TheNational Policy for School Infrastructure and Its Implications for School-Based Management in South Africa

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ABSTRACT As part of its legislative mandate to provide 'Quality Education for All' in the country, the Department of Basic Education in South Africa is committed to the creation of a safe and secure learning environment for all learners. To create such environment, the Department has developed a national policy on school infrastructure called National Education Policy for Equitable Provision of an Enabling Physical Teaching and Learning Environment. The policy has come up in response to international conventions on the rights of the child to education; constitutional and legal imperatives relating to the issue; and the national school infrastructure realities. In addition to these, consideration has been given to international studies that continue to show a positive relationship between learning outcomes and the physical environment in which teaching and learning take place. This study seeks to shed light on the implications of this policy for school-based management by reviewing literature on school infrastructure from the academic, legal, theoretical and practical perspectives. The implementation of this policy, as this study reveals, has serious practical implications for school-based management of infrastructure. Key management issues relating to policy implementation and its implications are discussed.

INTRODUCTION

The demand for *Quality Education for All* has become a subject that continues to generate scientific research interest and dominate everyday public discourse on transformation of education in South Africa. Quality education is quite often linked with a kind of environment in which such education should be delivered, specifically, a safe and healthy 'child-friendly' school environment (UNICEF 2007a). For this reason, the provision of an enabling physical teaching and learning environment is critical. In order to create enabling conditions for this kind of environment to emerge and for the desirable quality to be assured, the Department of Basic Education has developed the National Education Policy for Equitable Provision of an Enabling Physical Teaching and Learning Environment (South Africa 2010), referred to as the National Education Policy on School Infrastructure in this study. Infrastructure here refers to what is commonly known as 'physical resources' or 'school facilities' which collectively constitute school assets. It includes school buildings, equipment, furniture, grounds, fencing and services that are essential for effective functioning of a school. In other words, infrastructure in the school context refers to the physical teaching and learning environment (Marishane, 2013a).

While on the 'supply side' the state Department of Basic Education is legally and constitutionally mandated to provide infrastructure as part of its education delivery function, the responsibility of managing this rests with the school management and leadership on the 'demand side'. For example, Section 20 (1) (g) of the South African Schools Act (South Africa 1996a) places the administration and control of the school's property, including buildings and grounds occupied by the school, squarely on the School Governing Body, which in practice is guided by the school principal's professional leadership and management. This legal provision sets the tone for effective school infrastructure management and leadership. The role of both school leadership and management in this regard is to ensure that school assets are managed in such a way that the twin goals of value for money and the delivery of quality education can be assured in the process.

METHODOLOGY

This paper is based on descriptive review of literature that deals with three issues, namely, school infrastructure, academic value of infrastructure and the right to education, expressed through the legislative framework that underpins the National Education Policy for Equitable

Provision of an Enabling Physical Teaching and Learning Environment. The integration of the three issues through literature review, shed light on the implications of this policy for school-based management.

OBSERVATIONS AND DISCUSSION

Academic Value of School Infrastructure

Literature on school infrastructure abounds with strong cases made in support of the academic value of school infrastructure (Crampton 2009). For this reason, there is currently a growing demand in many countries for schools to manage their physical resources efficiently, economically and effectively. This demand emanates from three logically connected trends emerging in countries pursuing education transformation. These trends include evidence-based relationship between learning outcomes and the physical environment; school infrastructure and the universal human rights-based approach to education; and, school-based management of infrastructure in line with decentralization policies. The emergence of these three trends strengthens the case for school management and leadership to focus on and commit to the creation of the physical school environment that has the potential to maximize achievement of learning outcomes. School infrastructure is therefore regarded as being of critical importance in the delivery of quality education.

Relationship between Learning Outcomes and the Physical Teaching and Learning Environment

The first trend covers empirical evidence that shows a positive relationship between learning outcomes and the physical environment in which teaching and learning take place (Bullock 2007; Earthman 2004; Higgins et al. 2005). Three examples can be cited in this regard. First, the school's physical environment has been found to affect children's cognitive and behavioural development (Ellis 2005). Secondly, it has been found that learners' collective experience of a safe, secure and well-resourced school environment translates into what one can call emotional investment (Marishane 2013b). Thirdly, studies have also found that the nature of school infrastructure (age, size and quality) is positively

correlated to such school outcomes as academic achievement, learner attendance, discipline, dropout rates and teacher turnover rates (McGowan 2007). The collective message carried by these findings is that learner performance is the function of various physical elements constituting the school environment. What this suggests is simply that when learners play on secure grounds, learn, are taught and assessed in better school buildings (classrooms, laboratories and libraries) and using safe learning support equipment, they are likely to show success in their academic achievement.

The Human Rights-based Approach to Education

The second trend emerges through the universal human rights-based approach to education, expressed in numerous international conventions rooted in the 1948 Universal Declaration of Human Rights (United Nations 1948). Such conventions include the Convention on the Rights of the Child (United Nations 1989) and the 'International Conference on the Right to Basic Education as a Fundamental Human Right and the Legal Framework for Its Financing' (UNESCO 2005).The human rights-based approach to education presents a child-friendly school as part of a definition of the right to quality education for all learners. A 'child-friendly school' is defined as a school that is welcoming, gender-sensitive, healthy, safe, protective, obstacle-free and sensitive to the needs of children (UNICEF 2007a). Given this broad definition, society is legitimately concerned about the physical nature of the school environment. As Hinum (1999) has found, communities are extremely concerned about such issues as, vandalism, adaptation and reuse of buildings, maintenance of aging property, up-to-date use of furniture and equipment, multi-purpose use of premises as well as expenditure on these items. Added to these concerns are issues of access to the physical environment. For instance, the physical design and infrastructure of a school may adversely affect children's right to education, particularly those with disabilities, by excluding them from accessing education (UNICEF 2007b). Concerns may also be raised with regard to the guarantee of the quality of the physical environment and sustainability thereof once access has been assured. The legitimacy of these

concerns revolves around infrastructure as a critical element of the fundamental right of a child to education.

School-based Management of Infrastructure

The third trend involves the changing education management policy environment characterized by the move towards school-based management (SMB) which involves the decentralization of decision-making authority from the central government to the school level (Caldwell 2005). Representing a transformed approach to education management, the SBM has emerged from the belief that when decisions about school matters are made by people closer to the school, better decisions followed by subsequent decision-informed actions will be made. It is for this reason that, amongst other goals, SBM is aimed at empowering local school communities to take meaningful decisions over schools' physical resources. As part of decentralization, school-based management is perceived as an important force that strengthens efficiency and accountability of resources and results (Duanne et al. 2007). Such perception is further strengthened by the view that the task of management at school level is to "provide an environment in which teachers can teach and students can learn" (Taylor et al. 2003:61). This places accountability for the management of school infrastructure and the implementation of any policy relating to this area squarely on school-based management, specifically, the School Management Team (SMT) and the School Governing Body (SGB). For this reason, the Financial and Fiscal Commission (2009) encourages intensified devolution of responsibility, authority and accountability for the management of the physical teaching and learning environment to School Governing Bodies through principals.

Legislative Framework Underpinning the National Policy for Infrastructure in South Africa

In addition to the provisions of the South African Constitution (South Africa 1996b), there are currently several pieces of legislation which relates to the National Policy for School Infrastructure. Three examples can be cited in this regard. First the Bill of Rights in the South African Constitution guarantees the rights to human dignity (section 10), to the environment that is not harmful (section 24) and to basic education (section 29) for everyone, including children in schools. This sets the tone for the provision of education in an environment that is safe and secure. The Occupational Health and Safety Act, No. 85 of 1993 (South Africa 1993), provides for the health and safety of persons at work. In the case of schools the Act protects teachers and a whole range of people working in and around school buildings. Second, among its key objects, the Children's Act (South Africa 2005) has an expressed intent to protect children from physical harm and hazard and to recognize the special needs of children with disabilities. The South African Schools Act (South Africa 1996a) requires the School Governing Body to administer and control the school's property, buildings and grounds. This is to ensure the safety of learners and everyone working in schools.

The Nature of and Scope Covered by the National Policy on School Infrastructure

Known as the National Education Policy for Equitable Provision of an Enabling Physical Teaching and Learning Environment (South Africa 2010), the National Policy on School Infrastructure aims at guiding the provision of an enabling physical teaching and learning environment for all South African learners on an equitable basis. To achieve its strategic objectives, the policy applies a set of principles which include a broad-based access, equity and redress, quality and effectiveness, efficiency and functionality/responsiveness in addition to a wide range of national values. The policy contains six strategic policy statements and two operational policy statement (Table 1). Key elements of the policy are embedded in its strategic and operational statements each with its special focus, namely:

- Establishment of national norms and standards for an enabling environment
- Systematized prioritization of infrastructure needs
- Planned development of an enabling environment
- Standardized architectural designs
- Management and maintenance
- Diversification of funding sources
- Demonstrated delivery capacity
- Systematized procurement management and procedures for the sector

Table 1: The National Education Policy for equitable and an enabling physical teaching and learning environment: Strategic and operational statements

Statement No.	Policy statement and focus
1	Establishment of national norms and standards for an enabling environment Focus: Setting national norms and standards for safety, functionality and enrichment and targets for adoption by provinces
2	Systematized prioritization of infrastructure needs Focus: Standardizing criteria and procedures for identification and prioritization of teaching and learning environment needs
3	Planned development of an enabling environment Focus: Preparing a strategic (long-, medium- and short-term) plan with objectives and targets, guided by recurrent mandatory planning instruments
4	Standardized architectural designs Focus: Developing prototype space norms and designs, guided by core sector policies such as physical access and substantive relevance
5	Management and maintenance Focus: Developing a policy on the management and maintenance of immovable assets
6	Diversification of funding sources Focus: Applying alternative funding mechanisms, regulated by the National Treasury and in line with relevant Constitutional provisions
7	Demonstrated delivery capacity Focus: Devolving responsibility, authority and accountability to the school level accompanied by capacity building for implementation
8	Systematized procurement management and procedures for the sector Focus: Developing standardized sector-specific procurement procedures with procurement authority devolved to the lowest procurement level

Source: South Africa, 2010

Practical Infrastructure Realities in South African Schools

There are two sets of challenges relating to school infrastructure in South Africa, which have implications for the implementation of the National Policy on School Infrastructure. The first set of challenges relates to the need for infrastructure and the provision of the necessary infrastructure to satisfy the need. The second challenge relates to the state of the existing school infrastructure and the school-based management of such infrastructure.

The Need and Provision for School Infrastructure

South African schools are in dire need for basic infrastructure that is needed for quality education delivery. Though the provision of such infrastructure is one of the priorities of government (South Africa 2011), actual provision is a challenge. The current state of backlog in the provision of this important quality education enabler shows that more effort is necessary to address the challenge as Table 2 shows. Table 2 which presents data derived from the National Education Infrastructure Management

Systems (NEIMS) (South Africa 2011) emphasizes this point. It gives a picture of the state of safety and security prevailing in schools.

One can deduce from the table that the majority of schools in the country still lack the basic infrastructure that is needed for quality education delivery in a safe and secure learning environment. This is despite the acknowledgement that inadequate and poorly maintained infrastructure tends to exclude learners (Wall 2011). Lack

Table 2: Schools without basic infrastructure

Total number of schools in the nine provinces:	Ordinary schools: 24793 special needs education: 359 Total: 25152	
Infrastructure	Total	%
Without Electricity Supply	3544	14
Without Water Supply	2402	9
Without Ablution Facility	913	3
Without Fencing	2730	11
Without Library	19541	79
Without Laboratory	21021	85
Without Computer Centre	19037	77
Without Sports Facility	4312	17
Without Communication System	409	2

Source: South Africa, 2011

of proper infrastructure in the form of toilets, clean drinking water, sports facilities and educational buildings that are safe and accessible to learners may violate children's rights and other legislative provisions protecting these rights. It is the picture like this that has motivated the national Department of Education to establish minimum Norms and Standards for School Infrastructure (South Africa 2008). Part of the rationale for the establishment of these national norms and standards is for the state to be responsive to curricula and pedagogic needs of schools by addressing existing inadequacies in the physical teaching and learning environment. Though the establishment of these norms has been welcome, their implementation has been a challenge for the Department of Basic Education. Frustrations with the delay in the implementation of the norms and standards has led to non-governmental organizations such Equal Education (2012) marching to parliament and to courts (Mail and Guardian Online, 7 March 2012) to demand implementation. The latter forms the basis for the development of the National Policy on School Infrastructure discussed below.

The State of the Existing School Infrastructure and the School-based Management

The South African Schools Act (South Africa 1996) places responsibility for the management of school infrastructure, specifically the maintenance and improvement of school's property, buildings and grounds on school-based management (SMTs and SGBs). The main rationale for the involvement of school-based management in this regard is to "provide an environment in which teachers can teach and students can learn" (Taylor et al. 2003: 61). Such involvement is in line with the view that a school can be better managed by people closer to it than people situated far from it. Given this view, one would logically expect school infrastructure to be better managed, but studies show serious challenges schools experience in this regard. First, while many schools in the country are in need of infrastructure, studies reveal poor conditions of existing school infrastructure which reflect on poor management. In its first report on the state of engineering infrastructure in South Africa, the South African Institute of Civil Engineering (SAICE 2006) has noted a state of gen-

eral deterioration of education infrastructure across all provinces. According to the study the state of infrastructure degradation is such that "many schools now need urgent maintenance to ensure environments are suitable for teaching and learning, and to avoid expensive unplanned repairs." (SAICE 2006: 9).

Second, school infrastructure is often subject to vandalism arising from both within the school and the community around the school and this is noted with concern in many local studies (Govender 2006; Scherman 2005; Thabethe 2010). Vandalism is a social problem and, as research has revealed, it has negative economic, psychological and educational implications for education in general (De Wet 2004) and for schools in particular. School-based management faces this problem but experiences enormous challenge when it comes to dealing with it effectively. In their study into school safety in rural areas, Netshitahame and VanVollenhoven (2002) have found that though school physical facilities posed threats to safety, schools did not have the necessary safety measures, policies and rules. In addition to this, many schools in the country to not have organizational structures in place for planned maintenance of school facilities (Xaba 2012). What this suggests is lack of leadership and management capacity to deal with the problem

Placing the National Policy on School Infrastructure within the Theoretical Policy Implementation Framework

The implementation of the National Policy on School Infrastructure cannot be pursued in isolation from the implementation of other education policies applicable to schools. Like other education policies, the policy should finally be implemented at school level by school-based management with sufficient understanding of what such implementation actually involves. A focus on the school level emanates from the understanding that it is at this level where ideas, goals and visions expressed in policies are to be translated into reality. It is therefore, important to briefly discuss the policy within a broader theoretical framework underpinning policy implementation. Since the policy on school infrastructure is but one of many education policies applicable to schools, it is important for SMB to have a basic understanding of the nature of pol-

icy implementation and to share such understanding with stakeholders.

Connection between Policymaking and Policy Implementation

Policy in making and policy in action are two different things – one is an authoritative (governmental) expression of an intention or desire (objectives and goals) and another is an individual or public action on an expressed intention. While the former is called policy formulation or development, the latter is called policy implementation and involves closing the gap between the intention and the achievement of what is intended. Implementation is therefore, "the process of achieving the actualization of an expressed policy" (Tolliver 2010: 6). Studies show that policy implementation involves the creation of connection between the expressions of governmental intention and actual result (O'Toole et al. 1995). What this logically suggests is that though policy development is a necessary condition for achievement of success, that is, desired goals of policy makers, it is not a sufficient condition for that achievement. There is a need for implementability to link the two. Quite often policies are developed only for challenges to emerge during the course of their implementation, becoming barriers obstructing such implementation. Quite a number of educational studies in South Africa cite several challenges experienced in policy implementation in many areas. Such challenges vary from those relating to the implementation of curriculum policies (Maila 2003) and health-related policies (Naidoo 2006) to those relating to the implementation of information communications technology (ICT) (Prince 2007).

Policy Implementation Infrastructure

Success and implementability (successful implementation) of a policy, as literature shows (Brynard 2005; Honig 2006), is a product of an interaction between policy content, policy goals, policy implementers, policy implementation strategy, policy implementation target group and policy implementation context. Since the six variables are the building blocks for policy implementation, one may safely regard them collectively as *policy implementation infrastructure* – the collection of tools necessary for policy implementation at the point of implementation.

Mismatch or lack of interaction between these components may, therefore, threaten successful implementation of the policy.

Policy implementation is admittedly a complex undertaking which is subject to many theories that compete for hegemony, leaving no room for consensus (Honig 2006). Figure 1 is a simple diagrammatic representation of a complex implementation infrastructure with the following six components:

Policy Content: Policy content represents the scope covered by the policy and embodies elements on which the policy as designed by policy makers focuses (see Table 1).

Policy Implementation Context: The implementation context refers to the institutional environment – the socio-economic, political, cultural and technological conditions under which a school is operating.

Policy Implementers: Policy implementers are people who are instrumental in implementing the policy at the institutional level – these are key players in the implementation process.

Policy *Target Group*: The target group represents end-users or beneficiaries of the policy – people in whose best interests the policy has been designed in the first place.

Policy Goal: A policy goal is an outcome the policy is intended to achieve through a set of value-based and principle-driven operational and strategic objectives collectively constituting the rationale for the existence of a policy.

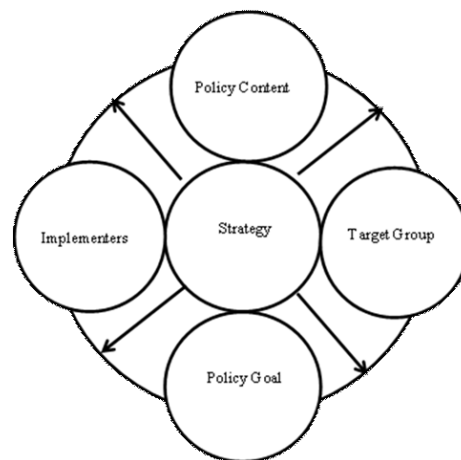*Policy Implementation Strategy:* An implementation strategy is a strategy designed by

Fig. 1. Policy implementation infrastructure

the school-based management for policy implementation geared towards achievement of goal.

Policy Implications for School-based Management

Given the decentralization policy that is in vogue across many countries today and the general acceptance of the view that the school is better managed by those close to it, the necessity for the devolution of the National Policy on School Infrastructure to schools thus, placing responsibility on school-based management for its implementation, is indisputable. However, such devolution carries two sets of implications for school-based management in South Africa. The first implication involves connecting the policy to stakeholders and the second implication involves designing and applying a strategy for implementation.

Connecting the Policy to Stakeholders

Connecting policy to stakeholders is critical for implementation of the National Policy on School Infrastructure. Connectivity between stakeholders and the policy requires school management to communicate to the stakeholders the policy content and goals and the various legal, academic and theoretical perspectives that helped shape the policy. Connectivity through communication with stakeholders covers the following processes:

Advocacy: School management should be adequately conversant with the policy content and intent and advocate its implementation to make people aware of its existence. Information about the policy should be disseminated to the school community and take a centre stage in its conversation about school infrastructure improvement.

Consultation: School community members (teachers, parents and learners) as stakeholders, should formally be consulted and be informed about its content and the improvements it is intended to bring into their school. In other words, a policy should not be thrown into a school, but ushered in through debates that include interrogation of the policy to avoid resistance and enhance understanding, acceptance and subsequent ownership.

Involvement: People should not only be consulted, but should also be actively involved in decision making regarding policy implementation. Involvement paves way for school community ownership of the policy. After all, the policy is about bringing about change for improvement and people should not feel isolated from contributing to such change.

Engagement: For the policy to be implemented, it requires active engagement of people affected by the policy. Active engagement involves articulating specific roles and responsibilities of various players in the implementation process and providing stakeholders with implementation guidelines.

Commitment: The National Policy on School Infrastructure represents a social contract between the Department of Basic Education and the school community, aimed at creating a safe physical teaching and learning environment. For this reason, stakeholders should be committed to the successful implementation of the policy. It is the responsibility of the school management to seek ways of motivating and supporting implementers and encouraging beneficiaries to cooperate with implementers while at the same time they comply with policy provisions. This requires school management to continuously monitor the implementation process, identify problems whenever they emerge and commit itself to their speedy resolution.

Contextualization: One common reason why national policies fail during implementation is an attempt to implement them without due consideration to the prevailing local institutional conditions of resources, capacities of implementers and other influential factors. For the policy on infrastructure to be implementable, the school management should contextualize its implementation, that is, adapt it to the local socio-academic conditions. In other words, the policy should be sensitized to prevailing school infrastructural needs and challenges as well as capacity needs of implementers.

Creating and Applying a Strategy for Policy Implementation

Informed by the policy provisions (content, goals and guidelines), prevailing local conditions, the capacity of implementers, resources available and the interests of beneficiaries, the school management should design a strategy for implementing the National Policy on School Infrastructure and commit itself to its implementation. The design of such strategy should be the result of a discussion between the SGB and SMT. Such a strategy may include the following:

Organizational Structure: Creation of an *organizational structure* for the implementation of the policy with members drawn from the various constituencies represented in the SGB and chaired by a member of the latter as required by the law, is a fundamental component.

Roles and Responsibilities: People can perform provided they have clear knowledge and understanding of their roles and responsibilities and are capable of carrying them out to the best of their abilities and to the satisfaction of the school community. Allocated responsibilities in the implementation of the National Policy on School Infrastructure may include, procurement, maintenance, renovation, repair and use of infrastructure as well as disposal of irreparable and financially unsustainable infrastructure; capturing and management of infrastructure data; establishment and management of safety measures; and, monitoring of compliance with national norms and standards.

Capacity Building: Lack of the necessary capacity for implementation may be a barrier to successful policy implementation. Capacity building includes acquisition of knowledge and skills development through training and provision of resources needed for implementation.

Monitoring and Accountability: Policy implementation in a school is a transparent exercise. For this reason, the strategy for the implementation of the National Policy on School Infrastructure should indicate ways in which the implementation process will be monitored and how various decisions and actions taken during the process will be accounted for.

CONCLUSION

This study has revealed the complexity of the implementation of the National Policy on School Infrastructure as a result of the interaction of various academic, legislative, theoretical and practical perspectives that helped shape the policy. Given the complex nature of this policy, placing the responsibility for its implementation on the school community has important implications for school-based management, notably connecting the policy to the stakeholders, designing and applying a strategy for policy implementation.

RECOMMENDATIONS

For successful implementation of the South African National Policy on School Infrastruc-

ture, there is a pressing need for the creation and strengthening of connectivity between the various components of the policy and ensuring active participation of stakeholders in various processes leading up to its implementation. Special attention needs to be given to the development of a clear implementation strategy geared towards empowerment of school-based managers as important implementation agents in the policy implementation process. Consideration in this regard should be given to capacity building in the form of training on policy development and implementation matters, which is informed by and tailored for context-specific needs of these agents.

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