



Disability Support & Accessibility in Mainstream Schools in South Africa

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Abstract

Increased access to education among children with disabilities is key to reducing economic inequality, by disability status, later in life. Increasingly, in many parts of the world including South Africa, inclusive education has been accepted as the means to provide increased educational access for all (including children with disabilities). Monitoring of progress in inclusive education tends to focus on measuring enrolment of children with disabilities in mainstream schools. There is little systematic collection of appropriate data on the availability of disability support structures and provision of services to learners with disabilities, who are enrolled in mainstream schools. This hinders accountability for policy implementation in South Africa and makes budgeting for inclusive education difficult. This study provides new evidence on disability support, accessibility of schools and learning environments, and adequacy of teacher training in inclusive education in South Africa. This evidence is generated using multivariate analysis of the School Monitoring Survey 2017, and a follow-up qualitative study. The study analyses the inputs, processes, and school enablers at the teacher- and school-level in relation to school characteristics. The results show substantially more schools have established School-based support teams (SBSTs), and provision of district support for these teams has expanded. But there has been little progress in specialist support to schools and less than half our schools are confident in their ability to screen students for visual, hearing or learning difficulties. The results also suggest that educators have a poor understanding of the screening process. This means that many learners with disabilities or who are experiencing learning barriers are unlikely to be identified in schools, preventing them from receiving the support they need to fully participate in learning. Further, there are vast inter-provincial inequalities in disability support and teacher training. Teachers who are trained in identifying or supporting learners experiencing learning barriers are much more likely to be confident in addressing learning barriers.

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1. Introduction



1. Introduction²

Developing countries have seen a rapid expansion of school enrolment in recent decades, but, to a large degree, children with disabilities have been left behind. In South Africa, school enrolment is lower for children with disabilities than for children without disabilities, and in 2015 disability was the main reason why 7-15 year olds were not attending school at all (Department of Social Development Republic of South Africa, 2015; Nuga-Deliwe, 2016; Statistics South Africa, 2014; Statistics South Africa, 2017). This is concerning because **increased access to education among children with disabilities is key to reducing economic inequalities between them and people without disabilities later in life** (Banks, Polack & International Centre for Evidence in Disability, 2014; Filmer, 2008).

Increasingly, inclusive education is the preferred way of increasing access to education for children with disabilities, rather than a parallel, special school system. Encouraging the enrolment of learners with disabilities in mainstream schools must come with the necessary support and improvements in the accessibility of learning and physical environments. Similarly, the enrolment of learners with disabilities in mainstream schools, the support they receive and the accessibility of learning environments must be monitored together, to determine the level of progress made. Reporting requirements to the United Nations on implementation of the Convention on the Rights of Persons with Disabilities (CRPD) and on the Sustainable Development Goals (in particular, Goal 4.5³) has increased pressure on the South African government to demonstrate progress in disability inclusion in education.

However, there is little systematic collection of appropriate data on the availability of support structures and provision of services to learners with disabilities, who are enrolled in mainstream schools.⁴ Few inclusive education interventions in Africa have been formally evaluated, making it difficult for policy-makers to identify effective and cost-effective strategies to promote disability inclusion in schools.⁵ The lack of suitable data hinders accountability. Previous research shows that the resourcing of disability-inclusive education has been very uneven between provinces and slow policy implementation might be due to a lack of buy-in to the idea of inclusive education in some provinces (Budlender, 2015; Du Plessis, 2013).

There are only two sources of nationally-representative data that address aspects of disability inclusion in South Africa: the School Monitoring Surveys (SMS) (2011, 2017) and the Teaching and Learning in Schools (TALIS) survey (2018). In this study, I have used the SMS 2017 to analyse availability of disability support structures in schools, disability accessibility of schools and teacher training in identifying and supporting learners who are experiencing barriers to learning in mainstream schools. Where possible, these results are compared to the 2011 survey to determine the level of progress between 2011 and 2017. I conducted a follow-up qualitative study to the SMS 2017 to strengthen insights from the quantitative analysis. Using multivariate techniques, I am able to provide robust evidence on inequalities in the provision of disability support, by province. The implications for policy and for economic inequality among people with disabilities are drawn out. Understanding the current level of disability support and accessibility will allow much more accurate budgeting for the implementation of school-level reforms.

The next section provides additional background on the policy shift towards disability inclusion in mainstream schools in South Africa since 2001, defines the concepts of disability and barriers to learning and explains why measurement of disability support is important for improved access to effective learning for children with disabilities.

² For the entire in-depth study, please see [Stellenbosch University Working Paper 05/2021](#).

³ "By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations."

⁴ For smaller-scale, qualitative studies, see (Fish Hodgson & Khumalo, 2016), (Human Rights Watch, 2015).

⁵ See Srivastava, de Boer and Pijl, (2015) for a literature review of inclusive education projects in developing countries, and Loreman, Forlin and Sharma (2014) for a literature review of measurement or evaluation of progress of inclusive education in developing countries.



2. *Background*

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Disability arises when people with impairments face attitudinal and environmental barriers that prevent full participation in society (United Nations, 2007).

Impairments do not automatically lead to disability. Rather, impairments (often caused by health conditions or injuries) can be made worse and lead to disability when the environment or system is unaccommodating. Inclusive education policy is based on this understanding of disability, and focuses on:

- adapting the school and learning environment to be more accommodating of a range of impairments,
- providing individual-level interventions,
- improving educators' attitudes towards disability, and
- improving educators' skills to accommodate disability.

South Africa has developed its own domestic disability-inclusive education policies. White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System (2001) and the Policy on Screening, Identification, Assessment and Support (SIAS) (2008, updated in 2014) are the most relevant. The White Paper on the Rights of Persons with Disabilities (2015) covers some aspects of schooling, in very broad terms. In addition, the Guidelines on Responding to Learner Diversity in the Classroom through the Curriculum and Assessment Policy Statement (2011) outlines approaches to accommodate diverse learning needs within the mainstream classroom using curriculum differentiation.



The 2014 SIAS policy and 2001 Education White Paper 6 recognises disability as a factor that hinders learning and participation in schools. The SIAS policy defines barriers to learning as “difficulties that arise within the education system as a whole, the learning site and/or within the learner him/herself which prevent access to learning and development”. Barriers to learning can arise from “social, emotional, cognitive, linguistic (factors), disability, or family [...] circumstances”. Additional support may be required for a child “who has learning difficulties; is being bullied; has behavioural difficulties; is a parent; has a sensory or mobility impairment; is at risk of school drop-out or has been bereaved” (Department of Basic Education, 2014a).

South Africa became a signatory to the UN CRPD in 2007. This commits her to Article 24, 2(b):

“Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live” (United Nations, 2007)

The CRPD further obligates the state to ensure that “(children) with disabilities receive the support required, within the general education system, to facilitate their effective education” (United Nations, 2007, Article 24, 2 (d)). The CRPD emphasises that learners with disabilities should be reasonably accommodated (Article 24, 2(c)), and that they must receive the support they need to enable their effective education. Effective, individualised support should be provided in an environment that maximises the academic and social development of learners with disabilities.

Any indicators of progress of inclusive education must flow from South Africa’s domestic policies and international commitments. Domestically, the SIAS Policy 2014 is the most appropriate policy document upon which to develop indicators.



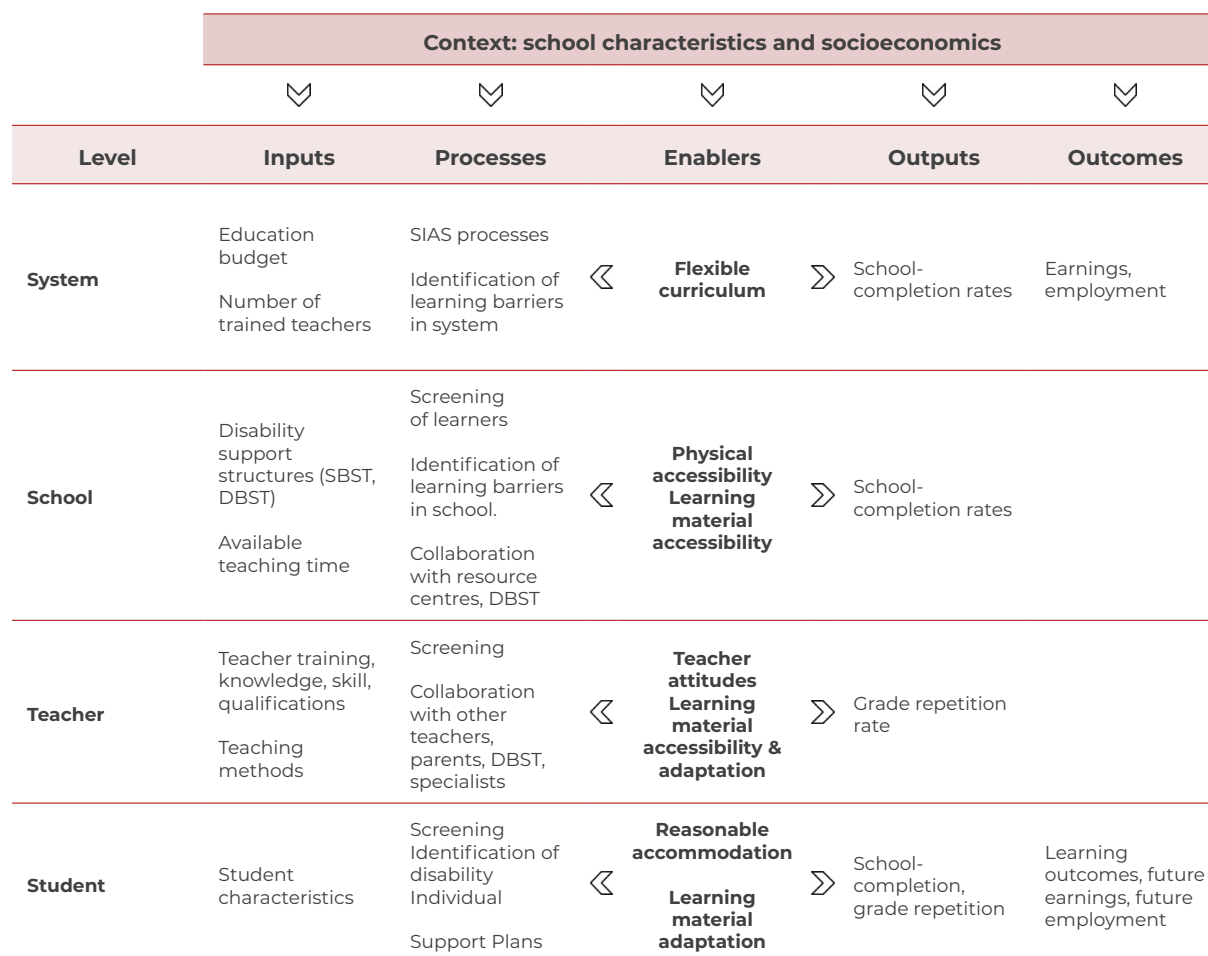
3. Theoretical Framework

3. Theoretical framework⁶

3.1. Frameworks and approaches to measuring disability support and disability inclusion in schools.

I have used a hybrid framework to evaluate the inputs and processes in inclusive education, using data from the SMS 2011 and 2017. The framework incorporates the Integrated model of school effectiveness, as described by Schereens (1990), and the Disability Rights in Education Model, developed by Peters et al (2005). Figure 1 provides some examples of relevant inputs, processes, enablers, outputs and outcomes of inclusive education at several different levels of the education system.

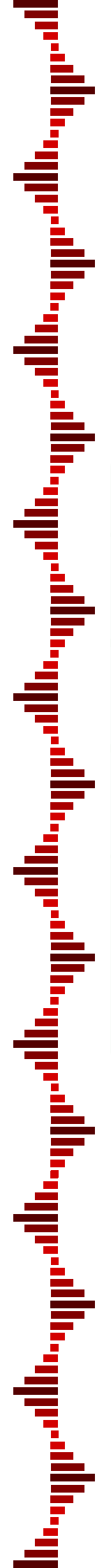
Figure 1: Model of inclusive school effectiveness



This study focuses on analysing **school- and teacher-level inputs, processes and enablers of inclusive education**. As there is not yet any reliable data on outputs or outcomes of inclusive education for learners with disabilities in South Africa, this study focuses on examining differences in school- and teacher-level inputs, processes and enablers, assuming that these will result in differences in student academic achievement and school completion rates.

Inputs and process variables are used to explain the differences in schooling outputs, while the **context** influences how effective processes in the school and classroom can be.

⁶ For a detailed literature review and more on the models and indicators used, see [Stellenbosch University Working Paper 05/2021](#).



Context includes the incentives created by education management at above-school level, and school characteristics (such as school size, rural or urban settings, socio-economic status of the school community and an orderly and safe school environment) (Scheerens, 1990).⁷

School **enablers** are included in the evaluation framework, using the Disability Rights in Education Model. Enablers allow learners with disabilities to participate meaningfully in mainstream education (Peters, Johnstone, & Ferguson, 2005). The appropriate adaptation of the learning environment and appropriate accommodation of individual learner's needs are key enablers to allow full and effective participation within schooling. Including enablers in the model introduces the notion that the environment can hinder or empower learners with impairments to participate in learning.

Three sets of international indicators of disability inclusion in schools are relevant to the South African context:

- **The Washington Group draft Inclusive Education Module** (Cappa, De Palma, & Loeb, 2015): focuses on disability-inclusive education and addresses barriers to school participation.⁸
- **UNICEF Guide to Including Disability in Educational Management Information Systems (EMIS)**: includes questions on teacher qualifications and school accessibility.
- **The Pacific Indicators for Disability-Inclusive Education**: address access, quality and effectiveness of disability-inclusive education (Sharma, Jitoko, Macanawai, & Forlin, 2018).

Additionally, two large sample, nationally-representative school surveys from South Africa, provide some data on disability support and inclusion. The **School Monitoring Surveys (SMS)** and **Teaching and Learning in Schools (TALIS)** are broad surveys that provide indicators of disability accessibility and teacher preparedness for including learners with disabilities in mainstream classrooms.

3.1.1. Teacher-level inputs

Teacher-level inputs which are frequently measured are shown in Figure 1. In high income countries there is evidence that teacher training in inclusion is linked to improved knowledge and skill in inclusive education and disability (Copfer & Specht, 2014). Research in high income countries has also established a link between training and educator confidence in implementing inclusive education (McGhie-Richmond, Irvine, Loreman, Cizman, & Lupart, 2013). Neither of these relationships have yet been clearly demonstrated in South Africa. This paper seeks to establish this link.

⁷ Outputs are measured by student academic achievement and are linked to outcomes such as earnings and employment in adulthood, but they are not discussed in this paper.

⁸ A final version was not yet available at the time of writing.

Teacher training for inclusion is measured in the SMS and in TALIS 2018. The 2011 SMS measures the percentage of schools that have at least one educator formally or informally trained in identifying and supporting “learners with special education needs”, while the 2017 survey measures the percentage of schools that have at least one educator trained in identifying or supporting “learners experiencing barriers to learning”. The 2018 TALIS survey measures training in teaching “learners with special needs”, teachers’ perceptions of their need for special needs training, and Principals’ opinions of the number of teachers who are competent to teach “learners with special needs”.

Further, SMS measures teacher confidence. Teacher confidence can be seen as an enabler or as a teacher-level input into inclusive education. In this study it has been characterised as a teacher-level input (confident teachers). In SMS 2011, 21% of teachers were “not confident” in dealing with learners with special education needs. Analysis concluded that educators who had received both formal qualifications and informal training were more confident than those who had received informal training only (Department of Basic Education, 2014b). However, these results may be unreliable as there were high levels of missing data in this question (23%), particularly among educators who did not receive training. As a result, data from 2017 SMS is the first dataset which can be used to test the link between training and teacher confidence. The relationship between training and confidence is explored in this research.

3.1.2. School-level inputs

When it comes to school-level inputs, evaluations of inclusive education projects in high income countries have focused on assessing the structures for providing special services in schools (Srivastava, de Boer, & Pijl, 2015)..

School-based and district-based support teams, and resource centres are the key disability support structures in South Africa. School-based support teams (SBSTs) are created with existing staff, to put coordinated school-, learner- and teacher-support in place (Department of Basic Education, 2014a). District-based support teams assist SBSTs, by monitoring the support provided to learners, advising the SBST and facilitating access to specialists when needed. Though less clearly defined, policy also puts resource centres in each district (usually based at a special school) to provide additional teaching and therapy support and assistive devices for learning to learners with disabilities in mainstream schools in that district. SMS 2011 and 2017 evaluate the presence of SBSTs and whether these teams received any district support, but do not evaluate the support received from resource centres.

3.1.3. Process indicators

A review of the literature and scoping of available data in South Africa suggests that the most relevant processes which can be monitored at the school-level are 1) screening of learners and 2) collaboration among educators. In South Africa, the SBST, district-based support team and School Health team are jointly responsible for screening for learning difficulties. The Integrated School Health Team is responsible for screening learners’ vision and hearing and screening for chronic health conditions. school-level processes for screening and identification of learners who are experiencing learning barriers and possible disabilities have been defined in the 2014 SIAS Policy. It also outlines processes to be followed to obtain additional support or formal learner assessments from the district.

The 2011 SMS assessed schools’ ability to screen “learners with special education needs”⁹. The questions on screening did not perform particularly well (they suffered much higher

⁹ This is the questionnaire wording in 2011. The implications of this wording are discussed later.

levels of missing data than other questions and my own preliminary analysis of the 2011 data revealed some anomalies in reporting). It has been suggested that the question wording (“Has your school, without the help of the district, been able to screen learners for special education needs?”) and in particular the phrase “without the help of the district” may have led to confusion and refusal to answer the question (Department of Basic Education, 2014b). The responses also suggest a poor understanding of the concept of screening among Principals or confusion over whose responsibility it is to screen (the school, the district, or the Integrated School Health Programme). The question wording was altered in 2017 and the performance of the new question is analysed in this study. SMS 2017 also asked educators to estimate the number of learners for whom SIAS forms had been completed. This data is used in the analysis as a proxy for schools’ ability to complete SIAS processes.

In the Pacific Region, monitoring focuses on measuring the outcomes of early identification and support services, rather than on self-rated ability to screen or identify learners with disabilities or difficulties. The Pacific Region indicators measure the number of children with disabilities who are provided with relevant assistive devices and technologies. Similar data is collected in Census in South Africa (use of eyeglasses, hearing aids, wheelchairs, and walking sticks/frames).

Research shows that collaboration between teachers and parents is key to effective inclusion in schools. In South Africa, the SIAS process must be built on effective collaboration and communication between teachers and parents, between SBST members, and between teachers and outside professionals. Collaboration among multiple role-players is critical for effective screening. Collaboration is not assessed in SMS 2011 or 2017. TALIS 2018 and some qualitative research has addressed this area.



3.1.4. School-level enablers

A review of the literatures suggests that physical accessibility of the school environment and learning material accessibility (and adaptation of learning materials) are the most critical school-level enablers of inclusion in the South African context.

Physical accessibility of schools enables participation of learners with physical disabilities, learners who are blind, partially sighted or who have severe intellectual disabilities. UNICEF recommends that, as a minimum, EMIS should monitor the accessibility of toilets and the main entrance to the school (UNICEF Education Section, 2016). Incontinence, the need for assistance during toileting or inaccessible toilet facilities are a key reason why children with severe intellectual, physical or psychosocial disabilities are not enrolled in South African mainstream schools (Department of Social Development Republic of South Africa, 2015).

SMS 2011 and 2017 measure accessibility of toilets, while SMS 2017 includes questions on accessibility of the main entrance, adopting from the UNICEF technical guidance.

Learning material accessibility is often overlooked but is possibly even more important than physical accessibility as it enables participation of learners with intellectual, sensory and communication disabilities. The availability of items such as braille books, audio books, and large, easy to read signage should be measured in school surveys (Mont, 2014). Interestingly, it does not suggest recording whether simplified instructions or simplified workbooks for learners with intellectual disabilities are provided. The recent technical guidance to SADC recommended measuring specialised equipment available for learners with disabilities, including computer screen readers, braille typewriters, augmentative communication devices, writing frames. But, again, it did not record whether workbooks or worksheets had been adapted for learners with intellectual disabilities or learners with low vision. Possibly these omissions are due to the difficulty in verifying reports by educators that such adaptation has been done. Adaptation of learning materials to suit learners with different learning needs could also be measured. Learning material accessibility is closely tied to the flexibility of the curriculum (which is a system-level enabler and is not addressed in this study).

Previous research has suggested that the existence of support structures is a rough proxy for the accessibility of the learning environment (Watkins, Ebersold, & Lenart, 2014). The presence of SBSTs, SBST support from the district and specialist support from psychologists and others are measured in SMS 2011 and 2017.

SMS 2017 attempted to measure two aspects of learning material accessibility directly: 1) whether teachers had been trained on curriculum or assessment differentiation and 2) the number of learners with disabilities supported with adapted LTSM. Unfortunately, the question on LTSM did not perform well and is not analysed in this paper. Data on training in curriculum and assessment differentiation is analysed as part of teacher-level inputs (training).



4. *Data and Methods*

4. Data and methods¹⁰

I have used data from school observations, principal interviews and stand-alone “learners with special educational needs” educator questionnaires for this research. Between October and November 2017, a research team spent two days in each school, completing multiple structured surveys and interviews with a range of educators for the SMS 2017 (Nexia SAB&T, 2017a). Simultaneously, trained fieldworkers completed structured school observations, which assessed schools’ infrastructure. Follow-up qualitative research occurred in a small sample of schools in Limpopo, the Free State and the Western Cape in March and April 2018. I conducted follow-up interviews telephonically, with educators who had completed a stand-alone questionnaire. This was to evaluate respondents’ understanding of the questionnaire wording and certain concepts related to inclusive education.

4.1. 2017 School Monitoring Survey sample

SMS 2017 was conducted on a random stratified sample of public sector primary and secondary schools in all nine provinces. The sample is stratified by province and quintile (Nexia SAB&T, 2017b). The planned sample was 2,000 schools (1,000 primary and 1,000 secondary schools). Over 98% of schools who were approached participated in the survey. Rates of completion, for each of the three survey instruments analysed in this study are shown in Table 1.

Table 1: Rate of instrument completion: School Monitoring Survey 2017

Survey Instrument	Number of schools (%) completing instrument	Number of schools (%) where whole instrument is missing
Principal interview	1972 (98.6)	28 (1.4) ¹
Educator questionnaire	1966 (98.3)	34 (1.7) ²
School observation	1979 (99.0)	21 (1.0)

Source: School Monitoring Survey 2017/18 Fieldwork Report

1 Reasons for non-completion: Access to school denied (n=19); No-one available to complete questionnaire (n=6); Unwilling to complete this questionnaire (n=3)

2 Access to school denied (n=19); No-one available to complete questionnaire (n=11); Unwilling to complete this questionnaire (n=4)

A description of the sample is provided in Table 2. The low proportion of SBST coordinators who responded to the educator questionnaire is disappointing as they are likely to be best placed to answer these questions. This trend suggests that many SBSTs are inactive.

¹⁰ For a detailed Data and Methods discussion, see [Stellenbosch University Working Paper 05/2021](#).

Table 2: Sample description: School Monitoring Survey, 2017 (unweighted)

	Grade 6 sample N=989	Grade 12 sample N=992	Total N=1981
Province in which school is located			
Western Cape	111 (11.2%)	111 (11.2%)	222 (11.2%)
Eastern Cape	114 (11.5%)	114 (11.5%)	228 (11.5%)
Northern Cape	100 (10.1%)	100 (10.1%)	200 (10.1%)
Free State	106 (10.7%)	107 (10.8%)	213 (10.8%)
KwaZulu-Natal	119 (12.0%)	116 (11.7%)	235 (11.9%)
North West	108 (10.9%)	107 (10.8%)	215 (10.9%)
Gauteng	107 (10.8%)	112 (11.3%)	219 (11.1%)
Mpumalanga	110 (11.1%)	110 (11.1%)	220 (11.1%)
Limpopo	114 (11.5%)	115 (11.6%)	229 (11.6%)
School wealth quintile			
Quintile 1	266 (26.9%)	229 (23.1%)	495 (25.0%)
Quintile 2	249 (25.2%)	217 (21.9%)	466 (23.5%)
Quintile 3	246 (24.9%)	256 (25.8%)	502 (25.3%)
Quintile 4	108 (10.9%)	132 (13.3%)	240 (12.1%)
Quintile 5	120 (12.1%)	158 (15.9%)	278 (14.0%)
School size (number of learners)			
< 600 learners	388 (39.9%)	256 (26.4%)	644 (33.2%)
>=600 learners	584 (60.1%)	713 (73.6%)	1297 (66.8%)
Person interviewed (educator questionnaire)			
LSEN Educator	495 (50.5%)	443 (45.0%)	938 (47.7%)
Deputy Principal	89 (9.1%)	143 (14.5%)	232 (11.8%)
Principal	180 (18.3%)	201 (20.4%)	381 (19.4%)
SBST Coordinator	217 (22.1%)	198 (20.1%)	415 (21.1%)

Public schools in South Africa are grouped into five groups according to the average household income in the immediate vicinity of the school. These groups are known as **school wealth quintiles**.

- Quintile 1 schools are located in the poorest 20% of areas in the country (mainly rural)
- Quintile 5 schools are located in the wealthiest 20% of areas in the country (mainly in the suburbs in large urban centres)
- Quintile 1, 2 and 3 schools are located in the poorest 60% of the country. Schools in these quintiles may not charge fees.
- Quintile 4 and 5 schools may choose to charge school fees.

4.2. Qualitative study sample

Eighteen of the schools that participated in SMS in 2017 in the Free State, Limpopo and Western Cape were purposively selected to participate in further qualitative research. In each province, one primary and one high school was chosen from a high-, low-, and moderately-functioning district. The sample aims to include a balance between rural and urban schools, and by quintile. Interviews were completed in 13 of the 18 schools. The low response rate is probably due to the choice of interview technique (telephonic) as it proved impossible to contact the correct person by telephone in three schools. The two refusals were likely due to interviewee fatigue as this interview was conducted at the end of an onerous research process. The achieved sample is skewed towards quintile 1 to 3 schools, and towards primary schools, as shown in Table 3. The Western Cape is under-represented in the final qualitative sample.

Table 3: Characteristics of final qualitative sample

School characteristic		% of sample	n
Province	Free State	46	6
	Limpopo	31	4
	Western Cape	23	3
Quintile	Quintile 1	31	4
	Quintile 2	23	3
	Quintile 3	31	4
	Quintile 4	0	0
	Quintile 5	15	2
Phase	Primary schools	62	8
	Secondary Schools	23	3
Designation (official data)	Full-service school	15	2
Role of interviewee	LSEN Educator	46	6
	Principal	31	4
	Deputy Principal	0	0
	SBST	23	3
	Coordinator		
Sample		100	13

Source: own analysis of achieved sample: qualitative study

4.3. Approach to analysis

Analysis was conducted at the school-level, using weighted data. All analysis was done in Stata version 14.2, using the svy commands to account for stratification in sampling and possible heteroskedasticity.

To my knowledge, this is the first study that applies multivariate techniques to this type of data in South Africa. Multivariate regression analysis has been used:

- to explain variation in educator training by observable school characteristics,
- to examine the relationship between educators' training and confidence in dealing with learners experiencing learning barriers,
- to explain variation in school-based support team (SBST) coverage, and the provision of district support to SBSTs by school characteristics,
- to assess schools' abilities to screen learners and complete SIAS processes relative to school characteristics, training, and presence of SBSTs.

In cases where the dependent variable is binary, a linear probability model (LPM) has been used because the sample is relatively small.

In each school, the principal selected the educator who would answer the educator questionnaire. Principals were asked to select the person best qualified in special or remedial education. This may have introduced some selection bias into the data. Firstly, it means that one cannot generalise the data on training by respondent type. For example, Appendix Table 1 shows that this data overestimates the percentage of principals who have training in identifying or support learners experiencing learning barriers. Secondly, schools where principals chose to complete the questionnaire themselves may be different from other schools in a number of ways. This is further complicated as the proportion of principals who answered the questionnaire was quite different in different provinces (as shown in Appendix Table 2). To deal with this selection bias, regressions are run on three samples: all schools, those schools where the principal was the respondent, and those where another educator was the respondent.



Data quality in School Monitoring Survey 2017

In teacher and principal surveys, socially desirable reporting could pose a threat to the integrity of the survey responses. Socially desirable reporting occurs when the interviewee gives responses which they believe will be viewed favourably by others. To avoid this, the SMS 2017 uses triangulation of data. This is done by any of the following:

- asking the same question of more than one role-player in a school,
- repeating similar questions in a single survey,
- using responses to open-ended questions to verify responses to the preceding questions, and
- verifying self-reported responses with more objective observations of facilities by fieldworkers.

Results of the qualitative study were also used as a broader verification of the findings of the educator questionnaire.

Substantial over-reporting was found in three questions which relate to full-service designation of the school, wheelchair-accessible toilets, and ability to screen for learning difficulties. There are improbably high levels of agreement (53%) with the question “Is this a full-service school?” Comparing the responses to 2017 official data on full-service designation, revealed that 51% of schools incorrectly claimed they were full-service schools. There are also inconsistencies between self-reported and observed data on wheelchair-accessible toilets (discussed in section 5.4). In follow-up open-ended questions, 15% of respondents who claimed their school was able to screen for learning barriers conceded that they had not done any screening when probed for details (discussed in section 5.3).



5. Results

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The results are grouped into teacher- and school-level inputs, process indicators, and school-level enablers. Most of the results are informed by the quantitative survey, but in places the results of the qualitative follow-up study have also been included. The final section deals with the qualitative study alone.

5.1. Teacher-level and school-level inputs

SMS 2017 evaluates teacher training in special needs education and teacher confidence in “dealing with learners with learning barriers”. Several types of training are assessed in the 2017 educator questionnaire, as shown in Table 4.

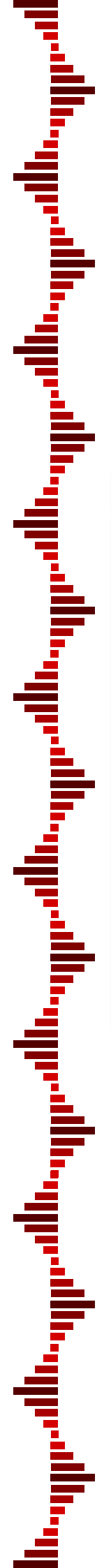
Table 4: Proportion of schools with at least one educator trained in special needs or learning barriers in 2017.

Training types:	Total	Primary School sample	Secondary school sample
(1) Formal qualification in special or remedial education	0.45 (0.02)	0.47 (0.03)	0.39 (0.02)
(2) Training in identifying &/or supporting learning barriers	0.74 (0.02)	0.78 (0.03)	0.63 (0.02)
(3) Training on curriculum differentiation	0.57 (0.02)	0.61 (0.03)	0.46 (0.02)
(4) Training on setting assessments [#]	0.43 (0.02)	0.47 (0.03)	0.33 (0.02)
Formal qualification (1) & training (2)	0.40 (0.02)	0.43 (0.03)	0.33 (0.02)
Sample	1966	981	985

Standard errors in parentheses. [#] for learners who are experiencing learning barriers

While 74% of respondents claimed having some training in identifying and/or supporting learners experiencing learning barriers, only 57% had been trained in curriculum differentiation and only 43% had received training on setting assessments for learners experiencing barriers to learning. The proportion of respondents with training on setting differentiated assessments is especially low in secondary schools. This suggests many training courses lack depth and do not teach skills, such as curriculum differentiation or setting differentiated assessments, needed to implement inclusive teaching practices.

Training coverage was greater in primary schools than secondary schools. Unfortunately these coverage estimates suggest that published targets, such as “all foundation phase teachers will receive SIAS training by 2016” (Department of Basic Education, 2014a), have not been met or have been poorly targeted, meaning some primary schools have not been covered.



Regression analysis has been run on the full sample, and separately for three samples: those schools where the principal was the respondent and those where another educator was the respondent. Results in the column headed “All” apply to all schools, those in the column headed “Principal” are for the sample of schools where the principal is the respondent and those in column “Other” are for the sample of schools where the LSEN educator, SBST coordinator or deputy principal is the respondent. Across all three samples, schools in Gauteng, the Free State and the Western Cape were more likely to have at least one trained educator than schools in the North West¹¹. These provincial patterns in training remain, even when school phase, quintile, being in a metropolitan area and being a full-service school is included in the regression. In the total sample, respondents in primary or combined schools are 13.4% more likely to be trained than those in high schools. There is no difference in training by school quintile.

A guide to interpreting the regression results in Table 5

If the coefficients in Table 5 is a positive number, this shows that schools in this category are more likely to have at least one educator who has training in inclusive, remedial or special needs education. The coefficient shows how much more or less likely these schools are to have a trained teacher. Looking at the first line of the table, principals in schools in the Western Cape are 46% more likely to be trained in this area, than principals in the North West (which is the omitted category). Standard errors are shown in brackets below each coefficient. These show how variable the estimated coefficient is. When interpreting a regression, one focuses on the explanatory variables that are “statistically significant”. These variables tend to have small standard errors, so are more reliable estimates. These variables are marked with asterisks. For example, in Table 5, primary school is significant (across all three samples). This suggests that primary schools are between 9.7% and 21.5% more likely to have at least one trained educator than secondary schools (the exact size of the difference depends on which sample we use). The regression results in Tables 7, 10, 12, 14 and 15 are interpreted in the same way.

¹¹ North West is the omitted category, so all analysis is conducted relative to the North West.

Table 5: Probability that a school has at least one educator who has a formal qualification in special needs or any training in identifying and supporting learners with learning barriers

	All	Principal	Other
Western Cape	0.149*** (0.048)	0.469*** (0.107)	0.073 (0.052)
Eastern Cape	-0.067 (0.078)	-0.228 (0.149)	-0.062 (0.085)
Northern Cape	-0.077 (0.074)	0.142 (0.160)	-0.116 (0.078)
Free State	0.206*** (0.046)	0.495*** (0.106)	0.139*** (0.048)
KwaZulu-Natal	0.085* (0.051)	0.307*** (0.111)	0.076 (0.051)
Gauteng	0.216*** (0.048)	0.501*** (0.143)	0.145*** (0.049)
Mpumalanga	0.120** (0.050)	0.135 (0.170)	0.100** (0.047)
Limpopo	-0.098 (0.078)	0.084 (0.128)	-0.123 (0.104)
Primary school	0.134*** (0.036)	0.215*** (0.074)	0.097** (0.042)
Designated full-service school in 2017	0.069** (0.033)	0.097 (0.104)	0.045 (0.034)
Constant	0.659*** (0.054)	0.242** (0.122)	0.773*** (0.059)
R-squared	0.089	0.214	0.076
Sample	1958	379	1579

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Col. (1) shows regression for all respondents, Col. (2) shows results where principal is respondent, Col. (3) shows results where School-based Support Team coordinator, LSEN educator or deputy principal is respondent. The omitted categories are: North West, Secondary school and ordinary school.

Looking at changes in training coverage from 2011 and 2017 is informative (even though the questions are a little different):

- In 2017, training coverage is still higher among primary schools than secondary schools.
- Schools in lower wealth quintiles were less likely to have at least one trained educator in 2011, and this changed very little by 2017.
- Inter-provincial differences in training coverage have persisted from 2011 to 2017, with the Eastern Cape, Northern Cape, and Limpopo continuing to lag behind other provinces.

When asked to rate their own confidence in “dealing with learners with learning barriers”, most educators rate themselves as “confident”, but 18.9% say they are “not confident” (see Table 6). This large proportion of unconfident teachers is very discouraging and has changed little since 2011.

Table 6: Self-rated teacher confidence in dealing with learners with learning barriers.

Self-rated confidence	% of respondents (2011)	% of respondents (2017)	As a binary variable:	% of respondents
Not confident	21	18.9	Not confident	41.3
Somewhat confident	54	22.4		
Confident	-	38.6	Confident	58.7
Very confident	25	20.1		

Source: School Monitoring Survey 2011, 2017 (weighted analysis) educator questionnaire. Note that there are large levels of missing data in the 2011 survey (31% missing data among teachers who did not receive informal training and 2% among those who received informal training).

Table 6 illustrates how the response categories “not confident” and “somewhat confident” are combined into a single category (“not confident”), and the response categories “confident” and “very confident” were combined into one category (“confident”) so that a linear probability regression can be run. Again, three regressions are run, with the sample split by respondent role in the school.



The results are shown in Table 7. Results in the column headed “All” apply to all schools, those in the column headed “Principal” are for the sample of schools where the principal is the respondent and those in column “Other” are for the sample of schools where the LSEN educator, SBST coordinator or deputy principal is the respondent. This regression provides evidence that training is associated with improved confidence in tackling learning barriers. Across all respondents, those who have formal qualifications in special or remedial education are 15.4% more likely to be confident in dealing with learners experiencing learning barriers than their peers. SBST coordinators, LSEN educators and deputy principals who have received training are more confident than their untrained peers:

- Those who had received training on curriculum differentiation for learners with learning barriers are 17.4% more likely to be confident, and
- Those who had received training on setting differentiated assessments are 17.6% more likely to be confident.
- These effects are cumulative. For example, educators who received training in curriculum differentiation and assessing learners experiencing learning barriers are 35% more likely to be confident.
- However, principals who have had training in curriculum or assessment differentiation are no more confident than those who have not.

Educators are more likely to be confident if there is a SBST in the school, while principals are more confident where the SBST received support from the district.

Educator confidence does not differ between provinces or school wealth quintile, once differences in training in inclusive, remedial and special education are accounted for.



Table 7: Probability that respondent is confident in dealing with learners with learning barriers.

	All	Principal	Other
School has SBST	0.079 (0.053)	0.015 (0.089)	0.133** (0.057)
Formal qualification in special or remedial education	0.192*** (0.044)	0.239** (0.095)	0.154*** (0.041)
Training on curriculum differentiation	0.184*** (0.056)	0.138 (0.124)	0.174*** (0.058)
Training on setting assessments for learners with learning barriers	0.163*** (0.057)	0.085 (0.135)	0.176*** (0.052)
District visit for purpose of supporting SBST	0.077* (0.045)	0.279*** (0.095)	-0.020 (0.042)
Western Cape	-0.010 (0.067)	-0.108 (0.151)	0.051 (0.068)
Eastern Cape	-0.025 (0.066)	-0.225* (0.116)	-0.025 (0.072)
Northern Cape	-0.072 (0.072)	-0.011 (0.145)	-0.049 (0.079)
Free State	0.017 (0.068)	-0.247 (0.208)	0.061 (0.063)
KwaZulu-Natal	-0.035 (0.069)	0.020 (0.115)	-0.014 (0.074)
Gauteng	-0.068 (0.066)	-0.261 (0.194)	-0.041 (0.070)
Mpumalanga	-0.005 (0.058)	-0.300** (0.117)	0.032 (0.061)
Limpopo	0.093 (0.067)	0.118 (0.126)	0.106 (0.078)
School is in wealth quintile 1-3	0.025 (0.042)	0.024 (0.092)	0.045 (0.043)
Constant	0.220*** (0.076)	0.129 (0.144)	0.255*** (0.088)
R-squared	0.221	0.272	0.216
Sample	1916	372	1544

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Col. (1) shows regression for all respondents, Col. (2) shows results where principal is respondent, Col. (3) shows results where School-based Support Team coordinator, LSEN educator or deputy principal is respondent. North West is the omitted category for province. Quintile 4 and 5 is the omitted category for quintile.

In 2017, 67% of all schools reported having an SBST. In 2017, 90% of schools in Quintile 4 or 5 reported having a SBST. This is higher than among Quintile 1 to 3 schools. SBST coverage increased substantially from 2011 (when it was 54%). Significant improvements were made from 2011 to 2017 in most provinces, and across all quintiles, as shown in Table 8.

Table 8: Proportion of schools with school-based support teams in place (self-reported): 2011 and 2017

	2011	2017
By province		
Western Cape	0.84 (0.03)	0.95** (0.02)
Eastern Cape	0.47 (0.03)	0.54 (0.06)
Northern Cape	0.52 (0.04)	0.82** (0.07)
Free State	0.72 (0.04)	0.84 (0.12)
KwaZulu-Natal	0.56 (0.03)	0.62 (0.05)
North West	0.48 (0.04)	0.83** (0.04)
Gauteng	0.98 (0.01)	0.99 (0.00)
Mpumalanga	0.72 (0.03)	0.91** (0.02)
Limpopo	0.14 (0.02)	0.39** (0.05)

By school wealth quintile		
Quintile 1	0.43	0.56*
	(0.02)	(0.05)
Quintile 2	0.45	0.67**
	(0.02)	(0.04)
Quintile 3	0.58	0.68**
	(0.02)	(0.04)
Quintile 4	0.74	0.90**
	(0.03)	(0.02)
Quintile 5	0.78	0.90*
	(0.03)	(0.03)
All	0.54	0.67
	(0.01)	(0.02)
Sample	1922	1960

Standard errors in parentheses. Source: School Monitoring Survey 2011 and 2017 Principal interview (school-weighted data).
 ** p<0.05, * p<0.1 (2017 compared with 2011 data).

The large inter-provincial differences in SBST coverage between provinces in 2017 do not reflect provincial differences in disability prevalence among children of school-going age, as shown in Table 9. In fact, the provinces with the highest SBST coverage have the lowest disability prevalence of all the provinces. The situation in KwaZulu-Natal is particularly concerning as the prevalence of disability among children of school-going age is higher than average in this province, and no progress was made in SBST coverage from 2011 to 2017.

Table 9: Presence of disability support structures and disability prevalence (%), by province

	Proportion of schools with SBST (2017)	Disability prevalence rate (%): children (7 to 18 years) (2016)
Western Cape	0.95** (0.02)	1.78** (0.001)
Eastern Cape	0.54 (0.06)	2.86** (0.001)
Northern Cape	0.82 (0.07)	3.86** (0.002)
Free State	0.84 (0.12)	4.86** (0.001)
KwaZulu-Natal	0.62 (0.05)	3.31** (0.001)
North West	0.83** (0.04)	3.69** (0.001)
Gauteng	0.99** (0.00)	2.62** (0.001)
Mpumalanga	0.91** (0.02)	3.29** (0.001)
Limpopo	0.39** (0.05)	2.87** (0.001)
South Africa	0.67 (0.02)	3.03 (0.000)
Sample	1960	760854

Standard errors in parentheses. ** p<0.05 (compared with national mean).

Sources: School Monitoring Survey 2017 & Community Survey 2016 (own calculations).

Notes: In Community Survey 2016, the Washington Group Short Set of questions was used to measure disability. Children were classified as having a disability if the caregiver reported the child had a lot of difficulty or were completely unable to function in at least one domain, or reported child had some difficulty in at least two domains.

SBST = school-based support team.

To disentangle the effects of province, quintile, and school size in explaining SBST coverage, a regression model is used. The results are shown in Table 10 and reveal that:

- Schools in Limpopo, the Eastern Cape and KwaZulu-Natal are substantially less likely to have an SBST than schools in the North West once quintile and school size are accounted for. Schools in Limpopo are 41.7% less likely to have an SBST than schools in the North West.
- Large schools are 11.5% more likely and full-service schools 10% more likely to have an SBST.
- Quintile 2, 4 and 5 schools are more likely to have an SBST than quintile 1 schools.

- SBST coverage varies more by province and school size than by quintile once other factors are controlled for.

Table 10: Probability that school has a school-based support team in 2017 (self-reported).

	Probability of having a SBST
Western Cape	0.050 (0.054)
Eastern Cape	-0.269*** (0.069)
Northern Cape	-0.024 (0.074)
Free State	-0.009 (0.115)
KwaZulu-Natal	-0.199*** (0.067)
Gauteng	0.073 (0.048)
Mpumalanga	0.062 (0.050)
Limpopo	-0.417*** (0.064)
Quintile 2	0.110** (0.055)
Quintile 3	0.062 (0.064)
Quintile 4	0.089* (0.053)
Quintile 5	0.103* (0.052)
Large school (>600 learners)	0.115*** (0.032)
Designated full-service school in 2017	0.100** (0.041)

Table 11: Proportion of SBSTs that received district support in 2017, by province.

	Proportion of SBSTs that received district support (2017)
Western Cape	0.90** (0.02)
Eastern Cape	0.47** (0.06)
Northern Cape	0.57 (0.07)
Free State	0.84** (0.04)
KwaZulu-Natal	0.61 (0.07)
North West	0.82** (0.03)
Gauteng	0.81** (0.04)
Mpumalanga	0.69 (0.04)
Limpopo	0.36** (0.06)
South Africa	0.65 (0.02)
Sample	1542

Standard errors in parentheses. ** $p < 0.05$ (compared with national mean).

Source: School Monitoring Survey 2017

SBST = school-based support team.

Regression results (in Table 12) show that SBSTs in Limpopo are 44%, Eastern Cape are 34%, and Northern Cape are 23% less likely to receive support than SBSTs in the North West. SBSTs in the Western Cape were more likely to receive support. These provincial differences are not the result of differences in disability prevalence by province. In fact, three of the four provinces that have particularly low coverage of district support (the Northern Cape, Mpumalanga, and KwaZulu-Natal) also experience higher disability prevalence among children. This suggests the unmet support needs may be worst in these provinces.

Table 12: Probability that a school receives SBST support from the district.

Western Cape	0.096** (0.048)
Eastern Cape	-0.338*** (0.073)
Northern Cape	-0.232*** (0.082)
Free State	0.003 (0.053)
KwaZulu-Natal	-0.187** (0.078)
Gauteng	0.007 (0.055)
Mpumalanga	-0.146** (0.057)
Limpopo	-0.440*** (0.070)
School is in wealth quintile 1-3	0.088** (0.040)
Large school (>600 learners)	0.101*** (0.037)
Designated full-service school in 2017	0.135*** (0.043)
Constant	0.690*** (0.054)
R-squared	0.140
Sample	1510

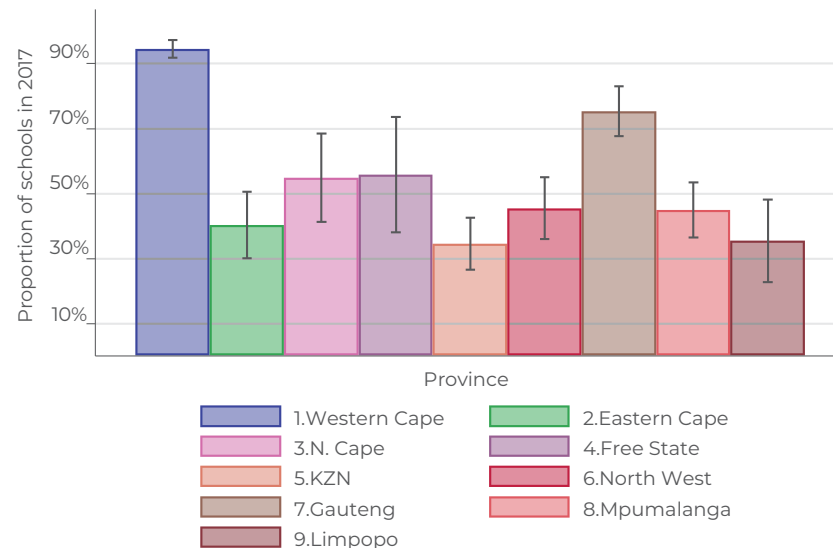
Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Sample = schools where Principal reported having a School-based support team in place.

Where: North West is the omitted category for province. The total number of schools in the municipal district was included as a control but is not significant and is not included in the table.

There has been no significant improvement in the provision of specialist services between 2011 and 2017.¹² Overall, 47% of principals reported their school had received a visit from a psychologist, therapist, members of the district-based support team, learning support official or health official in 2017. Availability of these services is much higher among primary schools than in secondary schools. Again, the provincial differences are substantial. The Western Cape outperforms all other provinces in the provision of specialist district and/or health services to schools in 2017, as illustrated in Figure 2.

Figure 2: Proportion of schools visited by psychologists, therapists, members of the district-based support team, learning support officials or health officials in 2017, by province.



¹² Whether one considers the full sample of schools (44% of schools in 2011, 95% confidence interval (42.9% - 46.3%) or those schools with an SBST (2011, 57% of schools, s.e. = 0.02).

5.2. Screening process indicators

Less than 50% of schools are able to screen learners' hearing or vision or screen learners for possible learning difficulties.

Table 13: Proportion of schools able to screen at least some learners for visual, hearing or learning difficulties.

Proportion of schools:	Educator questionnaire
Able to screen at least some learners for visual difficulties	0.47 (0.02)
Able to screen at least some learners for hearing difficulties	0.41 (0.02)
Able to screen at least some learners for learning barriers	0.41 (0.02)
Where SIAS forms completed for at least one learner in the school	0.50* (0.02)
Sample	1966

Standard errors in parentheses. Source: School Monitoring Survey 2017, educator questionnaire (school-weighted data).

In a follow-up question posed to respondents who reported being able to screen learners for learning difficulties, 15% conceded that no screening had been done, and a further 16% of respondents were unable to provide details of the types of learning difficulties identified. This strongly suggests over-reporting of the ability to screen for learning difficulties.

If these inconsistent responses are removed from the results, only 33% of schools are able to screen for learning difficulties.

Regression analysis suggests that Gauteng schools and primary schools were more likely to be able to screen learners' vision than other schools, even once school size, phase, presence of an SBST and previous training are accounted for (see Table 14).

Table 14: Probability that a school is able to screen learners' vision.

	Educator questionnaire		
	All	Other	All Principals
Western Cape	0.099 (0.078)	0.113 (0.090)	0.218*** (0.076)
Eastern Cape	-0.110 (0.073)	-0.117 (0.086)	-0.033 (0.071)
Northern Cape	-0.051 (0.078)	-0.066 (0.079)	0.033 (0.077)
Free State	0.111 (0.101)	0.187* (0.096)	0.118 (0.080)
KwaZulu-Natal	0.017 (0.072)	0.032 (0.082)	0.109 (0.072)
Gauteng	0.156** (0.071)	0.151* (0.082)	0.277*** (0.064)
Mpumalanga	-0.109 (0.066)	-0.106 (0.074)	-0.049 (0.066)
Limpopo	0.081 (0.079)	0.046 (0.094)	0.171** (0.080)
Respondent is trained #	0.132** (0.053)	0.068 (0.074)	0.071 (0.050)
School has a school-based support team	0.120** (0.054)	0.080 (0.062)	0.222*** (0.050)
Primary (or combined) school	0.205*** (0.038)	0.233*** (0.042)	0.185*** (0.037)
Designated full-service school in 2017	0.100 (0.066)	0.072 (0.068)	0.152** (0.065)
Constant	-0.004 (0.085)	0.055 (0.107)	-0.103 (0.082)
R-squared	0.109	0.093	0.146
Sample	1924	1930	1938

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: School Monitoring Survey 2017 (school-weighted data). Columns 1-2 show results from the educator questionnaire, Col. 3 shows results for the Principal questionnaire. Column 1 shows regression for all respondents to educator questionnaire, Col.2 shows results where SBST Coordinator, LSEN Educator or Deputy Principal is respondent. School wealth quintile and the number of schools in the district (a measure of school density) were also included in the regression but were not significant and are not shown in the table. # has either a formal qualification in special needs or remedial teaching or any learning barriers training.

Similar regressions were conducted on data about schools' ability to screen learners' hearing. The results are not shown here, but were quite similar to those in Table 14:

- schools in Gauteng and the Western Cape are more likely to be able to screen learners' hearing.
- primary schools and those with SBSTs are more likely to be able to screen learners' hearing.

School wealth quintile is not significant in explaining variation in vision or hearing screening ability.

As shown in Table 13, half the sampled schools reported being unable to complete the Screening, Identification, Assessment and Support (SIAS) forms, even for one learner. As the name suggests, the SIAS forms are an integral part of the process of screening for learning barriers and identifying learners at risk, but also go beyond this, to identify the additional support needed by the learner.¹³ It is odd that more schools report being able to complete the SIAS forms than report being able to screen learners for learning barriers. The ability to complete the SIAS process does not seem to translate into self-belief in the ability to screen learners. This could indicate that there is over-reporting of completion of SIAS forms (possibly due to socially desirable reporting) or that educators do not understand the concept of screening. It may also suggest possible problems with the wording of questions, as discussed later.

As a result of possible poor understanding of screening, multivariate analysis used data on the ability to complete SIAS forms, rather than data on the ability to screen learners experiencing learning barriers. The results are shown in Table 15. Schools in Gauteng, primary schools, and schools where the respondent had prior training were more likely to complete SIAS forms than other schools, even when other school-level characteristics are controlled for. This result is consistent, regardless of the respondents' role in the school. Prior training increases the probability that the school was able to complete these forms by 15% (where the principal is the respondent) and 21% (where another educator is the respondent).

¹³ They include support needs assessment forms (the first is completed by the class teacher, the second by the SBST and the third by the district-based support team, if required). The forms completed by the class teacher include initial screening and identifying areas where the learner needs more support. In cases where the class teacher is unable to successfully intervene to support the learner, the barriers identified and strategies implemented by the class teacher are reviewed in the second set of forms by the SBST, culminating in an SBST assessment and intervention schedule. This may include an individual support plan. Only when interventions by the SBST fail, or formal medical assessment is required, is the case referred to the District-based Support (and the District-based Support Needs Assessment is completed). At this stage, the Health and Disabilities form will be completed by a medical practitioner, should formal assessment be required.

Table 15: Probability that a school is able to complete SIAS* forms for at least one learner.

	All	Principal	Other
Western Cape	0.094 (0.081)	0.237 (0.153)	0.085 (0.092)
Eastern Cape	0.152** (0.068)	0.050 (0.128)	0.154** (0.077)
Northern Cape	0.006 (0.073)	-0.036 (0.098)	0.095 (0.077)
Free State	0.172* (0.096)	0.296 (0.199)	0.160 (0.102)
KwaZulu-Natal	0.038 (0.074)	0.128 (0.095)	0.089 (0.078)
Gauteng	0.261*** (0.065)	0.471*** (0.143)	0.220*** (0.074)
Mpumalanga	0.026 (0.064)	-0.078 (0.088)	0.037 (0.072)
Limpopo	0.126 (0.084)	0.108 (0.108)	0.194* (0.107)
Respondent is trained ##	0.236*** (0.061)	0.147** (0.075)	0.209** (0.087)
School has a school-based Support Team	0.176*** (0.056)	-0.005 (0.106)	0.263*** (0.062)
Primary (or combined) school	0.141*** (0.043)	0.131* (0.070)	0.174*** (0.050)
School is in wealth quintile 1-3	-0.073* (0.039)	0.015 (0.085)	-0.074* (0.042)
Metropolitan area	0.079** (0.040)	0.068 (0.096)	0.086** (0.043)
Designated full-service school in 2017	0.242*** (0.052)	0.307 (0.225)	0.186*** (0.052)
Constant	0.034 (0.080)	-0.019 (0.123)	-0.001 (0.096)
0.165	0.119	0.175	0.165
Sample	1924	1975	1930

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: School Monitoring Survey 2017, educator questionnaire.

Screening, identification, assessment, and support forms. These include the support needs assessment forms to be completed by multiple role-players.

has either a formal qualification in special needs or remedial teaching or any learning barriers training.

Column 1 shows regression for all respondents to educator questionnaire, Col.2 shows results where Principal is respondent, Col.3 shows results where SBST Coordinator, LSEN Educator or Deputy Principal is respondent

5.3. School-level enablers

SMS 2017 evaluates the wheelchair accessibility of toilets and the main entrance to the school. Overall, 84% of schools were found to have wheelchair-accessible main entrances (stair-free or with a suitable ramp) and 31% of schools had one or more wheelchair-accessible toilets. The proportion of mainstream schools with wheelchair-accessible toilets almost doubled from 2011 to 2017, as shown in Table 16.¹⁴

However, there are some signs that the data may not be very reliable. The accessibility indicators were measured through self-report (by the educator) and from interviewer observation. The self-reported and observed data are poorly correlated (as shown in column 4 of Table 16) and there are large differences in mean reporting, between the observed and self-reported on wheelchair toilets.

Table 16: Indicators of physical accessibility of mainstream schools.

Proportion of schools with:	2011	2017		Correlation coefficient
	Observed data	Observed data	Self-reported data	
At least one toilet suitable for wheelchair users	0.16 (0.01)	0.31 (0.02)	0.48 (0.02)	0.65
Stairs at main entrance	-	0.28 (0.02)	0.26 (0.02)	0.59
Stair-free or ramped main entrance*	-	0.84 (0.02)	0.86 (0.02)	0.52

Standard errors in parentheses. Data source: School Monitoring Survey 2011 & 2017.

* This measure is created by combining two questions (Are there stairs at the entrance of the school? If yes, in your opinion, is there a ramp in a good condition that is not too steep, that could be used by a person in a wheelchair).

The findings of the qualitative research suggest that respondents found the questions on physical accessibility more difficult to understand. As one respondent explained:

¹⁴ In 2011 self-reported data was not collected on sanitation. All comparison of 2011, 2017 data was based on fieldworker observations.

“The questions on wheelchairs were difficult to answer because I had not opened my eyes. I couldn't answer whether there were ramps and stairs. The question made me open my eyes and look and ask other teachers. I wasn't aware of it, but we do have some ramps. We don't have special toilets.” (SBST Member, Western Cape)

Because of discrepancies between the observed and self-reported data, and the results of the qualitative study, all further analysis is based on observed data, which I consider more reliable.

There are large differences in accessibility of the main entrance by province, as shown in Table 17. Only 60% of schools in the Western Cape were found to have accessible entrances. This is significantly lower than the national average and is driven by the larger proportion of schools with stairs at the main entrance in that province.



Table 17: Proportion of schools with accessible entrance, by province.

	Stairs at main entrance	Stair-free or ramped
Western Cape	0.629** (0.047)	0.602** (0.056)
Eastern Cape	0.184 (0.032)	0.875 (0.026)
Northern Cape	0.506** (0.067)	0.706 (0.065)
Free State	0.288 (0.054)	0.818 (0.040)
KwaZulu-Natal	0.189 (0.030)	0.886 (0.023)
North West	0.384 (0.050)	0.843 (0.045)
Gauteng	0.318 (0.044)	0.795 (0.042)
Mpumalanga	0.199 (0.032)	0.916 (0.025)
Limpopo	0.334 (0.064)	0.812 (0.069)
South Africa	0.277 (0.018)	0.837 (0.016)
Sample	1978	1978

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Data source: School Monitoring Survey 2017.

Similar patterns exist by quintile. Quintile 4 schools are less likely to have a wheelchair-accessible front entrance than the average school. It seems this result is generated by higher proportions of schools with stairs at the front entrance in Quintile 4 and 5 schools.

Table 18: Proportion of schools with accessible entrance, by quintile.

	Stairs at main entrance	Stair-free or ramped
Quintile 1	0.191 (0.037)	0.861 (0.036)
Quintile 2	0.219 (0.030)	0.897 (0.023)
Quintile 3	0.287 (0.033)	0.820 (0.026)
Quintile 4	0.523** (0.045)	0.662** (0.045)
Quintile 5	0.595** (0.043)	0.734 (0.040)
South Africa	0.277 (0.018)	0.837 (0.016)
Sample	1978	1978

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Data source: School Monitoring Survey 2017.

In 2017 a quintile 1 school is just as likely to have a wheelchair-accessible toilet as a quintile 5 school.

5.4. Results of the qualitative follow-up study.

One of the key changes in the questionnaires from 2011 to 2017 is in terminology used to describe learners who require additional support in the school system. In 2011 the term “learners with special educational needs” is used, while in 2017 this is updated to “learners with learning barriers”. This term is broader and more closely aligned with domestic inclusive education policies (such as SIAS, 2014). The qualitative follow-up study assesses whether educators are familiar with this terminology and what they understand by “learners with learning barriers”.¹⁵

Two of the thirteen respondents gave very generic descriptions of the term “learners with learning barriers” and were not keen to elaborate. This suggests that they do not fully comprehend the concept. The other eleven respondents elaborated at length, giving examples of the types of learners they had encountered in their schools. Their understanding varied somewhat. Some respondents had a narrow interpretation, while others described it as a broad concept and seemed to understand that learners experiencing learning barriers encompassed a wide range of learners with varying levels of support needs. For example, one respondent said:

¹⁵ The term “learners who are experiencing learning barriers” *would have been preferable as the terminology here may reinforce the idea that all learning barriers are internal to the learner.*

"To me this is a wide concept. There are those who have physical defects, such as size, hearing, seeing and then there are those who have intellectual challenges, where physically there are no problems, you can't see anything wrong with the learner, but they can't grasp things at the same speed as others, for example slow learners." (Principal, Limpopo)

Two respondents started with the phrase "Learning barriers can be anything that ...", and another two respondents began with "It is a wide/broad concept". For example:

"Learning barriers are anything that hinders a child from learning successfully: reading problems, reading with comprehension, vision, handwriting ... anything that is preventing the child from achieving academically."

It seems that most educators see "learners with learning barriers" as a broader group than "learners with special education needs". Most respondents went on to mention a list of barriers that were internal to the learner, such as in the response above. One respondent, for example, emphasised that learning barriers were an intrinsic factor:

"Learners who struggle in the mainstream due to an intrinsic factor. These learners who have something intrinsic that causes them not to function on the same level as their peers." (member of SBST, Western Cape)

Only one respondent directly mentioned a barrier that was created by the school environment at that school (class size), saying:

"... In the classroom it could be because of overcrowding, or some are disabled, some cannot write well." (Principal, Limpopo)

Four respondents mentioned factors that arise from the education system (such as uniform expectations for an age-level), but the problem was still seen to originate in the child, not the system. For example, according to one respondent:

"Some learners have academic barriers; some have barriers because they are disabled in some way that this makes them to not grasp the curriculum as expected." (Remedial teacher & SBST member, Free State)

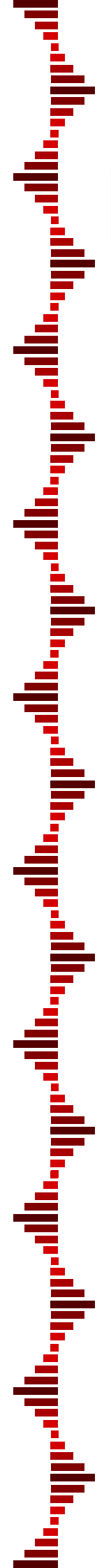
And according to another:

"Children with barriers need to work at their own pace." (SBST member, Western Cape)

While several respondents mentioned the socio-economic circumstances of the learners' families in the interview, only one mentioned them in response to the question about learning barriers.

"The child has something that naturally stops the learner from performing at the level as other learners. Either the child was born with something, or it happened due to an accident...Other learners are not performing well due to the background at home and the socio-economics." (SBST Coordinator, Free State).

Some educators reported a wide range of support that is provided to socio-economically disadvantaged learners. But most educators did not perceive the socio-economic context as a barrier to learning. Neither behavioural difficulties nor attitudinal barriers were mentioned as being potential barriers to learning. Overall, the responses suggest that most respondents are aware of the concept of learning barriers but tend to see these barriers as arising from within the learner.



Environmental and attitudinal barriers that learners may experience in schools and communities are generally poorly understood.

The wording of SMS 2017 (“learners with learning barriers”) does not directly apply to learners with disabilities. The results of the qualitative study, however, suggest that respondents mostly understand “learners with learning barriers” to include learners with disabilities and other learners with lesser participation limitations. The wording may have skewed the participants to think mainly about learners with intellectual and learning disabilities, but this is not a problem as it is the largest disability group in South African schools. Generally, the same support structures serve learners with special educational needs, learners with learning barriers, and learners with disabilities. The survey provides good evidence of disability support and accessibility, even though only a few questions directly ask about learners with disabilities.



6. *Discussion*



6. Discussion

6.1. Teacher- and school-level inputs

The results suggest there are substantial gaps in current inclusive education training, particularly in some provinces. Both curriculum differentiation and setting assessments are core skills that educators require to support learners who are experiencing barriers to learning. It is concerning that coverage of training on setting differentiated assessment is so low in secondary schools as the process of granting concessions for assessment usually only begins in secondary school. These results align with those from TALIS (2018), which finds a large proportion of lower secondary school teacher reporting a high need for training in teaching special needs students. A renewed focus on training on concessions, curriculum differentiation and differentiation of assessment is needed.

These results provide the first clear evidence of a strong relationship between training (in all its forms) and an increased confidence in addressing learning barriers among SBST coordinators, LSEN educators or deputy principals in South Africa. Interestingly, before training is controlled for, respondents in the Western Cape and Free State were substantially more likely to be confident than those in the North West. This provincial pattern disappears once training and formal qualifications are added to the regression as explanatory variables. This suggests that if levels of SBST coverage, teacher training and district support to the SBST in under-performing provinces could be raised to the levels of implementation seen in other provinces, the differences in teacher confidence, by province, could be eliminated. This is extremely encouraging as it provides three key policy levers to address inequality between provinces.

Multivariate analysis shows that SBST coverage is lower in quintile 1 schools. SBST presence emerges as a key school-level input and key determinants of a school's ability to screen learners. Furthermore, having a SBST is associated with higher teacher confidence¹⁶. The presence of a SBST is also strongly associated with the respondents' receipt of training.

This provides a key policy lever: the proportion of quintile 1 schools with SBSTs must be raised from current levels (56%) to the levels reported by quintile 4 and 5 schools (90%) in order to reduce wealth inequalities in disability support.

Reported levels of district support to the SBST have almost doubled from 2011 to 2017 and this is cause for celebration. Even more promising, there is evidence that schools from lower quintiles are more likely to receive such support for their SBSTs, which suggests a prioritisation of support for SBSTs in less wealthy areas. Unfortunately, levels of district support are still far too low in some provinces. These findings are aligned with previous research that found uneven funding of inclusive education between provinces (Budlender (2015). In 2013 official reports showed there were few functional district support teams in the Eastern Cape and Limpopo (Government of the Republic of South Africa, 2013). This aligns closely with much lower probability that a SBST in the Eastern Cape and Limpopo received support from the district in 2017. Findings in SMS 2017 suggest that there may still be very few functional (and fully staffed) district support teams in the Eastern Cape and Limpopo by 2017.

¹⁶ where the respondent is someone other than the principal.

There was no significant improvement in the proportion of schools visited by district specialists or by health officials from 2011 and 2017. One would expect substantial improvement in this period as the Integrated School Health Programme was introduced in 2012 and had achieved screening coverage of about 33% of Grade 1 learners by 2017. Again, the provincial patterns in the data suggest district team may not be functioning well in Limpopo, the Eastern Cape and KwaZulu-Natal. The results align with data from the District Health Information System which shows lower-than-average levels of School Health screening coverage in the Northern and Eastern Cape, KwaZulu-Natal, and Mpumalanga.

These gaps in key disability support structures means learning environments are much less accessible in the Eastern Cape, KwaZulu-Natal, and Limpopo than in other provinces. On the flipside, learning environments in the Western Cape and Gauteng are much more accessible than in other provinces.

6.2. Screening process indicators

The findings of the qualitative study support the survey data as they illustrate that the completion of the Support Needs Assessment forms, or review of a learner by the SBST, is not seen by educators as screening. As one respondent in the qualitative study reported:

“No screening happens at this school. Screening happens at the special school. If we think a child has a problem, we ask the district, and the district refers the child to the special school for screening as they have the special equipment. At the school, we just fill the SNA (Support Needs Assessment) forms in and ask for help if we feel there is a problem with the learner.”

A telling comment was made by a respondent from a full-service school:

“Often other schools ask us: What is screening?” (SBST Coordinator, Free State)

Several responses illustrated that screening is often equated to medical tests. Another response suggested that learning barriers do not require screening, such as with hearing and vision. Instead, the educators just “picked these up”.

These comments from the qualitative study, together with the inconsistencies in the survey results suggests either a poor understanding of the concept of screening, or problems with the wording of the questions. The position of the question may be partly to blame. The question was immediately preceded by questions about the school’s ability to screen learners’ hearing and vision. This may have inclined teachers to think of learning barrier screening as a medical process, rather than something that was embedded in the SIAS process. Additionally, the wording of the question focuses on screening learners for learning barriers, rather than trying to identify learning barriers in the school environment. The wording firmly locates the learning barrier within the child.

There is evidence of a link between the school’s ability to screen learners and the support and specialised services provided by the district. It is clear that screening is a collaborative process requiring input from the school, the district, and the School Health Programme. It should be monitored at both the school and district levels.

The SMS results on screening ability were compared against the District Health Information System School Health screening coverage indicator, which shows that 33% of learners in Grade 1 were screened in 2017 (Bamford, 2019). The SMS results suggest slightly better health screening coverage in schools than the DHIS data. But both suggest a substantial risk that hearing or visual impairments are not identified in the early grades. Across both data sources, screening appears to be more entrenched in primary schools than in secondary

schools. The DHIS School Health Screening indicator corroborates the wide inter-provincial differences in screening capacity, shown in the SMS results. This has serious implications for learning inequality between provinces.

I suggest that the questions on screening of vision and hearing are dropped from the next survey as they may not have performed well and may have biased educators to think of screening for learning barriers as a medical process. Given that the findings are in line with those reported in the DHIS, it may be advisable to rely on the DHIS data on health screening coverage instead. In their place, a simple question on the number of children per class observed to be wearing eyeglasses should be included in the classroom observation in the SMS as this easily observable data may act as a better proxy for access to screening and eye health services.

6.3. School-level enablers

Impressive progress has been made in the proportion of schools observed to have a wheelchair-accessible toilet from 2011 to 2017. However, some caution should be exercised when interpreting the overwhelmingly positive reported data on physical accessibility of schools. Firstly, the substantial inconsistency between the self-reported and observed data suggests there may have been some confusion around the “main entrance”, or an element of socially desirable reporting in educators’ responses. The qualitative study also illustrated that the question on ramps was difficult to understand. Finally, it is unclear how thoroughly the fieldworkers were trained on what to expect in a disability-accessible toilet. Direct observation by field workers who are not familiar with disability could lead to upwardly biased estimates.



More fundamentally, it is difficult to judge whether a school is wheelchair-accessible based on only two indicators. Importantly, there was no measurement of physical accessibility of the surrounding neighbourhood or transport to get to and from school. These aspects of broader accessibility of schools are emphasised in the draft version of the Washington Group Inclusive Education Module, where they are measured from the perspective of caregivers of children with disabilities who are not enrolled in school (that is, those that have not succeeded in overcoming the accessibility barriers) (Cappa et al., 2015). Such an approach should be tested in South Africa.

Nevertheless, the results on the expansion of wheelchair toilet provision are encouraging and should not be dismissed completely. Even if the results are overstated, they still point to substantial improvement in this area.

In 2017, 20% of schools in the sample had unsuitable toilets that did not meet the specified norms (even for children without disabilities). This shocking statistic points to a valuable opportunity. If, in upgrading the sanitation infrastructure at these schools, the principles of universal design are followed, wheelchair accessibility could be greatly improved in the poorest schools. Indeed, over 50% of schools could have at least one toilet suitable for persons with disabilities if the sanitation infrastructure backlog is addressed following universal design.¹⁷ Evidence suggests that where universal design is followed from the project conception, the total construction cost of designing and building a fully accessible building are just one percent higher than the costs of building an inaccessible building (World Bank, 2005). Thus, it is possible for South Africa to provide wheelchair-accessible toilets in a further 20% of schools in the near future, with only one percent increase in the budget for infrastructure development. This is provided wheelchair accessibility is included at the design phase and guidelines, like those from the World Bank to ensure cost containment, are followed (World Bank, Snider, & Takeda, 2008).

In most schools, the school entrance is not a major barrier to inclusion of learners with physical disabilities. There are however substantial accessibility challenges in Quintile 4 schools and those in the Western Cape, which still need to be addressed. Renovation of Quintile 4 schools and Western Cape schools will need to be prioritised to make them more accessible to wheelchair users.

6.4. Measurement gaps

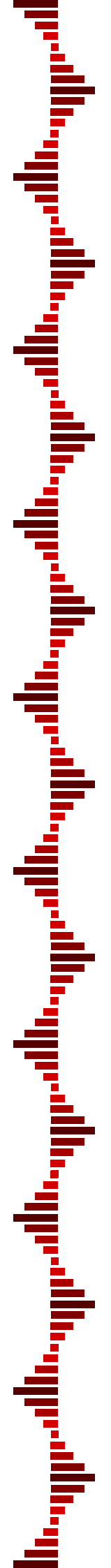
The SMS 2017 provides little useful information on the accessibility of learning materials. A question on the number of learners who are supported with adaptive learning and teaching support materials was included in the survey and was meant to serve as a proxy for provision of learning support to learners with high-level support needs. It has not been reported here as the results were difficult to interpret in isolation of information on enrolment of learners with disabilities or high additional support needs in the school.¹⁸ Without this information, it is impossible to determine whether a low proportion of schools providing these services is indicative of an unmet need, or of an absence of learners with disabilities in the school.

Respondents were not asked about formal qualifications in inclusive education, such as the Advanced Certificate in Education in Inclusive Education or Advanced Certificate in Education in Learner Support. This has resulted in a gap in the measurement of formal qualifications, which must be addressed in the next SMS.

SMS 2017 focuses on measuring teacher training, qualifications, and confidence rather than measuring attitudes to learners with disabilities, knowledge of approaches to dealing

¹⁷ And if there is no over-reporting in the school observation data in SMS 2017.

¹⁸ The question may not have been understood among educators who have not worked with learners with high-level support needs and was not defined in the questionnaire.



with learning barriers, or teacher skill in teaching learners with disabilities. Indirectly the results (particularly the poor self-reported ability of schools to screen learners) cast some doubt on whether current training provides teachers with the skills to screen learners. This is reinforced by the results of the qualitative study, and the 2011 survey, which suggest that educators do not understand the concept of screening well. The results of TALIS 2018 point to low perceived levels of competence in teaching learners with special needs effectively. The results of both surveys thus suggest that further deepening of training may be required to ensure there are enough teachers trained in each school to form an effective team.



7. Findings and Conclusions



7. Findings and conclusions

There is evidence that some implementation of inclusive education policies has occurred since 2011; school-based support team (SBST) coverage has improved since 2011 and levels of support to these teams from the district has improved. However, availability of specialist services has not improved since 2011, despite the introduction of the Integrated School Health Programme. The results of the survey and qualitative study show that, by 2017, screening is not well understood by educators and most feel they are unable to screen learners for visual, hearing or learning difficulties. Solving this challenge will require collaboration between the Integrated School Health Programme, district-based and school-based support teams, and investments in re-training of all three role-players, together, to build shared responsibility for this goal.

Disability support and teacher training to support disability inclusion are unevenly distributed by province. These provincial inequalities are likely related to uneven funding of inclusive education between provinces, as illustrated previously by Budlender (2015). For children with disabilities and those facing learning barriers, these results suggest that the province in which they live is a source of education inequality.

In 2017, many mainstream schools in the impoverished and rural provinces of South Africa are unlikely to be able to provide support required by children with disabilities (and those experiencing barriers to learning) to facilitate their effective education. Given the poor capability of schools to screen learners, it is likely that many learners are not identified as requiring additional support. This makes it highly unlikely that they are receiving the reasonable accommodation they require to enable full participation in learning.

The 2017 SMS has produced the first large sample nationally-representative set of data on teacher confidence in “dealing with learners with learning barriers”. Teacher confidence has been shown to be strongly associated with prior training in special needs/learning barriers and the presence of the SBST in a school, except among principals. The study provides evidence that, if equality of training, SBST coverage and district support could be achieved across provinces, differences in teacher confidence between provinces could be eliminated in South Africa. Further research is needed to determine whether more confident teachers are more likely to have better attitudes towards inclusion, in general, and towards learners with disabilities, more specifically. This research should aim to identify parts of the schooling system where educators’ attitudes have become more positive and identify the factors that have enabled this change.

School wealth quintile is not strongly associated with teachers’ prior training on learning barriers or special education, teacher confidence or physical accessibility of schools, once other factors such as province, school size and the presence of a SBST are accounted for. This suggests that the implementation of inclusive education policy and rollout of training that has occurred, has been progressive in terms of its focus on poorer schools. The one important exception is the coverage of school-based support teams, which is much lower in quintile 1 schools than in all other schools.

This paper provides evidence of the further reforms that need to be budgeted for to allow inclusion to flourish. One third of South African schools still need to form SBSTs and must be empowered and supported to do so. District support to these teams must be further prioritised and vacant posts must be filled in district-based support teams so that there are functional teams in all districts. The health screening programmes offered by the Integrated School Health Programme must be further strengthened so that coverage can be improved. Collaboration between the health screening team and SBSTs must be strengthened, as part of improving educators’ understanding of the screening process. Existing educator training programmes need to be extended to cover topics such as curriculum differentiation and setting of assessments for learners experiencing barriers

to learning. More in-depth training is required to improve teachers' understanding of the screening process and the role of full-service schools. Further progress in improving accessibility of toilets is possible without an increase in the budget, but only if universal design is clearly prioritised in the infrastructure development programme. This requires sensitisation training among infrastructure planners. More information is needed on other aspects of disability accessibility in mainstream schools to inform budgeting further.

Many low- and middle-income countries are grappling with the challenge of how to report meaningfully on progress made in reforming their education systems to be more disability-inclusive. This research adds meaningfully to the body of knowledge. Firstly, it gives evidence for how far South Africa has come in the implementation of disability inclusion in schools. Secondly, it provides evidence on appropriate measurement of disability accessibility and provision of disability support in south African schools. This paper provides guidance to other countries in their efforts to develop effective indicators suitable for their reality. Further, it shares lessons learnt on questions educators found difficult to answer, errors in the questionnaire design, and methods of data triangulation that have cut down on socially desirable reporting. It is hoped that this will help other countries to anticipate and avoid challenges that South Africa has experienced.

Closer to home, this paper offers guidance to improve the next School Monitoring Survey, by highlighting the remaining measurement gaps. While resource centres are one of the key support structures in inclusive education policy, the support provided by these structures is not measured in the SMS, nor any other quantitative study in South Africa. The percentage of special schools serving as resource centres has been introduced as an indicator in the Annual Performance Plan in Basic Education (PPM 403). The Western Cape has introduced a further indicator in their Annual Performance Plan 2020/21-2022/23: number of public ordinary schools supported by special schools serving as resource centres (PPI 402)(Western Cape Education Department, 2020). The SMS may be a good vehicle to evaluate these indicators and to evaluate collaboration between mainstream and special schools. For mainstream schools that received such support, it would be useful for this support to be evaluated by the SBST coordinator.

It is recommended that disability support should not be measured in isolation from disability enrolment (UNICEF Education Section, 2016). Unfortunately, the enrolment of learners with high-level additional support needs or disabilities was not measured in SMS and it has not been possible to link these results with disability enrolment data from EMIS. This has made it difficult to interpret some results meaningfully. Linking the data in the future will allow more pointed interpretation of the evidence. Some questions should only be posed to educators in schools who report enrolment of learners with high-level additional support needs.

Finally, the SMS does not evaluate whether the school has been able to identify or address any learning barriers in the school environment or classroom or teaching practices. Given that inclusive education involves a shift from focusing on learner deficits to focusing on making changes in the learning and physical environment to eliminate learning barriers, it is critical that this aspect is measured.



Glossary of terms

CRPD	Convention on the Rights of Persons with Disabilities
DHIS	District Health Information System
LMIC	Low- and middle-income country
LSEN	Learners with Special Education Needs
SBST	School-based Support Team
SIAS	Screening, Identification, Assessment and Support
SMS	School Monitoring Survey
TALIS	Teaching and Learning in Schools
TIMSS	Trends in International Maths and Science Study

Appendix

Appendix Table 1: Effects of self-selection in educator questionnaire on estimates of proportion of Principals trained in identifying/supporting learners who experience learning barriers.

	All Principals	Principals who responded to educator questionnaire
Proportion of Principals with learning barrier training	0.48 (0.02)	0.62 (0.04)
Sample	n=1891	n=381

Standard errors in parentheses

Appendix Table 2: Proportion of schools where Principal responded to educator questionnaire, by province.

Province	Principal is respondent to educator questionnaire
Western Cape	0.19 (0.03)
Eastern Cape	0.12** (0.02)
Northern Cape	0.23 (0.03)
Free State	0.08** (0.02)
KwaZulu-Natal	0.43** (0.03)
North West	0.21 (0.03)
Gauteng	0.09** (0.02)
Mpumalanga	0.10** (0.02)
Limpopo	0.27 (0.03)
All	0.19 (0.01)
Sample	1981

Standard errors in parentheses

References

Bamford, L. (2019). School health. In N. Massyn, Y. Pillay, & A. Padarath (Eds.), *District Health Barometer 2017/18* (pp. 121–137). Durban: Health Systems Trust.

Banks, L. M., Polack, S., & International Centre for Evidence in Disability. (2014). The Economic Costs of Exclusion and Gains of Inclusion of People with Disabilities: Evidence from Low and Middle Income Countries. London School of Hygiene and Tropical Medicine.

Budlender, D. (2015). *Left in the Dark: Access to Education for Visually Impaired Learners in South Africa. Annexure C*. Johannesburg. Retrieved from <https://section27.org.za/wp-content/uploads/2015/09/leftinthedark2015-annexureC.pdf>

Cappa, C., De Palma, E., & Loeb, M. (2015). UNICEF/Washington Group Module on Inclusive Education: Update on Development of the Module on Inclusive Education. In *15th Washington Group Meeting*. Copenhagen.

Copfer, S., & Specht, J. (2014). Measuring effective teacher preparation for inclusion. In C. Forlin (Ed.), *Measuring Inclusive Education* (Vol 3, pp. p93-114). Emerald Books.

Department of Basic Education. (2013). *School Monitoring Survey (DBE013 conducted in 2011): Technical report*. Pretoria.

Department of Basic Education. (2014a). Policy on Screening, Identification, Assessment and Support: 2014. *Government Gazette*, 594(No. 38356), 1–84.

Department of Basic Education. (2014b). *Second detailed indicator report for basic education sector*.

Department of Social Development Republic of South Africa. (2015). *Elements of the Financial and Economic Costs of Disability to Households in South Africa*.

Du Plessis, P. (2013). Legislation and policies: Progress towards the right to inclusive education. *De Jure*, 76–92.

Filmer, D. (2008). Disability, Poverty, and Schooling in Developing Countries: Results from 14 household surveys. *The World Bank Economic Review*, 22(141–163).

Fish Hodgson, T., & Khumalo, S. (2016). *Too Many Children Left Behind: Exclusion in the South African Inclusive Education System*. Johannesburg. Retrieved from <https://section27.org.za/wp-content/uploads/2016/07/S27-left-in-the-dark-2015-accessible.pdf>

Government of the Republic of South Africa. (2013). *Baseline County Report to the United Nations on the Implementaiton of the Convention on the Rights of Persons with Disabilities*. Cape Town.

Human Rights Watch. (2015). *Complicit in Exclusion: South Africa's Failure to Guarantee an Inclusive Education for Children with Disabilities*. Johannesburg. Retrieved from <https://www.hrw.org/report/2015/08/18/complicit-exclusion/south-africas-failure-guarantee-inclusive-education-children>

McGhie-Richmond, D., Irvine, A., Loreman, T., Cizman, J. L., & Lupart, J. (2013). Teacher perspectives on inclusive education in rural Alberta, Canada. *Canadian Journal of Education*, 36(1), 195–239.

Mont, D. (2014). Education Management Information Systems and Children with Disabilities. Webinar 6 - Companion Technical Booklet. New York: United Nations Children's Fund (UNICEF).

Nexia SAB&T. (2017a). Preliminary Fieldwork Report: School Monitoring Survey 2017/18. Pretoria.

Nexia SAB&T. (2017b). Sampling Report: School Monitoring Survey 2017/18. Pretoria.

Nuga-Deliwe, C. (2016). *Building an evidence base for inclusive education in South Africa: Focusing on learners with disabilities*. Stellenbosch. Retrieved from https://resep.sun.ac.za/wp-content/uploads/2017/10/RESEP-Policy-Briefs_Carol-Nuga-Deliwe-EMAIL.pdf

Peters, S., Johnstone, C., & Ferguson, P. (2005). A Disability Rights in Education Model for evaluating inclusive education. *International Journal of Inclusive Education*, 9(2), 139–160. <https://doi.org/10.1080/1360311042000320464>

Scheerens, J. (1990). School Effectiveness Research and the Development of Process Indicators of School Functioning. *School Effectiveness and School Improvement*, 1(1), 61–80. <https://doi.org/10.1080/0924345900010106>

Sharma, U., Jitoko, F., Macanawai, S. S., & Forlin, C. (2018). How Do we Measure Implementation of Inclusive Education in the Pacific Islands? A Process for Developing and Validating Disability-Inclusive Indicators. *International Journal of Disability, Development and Education*, 65(6), 614–630. <https://doi.org/10.1080/1034912X.2018.1430751>

Srivastava, M., de Boer, A., & Pijl, S. J. (2015). Inclusive education in developing countries: a closer look at its implementation in the last 10 years. *Educational Review*, 67(2), 179–195. <https://doi.org/10.1080/00131911.2013.847061>

Statistics South Africa. (2014). *Profile of persons with disabilities in South Africa*. Pretoria.

Statistics South Africa. (2017). *General Household Survey 2015: Focus on Education*. Pretoria.

UNICEF Education Section. (2016). *Guide for Including Disability in Education Management Information Systems*.

United Nations. Convention on the Rights of Persons with Disabilities (2007). Geneva.

Watkins, A., Ebersold, S., & Lenart, A. (2014). Data Collection to Inform International Policy Issues on Inclusive Education. In C. Forlin (Ed.), *Measuring Inclusive Education* (Vol 3, pp. 53–74). Emerald Books.

Western Cape Education Department. (2020). Annual Performance Plan 2020/21–2022/23. Cape Town. Retrieved from <https://wcedonline.westerncape.gov.za/annual-performance-plan>. Accessed 07 April 2021

World Bank. (2005). Education for All: The Cost of Accessibility. World Bank Education Notes.

World Bank, Snider, H., & Takeda, N. (2008). Design for All: Implications for Bank Operations. The World Bank.

