is beneficial from a value for money perspective and/or achieves government's preferential procurement policy objectives. Minimum reporting requirements were established for Accounting Officers/authorities and the National Treasury to monitor compliance.

4.167. This uniformity in SCM practices is to be promoted, among others steps, through uniformity in bid and contract documentation and options and standards of bid policies and procedures. The National Treasury is to issue such practice notes. In turn, Provincial Treasurers and Municipal Managers will issue further practice notes to guide the more detailed implementation of SCM functions.

4.168. These policies apply to all national and provincial departments, constitutional institutions, public entities and all school governing bodies. The system empowers Accounting Officers to manage their departments and accept full responsibility and accountability for all expenditures incurred by their departments. At provincial level, the various Tender Board Acts will also be ultimately repealed and the various provincial Tender Boards will be dismantled. In some provinces this phased process has already commenced and certain provincial Tender Boards have already been dismantled.

4.169. *Implementation Strategy is developed:* The divide between the then current procurement and provisioning practices in government and the new integrated SCM function necessitated a phased implementation approach. To prepare departments for the new concepts, tender boards, in liaison with the relevant treasuries, began to significantly delegate their authority to procurement departments so that the latter can begin to build capacity. In this endeavor, Accounting Officers/authorities are to be supported by their relevant treasuries. Capacity building would include the establishment of SCM Units, the establishment of clear lines of authority and accountability and performance criteria, quicker and more efficient sourcing and better asset and inventory management.

4.170. *Capacity building in Procurement is planned:* It is the responsibility of every Accounting Officer/ authority to ensure that their SCM personnel are adequately trained. The National Treasury will facilitate the development of appropriate training material in conjunction with (South African Management Development Institute) SAMDI, Institute for Public Finance and Auditing (IPFA) and others to assist Accounting Officers/authorities in the training of their personnel.

4.171. *Accountability and reporting is defined* to ensure that individuals and organizations are answerable for their plans, actions and outcomes. Openness and transparency in administration, by external scrutiny through public reporting, is an essential element of accountability. Within the procurement framework, the heads of departments are accountable to their ministers for the overall management of procurement activities with suitable delegation of authority within the department.

4.172. *The 2003 procurement guidelines* stress that proper and successful government procurement rests upon core principles of behavior - the Five Pillars of Procurement: (a) Value for Money, (b) Open and Effective Competition, (c) Ethics and Fair Dealing, (d) Accountability and Reporting, and (e) Equity. The Guidelines prescribe minimum standards that are to be observed. The Guidelines are to be supplemented by individual Accounting Officers' Procurement Procedures.

Persisting challenges

4.173. To date, and in spite of the national progress outlined above, the sector seems to not have systematically interpreted the national procurement system and translated it into a sector-specific system. Mainly because of an unclear sector-specific procurement system the organization and management of procurement differs across and within provinces. Roles, responsibilities and accountability for procurement are fragmented and unclear. There are inconsistencies in the extent of the devolution of authority for procurement. Procurement authority is not always devolved to the appropriate operational level. Where there is devolution, identical operational levels are accorded different levels of authority with respect to identical functions. For instance non-section 21 schools have very limited authority for procurement with a threshold of about R 2000. Yet the same schools raise hundreds of thousands of Rands with which they have unlimited authority to procure. This means that either the capacity of these schools to procure is underrated or their accountability for own-source revenues is not taken seriously. Either way, there are inexplicable inconsistencies in the level of procurement authority devolved to these schools. Procurement planning is weak to non-existence. Most visited provinces did not seem to distinguish procurement plans from implementation plans. Partly because of poor procurement planning, implementation and disbursements have not always matched the needs. Absorptive capacity for allocated resources has been low, despite dire needs. As noted, the IDIP program seeks to remedy this situation, but even that does not give adequate attention to procurement planning and procurement management.

Policy statement

4.174. Effective from the new strategic plan period—2008 to 2012—procurement of all elements of the physical teaching and learning environment will comply with the standardized sector-specific procurement procedures. These procedures will be developed by the DoE, in compliance with the overall national procurement policy and procedures. All provinces will comply with set sector-specific procedures.

4.175. *Effective from the new strategic plan period—2008 to 2012—responsibility and accountability for the actual execution of procurement procedures will with PEDs and not with a multiplicity of agencies as it is currently the case.*

4.176. *Effective from the new strategic plan period—2008 to 2012—authority for procurement execution will be devolved to the lowest appropriate operational level.*

Key policy actions

4.177. Standardization of a sector-specific procurement system will require the following key actions:

4.178. *Interpretation of national procurement policy and procedures and translating them into a sector –specific system and procedures.* By and large South Africa has developed procurement policies and procedures. What remains is for sectors to translate existing policies and procedures into what suits the sector. In so doing, the DoE should remain in compliance with the national system, but does not have to adopt all elements of the system. For instance, the DoE may feel that certain

procurement methods allowed in the national systems are suitable for its purposes but not others. It is also possible that the DoE may find certain methods not provided for in the national systems appropriate for its purposes. An example may be the use of international competitive bidding (ICB) as a method that could improve efficiency and cost-effectiveness through more open competition. In cases where the DoE digresses from the national system, no matter how slightly, clearance will be sought from the National Treasury as the authority responsible for the national system.

4.179. *Develop procurement guidelines and manuals:* For its effect, the sector-specific system should be backed up by clear guidelines and manuals. These will be developed by the DoE.

4.180. *Accord the PEDs sole responsibility and accountability for procurement.* Currently, the procurement of works particularly is fragmented over a range of agencies. This fragmentation weakens accountability for a range of core function like construction supervision and contract management. On average, most of procurement functions are discharged by PEDs through the agency of the SCMO. However there are wide variations on who takes responsibility and accountability for procurement of work. The variation ranges from one extreme where the PEDs do all procurement in-house to outsourcing all procurement to a range of agencies ranging from the Department of Works (DoW) to independent consultants. In some provinces, the procurement of works is done by PEDs but not through the SCMO. Other provinces delegate the procurement of works to the DoW. Even then, the actual functions are still split. The DoW does all the processing of the works contracts using its departmental staff. Thus, DoW acts as an agency of the PED. However, the contract with the selected contractor is not signed by DoW; it is signed by the PED. In this arrangement, the PED is responsible for (a) approving and making all payments, and (b) approving all variations and additions to the contract. In this way, the PED retains full control of (i) contract content, (ii) contract payments, while leaving most of the actual "contract management" function to DPW (iii) PEDs do some limited construction supervision but it is not clear how the contractor reports to supervisors from PEDs and DoWs. The net effect is that the line of accountability for construction supervision gets blurred.

4.181. *Strengthen procurement planning and management capacity of PEDs.* PEDs will not be able to take sole responsibility and accountability for procurement without substantial capacity development. Specific areas where capacity needs to be developed includes: (i) procurement planning; (ii) coordination of procurement planning with implementation planning, disbursement planning, and monitoring and evaluation; (iii) contract management and construction supervision; and (iv) cost management and cost control.

4.182. *Strengthen procurement management capacity at all operational levels where procurement takes place*: It will be impossible to devolve procurement authority to lower levels unless those levels are technically empowered to exercise that authority. As such, capacity will have to strengthen at the lower levels and in a manner commensurate with their levels of authority.

4.183. *Strengthen capacity for financial management:* Procurement releases funds, and thus demands strengthened financial management system. The devolution of procurement authority will therefore necessarily demand devolution of financial management. Thus capacity needs to be developed in this area.

4.184. *Streamline financial management systems:* Effective financial management demands effective and streamlined systems.

4.185. *Determine and consistently apply thresholds for lower levels of the system:* Currently, the thresholds for non-section 21 schools are counterintuitive. On the one hand, they have a limit of R 2000. On the other hand, they have no limits. The contradictions of this practice have been sketched above and need reconciliation.

Benefits

4.186. Expected benefits of clear procurement system and procedures are all the benefits of effective procurement policy, planning and procedures outlined above—quality of service, time, technical and resource efficiency, timeliness of service, value for money, accountability for public resources, fair opportunities, etc. Improved procurement capacity is also expected to facilitate implementation and disbursement.

Risks and risk mitigation

4.187. The proposed policy may lead to turf battles where other departments like National Treasury, and DoW feels that the DoE is encroaching in their space. Provinces may not like the centrist approach where their procurement system, guidelines, manuals and procedures are centrally determined. PEDs may be reluctant to devolve procurement authority to lower levels as this may seen to be the erosion of their power and control. Risks of price control measures in context where other government departments are not doing the same have already been outlined.

4.188. To mitigate this risk, consultation and higher levels engagement will be necessary to make feasible the implied reorganization of roles and functions across different government departments.

NOTICE 1439 OF 2008

DEPARTMENT OF EDUCATION

SOUTH AFRICAN SCHOOLS ACT 84 of 1996

CALL FOR COMMENTS ON NATIONAL MINIMUM UNIFORM NORMS AND STANDARDS FOR SCHOOL INFRASTRUCTURE

I, Grace Naledi Mandisa Pandor, Minister of Education after consultation with the Council of Education Ministers and in terms of section 5A of the South African Schools Act,1996(Act No 84 of 1996), hereby determines National Minimum Uniform Norms and Standards for School Infrastructure, as set out in the Schedule.

All interested persons and organisations are invited to comment on the norms and standards, in writing and to direct their comments to-

The Director-General, Private Bag X895, Pretoria, 0001, for attention: Mrs E Mamathuba, tel 012 312 5954, email mamathuba.e@doe.gov.za, fax 012 312 6058/ 086 554 2241.

Comments must reach the Director-General on or before 23 December 2008.

G.N.M. Pandor

GRACE NALEDI MANDISA PANDOR, MP
MINISTER OF EDUCATION
DATE: 14-11-2008

SCHEDULE

NATIONAL MINIMUM NORMS AND STANDARDS FOR SCHOOL INFRASTRUCTURE

VOLUME 1

TABLE OF CONTENTS

TABLES

ABBREVIATIONS AND ACRONYMS

BMP	Basic Minimum Package
CEM	Council of Education Ministers
DoE	Department of Education
ECD	Early Child Development
GET	General Education and Training
FET	Further Education and Training
HEDCOM	Heads of Education Committee
MEC	Members of the Executive Council
MoE	Ministry of Education
NEIMS	National Education Information Management System
ETSDS	Education, Training and skills development system
NCS	National Curriculum Statement
UI	Utilization index
Hs	Total school hours per week
nS	Number of spaces
VUI	Verification of index
TWHLA	Total weekly hours by learning area

Introduction

1.1. Equality of educational opportunity is one of the principles enshrined in our Constitution. The Ministry of Education (MoE)) interpret this principle as entailing equity of both education resource inputs and thus education outcomes., The historical heritage of South Africa's Education, Training and Skills Development System (ETSDS) has been one of institutionalized inequalities. Just before the democratic transition in 1991, the per capita spending on a white child was 350 percent more than on a black child. Consequently, the distribution of key resource inputs that are known to facilitate teaching and learning were skewed.

1.2. Since the democratic transition of 1994, the MoE has endeavored to redress the stark historical inequalities in the distribution of education resource inputs and outcomes. By 2006, the per capita spending on a white child had declined to 22 percent more than what is spent on a black child. This differential is mainly due to fees and other private contributions that are outside the control of the system. While progress is being made, the racial composition of schools still remains a major explanatory factor for student learning outcomes (as evident in the matriculation pass rates) after controlling for socio-economic background and school inputs.

1.3. Historically, one of the most visible forms of inequalities in the provision of resource inputs has been the physical teaching and learning environment; the key elements of which include infrastructure, basic services, equipment, furniture, books and instructional materials. As with other areas of provision, substantial effort has been made to redress these inequalities. This effort notwithstanding, key elements of the physical teaching and learning environment remain insufficient and inequitable across schools. For instance, by 2006, 17 percent of schools were without electricity, 12 percent were without a reliable water source on site, 68 percent were without computers, 80 percent without libraries or library stocks, 61 percent without laboratories and 24 percent had overcrowded classrooms (45 learners or more). To date, there is still a significant backlog of schools that are run in unacceptable and even unsafe physical facilities.

1.4. During 2007, the MoE developed a *National Policy for Equitable Provision of an Enabling School Physical Teaching and Learning Environment (policy document)* to guide sufficient and equitable provision of key elements of the physical teaching and learning environment. These norms and standards follow a formal approval of the national policy by the Council of Education Ministers (CEM). It comprises Volume 1 of the national norms and standards which focuses only on school infrastructure and basic services. Norms and standards for other elements of the physical teaching and learning environment will be prepared at a later stage.

Legal, Policy and Institutional underpinnings

Policy underpinnings

1.5. The norms and standards presented in this document are underpinned by the above referred *National Policy for Equitable Provision of an Enabling School Physical Teaching and Learning Environment*. The policy comprises 6 strategic and 2 operational policy statements. The first of the 6 strategic policy statements calls for the development of norms and standards for equitable provision of an enabling physical teaching and learning environment as an urgent priority. The national policy further states that national norms and standards will be developed during 2008, fully adopted by the end of 2009, and implemented by 2010. This document is therefore the first step toward the operationalization of the national policy. It presents a draft norms and standards to be discussed and adopted at a national level. As a national instrument, these norms and standards will apply to ***ALL*** public ordinary schools (excluding hostels) that operate in South Africa, regardless of the ownership. Also, in the process of registering of independent school, The MEC will ensure that such schools oblige the minimum norms as indicated in this document. Further, considering the specificity and diversity for provision of special schools, all special schools shall oblige to these minimum norms as indicated in this document.

Strategic underpinnings

1.6. The current sector strategic plan ***(2008/2012)*** also identifies the development of national norms and standards as well as the Basic Minimum Package (BMP) for the provision of school infrastructure as the second priority for the period of the plan. Consistent with the policy, the plan sets as a target, the development of the norms and standards within 2008. These norms and standards are therefore also the first step toward the implementation of this aspect of the strategic plan.

Effectiveness of the norms

1.7. These norms will be fully adopted by the end of 2009 and will be implemented in a phased manner starting from 2010.

Legal underpinnings

1.8. The norms and standards entailed in this document find their legal underpinning in the South African Schools Act of 84 of 1996 as amended which designates the Minister of Education the authority to prescribe minimum norms and standards for the physical teaching and learning environment, after consultations with the Council of Education Ministers (CEM).

1.9. In operational terms, these norms and standards will also impact other relevant national legal frameworks such as the National Education Policy Act 1996(Act No 27 of 1996) the *Development Facilitation Act, 1995 (Act 67 of 1995), Environmental Management Act, 1998 (Act 107 of 1998), Town Planning and Township Ordinance Act*, 1986 (Act15 of 1986), *Water Service Act, 1997 (Act 108 of 1997),* and the *Intergovernmental Relation Act, 2005 (Act 13 of 2005)* etc.

Institutional framework

1.10. The current institutional framework accords the MoE the responsibility for policy development and the monitoring of policy implementation by provinces. Consistent with the current institutional framework, the MoE will retain the responsibility for policy development, for the development of national instruments that facilitate policy implementation of these norms and standards. The MoE will also retain responsibility for periodic review of the norms and standards to ensure currency and contextual responsiveness. As provided for in the national policy, The DoE will oversee and ensure effective implementation and compliance with the norms and standards. This includes the monitoring and evaluation of the implementation of the norms and standards as well as the assessment of their intended impact and outcomes. To best execute its role, the DoE will assess its delivery capacity and that of the Provinces. Based on the results, a capacity development program will be developed and implemented alongside with the implementation of the norms and standards. A key part of the capacity strengthening initiatives will entail the establishment of a new unit dedicated to the provision of elements of the physical teaching and learning environment. The Unit will report directly to the Director General. Provinces will implement the norms and standards. In so doing, Provinces may adapt national norms and standards to their specific contexts within parameters set by the DoE. For instance, the proposed norm for the size of a regular classroom is 48 to 60 square meters. Within this set range of the norm, Provinces may pick a suitable class size. Provincial adaptation of norms and standards will, under no circumstance, lead to a diminution of the minimum norm.

1.11. All other departments that are responsible for national norms and standards for the provision of basic services (construction standards, water, electricity, sanitation, transport, etc.) as well as for construction standards will also support the implementation of these norms.

Rationale for national norms and standards

Responsiveness to sector policies

1.12. One of the key challenges that prompted the development of these norms and standards is that current provision does not provide a physical teaching and learning environment required to sufficiently support the implementation of core sector policies. As elaborated in Chapter 2 of the national policy, the norms and standards entailed in this document are therefore meant to better facilitate the implementation of core sector policies whose success depends on the adequacy of the physical teaching and learning environment. They are also meant to facilitate the actualization of key sector policy tenets—equity, quality, relevance, efficiency, values—as elaborated in Chapter 3 of the national policy document.

Responsive to curricula and pedagogy

1.13. The current physical teaching and learning environment was also found to be inadequate to facilitate effective delivery of curricula, co-curricula activities, progressive pedagogy implied in national curriculum statement (NCS), effective learning, and community needs. Learners and educators are therefore prime clients, while communities are secondary clients whose needs are to be responded to through these norms and standards.

Systematization of priority setting and identification of backlogs in provision

1.14. The previous lack of national norms and standards was identified among key constraints to a systematic and strategic prioritization of needs regarding core elements of an enabling environment. Lack of clear priorities, constrained the creation/articulation of a nationally consensual definition of backlogs in the provision of all elements of an enabling teaching and learning environment. Lack of consensus on what constitutes priority needs and backlogs in provision risked the attainment of equity in provision. Consensual definitions of priorities and backlogs are particularly critical in the context of South Africa where levels of provision vary substantially and where equity and strategic considerations have to be carefully balanced.

Ensuring equity of provision

1.15. In order to ensure equity of provision and to aid the setting of priorities, the national policy provides for minimum and optimum norms and standards. It also presents a gradation of provision which will be used as benchmarks for adequacy of provision further down the line during the planning stage for the intended levels of provision. According to this gradation, schools will be classified as meeting norms and standards for *safety, functionality,* and *effectiveness*. During strategic planning, the DoE will determine a target date by which schools will meet each level of provision with an ultimate aim of having ***ALL*** schools reach an effective physical teaching and learning environment by 2030, or within 20 years of the first year of implementing the norms (2010). Because this is the level where we aim for all schools to reach, this document mainly details the norms and standards for an effective environment. Schools that do not meet *safety* norms will not be tolerated and will be closed with immediate effect. *Safety* norms and standards are therefore regarded as emergency norms and all effort will be made to not have any school at this level beyond the current sector strategy plan period (2012). The aim will be to have all schools meet *functionality* norms and standards as soon as possible (within the first 10 years of implementing these norms or by 2020).

1.16. Collectively, schools that do not meet *safety* and *functionality* norms and standards will be considered as comprising a "backlog" in provision. A "backlog" is therefore operationally defined as entailing schools that do not meet *safety* and *functionality* norms. It should be pointed out that existing schools may fail to meet some aspects of the norms and standards. In such cases, such aspects will be retrofitted into a school to ensure that it fully meets the BMP for a set level of provision (i.e., functional or effective). As noted, our target is to clear the "backlog" in provision within the first 10 years of the implementation of these norms and standards.

1.17. As development imperatives may dictate, schools may be selectively provided for beyond the optimum norms and standards that are expected to provide an environment that enables schools to be effective. The policy allows for this, and refers to this level of provision as *enrichment* norms and

standards. It is expected that from time to time, the nature and mix of inputs that constitute an enriched environment may change depending on strategic country needs that the DoE must respond to. It is also expected that the proportion of schools requiring enriched environments will be strategically decided on by the Ministry of Education, following its normal consultative processes. These special schools fall outside the label of public ordinary schools which comprise the scope of these norms and standards.

1.18. Current examples of schools that meet enrichment norms include Dinaledi schools which focus on science, mathematics, and technology; language arts focus schools, and the proposed sports academies. Detailed articulation of norms and standards for such schools will be elaborated on, and adopted as an addition to the national norms as needs arise.

1.19. These norms and standards presented in this document recognize that non-public schools may often go beyond the effectiveness norms to provide elements of enriched environments. This will continue to be encouraged. The DoE and Provincial Education Departments (PED) will intervene where a non-public school falls below the gradation of provision set to be reached by ***ALL*** schools within a set period of time.

Responsiveness to planning requirements

1.20. Because good planning requires a clear sequencing of priorities, the previous lack of norms and standards also significantly contributed to the weak planning for the provision of core elements of the environment. Lack of national norms also made it difficult for South Africa to improve equity in resource inputs and the associated education quality. It is for this reason that the national policy proposes a gradation of levels of provision of the environment which will be used to set provision benchmarks and targets to be reached over time.

Responsiveness to cost management and resource efficiency requirements

1.21. The previous lack of norms has been found to also make it difficult for the DoE and PED to effectively control and manage the costs of provision and to facilitate efficient use of resources. These norms and standards will therefore enhance cost management and resource efficiency as elaborated in paragraph 5.37 of the policy document. They will guide the development of standardized designs, which in turn will guide the development of cost maps across diverse context of South Africa (ref; par 1.14.14 of the policy document.)

Nature and construct of the norms

1.22. These norms and standards are developed from two perspectives through which the two genres are generated. The first perspective is that they are as a set of architectural programs which must respond to the needs of the education and training system. Education needs are derived from a range of factors including: teaching spaces defined after a detailed analysis of student enrolment projections, subject matters and learning areas that constitute curricula of different levels of the system, specific activities to be conducted under different subjects, diverse co-curricula activities, etc. These architectural programs will guide the actual designing of required "spaces" by architects who will be contracted by the DoE on a competitive basis.

1.23. Part of the role of the DoE would be to develop a design manual which will elaborate the specifications of each unit of teaching and learning space/accommodation in detail. Architects will use the design manual to guide the development of standardized designs in accordance with Policy Statements # 4 and # 5 of the *National Policy on Equitable Provision of an Enabling Physical Teaching and Learning Environment.*

Architectural norms

1.24. Examples of architectural norms that should guide architectural designs include: minimum and maximum ratio of learners per classroom in a mono-grade and in a multi-grade teaching context, minimum area per learner that allows for dynamic pedagogy and the related movement of learners, furniture and equipment, minimum space per specialized teaching room to allow for safe and effective use of equipment, materials, as well as learner movement, materials and sensitive equipment storage facilities in teaching rooms, minimum lighting, ventilation, distance from chalkboard to allow for comfortable sight by learners, acoustics, access for people with special needs, solidity and durability of construction, etc. They are all that an architect needs in order to design the physical spaces for teaching and learning.

Planning norms

1.25. The second perspective is that these norms are a planning guide. They comprise key aspects which should be taken into account when planning for the provision of the physical teaching and learning environment.

1.26. Examples of *planning norms* include the maximum distance of a school from learners that are eligible to attend that school or distance from a school's catchment area, alternatively, the learners' maximum walking time to school, alternative means of bringing schools close to learners such as hostels and/or learner transportation, location of a school relative to other facilities such as fire stations, bars, shopping centers, hospitals etc, characteristics of land that may serve as a school site, maximum size of a school for purposes of efficient provision and effective management, etc.

Process

1.27. The norms and standards presented in this document were developed in a consultative and participatory manner. In order for them to be responsive to the main client—learners and educators—a large base of curriculum, pedagogy specialists national and provincial officials were consulted as well as physical planners and other infrastructure technical experts and given a chance to operationally define what in their view, constitutes an enabling environment to effectively teach their subjects and to facilitate students learning. With these inputs taken into account, these norms and standards were discussed and approved by the CEM at its meeting of October 6, 2008. They are now ready for public comment during the months of November and December 2008.

1.28. Following public comments, the revised norms and standards will be published as regulations

1.29. The following chapter presents the methodology which was used to derive the norms and standards, specifically, to estimate space requirements.

Overview of current school types

2.1. In any given country, schools may be classified in a range of ways based on the organization of curricula, levels of schooling, ownership, sponsorship, size, location, etc. These possible classifications can sometimes generate a complexity of school types, and make general regulatory instruments such as norms and standards difficult to articulate and to implement.

2.2. Like in other countries, Public ordinary schools are organized and categorized in a rather complex and overlapping manner. In terms of levels of schooling, they are classified as:

- **GET foundation phase**----------grades R to 3
- **GET intermediate phase**----------grades 4 to 6
- **GET Senior phase**----------grade 7 to 9
- **FET phase in schools**-------- ----------grade 10 to 12

2.3. When expressed in terms of sub-sectors, the above phases change and overlap in a different manner. The respective sub-sectors are organized as follows:

- **Primary education**----------grades R to 7
- **General education and training or combined schools**-----grades R to 9
- **Secondary education or combined schools** ----------grades 8 to 12.
- **Further education and training**----------grades 10 to 12

2.4. Another category of schools is best described as **combined and incomplete schools.** The reality on the ground is that there are schools that offer an unlimited combination of segments of the phases and sub-sectors outlined above. For instance, there are schools that offer an endless range of combination of grades within the primary school cycle, some offer an endless range of combined primary and secondary school grades, and others offer some combination of GET and FET grades. What is even more complicated is the scale of these schools and the number of learners enrolled in them is unknown. What is known is that they are a significant proportion of the total number of ordinary GET and FET schools covered in the 2006 survey of the National Education Information Management System (NEIMS).

2.5. In terms of size the following types are found:

- **Ultra micro schools**---------- (1 - 30 learners; 1 teacher)
- **Micro schools**----------(31 - 50 learners; 1 to 2 teachers)
- **Small schools**----------(51 – 120; up to 2 to 3 teachers)
- **Medium schools**----------(121 – 240; up to 4 to 6 teachers)
- **Medium to large schools**----------(241 – 720; up to 7 to 18 teachers)
- **Large schools**----------(721 – 900; up to 18 to 23 teachers)
- **Mega schools**----------(> 900; 23^{+} teachers)

2.6. As shown in Table 1, the proportions of the above school sizes relative to the 25,043 public ordinary public schools captured NEIMS is not insignificant. In total, 8 percent of schools have an enrollment of up to 50 learners. Another 15 percent has up to 240 learners. The predominance of ultra micro schools (1 to 30 learners) fall within the primary education phase. Even further, 51 percent of them are in Free State. At the same time, the Free State has the third largest number of mega schools. The two largest and richest metropolis (Gauteng and the Western Cape) hold 56 percent of mega schools.

Table 1: Ordinary public schools by province and size

Schools offering any combination of primary school grades

Province	Schools	Learners	% 1-30 Learners	% 31-50 Learners	% 51-120 Learners	% 121-240 Learners	% 241-720 Learners	% 721-900 Learners	% >900 Learners
Eastern Cape	2442	593234	9	7	21	29	28	3	4
Free State	1170	315329	51	9	6	3	12	6	3
Gauteng	1345	1014915	0	0	2	5	40	19	3
Kwa Zulu Natal	3770	1594081	2	2	7	19	54	8	7
Limpopo	2561	1002246	5	2	7	19	56	6	6
Mpumalanga	1230	551195	8	5	13	10	41	9	13
North West	1048	401827	7	6	12	18	40	7	10
Northen Cape	354	122778	9	9	21	17	27	6	11
Western Cape	959	516055	5	7	12	11	31	11	23
Total	**14879**	**6111660**	**9**	**4**	**10**	**17**	**41**	**8**	**11**

Schools offering any combination of secondary school grades

Province	Schools	Learners	% 1-30 Learners	% 31-50 Learners	% 51-120 Learners	% 121-240 Learners	% 241-720 Learners	% 721-900 Learners	% >900 Learners
Eastern Cape	846	405988	1	1	8	18	49	9	13
Free State	231	185316	0	0	0	2	42	18	38
Gauteng	503	571088	0	0	0	1	13	15	72
Kwa Zulu Natal	1494	898993	0	0	3	13	50	12	22
Limpopo	1320	666271	0	0	3	16	59	10	11
Mpumalanga	426	322669	0	0	0	4	47	17	32
North West	292	189974	0	0	4	11	47	12	27
Northen Cape	104	63895	0	2	4	9	47	19	21
Western Cape	311	297897	0	0	0	1	26	16	57
Total	5527	3602091	0	0	3	11	47	13	26

Schools offering any combination of both primary and secondary school grades

Province	Schools	Learners	% 1-30 Learners	% 31-50 Learners	% 51-120 Learners	% 121-240 Learners	% 241-720 Learners	% 721-900 Learners	% >900 Learners
Eastern Cape	2442	1039609	0	0	2	16	71	6	4
Free State	288	144630	3	1	10	13	45	13	15
Gauteng	146	106196	0	0	1	10	40	19	30
Kwa Zulu Natal	573	281462	0	1	5	15	58	8	11
Limpopo	128	50490	4	5	18	14	45	7	8
Mpumalanga	277	160102	0	1	5	13	51	12	18
North West	426	162270	3	4	12	23	44	5	9
Northern Cape	154	75805	0	3	10	12	51	10	14
Western Cape	203	128031	2	0	2	7	56	10	22
Total	4637	2148595	1	1	5	15	61	8	9

Source: 2006 NEIMS

2.7. Overlaying the above-outlined school types, schools are classified by location as either **urban, peri-urban or rural schools.** The very classification of these locations (i.e., what is urban vs what is peri-urban) is in itself contentious, making a consensual classification of schools along this dimension problematic.

2.8. Over and above schools are also classified in terms of quintiles in terms of the National Norms and Standards for School Funding.

2.9. The current multiplicity of school types within the country, presents a serious challenge to any effort to develop norms and standards that can be applied in a systemic, equitable and transparent manner. Yet, both quality and equity imperatives dictate that a mechanism(s) for ensuring adequacy and equity of provision is developed; thus these norms and standards.

2.10. Beyond the unmanageable range of school types, the range in school size also presents a daunting challenge in the application of national norms and standards. In particular, the scale of micro primary schools (13%) makes the application of norms and standards financially not viable, at least not without raising the unit cost within these schools to levels that are untenable. While sufficient and equitable provisioning for these schools is not financially viable, learners who attend them have equal right to equity of resource inputs and of learning outcomes.

2.11. On the other extreme, and though outside the scope of this document, the scale of mega primary schools (11%) and mega secondary schools (14%), risks effective management of these schools. While it is financially viable to sufficiently resource these schools, their potential mismanagement may weaken processes required to mobilize provided resources into learning outcomes. At the end of the day, adequate provisioning of both micro and mega schools may be resource inefficient, albeit, for very different reasons. These tensions are only a part of what these norms and standards intend to resolve.

Creating school prototypes

2.12. In order to bring school types into some manageable range that allows for the application of norms and standards, these norms provide a narrow range of school prototypes against which sufficiency and equity of provision will be approximated over time. The development of a menu of prototypes is called for under *Policy Action # 5.91* of *Policy Statement # 4* of the *National Policy on Equitable Provision of an Enabling Teaching and Learning Environment*.

2.13. Like all prototypes, the prototypes created herein will, as the norms and standards are implemented, represent the majority of South African schools. As the name suggests, they will become a typical school. These typical schools will become a point of reference, which is currently lacking, for determining minimum and optimum norms and standards for the provision of elements of an enabling physical teaching and learning environment. Later when a strategy for provision is developed, they will become the context against which to benchmark levels of provision to be attained over time. They will also provide a context for benchmarking efficiency of resource provision and utilization.

2.14. As in all life contexts, there will be outliers from these prototypes. However, the policy stance is to keep these outliers to the bare minimum as indeed outliers should be. In rare cases where such schools are unavoidable, their establishment and/or retention will be a matter of a deliberate and strategic decision and not haphazard as it is now the case. Such establishment and/or retention will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why such a discretion was made

2.15. Most countries classify schools into three prototypes, primary, middle and secondary schools. This may sound the best option in general. However, such a classification would lead to an overlap of the primary and secondary school levels which ordinarily, require very different types and levels of resources. It may also lead to duplication of resources provided for the secondary level as the upper end of middle schools and secondary schools may require similar resources such as laboratories, specialized workshops, library stocks, etc. It may also lead to underutilization of specialized secondary level teachers who would have to be deployed to both the upper end of middle schools and to secondary schools.

2.16. In order to allow for resource pooling and optimum resource efficiency, schools will be classified into two **prototypes, primary and secondary schools.** These two prototypes are overlaid with school size, ensuring that a typical school has a threshold of size that makes it financially viable and that assures learners equity of resource inputs. On the upper end, a limit of school size is set, that should ensure effective manageability, and better chances of mobilizing resource inputs into expected outcomes. As outlined below the overlay of level and size of school generates 6 school types but not necessarily, 6 substantive levels of provision. For instance, a small primary school will have the same resources as a large primary school. What will differ will be the scale of provision (e.g. the number classrooms, toilets, size of administration block etc.) and the mode of provision (eg., while a large primary school may have a library, the small one will have a multi-media room, in the rare event there is a micro school, it will have library stocks in class or delivered by a mobile library or a school book books that ensure that stocks are periodically renewed). In essence, the substantive provision will remain equitable and sufficient across board.

2.17. All schools will be mono-grade. The establishment and/or retention of multi-grade schools will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why such discretion was exercised.

2.18. . For that reason, these norms and standards do not include multi-grade schools. However, the norm of mono-grade schools does not preclude the use of multi-grade teaching as a pedagogical approach.

2.19. In defining the prototypes, the **urban/rural** classifications were deliberately excluded because of the fundamental belief that, all things being equal, and in the name of equity, there should be no differences in the level of provision across urban and rural locations.

2.20. Combined schools and intermediate schools will also be phased out in terms of the new prototypes. The establishment and/or retention of such schools will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why such discretion was exercised.

2.21. The following will be the types of schools:

Primary school prototype offering grades R – 7 (age group 5-12)

- Small primary school with minimum capacity of 135 learners and maximum capacity of 310 learners with 1 class per grade.
- Medium primary school with a minimum capacity of 311 learners and a maximum capacity of 620 learners with 2 classes per grade.
- Large primary school with minimum capacity of 621 learners a maximum capacity of 930 learners with 3 classes per grade.

Secondary school prototype offering grades 8 – 12 (age group 13-17)

- Small secondary school with minimum capacity of 200 learners and a maximum capacity of 400 learners with 2 classes per grade.
- Medium secondary school with a minimum capacity of 401 learners and a maximum capacity of 600 learners, with 4 classes per grade.
- Large secondary school with minimum capacity of 601 learners and maximum capacity of 1000 learners with 5 classes per grade.

2.22. All schools will be provided with a certificate showing the capacity of the school in terms of size and prototype. The certificate will be issued by the HOD of the respective province.

2.23. As part of its oversight role, the DoE will keep constant watch of these changes using the NEIMS facility to record school size "real time". On their part, Provinces will develop and circulate to schools, clear procedures for expansion of school size which principal should oblige. Such procedures will ensure that no school expands beyond a level that begins to threaten compliance with provision norms and standards. They will also circulate to schools, clear procedures for reporting significant declines in school size.

Defining types of spaces required in a school

2.24. The second step in the methodology was to create categories of key spaces required by each school. These spaces are categorized as *core education spaces, education support spaces,* and *administration spaces*. A detailed description of these spaces is presented in Chapter 3 under space norms.

Core education spaces

2.25. Core education spaces refer to teaching spaces like classrooms, laboratories, workshops, storage areas for teaching and learning materials and sensitive equipment, etc., and critical spaces that are essential for the use of learners like toilets, libraries, and playgrounds.

Administrative spaces

2.26. These refer to all spaces for direct use by a school administration and educators such as school principals' offices, storage rooms, printing rooms, staff rooms, etc. They also refer to spaces that are meant for student use but fall under the management of a school professional staff and/or educators. Example is a pastoral care centers and sick bays.

Support education spaces

2.27. Support education spaces are those that are also for the learners' usage, but are not critical for the core functions of a school to progress smoothly. Examples include food gardens, sports fields, assembly halls, school kitchen, etc.

Estimating core education space requirements by prototype

2.28. As noted, the norms and standards presented in this document are intended to create a physical teaching and learning environment that facilitates effective delivery of curricula and co-curricula activities. The NCS organizes the GET curriculum into learning areas and the FET curriculum into subject groups such as natural sciences, language, economic and management sciences etc. The list of subject groups and learning areas is the NCS is presented in Table 2. This list comprises the first step toward estimating teaching and learning space requirements of the national curriculum.

2.29. The NCS classifies FET subjects groups into core and electives. All students have to enroll for 4 core subjects (2 languages, mathematics/numeracy, and life orientation) and 3 electives. All electives account for 12 contact hours or 4 hours per elective. To avoid multi-counting of hours for elective subjects, Table 2 below shows hours for only 3 electives and zeroes thereafter.

2.30. Norms and standards are also meant to facilitate the execution of specific activities used to deliver the broad curriculum presented in Table 2. Such activities may include direct whole class lectures, individualized instruction, group work, peer teaching, laboratory experiments, independent learning etc.

Current time allocations across curricula and grades

2.31. For the third step, we consider the time allocations across curricula. The combined knowledge of the curriculum, time allocations and school size will later be used to estimate space requirements and rate of use. Table 2 therefore also presents current time allocations across curricula and grades.

Table 2: Time allocation by grade and subject group/learning area													
Subject group and learning area	Grades												
	R	1	2	3	4	5	6	7	8	9	10	11	12
	Weekly time allocation (hours)												
Literacy / Language	9	9	9	10	7	7	7	7	7	7	9	9	9
Numeracy / Math	8	8	8	9	5	5	5	5	5	5	5	5	5
Life Orientation	6	6	6	6	2	2	2	2	2	2	2	2	2
Natural Sciences	0	0	0	0	3	3	3	3	4	4	4	4	4
Social Sciences	0	0	0	0	3	3	3	3	3	3	4	4	4
Technology	0	0	0	0	2	2	2	2	2	2	0	0	0
Economic / Management	0	0	0	0	2	2	2	2	2	2	4	4	4
Arts and Culture	0	0	0	0	2	2	2	2	2	2	0	0	0
Breaks, Assemblies, Extramural	12	12	12	10	9	9	9	9	8	8	7	7	7
Total hour per week	35	35	35	35	35	35	35	35	35	35	35	35	35

Estimating education space requirements by grade and curricula activities

2.32. In developing these norms and standards, curricula experts and pedagogues were invited to provide a detailed analysis of the most common activities they use to deliver their respective subjects / learning areas. Detailed descriptions of the types of spaces, facilities, equipment and learning materials required for effective delivery were also provided. It should be noted that the estimates of time allocated to activities will need ongoing refinement.

2.33. The fourth step develops a generic matrix for estimating the nature and number of education spaces required per subject group/ learning area by grade. The matrix also estimates the time per week spent in each type of space and the utilization index for each space. Figure 1 presents the matrix.

Figure 1: Generic matrix for estimating education space requirements and utilization index

Number of groups per grade: (2)

LEARNING AREAS	Grades (g) R	G1	G2	...	G7	Total weekly hours by learning area (TWHLA)	Estimated weekly hours per education spac

Calculation formula

	Total weekly hours per education space (Hs)								
Total school hours per week (4)		T	T	T	T	T	T	T	T
Estimated utilization index = UI (5)		UI	UI+1	UI+2	UI+3	...	...	...	...
imated number of spaces (nS)= (Hs /35/UI) (6)		nS	nS+1	nS+2	nS+3	...	...	...	...
Round number of spaces = RnS (7)		RnS	...	...	...	...	...	...	...
Verification of UI (VUI) = (Hs /35/RnS) (8)		VUI	...	...	...	...	...	...	...

Key

(1) = (2) x (Time allocation by grade and learning area - (see Table 2)

(3) = Translation of weekly hours by learning area into education space requirements

(4) = Total school hours per week (which is 35).

(5) = It is the ratio of the total weekly hours per education space to total school hours per week (0,7 to 0,9)

(6) = estimated number of education spaces (nS) required based on the total weekly hours of use: nS = Hs / T / UI

(7) = Rounded number of education Spaces (RnS). It should be the nearest integer to resulted nS.

(8) = Verification of the resulted "UI" using RnS instead of nS (VUI) = Hs / T / RnS

Application of matrix to estimate core education space requirements per prototype

2.34. Tables 3 to 8 below, provide an estimate of core education spaces required for each school prototype.

Table 3 : Number of education spaces for a small primary school

With total enrolment :310 students, 7 groups of 40 learners and 1 group of 30 Grade R learners @ 1 Group per grade

	Grades									Estimated weekly hours per education space									
	R	G 1	G 2	G 3	G 4	G 5	G 6	G 7	(TWHLA)	Classrooms	Grade R Facility	Science Lab.	Media Centre/Library	Multipurpose classroom	Computer Room	Multimedia centre	Multipurpose Room	Media Centre/Library	Open Areas
LEARNING AREAS	Weekly hours by learning area																		
Literacy / Language	9	9	9	10	7	7	7	7	65	56	9								
Numeracy / Math	8	8	8	9	5	5	5	5	53	53									
Life Orientation	6	6	6	6	2	2	2	2	32	16	6					10			
Natural Science	0	0	0	0	3	3	3	3	12	8		4							
Social Sciences	0	0	0	0	3	3	3	3	12	12									
Technology	0	0	0	0	2	2	2	2	8	8									
Economic / Management	0	0	0	0	2	2	2	2	8	8									
Arts and Culture	0	0	0	0	2	2	2	2	8	8									
Breaks, Assemblies, Extramural	12	12	12	10	9	9	9	9	82							20			64
Total weekly hours per education space	35	35	35	35	35	35	35	35	280	169	15	4	0	0	0	30	0	0	64
Total school hours per week										35	35	35	35	35	35	35	35	35	35
Estimated utilization index = UI										0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= (Hs /35/UI)										6.90	0.61	0.16	0.00	0.00	0.00	1.22	0.00	0.00	2.61
Round number of spaces = RnS										7	1	0	0	0	0	1	0	0	3
Verification of UI (VUI) = (Hs /35/RnS)										0.70	0.70	0.71	0.00	0.00	0.00	0.70	0.00	0.00	0.70

Table 4: number of education spaces for a medium primary school

With total enrolment :620 students, 14 groups of 40 learners and 2 group of 30 Grade R learners @ 2 Groups per grade

	Grades									Estimated weekly hours per education space									
	R	G1	G2	G3	G4	G5	G6	G7	R - 7										
LEARNING AREAS	Weekly hours by learning area									Classrooms	Grade R Facility	Science Lab.	Media Centre/Library	Multipurpose classroom	Computer Room	Multimedia centre	Multipurpose Room	Media Centre/Library	Open Areas
Literacy / Language	18	18	18	20	14	14	14	14	130	112	18								
Numeracy / Math	16	16	16	18	10	10	10	10	106	90	16								
Life Orientation	12	12	12	12	4	4	4	4	64	42	12					10			
Natural Science	0	0	0	0	6	6	6	6	24	20		4							
Social Sciences	0	0	0	0	6	6	6	6	24	24									
Technology	0	0	0	0	4	4	4	4	16	13		3							
Economic / Management	0	0	0	0	4	4	4	4	16	16									
Arts and Culture	0	0	0	0	4	4	4	4	16	16									
Breaks, Assemblies, Extramural	24	24	24	20	18	18	18	18	164							20			64
Total weekly hours per education space	70	70	70	70	70	70	70	70	560	333	46	7	0	0	0	30	0	0	64
Total school hours per week										35	35	35	35	35	35	35	35	35	35
Estimated utilization index = UI										0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= (Hs /35/UI)										13.59	1.88	0.29	0.00	0.00	0.00	1.22	0.00	0.00	2.61
Round number of spaces = RnS										14	2	0	0	0	0	1	0	0	3
Verification of UI (VUI) = (Hs /35/RnS)										0.68	0.66	1.25	0.00	0.00	0.00	0.70	0.00	0.00	0.70

Table 5: Number of educational spaces required for a large primary school

With total enrolment :930students, 21 groups of 40 learners and 3 group of 30 Grade R learners @ 3 Groups per grade

	Grades									Estimated weekly hours per education space									
	R	G1	G2	G3	G4	G5	G6	G7											
LEARNING AREAS	Weekly hours by learning area									Classrooms	Grade R Facility	Science Lab.	Media Centre/Library	Multipurpose classroom	Computer Room	Multimedia centre	Multipurpose Room	Media Centre/Library	Open Areas
Literacy / Language	27	27	27	30	21	21	21	21	195	168	27								
Numeracy / Math	24	24	24	27	15	15	15	15	159	135	24								
Life Orientation	18	18	18	18	6	6	6	6	96	78	18								
Natural Science	0	0	0	0	9	9	9	9	36	22		14							
Social Sciences	0	0	0	0	9	9	9	9	36	36									
Technology	0	0	0	0	6	6	6	6	24	18					6				
Economic / Management	0	0	0	0	6	6	6	6	24	24									
Arts and Culture	0	0	0	0	6	6	6	6	24	24									
Breaks, Assemblies, Extramural	36	36	36	30	27	27	27	27	246								60	30	156
Total weekly hours per education space	105	105	105	105	105	105	105	105	840	505	69	14	0	0	6	0	60	30	156
Total school hours per week										35	35	35	35	35	35	35	35	35	35
Estimated utilization index = UI										0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= (Hs /35/UI)										20.61	2.82	0.57	0.00	0.00	0.24	0.00	2.45	1.22	6.37
Round number of spaces = RnS										21	3	1	0	0	0	0	2	1	6
Verification of UI (VUI) = (Hs /35/RnS)										0.69	0.66	0.40	0.00	0.00	0.00	0.00	0.70	0.00	0.74

Table 6: Number of educational spaces required for a small secondary school

With total enrolment :400 students, 10 groups of 40 learners @ 2 Groups per grade

	Grades						Estimated weekly hours per education space								
	8	9	10	11	12	0									
LEARNING AREAS	Weekly Hours by Learning Area					(TWHLA)	Classrooms	Science Lab.	Social Sciences Room	Arts and Culture Room	Computer Room	Gathering Room	Multipurpose classroom	Media Centre/Library	Open Areas
Literacy / Language	14	14	18	18	18	82	82								
Numeracy / Math	10	10	10	10	10	50	50								
Natural Sciences	8	8	8	8	8	40	25	15							
Social Sciences	6	6	8	8	8	36	20		16						
Technology	4	4	0	0	0	8	8								
Economic / Management	4	4	8	8	8	32	32								
Life Orientation	4	4	4	4	4	20	15						5		
Arts and Culture	4	4	0	0	0	8	8								
Breaks, Assemblies, Extramural	16	16	14	14	14	74							14	20	40
Total weekly hours per education space	70	70	70	70	70	350	240	15	16	0	0	0	19	20	40
Total school hours per week							35	35	35	35	35	35	35	35	35
Estimated utilization index = UI							0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= (Hs /35/UI)							9.8	0.61	0.65	0	0	0	0.78	0.82	1.63
Round number of spaces = RnS							10	1	1	0	0	0	1	1	2
Verification of UI (VUI) = (Hs /35/RnS)							0.7	0.7	0.7	0	0	0	0.7	0.7	0.7

Table 7: Number of educational spaces required for a medium secondary school

With total enrolment :600 students, 15 groups of 40 learners @ 3 Groups per grade

	Grades						Estimated weekly hours per education space								
	8	9	10	11	12	0									
LEARNING AREAS	Weekly Hours by Learning Area					(TWHLA)	Classrooms	Science Lab.	Social Sciences Room	Arts and Culture Room	Computer Room	Gathering Room	Multipurpose classroom	Media Centre/Library	Open Areas
Literacy / Language (1)	21	21	27	27	27	123	123								
Numeracy / Math	15	15	15	15	15	75	75								
Natural Sciences	12	12	12	12	12	60	40	20							
Social Sciences	9	9	12	12	12	54	30		24						
Technology	6	6	0	0	0	12	8				4				
Economic / Management	6	6	12	12	12	48	48								
Life Orientation	6	6	6	6	6	30	20						10		
Arts and Culture	6	6	0	0	0	12	12								
Breaks, Assemblies, Extramural	24	24	21	21	21	111							21	30	60
Total weekly hours per education space	105	105	105	105	105	525	356	20	24	0	4	0	31	30	60
Total school hours per week							35	35	35	35	35	35	35	35	35
Estimated utilization index = UI							0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= (Hs /35/UI)							14.5	0.82	0.98	0	0.16	0	1.27	1.22	2.45
Round number of spaces = RnS							15	1	1	0	0	0	1	1	2
Verification of UI (VUI) = (Hs /35/RnS)							0.7	0.7	0.7	0	0	0	0.7	0.7	0.7

Table 8: Number of educational spaces required for a large secondary school

With total enrolment :1000 students, 25 groups of 40 learners @ 5 Groups per grade

	Grades						Estimated weekly hours per education space								
	8	9	10	11	12	0									
LEARNING AREAS	Weekly hours by learning area					(TWHLA)	Classrooms	Science Lab.	Social Sciences Room	Arts and Culture Room	Computer Room	Gathering Room	Multipurpose classroom	Media Centre/Library	Open Areas
Literacy / Language (l)	35	35	45	45	45	205	205								
Numeracy / Math	25	25	25	25	25	125	125								
Natural Sciences	20	20	20	20	20	100	60	40							
Social Sciences	15	15	20	20	20	90	70		20						
Technology	10	10	0	0	0	20	10				10				
Economic / Management	10	10	20	20	20	80	80								
Life Orientation	10	10	10	10	10	50	30						20		
Arts and Culture	10	10	0	0	0	20	20								
Breaks, Assemblies, Extramural	40	40	35	35	35	185							14	20	40
Total weekly hours per education space	175	175	175	175	175	875	600	40	20	0	10	0	34	20	40
Total school hours per week							35	35	35	35	35	35	35	35	35
Estimated utilization index = UI							0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Estimated number of spaces (nS)= (Hs /35/UI)							24.5	1.63	0.82	0	0.41	0	1.39	0.82	1.63
Round number of spaces = RnS							25	2	1	0	0	0	1	1	2
Verification of UI (VUI) = (Hs /35/RnS)							0.7	0.7	0.7	0	0	0	0.7	0.7	0.7

Defining levels of provision

2.35. The fifth and last step in the methodology was to define levels of provisioning as already mentioned, these norms and standards operationally define levels of provision as meeting norms and standards that make a school a *safe, functional,* or *effective* teaching and learning environment.

2.36. They also recognize that for strategic reasons, schools may be provided for beyond the effectiveness level to rich an enriched level of provision. The circumstance within which this may happen, and attendant caveats are spelt out in the policy document and not subject to elaboration here. For this document , it suffice to note that a consensual and operational definition of levels of provision is critical for ensuring equity, enabling strategic planning and target setting, and to facilitate monitoring and evaluation of the implementation of norms and standards.

2.37. Because as stated, *safety* norms are the bare minimum allowable for a school to remain open, and this level of provision is not meant to be sustained beyond the current strategic plan period, this document does not define the BMP for *safety*. Suffice it to say that the BMP is basically a 'negative list' of what an operating school should not have like: caving structures that pose danger to learners,

structures without roofing, temporary structures that do not meet South Africa's health standards, total lack of water source, lack of ablution blocks that meet South Africa's health standards, etc.

2.38. Because *enrichment* norms are not where we intend an ordinary GET and FET school to be in terms of provision, and because the appropriate level of provision for these schools will be on a case-by-case basis, these norms and standards also do not define the BMP for this level of provision.

2.39. Norms and standards for a functional level of provision are minimum tolerable level of provision. Conceptually, the *functional* level of provision is that which allows the core functions of a school to run without undue interruption or inconvenience. Or, one could say, is the level of provision without which a school would be dysfunctional. Examples of dysfunctionality that arises from insufficient provision include: excessive overcrowding that results from an inadequate teaching spaces, and that render teaching and learning very difficult, lack of staffrooms which makes it difficult for teachers to work during school hours when classes are in session or which lead teachers to 'chase' learners from classrooms if staff meetings have to be ran within teaching hours, lack of administration blocks where school principals can sit and work while school in session, lack of kitchen or cooking space which lead to learners being 'chased' out of classes if cooking has to proceed during rainy seasons, etc.

2.40. A key criterion for defining the BMP for *functional* provision was that it should include all elements without which core functions of a school would be disrupted and, for which there is no substitute. For instance, a school may not have a science laboratory, but a science kit could be used as a reasonable substitute to facilitate teaching. There may be no library, but students could visit a close by community library, or classrooms may have a section where library stocks are kept and are reasonably accessible to learners. A school with a functional level of provision may not have a science laboratory but it must have an alternative way of providing learners an experience as similar to that of a laboratory as possible. Examples of such substitutes could be science kits and, as a last resort, virtual laboratories. Another way to look at it is that a *functional* level of provision affords the system time to plan without dramatically risking the core principle of equal educational opportunity.

2.41. The *effectiveness* level of provision is the optimum norms and standards. It comprises all facilities that most educators would agree is necessary for them to effectively support student learning. Its BMP would entail all necessities that constitute a functional level of provision plus what is required as optimum provision.

2.42. The following chapter presents the norms and standards for core education spaces as well as for all other elements of the physical teaching and learning environment described earlier. The chapter also details BMPs for the *functional* and *effectiveness norms and standards.*

Planning Norms

Catchment area

3.1. A catchment area is the area to be served by a school. It defines the distance between a school and the community it is serving. At full implementation of the norms, every school will be required to have a catchment area to the radius of up to 3 kms. A total walking distance to and from school will be up to 6 kms. Learners who fall beyond the set catchment area will be provided with either transport or hostel accommodation on a progressive phased and pro-poor sequence. To this end, the MoE will finalize the scholar transport policy as well as develop a school hostel policy.

School Site

3.2. School site refers to the actual physical location of a school. It also entails the total space a school required to adequately accommodate all its facilities. This includes both covered and uncovered areas. The geographical location of a school should be part of the serious considerations for locating a school site. Other considerations should include environmental factors such as: air temperature, air humidity, air movement and temperature of the surrounding surfaces

Size of school site

3.3. The minimum site will be 2.8h for primary schools and 4.8h for secondary schools. MEC may deviate below minimum without infringing the conduciveness of learning and teaching environment. Such deviation will be reported to the Minister indicating the reason for the deviation.

Location of a school site

3.4. School sites will not be located next to cemeteries, business centers, railway stations, taxi ranks, sewage, hotels and next to busy roads. The location of the school should ensure easy accessibility to roads, sewage lines, basic services etc.

Identification of school site

3.5. School sites will have name board indicating the name and contact details of a school, GPS coordinates and whether a school is a fee charging or no fee school

Other characteristics of a school site

These should include but not limited to:

3.6. The slope of the site should not exceed 15 degrees.

3.7. A school should not be situated within a radius of 3km around the community it serves.

3.8. Sites with servitudes must be avoided but if servitude is imposed, the buildings and sports field should be planned in such a way that the servitude will not affect normal school activities.

3.9. School sites should preferably be rectangular with the longest sides facing North and South.

3.10. In case where a school is located next to a river a 1:50 year flood line crosses a school site must be considered, sufficient ground should be available above the flood line for the erection of school building.

3.11. At least 50% of the perimeter of school site should be fronted by a street, and should not be adjacent to residential or other sites.

3.12. Soil conditions should be such that the buildings and sports field may be provided at minimum cost. Turf, clay dolomite, rocky soil should be avoided. Excavated areas and areas formerly used as refuse sites are all unsuitable as sites for schools.

School size

3.13. School size refers to the minimum and maximum number of learners that a school can accommodate. These norms and standards propose the minimum number of learners in a primary school

as 135 learners with a maximum number of 810 learners. For secondary schools a minimum number will be 200 and maximum will be1000 learners. This means that a school cannot admit learners more than its set capacity. The table below shows the allowable minimum and maximum size per prototype.

Table 9: Minimum and maximum capacity of a school

Prototype	Sub-prototypes	Minimum size	Maximum size
PRIMARY SCHOOL	Small	135	310
	Medium	311	620
	Large	621	930
SECONDARY SCHOOL	Small	200	400
	Medium	401	600
	Large	601	1000

3.14. In cases where a school falls below and above the norm strategic intervention will be taken by the MEC to either merge or divide a school for viability and efficiency. Mergers and sub divisions will be subject to consultation. Alternative solution like learner transport or hostels will be used to facilitate the compliance with size norm. The establishment and/or retention of schools below and above the norm will be made at the discretion of the relevant Provincial Member of the Executive Council (MEC) who will for each case report to the Minister motivating why discretion was exercised.

School security

3.15. At a bare minimum school will be provided with appropriate fencing around a school, outbuildings and sports field with the minimum height of 1.8m.

3.16. School building will be provided with some form of security. The basic minimum will be burglarproofs in all educational spaces. The optimum will be alarm system and guards.

3.17. School buildings will have a fire rating of 30 minutes (this to be understood as the minimum time before partial collapse of the structural elements takes place).

3.18. Fire extinguishers will be provided at a ratio of at least one for every 150 m^2. This ratio will be increased to one every 50m^2 in laboratories and similar areas. The provision of fire extinguishers will conform to local as well as international regulations on the provision of such.

Basic services

3.19. *Sanitations:* All schools will be provided with adequate sanitation facilities that promote health and hygiene standards that comply the National Building Regulations and Water Service Act, 1997 (Act 108 of 1997). The choice of appropriate sanitation technology to be used will be made at the discretion of the MEC after all environmental assessments have been made. Plain pit and bucket latrines will not be acceptable.

3.20. *Water*: All schools will be provided with minimum/basic water supply as stated in Section 3 of the Water Service Act, 1997 (Act 108 of 1997). As in case of sanitation the choice of appropriate water technology to be used will be made at the discretion of the MEC after all environmental assessments have been made. No school is allowed to function without portable clean water.

3.21. *Electricity*: All schools will be provided with some form of electricity in accordance with the National Building Regulation. In this case also the choice of appropriate source of electricity to be used.

3.22. *Connectivity*: All schools will be provided with some form (wired or wireless) of connectivity for communication purposes. The choice of technology will be made at the discretion of the MEC. The following communication tools will be provided, telephone, fax, internet access, intercom reticulation/public address system.
Statement on basic services

Architectural Norms and standards

Size of education spaces

3.23. Table10 to 12 provides the minimum and maximum size of education and administration spaces. The size of these spaces will be the same across prototypes.

Table 10 : Size norms for core education spaces

Core Educational spaces	Unit size m^2	
	Minimum	Maximum
Classrooms	48	60
Grade R facility	60	80
Science laboratory	60	80
Social Sciences rooms	60	80
Computer rooms	60	80
Arts and culture room	60	80
Multipurpose	60	80
Technology room	60	80
Media Centre	80	120
Ablution facilities for learners	0.06	0.11
Storage Areas	12	15
Agricultural Management Practices room	60	80
Agricultural Technology room	60	80
Agricultural Sciences room	60	80
Dance Studies room	60	80
Design design room	60	80
Dramatic Arts room	60	80
Music room	60	80
Visual Arts room	60	80
Civil Technology room	60	80
Electrical Technology room	60	80
Mechanical Technology room	60	80
Engineering Graphics and Design room	60	80
Hospitality Studies room	60	80

Table 11: Size norms for administration spaces		
ADMINISTRATION SPACES	**Unit size m²**	
	Minimum size	**Maximum size**
Principal's office	15	20
Deputy Pricipals office	12	15
Deputy Principal 2 office	12	15
Administration Office	15	20
Reception area	12	15
Toilets for Teachers	0.06	0.11
Storage Areas	12	15
Strong room	6	10
Printing room	10	15
Staff room	48	60
Pastoral care room with sick rooms and counseling room	10	15
HODs offices	12	15
Kitchenette	12	20

Table 12: Size norms for educational supporting spaces		
Education supporting spaces	**Unit size m²**	
	Minimum size	**Maximum size**
Food garden	15	20
Tuckshop	12	15
/Kitchen	15	20
Nutrition Center /Food Storage	12	15
/Dining Room (Multipurpose)	80	120
Security room	3	6
General Purpose Hall	120	180
Sports grounds		
Parking space		
Caretaker Room	12	15
Storage Areas	12	15
Toilets	0.06	0.11
Walk ways (covered)		
Assembly area		
Staff quarters (where there is a need)/living quarters		
Hostels		

Staff quarters will be provided in accordance with applicable Public Service Regulations.

Space norms and standards by prototype and level of provision

3.24. Tables 13 – 18 provide minimum and maximum space norms and standards by prototype;(or functional and effectiveness space norms by prototype)

Table 13: Small primary school						
Education spaces	**Functionality norms**			**Effectiveness norms**		
	No of units	**Unit size m²**	**Sub-total**	**No of units**	**Unit size m²**	**Sub-total**
CORE EDUCATION SPACES						
Classrooms	7	60	420	7	60	420
Grade R facility	1	75	75	1	75	75
Multimedia centre	1	120	120	1	120	120
Multipurpose Classroom	0	120	0	1	120	0
Toilets for Learners (no of toilet seats)						
Storage Areas	0	15	0	0	15	0
Sub - Total			**615**			**615**
ADMINISTRATIVE SPACES						
Principal	1	20	20	1	20	20
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	0	15	0
Toilets for Teachers						
Storage areas	1	15	15	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	15	0	1	15	15
2. sick rooms	0	15	0	1	15	15
HODs offices	0	15	0	0	15	0
Kitchenette	1	20	20	0	20	0
Sub-Total			**145**			**170**
EDUCATION SUPPORTING SPACES						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	1	15	15	1	15	15
/Dining room	0	120	0	0	120	0
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	0	180	0	1	180	180
Sports grounds(net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	12 parking spaces			12 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15	0	1	15	15
Sub-Total			**35**			**265**
Total net áreas			**795**			**1050**
Circulation and walls (30%) hall included			**239**			**315**
Total gross areas			**1034**			**1365**
learners			**320**			**320**
Unit area			**3.2**			**4.3**

Table 14: Medium primary school						
Education spaces required	**Functionality norms**			**Effectiveness norms**		
	No of units	**Unit size m²**	**Sub-total**	**No of units**	**Unit size m²**	**Sub-total**
CORE EDUCATION SPACES						
Classrooms	14	60	840	14	60	840
Grade R classroom	2	75	150	2	75	150
Multimedia centre	1	120	120	1	120	120
Multipurpose Classroom	0	120	0	1	120	120
Science laboratory	1	80	80	1	80	80
Toilets for learners (no of toilet seats)						
Storage areas	1	15	15	1	15	15
Sub-total			**1205**			**1310**
ADMINISTRATIVE SPACES						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for teachers						
Storage Areas	0	15	0	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	15	0	1	15	15
2. sick rooms	1	15	15	0	15	0
HODs offices	2	15	30	4	15	60
Kitchenette	0	20	20	1	20	20
Sub-total			**190**			**265**
EDUCATION SUPPORTING SPACES						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	1	15	15	1	15	15
/Dining room	0	120	0	1	120	120
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	0	180	0	1	180	180
Sports grounds(net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	22 parking spaces			22 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15		1	15	15
Sub-total			**35**			**391**
Total net areas			**1430**			**1966**
Circulation and walls (30%) hall included			**429**			**589.8**
Total gross areas			**1859**			**2555.8**
Learners			**620**			**620**
Unit area			**3.0**			**4.1**

Table 15: Large primary school						
Education spaces required	**Functionality norms**			**Effectiveness norms**		
CORE EDUCATION SPACES	**No of units**	**Units size m²**	**Sub-total**	**No of units**	**Units size m²**	**Sub-total**
Classrooms	21	60	1260	21	60	1260
Grade R classroom	3	75	225	3	75	225
Multimedia centre	1	120	120	0	120	0
Multipurpose Classroom	1	120	80	2	120	240
Computer room	0	80	0	1	80	80
Library centre	0	80	0	1	80	80
Science Laborotary	1	80	80	1	80	80
Toilets for Learners (no of toilet seats)						
Storage Areas	1	15	15	1	15	15
Sub-total			**1700**			**2700**
ADMINISTRATIVE SPACES						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	15	1	15	15
Toilets for Teachers						
Storage Areas	1	15	15	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	15	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	1	15	15	1	15	15
2. sick rooms	1	15	15	1	15	15
HODs offices	2	15	30	4	15	60
Kitchenette	0	20	20	1	20	20
Sub-total			**250**			**280**
EDUCATION SUPPORTING SPACES						
food garden	0	20	0	1	20	20
				1		
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	0	120	0	1	120	120
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	0	180	0	1	180	180
Sports grounds(net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	30 parking spaces			30 parking spaces		
Caretaker Room	1	15	15	1	15	15
Storage Areas	0	15	0	1	15	15
Sub-total			**35**			**391**
Total net areas			**1985**			**3371**
Circulation and walls (30%) hall included			**595.5**			**1011.3**
Total gross areas			**2580.5**			**4382.3**
Learners			**930**			**930**
Unit area			**2.7**			**4.7**

Table 16: Small secondary school						
Education spaces required	**Functionality norms**			**Effectiveness norms**		
CORE EDUCATION SPACES	**No of units**	**Unit size m²**	**Sub-total**	**No of units**	**Units size m²**	**Sub-total**
Classrooms	10	60	600	10	60	600
Computer room	1	80	80	1	80	80
Media centre	1	80	80	0	80	0
Multipurpose Classroom	0	120	0	1	120	120
Science Laboratory	1	80	80	1	80	80
Social Science room	1	80	80	1	80	80
Toilets for Learners (no of toilet seats)						
Storage Areas	0	15	0	1	15	15
Sub-Total			**920**			**975**
ADMINISTRATIVE SPACES						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for Teachers						
Storage Areas	0	15	0	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	12	0	1	12	12
2. sick rooms	1	15	15	1	15	15
HODs offices	1	15	15	2	15	30
Kitchenette	1	20	20	1	20	20
Sub-Total			**175**			**247**
EDUCATION SUPPORTING SPACES						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	0	120	0	1	120	120
Security room/Guard room	0	6	0	1	6	6
Multipurpose center that can also be used for indoor sport	1	180	180	1	180	180
Sports grounds(net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	15 parking spaces			15 parking spaces		
Caretaker Room	1	15	15	1	15	15
Storage Areas	0	15	0	1	15	15
Sub-total			**215**			**391**
Total net areas			**1310**			**1613**
Circulation and walls (30%) hall included			**393**			**483.9**
Total gross areas			**1703**			**2096.9**
Learners			**400**			**400**
Unit area			**4.2**			**5.2**

Table 17: Medium secondary school						
Education spaces required	**Functionality norms**			**Effectiveness norms**		
CORE EDUCATION SPACES	**No of units**	**Units size m²**	**Sub-total**	**No of units**	**Units size per m²**	**Sub-total**
Classrooms	15	60	900	15	60	900
Computer room	1	80	80	2	80	80
Media centre	0	80	0	1	80	80
Multipurpose Classroom	1	120	120	2	120	240
Science Laboratory	1	80	80	1	80	80
Social Science room	1	80	80	1	80	80
Toilets for Learners (no of toilet seats)						
Storage area	1	15	15	1	15	15
Sub-total			**1275**			**1475**
ADMINISTRATIVE SPACES						
Principal's office	1	20	20	1	20	20
Deputy principal's office	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for Teachers						
Storage Areas	0	15	0	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	0	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	0	12	0	1	12	12
2. sick rooms	0	15	0	1	15	15
HODs offices	2	15	30	4	15	15
Kitchenette	1	20	20	1	20	20
Sub-total			**175**			**277**
EDUCATION SUPPORTING SPACES						
Food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	1	120	120	1	120	120
Security room/Guard room	0	6	0	1	6	6
General Purpose Hall	1	180	180	1	180	180
Sports grounds(net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	20 parking spaces			20 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15	0	1	15	15
Sub-total			**320**			**391**
Total net area			**1770**			**2143**
Circulation and walls (30%) hall included			**531**			**642.9**
Total gross areas			**2301**			**2785.9**
Learners			**600**			**600**
Unit area			**3.8**			**4.6**

Table 18: Large secondary school						
Education spaces required	**Functionality norms**			**Effectiveness norms**		
CORE EDUCATION SPACES	**No of units**	**Units size m²**	**Sub-total**	**No of units**	**Units size m²**	**Sub-total**
Classrooms	25	60	1500	25	60	1500
Computer room	1	80	80	2	80	160
Media centre	0	80	80	0	80	0
Multipurpose Classroom	0	120	0	1	120	120
Science Laboratory	1	80	80	2	80	160
Social Science room	1	80	80	1	80	80
Library room	0	80	0	1	80	80
Toilets for Learners (no of toilet seats)						
Storage areas	1	15	15	1	15	15
Sub-total			**1835**			**2100**
ADMINISTRATIVE SPACES						
Principal's office	1	20	20	1	20	20
Deputy Principal's office	1	15	15	1	15	15
Deputy Principal'soffice	1	15	15	1	15	15
Administration Office	1	20	20	1	20	20
Reception area	0	15	0	1	15	15
Toilets for Teachers						
Storage Areas	0	15	15	1	15	15
Strong room	1	10	10	1	10	10
Printing room	0	15	15	1	15	15
Staff room	1	60	60	1	60	60
Pastoral care 1. counseling room	1	12	12	1	12	12
2. sick rooms	0	15	0	1	15	15
HODs offices	3	15	45	6	15	90
Kitchenette	0	20	0	1	20	20
Sub-total			**227**			**322**
EDUCATIONAL SUPPORTING SPACES						
food garden	0	20	0	1	20	20
/Kitchen	1	20	20	1	20	20
Nutrition Center /Food Storage	0	15	0	1	15	15
/Dining room	1	120	120	1	120	120
Security room/Guard room	0	6	0	1	6	6
General Purpose Hall	1	180	180	1	180	180
Sports grounds(net ball /volley and soccer /rugby ball	1 netball 1 soccer ball			1 netball, 1 volley ball 1 soccer ball, 1 rugby		
Parking space	30 parking spaces			30 parking spaces		
Caretaker Room	0	15	0	1	15	15
Storage Areas	0	15	0	0	15	15
Sub-total			**320**			**391**
Total net areas			**2382**			**2813**
Circulation and walls (30%) hall included			**714.6**			**843.9**
Total gross areas			**3096.6**			**3656.9**
Learners			**1000**			**1000**
Unit area			**3.09**			**3.7**

Table 19: Summary of norms and standards for primary schools						
	Small Primary school		Medium Primary School		Large Primary School	
Education spaces required	**Functionality norms**	**Effectiveness norms**	**Functionality norms**	**Effectiveness norms**	**Functionality norms**	**Effectiveness norms**
Education spaces						
Classroom	7	7	14	14	21	21
Grade R facility	1	1	2	2	3	3
Multimedia centre	1	1	1	1	0	0
Multipurpose classroom	0	1	0	1	1	2
Science laboratory	1	1	1	1	1	1
Computer room	0	0	0	0	1	1
Library centre	0	0	0	0	1	1
Toilets for learners						
Storage area	0	0	1	1	1	1
Administrative space						
Principal's office	1	1	1	1	1	1
Deputy Principal's office	0	0	1	1	1	1
Administration office	1	1	1	1	1	1
Reception area	0	0	0	1	1	1
Toilets for teachers						
Storage area	0	1	0	1	1	1
Strong room	1	1	1	1	1	1
Printing room	0	1	0	1	0	1
Staff room	1	1	1	1	1	1
Pastoral care / counseling room / sick room	0	1	0	1	1	1
	1	1	1	1	1	1
HODs office	0	1	2	4	2	4
Kitchenette	0	0	0	1	0	1
Education Supporting spaces						
Food garden	0	1	0	1	0	1
Tuck shop	0	1	0	1	1	1
/ kitchen	1	1	1	1	1	1
Nutrition centre / Food storage	0	1	1	1	1	1
/ dining room	0	0	0	1	0	1
Security room	0	1	0	1	0	1
General Purpose Hall	0	1	0	1	0	1
Sports grounds	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball, 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby
Parking space						
Caretaker room	0	1	0	1	0	1
Storage areas	0	1	0	0	1	1

Table 20: Summary of norms and standards for secondary schools						
	Small Secondary school		Medium Secondary School		Large Secondary School	
Education spaces required	**Functionality norms**	**Effectiveness norms**	**Functionality norms**	**Effectiveness norms**	**Functionality norms**	**Effectiveness norms**
Educational spaces						
Classrooms	10	10	15	15	25	25
Computer room	1	1	1	2	1	2
Media centre	0	1	0	1	0	1
Multipurpose classroom	0	1	1	2	1	2
Science laboratory	1	1	1	1	1	2
Social science room	0	1	1	1	1	1
Toilets for learners (no of toilets seats						
Storage area	0	1	0	1	1	1
Administrative space						
Principal	1	1	1	1	1	1
Deputy principal	0	0	1	1	1	1
Deputy principal	0	0	0	0	1	1
Administration office	1	1	1	1	1	1
Reception area	0	1	0	1	1	1
Toilets for teachers						
Storage areas	0	1	0	1	1	1
Strong room	1	1	1	1	1	1
Printing room	0	1	0	1	0	1
Staff room	1	1	1	1	1	1
Pastoral care 1: counseling room	0	1	0	1	1	1
2: Sick room	1	2	1	2	2	2
HODs offices	1	2	2	4	3	6
Kitchenette	1	1	1	1	1	1
Supporting spaces						
Food garden	0	1	0	1	0	1
/ kitchen	1	1	1	1	1	1
Nutrition centre / food storage	0	1	1	1	1	1
/ dining room	0	1	0	0	0	0
Security room	0	1	0	1	1	1
General purpose hall	0	1	0	1	0	1
Sports grounds	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby	1 netball 1 soccer ball	1 netball, 1 volley ball 1 soccer ball, 1 rugby
Parking space / bays						
Caretaker room	0	1	0	1	0	1
Storage area	0	0	0	0	0	0

Classroom size

3.25. This denotes the total capacity a class can hold. The norms for a classroom size will be as follows:

- Grade R 30
- For all other prototype 40
- For specialized FET subjects..... 25 – 40
- For science laboratories 40

Average space per learner

3.26. Sitting space denote the square meters each child will occupy within different types of teaching space.

- Grade R 2.6m²
- Ordinary primary and secondary schools 1.2- 1.5m²
- For specialised FET subjects and labs..... 1.5- 2m²
- For learners with disability 2.4m²

Lighting

3.27. Lighting includes artificial and natural lighting required in all type of spaces for effectiveness. This is measured in lux. Lighting norms will be as follows:

- Artificial illumination (the amount of light falling on a surface) should be:
  - for classrooms, libraries and offices.....200 lux
  - For art rooms and other specialized areas.....300 lux
- The lighting level above any given surface must be controllable (i.e. variable from 200 to 700 lux).
- The area within which a given level cannot be varied (the light-zone) shall not be larger than 50 sq.m.
- Individual light sources capable of providing 150 to 500 lux must be available for specific activities (power outlets should be available at least every 10 sq.m).

Acoustics

3.28. Acoustics refers to noise level within a set space. The following will be norms for noise levels.

- An "open space" should not be smaller than 300 sq.m².
- In relation to the size of the space, the quantity and quality of the absorbing surfaces must be designed with the objective of providing a general background noise of 40 to 50 decibels db (with the space fully occupied).
- Reverberation (echo) must be dealt with, in relation to the volume of the space and the quality of the surrounding surfaces. Too "live" spaces must be avoided and a rather low reverberation time achieved: approx. 0.6 to 0.7 seconds.
- Classroom must not be located next to the sports field.

Comfort levels

3.29. All school facilities will be adapted to for learners with disability and will facilitate access and functionality in accordance with White paper on inclusive education.

Sports facilities

3.30. All schools will be provided with the basic minimum space for soccer/rugby and a space for netball or volley ball. For maximum norms one sport field for soccer or rugby and one for netball/volleyball field size provided should be that of an athletics track. Initially the target will be confined to poor schools without any type of sporting fields