



Connecting the dots: The relationship between school infrastructure and learning

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Children who do not master basic concepts in the first few years of primary schooling are at a perpetual disadvantage.⁴

Introduction:

The 2016 Progress in International Reading Literacy Study (PIRLS) revealed that after four years of schooling, a devastating 78% of South African learners cannot read for meaning. A precarious foundation results in weak learning outcomes in the later schooling years.

There are a number of factors that contribute to the basic education sector's weak foundation phase, and these are often linked to what takes place inside the classroom. But, what if that classroom is overcrowded? And the taps are dry and the toilets are unsafe? What about the state of the infrastructure of so many of our schools not being conducive for quality teaching and learning? The Department of Basic Education (DBE) and provincial education departments (PEDs) have failed to ensure that our schools have the basics: a reliable supply of water and electricity, enough classrooms, and decent toilets. Our government has been achingly slow in fulfilling its legal and moral duties.

Learning inside of broken schools

School infrastructure—the physical learning space or building, its quality, maintenance and management—is critical in schooling outcomes and a key component in ensuring the provision of quality education because structured teaching and learning primarily occur within a physical context, the school environment (Barrett et al., 2019; Khumalo & Mji, 2014). Therefore, the condition of school infrastructure, i.e. the physical structure of schools as well as related facilities and services, can either foster or impede the teaching and learning processes (Khumalo & Mji, 2014).

That being said, information on how school infrastructure affects children's learning outcomes is scanty at best. This lag is problematic because many of the factors that determine the health and safety of the physical learning environment also significantly affect learning (Barrett et al., 2019).

Limitations notwithstanding, emerging literature has identified the quality of school infrastructure as important for educational outcomes as other factors like access, quality of teachers, or individual and household/community factors (Chaudhury et al., 2004; Murillo & Román, 2011). The broad consensus is that the physical condition of schools is strongly linked to learning outcomes, affecting how and what is taught in schools, as well as how learners receive, participate and achieve expected academic performance.

Empirical evidence from across the United States shows that school infrastructure has a direct relationship with academic performance, with quality infrastructure improving learners' performance or achievement in standardised tests (see e.g. Bullock, 2007; Duran-Narucki, 2008; Hughes, 2006; Tanner, 2009).

Developing contexts have also documented similar positive links between good school infrastructure and academic performance. For instance, in a study of 95,000 third-grade and 91,000 sixth-grade learners from 16 countries in Latin America, Murillo and Román (2011) found that the availability of basic infrastructure and services (water, electricity, sewage) and didactic facilities (sports installations, labs, libraries), in the school do affect the achievement of primary education students in Latin America, albeit to varying degrees. Similar findings are emerging in the South African context (Banda & Kirunda, 2005; Ndebele, 2014).

The school infrastructure law

The DBE has acknowledged the importance of infrastructure in enabling teaching and learning. In its report on "25 Year Review of Progress in the Basic Education Sector" it states:



The development of children is influenced by the physical and social environments they find themselves in. In the education sector, school infrastructure is important in facilitating the delivery of education and creating an atmosphere conducive for learning.

To achieve school infrastructure priorities, the Minister for Basic Education promulgated the 2013 Regulations Relating to Minimum Uniform Norms and Standards for Public School Infrastructure (Norms and Standards for School Infrastructure). She did this after being taken to court by Equal Education (EE). As the primary legal framework regulating the provision of infrastructure in South African public schools, the Norms and Standards for Public School Infrastructure set out the national guidelines for the equitable provision of basic infrastructure and services to schools within specific, legally binding timeframes.

Since EE secured the promulgation of the Norms and Standards, thousands of schools have received water, electricity and decent toilets, and hundreds of schools made of inappropriate materials, such as mud and asbestos, have been replaced. However, access to dignified and safe infrastructure is still highly uneven in South Africa – with rural and township schools bearing the brunt of historic inequalities.

Show us the money!

EE's engagements with education departments, and our analysis of school infrastructure data and delivery, show that the departments still struggle with the basics such as accurate and accessible data, clear and coordinated planning, as well as making sure that the implementing agents and contractors that build schools on behalf of government are held accountable. National and provincial governments are also not putting enough money toward building and fixing our schools.

Despite positive statements from the government on the need for progressive pro-poor funding towards the education sector, a worrying trend of deprioritisation of basic education funding has emerged over the years as National Treasury has introduced austerity budgeting.

Austerity budgeting was already a concern before the emergence of the COVID-19 pandemic, as South Africa was experiencing systemic underinvestment in key social and economic sectors. Over the years, the Budget Justice Coalition, Equal Education and other civil society actors have outlined the impact of lower allocations on the education sector and questioned the rationale for implementing austerity budgeting.

COVID-19 dramatically accelerated the trend as a result of the pandemic's impact on government's finances and spending. COVID-19 forced government to revise their 2020/2021 budget and take the exceptional step of tabling a Supplementary Budget in June 2020. The 2020 Supplementary Budget made major changes to departmental funding as government not only had to fund COVID-19 relief measures, but also decided which departments should be prioritised in this new environment. Basic Education was considered a donor department. This means that the sector received no additional support to help with the COVID-19 costs and instead experienced several funding cuts (as will be outlined below). This has forced the DBE, PEDs, and schools themselves to reallocate their already overstretched budgets. A consequence of this is schools being unable to maintain and upgrade dilapidated or dangerous infrastructure, and being unable to purchase school furniture or other teaching and learning support materials.

The trend of decreasing basic education funding is not just an overarching issue but is also experienced at the programme level, especially school infrastructure. Despite national government placing renewed priority on school infrastructure – through the introduction of conditional grants such as the School Infrastructure Backlogs Grant (SIBG) and the Education Infrastructure Grant (EIG) – funding has seen a decrease in recent years.

The cuts to infrastructure budgets directly affect the ability of schools to meet the minimum norms and standards for school infrastructure as many rely on this funding to provide safe structures, sanitation, water and electricity. This inability of the DBE to meet its legal obligation is unacceptable. Our government should ensure all provinces have sufficient funds to meet the Norms and Standards for Public School Infrastructure as a matter of urgency.

Conclusion:

Our advocacy around the Norms and Standards for Public School Infrastructure, recognises that safe and proper school infrastructure is a critical part of ensuring quality education, along with other important factors such as teacher training and support, curriculum, textbooks, school safety and scholar transport. The failure to comply with the Norms and Standards for Public School Infrastructure undermines the right to education. Minister Motshekga and the Education MECs must ensure that this right is realised!

*This advisory note has been drafted by Equal Education's research department

*This advisory note is an extract of Equal Education's draft research paper on the impact of school infrastructure on learning outcomes (please do not cite)