
Analysis and monitoring of equitable access and full participation in education in South Africa: the challenge of data quality

Jean Baxen, Yvonne Nsubuga, Lori Diane Hill and Anne Craig

Abstract

Indicators to measure educational access serve the useful purpose of facilitating the evaluation and analysis of progress made towards achieving stated educational access objectives. In South Africa, data from the Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) are commonly used to report on progress made towards universal educational access. The critique in the use of these data is threefold; first, that they are computed from inaccurate school data and second, that their conceptual basis stems from a structural approach to educational access that gives primacy to the onset or final phases of the schooling process (primary or secondary) rather than also to what not only happens during school but also in classrooms. Subsumed and arising from the first two, the third critique relates to the nature of indicators used to measure educational access. Put differently, conceptualisations premised on a structural approach have not only had consequences for the source of data and indicators used to measure educational access but also for its analysis and interpretation. Established therefore, is that conceptions of educational access not only influence the choice of indicators that are regarded to be effective and suitable to describe educational access (Fataar, 1997; Lewin, 2007; Hill, Baxen, Craig and Namakula, 2012) but they also impact the nature of data generated for this purpose.

Through a review of conceptualisations of educational access and through the use of data drawn from a study of two Eastern Cape secondary schools, this paper argues that a shift in discourses on education access is necessary for this country to fully understand and respond to the discontinuities that persist to characterise the education system. It calls for a shift from a structural discourse to one that intersects equity and full participation concerns. The paper highlights how such a shift in conceptualisation not only has implications for the nature of data gathered but importantly for indicators produced and applied to describe and measure educational access.

Data for monitoring educational access in South Africa

Prior to 1994, the nine racially desegregated education departments that existed in South Africa at that time each had their own ways of collecting information on education provision and delivery (Parliamentary Monitoring Group, 2007). The National Education Policy Information Act of 2004 established a unified Education Management Information system (EMIS) intended to oversee the collection, storage, processing, analysis and dissemination of information as a strategy towards encouraging evidence-based decision-making in the education sector. Serious doubts have been expressed over the reliability and validity of EMIS data (Van Wyk, 2006; The Ministerial Committee on Learner Retention, 2007). Limited information on education access in South Africa can also be gleaned from the analysis of census and general household survey data. Apart from these two databases and what can be gleaned from the Grade 12 national examination results, South Africa has no other major sources of data to monitor and evaluate educational access. As we show in the section that follows, these data are underpinned by a notion of access that emphasises a structural and systemic analysis using quantitative measures as the primary source. Initial use of such an approach was important, and indeed crucial, given the inequitable education system inherited by the democratic government of 1994. But as conceptualisations of access to education evolve to become more complex, so should data sources and indicators. Yet the link between the two has received little attention in research. Equally, little to no attention is paid to the type of indicators arising from various conceptualisations; concerns at the heart of this paper.

Conceptualisations of educational access and indicators to measure educational access objectives

Since the end of apartheid, South Africa has made a concerted effort towards not only improving structural or physical access to education but also to quality education for all her citizens, especially previously disadvantaged population groups. The country's new Constitution (RSA, 1996a) guarantees all children the right to basic education (Grade 1 to 9), and further stipulates that "[E]veryone has the right to further education, which the state, through reasonable measures, must make progressively available and accessible" (RSA, 1996a, p.1257). The South African Schools Act (RSA, 1996b) makes it

mandatory for all children to attend school until the end of Grade 9 or age 15. One of the essential elements in determining whether South Africa has achieved its goals of access to education for all is the development of good indicators and the collection of high quality data that includes both qualitative and quantitative measures.

Results with respect to structural access have been impressive with enrolment in school in South Africa widely acknowledged as being among the highest in sub-Saharan Africa (SSA), middle income countries. For example, the 2010 MDG report concluded that South Africa has accomplished the goal of universal primary education before the targeted date of 2015. The 2010 Gross Enrolment Ratio (GER) for ordinary secondary education in South Africa stood at 86%, up from 81% in 2002, while the sector's Gender Parity Index (GPI) estimate of 1.07 (Department of Basic Education (DBE), 2012, p.6) indicates that South Africa's female learners have a slight edge over their male counterparts in participating in secondary education.

The above notwithstanding and while structural access to school is guaranteed for all children, the mainly quantitative indicators, easily translatable into percentages as in above, mask the inequities attendant in a schooling system beleaguered with low completion rates, slow progression through the system, high dropout rates especially after Grade 10 and poor performance in the key subjects of Mathematics, Physical Sciences and Accounts (DBE, 2010b; 2011a). Put differently, and to make a broader point, the quantitative measures drawn from the use of particular indicators, premised on structural conceptions of educational access, foreground what occurs at the onset or end of schooling (primary or secondary) and thus do not also account for what happens during the process of schooling.

Despite various initiatives introduced by the post-apartheid government that include improved school infrastructure and management, professional development of teachers, the introduction of no-fee schools, a school feeding scheme, and the revision of curriculum frameworks aimed at improving the quality of teaching and learning (Motala, Dieltiens, Carrim, Kgobe, Moyo and Rembe, 2007; DBE, 2010a) to enhance access to education at all levels of the education system, equitable access and full participation remain a challenge. Indeed, even though government action indicates a shift toward a more complex conceptualisation of access to education that reflects a combination of structural, social and economic factors, the dominance of a structural

approach persists in reporting gains made in access to education. Over-reliance on quantitative indicators, therefore, does not reflect the discontinuities inherent in the process of education in a country where high numbers of children who enter the system do not complete.

Recent conceptualisations of access to education focus on the intersections of a complex array of issues that mediate and militate against learners' participation in the schooling experience (Motala *et al.*, 2007; Hill, Baxen, Craig and Namakula, 2012) and thus already encapsulate forms of access that move beyond a structural notion of the term. For example, Sayed's (2002) analysis of access to education stems from an inclusion and exclusion perspective. He acknowledges that despite having physical access to schools, there are factors both inside and outside school that contribute to the educational exclusion of learners. He identifies four features that need to be considered in measuring access to education beyond the physical. These include points of access (e.g. access policies and geographical location of schools); institutional setting and ethos (e.g. school culture and practices); curriculum (e.g. content and world views); and the interplay of multiple forms of injustice (Sayed, 2002, p.29). Instructive in such a conceptualisation is attention paid to structural forces that press upon schools in ways that negatively impact experiences of equitable access to education. Such a discourse though under plays factors outside school as well as what happens in classrooms that precludes full participation in school. Sayed (2002) also stops short in operationalising the concept by not specifying indicators to measure the four points of access. He is also silent on the nature, form and analysis of data. The implication is that while there is a notable conceptual shift, the practice of data generation, analysis and interpretation remains unchanged, in part, due to the structural roots inherent in such a discourse.

The Consortium for Research on Educational Access Transitions and Equity (CREATE), through a conceptualisation of meaningful access, extends Sayed's (2002) framework by identifying five key dimensions not already taken into account. These include high and regular school attendance rates among learners, little or no grade repetition, and learners' ages that are appropriate for their grades, achievement of expected learning outcomes including learners' mastery of basic knowledge, skills and competences as stipulated by curriculum requirements, high transition rates to higher grades or phases by the majority of learners and the provision of equitable learning opportunities to all learners including those from marginalised population

groups (Lewin, 2007, p.21). The CREATE framework represents an advance in conceptualisation of the term in that it not only focuses on the physical and structural mechanisms, but also on participation in the process of schooling. It considers the current and historical instances of marginalisation that may impact individual students' ability to meaningfully access educational opportunities. Participation in this instance thus includes structural as well as processual aspects of schooling and is accounted for in three ways. The first coincides with physical access and is subsumed in Sayed's (2002) concept of inclusion and the identification of mechanisms that militate against children entering the education system. The second, partially captured by rates of retention and completion, describes the state of staying in school. The third incorporates aspects of classroom life that allow students to become successful constructors of their own knowledge (Lewin, 2011). This notwithstanding and like Sayed (2002), the CREATE framework does not make explicit the implication such a framework has for the nature of data and the kind of indicators governments, policy makers, and researchers require to measure the attainment of education access.

We propose a conceptualisation of educational access as full participation. While taking account of and subsuming structural and processual elements that Sayed (2002) and Lewin (2011) propose, full participation shifts the gaze towards the classroom and on learners. The basic premise is that factors impacting learners' access to education as well as those shaping teaching and learning are integral to any conceptualisation of educational access. Learning is understood to be situated and produced and reproduced within broader social and historical practices, which come together in complex ways to produce what is valued in the field (Bourdieu, 1990) or community of practice (Lave and Wenger, 1991). Fully participation not only requires time for immersion in the practice but importantly, also access to the rules attendant with the practice. Learner positionality and legitimacy as contributors to the learning process are fundamental to such a conception. Initially, learners might be marginal to the learning process, but with time, experience and the attendant social, material and cultural resources made available, should come to not only embody the values of the practice but also embody concomitant social and individual identities (O'Donnell and Tobbell, 2007). Central to such a conceptualisation is the need to take account of the reciprocal and semiotic relationship between actors, context, and process of interaction and as such acknowledgment of the intersection between structural, processual, cultural, and agential (Archer, 2007) factors in producing educational access

and outcomes. Full participation, therefore, necessitates simultaneously paying attention to structural, cultural and agential elements because it is their intersectionality that produces particular forms of educational access and success. A conception of educational access premised on full participation, therefore, would require data resulting from indicators that focus on structural, processual, and agential elements at the level of the school *and* classroom.

We use data derived from two secondary schools in the Eastern Cape to highlight limitations in current discourses and in so doing, propose the type of data and indicators that would arise from conceptualisations of full participation.

Research context

The paper draws on a study that focused on two secondary schools and that took place in the Grahamstown Education District of Makana in the Eastern Cape.¹ On average, secondary schools serving predominantly black learners in this education district perform better in the National School Certificate (NSC) examinations (administered at the end of Grade 12) than the provincial average. However, given that the pass rate in Eastern Cape in general is extremely low, there is great concern over the low numbers participating in the examination in the first instance and poor quality of these passes (*Grocott's Mail*, January 6, 2012). Lack of NCS success at the level that allows access to tertiary education opportunities is a major obstacle to achieving admission to Grahamstown's prestigious Rhodes University and other higher education institutions in the country. It also flies in the face of post-apartheid government efforts to address the social injustices of the past through improvement in education, skills and income levels among the country's previously disadvantaged population groups.

The two schools in the study were relatively representative of peri-urban secondary schools. With respect to matric pass rates, they are neither the best nor the worst in the area. They are relatively well-resourced with poverty index ratings of 4 and 5 respectively, indicating that, based on Provincial Department of Education calculations; they are in the top 40% of schools

¹ There are nine provinces in South Africa, each sub-divided into local municipalities.

economically. An initial inspection of their EMIS data revealed high enrolment rates, especially in the lower Grades of 8 and 9. The higher Grades of 10 to 12 showed a worrying trend that raised questions about learner throughput, repetition, and retention rates in school.

Methodology

Our approach to examining the data requirements for effective analysis and monitoring of full participation comprised three stages. First, and to frame the data requirement analysis, we used the five key dimensions of the meaningful access CREATE framework as the basis to analyze data from the two participating schools, which included mark schedules,² snap survey forms, and school annual survey forms. For purposes of this analysis though, two of the CREATE framework dimensions, ('little or no grade repetition' and 'high transition rates to higher grades or phases by the majority of learners') were collapsed into 'grade progression'. The aim of this component of the analysis was to highlight the gaps that exist between the kind of learner data that is currently collected in South Africa to monitor educational access and the kind that is required to assess meaningful access to education.

The next step was to (a) generate a list of indicators deemed important to monitor meaningful access, given that the framework provided a conceptual tool and categories of analysis but not specific indicators, and (b) highlight the gap in data sources. This, with the view to highlighting the gaps that exist in the type of data and indicators in the use of meaningful access and to make the argument that conceptions of full participation have potential to generate data and indicators that better reflect school *and* classroom factors that militate against educational outcomes and success beyond merely a structural analysis.

Results

Using the dimensions employed in the CREATE's meaningful access framework, Table 1 below shows the results of the analysis of the available

² Documents used by all public schools in Eastern Cape to capture summaries of learner profiles and academic performance at the end of each school semester.

data in the two schools. The data required to effectively analyse and monitor progress in educational access attainment in each of the four aspects about learners are outlined in Column 2 of the table. The table also displays the available data on learners regarding educational access that were collected in the schools' mark schedules, and snap and annual surveys.

Table 1: A comparison between the data on learners that are required to effectively monitor meaningful access to education, and the actual data that are collected by the two secondary schools

| Dimension | Required data on learners | Mark schedule data | Snap survey data | Annual survey data |
|--|---|---|--|--|
| School attendance | Identity of all learners in each grade | Names and identity number of learners in each grade | No data | No data |
| | Learner enrollment figures | Number of learners in each grade by gender and population group | Number of learners in each grade by gender | Number of classes per grade |
| | | | | Number learners in each grade by population group & gender |
| | Number of days each learner in each grade was present/absent from school in a particular school year. | No data | No data | No data |
| | Average number of days in a particular school year learners in each grade were present/absent from school by gender, population group and home language | No data | No data | No data |
| | Main reasons for learner absenteeism in each grade by gender, population group and home language | No data | No data | No data |
| | Identity of learners in each grade who left the school in a particular year | Names, identity numbers, gender, population group and home language of learners who did not write the end of semester examination | No data | No data |
| | Number and % of learners in each grade who left the school during a particular year by gender, population group and home language | No data | No data | Number of deceased learners in each grade by gender and cause of death |
| Number of learner pregnancies in each grade | | | | |
| Number of learner transfers to and from the school in each grade by gender | | | | |

| | | | | |
|----------------------|--|---|----------------------------------|---|
| Grade progression | Number and % of over-age and under-age learners in each grade by gender, population group and home language | No data | No data | Number of learners in each grade by date of birth |
| | Number and % of repeaters in each grade in a particular school year by gender, population group and home language | Number of years each learner has spent in the grade in a particular school year | No data | Number of repeaters in each grade, gender and population group |
| Learning achievement | Identity of learners who passed/failed their grade in a particular school year | Names and identity numbers of learners who passed/failed their grade at the end of each school semester | No data | No data |
| | Number and % of learners who passed/failed their grade in a particular school year by gender, population group and home language | Number of learners who passed/failed their grade at the end of each school semester by gender | No data | Number of failures in each grade by gender and population group |
| | Individual learners' end-of-year marks in Maths, English, Accounts and Physical Sciences for each grade | Individual learners' end of semester marks in all subjects for each grade | No data | No data |
| | Average marks for each grade for Maths, English, home-language, Accounts and Physical Science | No data | No data | No data |
| | Individual learner's participation and achievement in non-academic school activities | No data | No data | No data |
| | Access to learning opportunities | Individual profiles of learners in each grade including their physical, mental, health, nutrition status, and home background | Gender of learners in each grade | No data |

| | | | | |
|--|--|---|--|---|
| Access to learning opportunities (continued) | Number and % of learners in each grade by type of disability | No data | No data | Number of disabled learners in each grade by gender, population group and disability type |
| | Number and % of learners in each grade by gender, population group and home language | No data | Number of learners in each grade by gender | Number learners in each grade by gender and population group |
| | | | | Number of learners in each grade by preferred language of instruction and gender |
| | | | | Number of learners in each grade by content subject, gender and population group |
| | | | | Number of learners from outside the Eastern Cape by province or country |
| | Number and % of orphaned learners in each grade by gender, population group and home language | No data | No data | Number and type of orphaned learners in each grade by gender |
| | Number of learners in each grade who are on social grants by gender, population group and home language | No data | No data | Number of learners in each grade registered but not receiving/ social grants |
| | | | | Number of learners in each grade receiving/ social grants |
| | Number and % of learners in each grade taking Maths, Accounting, Physical Sciences by gender, population group, home language and disability | Individual learner's performance in all subjects for each grade | No data | Number of learners in each grade by content subject, gender and population group. |
| | | | | Number of learners taking subjects outside the NCS in each grade |

Comparisons across the columns in Table 1 indicate that none of the three school data sets that were examined during the study contained the full complement of data on learners that are at a minimum, required for more effective monitoring of meaningful access to education. Of the three school data sets that were examined, the annual school survey forms provided the most comprehensive data on learners regarding educational access, while the snap survey forms provided the least data. Even if the data on learners from all three sources were combined, there were still gaps in the information on learners that would be required to effectively monitor meaningful access to education. It should be noted that, given the lack of a uniform learner identification system, combining data from different sources is neither straightforward nor feasible on a large scale.

School attendance

None of the three school data sets that were examined contained detailed data on learners' school attendance levels. Of the three forms, the annual school survey provided the most data on learners' school attendance, although this was mainly by way of numbers of learners in each grade who, for example, were deceased or transferred from/to the school. Although, all three forms provided data on learner enrolment figures, they all lacked data on individual learners' school attendance. None of the forms asked for data on reasons for learners' absenteeism, although the annual survey form collected data in each grade on learner deaths and their causes by gender.

Grade progression

Information on learners' progression was inadequate in all the three data sets. The mark schedules only provided the number of years a particular student had spent in current grade. The annual survey form requested information on numbers of learners repeating the grade by gender, and was not specific to individual learners. The snap survey form collected no information on learners' progression.

Learning achievement

Of the three forms, only mark schedules provided data on learners' level of educational achievement. This included the overall academic performance of each learner, and individual scores in each subject examination, by grade. None of the three forms supplied data on learners' non-academic performance. No data was available regarding students' transition rates to higher grades or phases of education.

Access to learning opportunities

Mark schedules provided the most in-depth personal data on learners, which in addition to their population group and gender, also included their names and identity numbers. However, data on learners' backgrounds in the annual survey covered a wider scope and included for example learners' home language, preferred language of teaching and learning, pregnancy levels, and home province/country. Only the annual survey form provided data on learners' social circumstances. However, this information was not linked to individual learners, and was limited to number and type of orphans in each grade by gender, learners who are receiving/not receiving social grants and causes of learner mortality.

Results from the first stage above showed the limitations in the available data, when dimensions of meaningful access were applied to monitor meaningful access to education. To advance full participation as a conceptualisation of education access, Table 2 below elaborates on the type of data as well as proposed indicators for its operationalisation. We draw attention to differences in indicators and data necessary to assess education access objectives in each case.

Table 2: Indicators and data to measure full participation

| Dimension | Full Participation | Meaningful Participation |
|--------------------|---|--|
| Learner profiles | <ul style="list-style-type: none"> Learners' name, gender, identity number, population group, home language and grade Number and % of special needs learners in each grade and nature of disability | <ul style="list-style-type: none"> Learners' name, gender, identity number, population group/home language and grade Number and % of marginalised learners in each grade |
| Learner background | <ul style="list-style-type: none"> Descriptions of individual learner's life history, health, nutritional status, learning needs, distance travelled to school, means of transport to school etc. Number and % of learners receiving social grants by grade, gender and population group Number of learners living in child-headed households by grade, gender and population group Descriptions of individual learners' home circumstances including cultural back-ground, socioeconomic status, parents' educational levels, etc. | <p style="text-align: center;">x</p> <p style="text-align: center;">x</p> <p style="text-align: center;">x</p> <p style="text-align: center;">x</p> |
| School profile | <ul style="list-style-type: none"> Type (rural/urban), quintile distance from nearest town, etc School accessibility by phone and road | <p style="text-align: center;">x</p> <p style="text-align: center;">x</p> |
| School enrolment | <ul style="list-style-type: none"> Number of learners in each grade by gender, population group and disability | <ul style="list-style-type: none"> Number of learners in each grade by gender, and marginalised group |
| Schooling costs | <ul style="list-style-type: none"> Number and % of learners receiving school uniform aid | x |
| | <ul style="list-style-type: none"> Number and % of learners unable to pay school levies, contributions, etc. | x |
| School attendance | <ul style="list-style-type: none"> Number of days each learner attended/was absent from school | <ul style="list-style-type: none"> Number of days a particular learner is present/absent from school by grade, gender, age and marginalised group |
| | <ul style="list-style-type: none"> Number of learners per reason for absenteeism | x |
| | <ul style="list-style-type: none"> Number of regular late comers in each grade by gender and reason for late coming | x |

| | | |
|---------------------------------------|--|--|
| | <ul style="list-style-type: none"> • Number and % of learners who left the school the previous year by grade, gender and population group, and reasons for leaving | <ul style="list-style-type: none"> • Number and % of learners who left the school the previous year by grade, gender and population group, and reasons for leaving |
| | <ul style="list-style-type: none"> • Number of days schooling was disrupted by cause of disruption, e.g. strike sports, etc.) | x |
| | <ul style="list-style-type: none"> • Number and % of learners who left the school the previous year by grade, gender and population group, and reasons for leaving grade | <ul style="list-style-type: none"> • Number and % of learners who left the school the previous year by grade, gender and marginalised population group, and reasons for leaving grade |
| School infrastructure | <ul style="list-style-type: none"> • Types of school infrastructure available (water, electricity, classroom, staff room, labs, library, toilets, etc.) and their condition | x |
| Facilities for special needs learners | <ul style="list-style-type: none"> • Types and condition of facilities for disabled learners | x |
| School sanitation | <ul style="list-style-type: none"> • Types and condition of school toilets | x |
| School furniture | <ul style="list-style-type: none"> • Types and condition of school furniture | x |
| Provision of school lunch | <ul style="list-style-type: none"> • Total number of days in the semester school lunch was provided | x |
| Safety at school | <ul style="list-style-type: none"> • Number of cases of bullying, harassment, drugs physical punishment and other forms of abuse in the year | x |
| Teacher absenteeism | <ul style="list-style-type: none"> • Total number of days teachers absent from school per semester | x |
| Teacher quantity and quality | <ul style="list-style-type: none"> • Teacher: learner ratio for each grade • Teacher: key subject ratio • Teachers' qualifications and teaching experience • Teacher's competency in the LoLT • Teacher's subject knowledge expertise • Teachers pedagogical knowledge • Teachers' professional development | <ul style="list-style-type: none"> x x x x x x x |

| | | |
|---|---|---|
| Teaching and learning resources | <ul style="list-style-type: none"> • Learner: essential school textbook ratio in each classroom • Learner: computers ratio • Learner: chair/desk ratio in each classroom • Condition of school furniture, blackboard, etc. in each class • Correct workbooks, textbooks, etc delivered on time • Types of facilities in the classroom for special needs learners • Types of additional educational resources available in each classroom | <p style="text-align: center;">x</p> |
| School's language policy | <ul style="list-style-type: none"> • Number and % of learners in each grade whose home language is the LoLT | <ul style="list-style-type: none"> • Home languages of learners |
| School's curriculum policy | <ul style="list-style-type: none"> • Subjects offered by the school • Number and % of learners enrolled in key subjects in each grade by gender and population group | <ul style="list-style-type: none"> • Subjects offered by the school • Number and % of learners enrolled in key subjects in each grade by gender and population group |
| Teachers' practice | <ul style="list-style-type: none"> • Teachers' coverage of prescribed curriculum requirements in each grade | <p style="text-align: center;">x</p> |
| Learners' progression | <ul style="list-style-type: none"> • Number and % of under-aged / over-aged learners in each grade by gender and population group • Number and % of repeaters in the grade by gender and population group • Number of learners who left school in each grade by gender, population group and reason for leaving | <ul style="list-style-type: none"> • Number and % of under-aged/ over-aged learners in each grade by population group • Number and % of repeaters in the grade by population group • Number of learners who left school in each grade by population group and reason for leaving |
| Learners' transition rates to higher phases | <ul style="list-style-type: none"> • Number and % of learners who passed each phase by gender and population group • Number and % of matrics from the school who joined HEIs by gender and population group | <ul style="list-style-type: none"> • Number and % of learners who passed each phase by population group • Number and % of matrics from the school who joined HEIs by population group |

| | | |
|----------------------------|--|--|
| <p>Learner performance</p> | <ul style="list-style-type: none"> • Number and % of learners who passed /failed the grade in the previous year by gender and population group • Performance of individual learners in the year- end, mid-year and other standardised test marks • Number and % of learners who passed /failed the NSC and ANAs by gender, population group and quality of pass • Number and % of learners who passed / failed key subjects in each grade by gender and population group each semester • Pass rate and average marks in key subjects in the ANAs and the NSC by gender and population group | <ul style="list-style-type: none"> • Number and % of learners who passed/failed the grade in the previous year by population group • Performance of individual learners in the year- end, mid-year and other standardised test marks • Number and % of learners who passed/failed the NSC and ANAs by population group and quality of pass • Number and % of learners who passed / failed key subjects in each grade by population group each semester • Pass rate and average marks in key subjects in the ANAs and the NSC by gender and population group |
|----------------------------|--|--|

Discussion

Two challenges to effective monitoring of access to secondary education in South Africa are the inadequate availability of indicators of educational access (mainly due to incomplete conceptualisation of educational access), and inaccurate and incomplete data on educational access that are generated by schools. While, with the introduction of electronic tools, the Department of Education is to be commended for taking steps to improve the quality of data on educational access, for the majority of under-resourced schools in the country, mark schedules, snap surveys and annual schools surveys remain the main means by which data on educational access are generated.

The CREATE framework of meaningful access to education was a useful starting point in that it provided an analytical tool to guide the identification of indicators and some data types for a more effective analysis and monitoring of educational access. By demonstrating the disparity that exists between the data on learners that are generated by these three data forms and the data that should be in place for effective reporting on meaningful educational access to secondary education in South Africa, the study highlighted the need for broader conceptualisations of educational access and that of more research into indicators of educational access that best capture the secondary education

experience of the majority of South African learners. The paper proposed a conceptualisation of full participation, which, we put forward as having promise for contextualised and nuanced descriptions of education access. Such an orientation shifts the gaze towards the classroom and onto learners; necessitating data with indicators that focus on learners and teaching and learning which have not been taken account of in the five CREATE dimensions.

The range of data on learners that are needed to effectively report on progress towards meeting educational access objectives require frameworks that draw on large data sources, usually quantitative in nature, some data are necessary to understand the conditions of learners and teaching and learning not always captured quantitatively. Put differently, although most of the required data are quantitative, for example number of learners in each grade, number of days an individual learner is absent, and number of repeaters in the grade, some are qualitative, for example learners' physical condition, socio-economic status and performance in non-academic school activities. The need for data on educational access to be disaggregated stands out in our study, not only to grade, gender and population group (for example, learners in a grade, repeaters in a particular year), but also to individual learners (for example, learner absenteeism and learning achievement). Analysis of the required data on learners and teaching and learning strengthens the argument for profiling and identification of all learners in the secondary school system as an initial step towards effective monitoring of their access to education. A step which has been planned for and approved by the Department of Education (LURTIS), but whose implementation has been stalled for various reasons.

As Table 1 showed, none of the three data sets currently used to gather school data contained the full complement of minimum data on learners that are needed for effective analysis and monitoring of meaningful access to education. Nor did the three data sets, taken together, provide all the data needed. All three forms that were examined during the study mainly focused on the collection of quantitative data on learners, reflecting a structural approach to educational access. While numbers (for example of learners by grade and of orphans by gender) and percentages (for example of repeaters and over-age repeaters in the grade) were commonly recorded, qualitative data on learners were rare. Examples of such data include reasons for learners dropping out of school, and descriptions of learners' social circumstances. The latter data are especially important as it has been shown in numerous

studies that learners' socio-economic circumstances are a key determinant of learner achievement in South Africa (van der Berg, 2007; Howie, 2003).

The data on learners' grade progression was another example of the incompleteness in data sources. In the annual survey form, this was expressed as the 'number of repeaters by grade and gender,' and in the mark schedules as 'number of years spent in grade.' Age distribution of learners by grade, gender, population group and social circumstances would give a more comprehensive and nuanced picture of learners' progression. Lastly, the data from the three forms were mostly disaggregated to grade, gender and population group. Only mark schedules disaggregated data on individual learners, and this was limited to learners' academic performance. Disaggregation of key data on educational access to minority groups and individual learners is especially important in identifying and addressing their specific educational access needs.

Table 2 showed that a conception of full participation provides an extension in data source and indicators to measure educational access outcomes in ways not possible when 'meaningful access' (Lewin, 2011) is applied. Additional data sources were necessary to not only understand learners and aspects of their lives that impact their experience of access, but also factors in the classroom that mediate their learning experience. While some of the measures to access experience are quantifiable, as was the argument earlier on, some would require data only obtainable through qualitative forms of data generation.

Conclusions and recommendations

Full participation as a conceptualisation of access not only provides the impetus to focus on the actions and interactions of learners at the classroom level but also on elements impacting teaching and learning. Laying this framework of participation against previous conceptualisations of access gives a useful tool for thinking about what it means to fully participate in education. The most basic aspects of access, structural access also form the most basic form of participation but that is not the whole story. It offers a way of generating data and indicators that extend the current development of Lewin's (2011) 'meaningful access'. It requires a deeper examination of the schooling context and the actual experiences of learners in the classroom and

in so doing might enable education decision makers to ask questions about why in the face of meeting the structural access imperatives, many children still stop short of completing school. The recent initiatives such as South African School Administration Management System (SA-SAMS) and the National Learner Unit Record Information and Tracking System (LURITS) would go a long way toward making high quality, usable data on learner progression and achievement available were it to also consider conceptions of full participation as a conceptual framework to monitor educational access outcomes.

References

- Akyeampong, K., Djangmah, J. Seidu, A., Oduro, A. and Hunt, F. 2007. *Access to basic education in Ghana: the evidence and issues*. Retrieved 14 January, 2012, from www.create-rpc.org
- Archer, M.S. 2007. Realism and the problem of agency. *Journal of Critical Realism*, 5(1).
- Bourdieu, P. 1990. *The logic of practice*. Translated from the French by Nice, R. Stanford: Stanford University Press.
- Department of Basic Education, 2010a. *Education for All Report. South Africa 2010*. Retrieved 9 March 2011, from <http://www.education.gov.za>
- Department of Basic Education, 2010b. *Education statistics in South Africa 2009*. Retrieved 14 March, 2011 from <http://www.education.gov.za>
- Department of Basic Education, 2010c. *Report on stakeholder perception of EMIS data*. Retrieved 5 June 2011 from <http://www.education.gov.za>
- Department of Basic Education, 2011a. *Macro indicator trends in schooling: Summary report 2011*. Retrieved 15 February 15 2012 from <http://education.gov.za>

Department of Basic Education, 2011b. *Report on learner dropout and learner strategy policy*. Retrieved 15 November 2012 from <http://www.education.gov.za>

Department of Basic Education, 2012. *Education Statistics in South Africa 2010*. Retrieved September 2012 from <http://www.education.gov.za>

Fataar, A. 1997. Access to schooling in post-apartheid South Africa: linking concepts to context. *The International Review of Education*, 43(4): pp.331–348.

Govinda, R. and Bandyopadhyay, M. 2008. *Access to elementary education in India. Country analytical review*. Retrieved January 12, 2012, from www.create-rpc.org

Grocotts Mail, 2012. Matric century for Grahamstown East Schools, 6 January.

Hill, L.D., Baxen, J., Craig, A. and Namakula, H. 2012. Citizenship, social justice, and evolving conceptions of access to education in South Africa: implications for research. *Review of Research in Education*, 36(1): pp.239–260.

Howie, S.J. 2003. Language and other background factors affecting secondary pupils' performance in mathematics in South Africa. *African Journal of Research in Mathematics Science and Technology Education*, 7: pp.1–20.

Lave, J. and Wenger, E. 1991. *Situated learning: Legitimate peripheral participation*. Cambridge University press.

Lewin, A.K. 2007. *Improving access equity and transitions in education. Creating a research agenda*. Retrieved 14 January 2012 from <http://www.create-rpc-org>

Lewin, K.M. 2011. *Taking targets to task revisited: how indicators of progress on access to education can mislead*. Retrieved 24 February 2012 from www.dfid.gov.uk/r4d/pdf

Motala, S., Dieltiens, V., Carrim, N., Kgobe, P., Moyo, G. and Rembe, S. 2007. *Educational access in South Africa. Country Analytical Report*. Retrieved 18 January 2012 from <http://www.create-rpc-org>

Motala, S. and Dieltiens, V. 2010. *Education access in South Africa. Country research summary*. Retrieved 21 January 2012 from <http://www.create-rpc-org>

Nelson Mandela Foundation (NMF), 2005. *Emerging voices: a report on education in South African rural communities*. Cape Town: HSRC Press.

O'Donnell, V.L. and Tobbell, J. 2007. The transition of adult students to higher education: legitimate peripheral participation in a community of practice? *Adult Education Quarterly*, 57(4), pp.312–328.

Parliamentary Monitoring Group, 2007. *Education management information systems: ensuring quality through education districts*. Retrieved 28 August 2011 from www.pmg.org.za/minutes

Republic of South Africa, 2013. *Millennium Development Goals Country Report*.

Sayed, Y. 2002. *Exclusion and inclusion in South Africa with reference to education: a review of literature*. Retrieved 13 June, 2011 from <http://www.dfid.gov.uk/r4d/PDF/outputs/impAccess/Research>

Sayed, Y. and Soudien, C. 2003. (Re)framing inclusion and exclusion discourses: limits and possibilities. *IDS Bulletin*, 34(1): pp.9–19.

Strassburg, S., Meny-Gibert, S. and Russell, B. 2010. *Barriers to participating in schooling: findings from the access to education study Volume 3*. Retrieved 7 March 2012 from <http://pari.academia.edu/SarahMenyGibert/Papers/772142/>

The Ministerial Committee on Learner Retention in South African schooling system 2007. Retrieved 23 June 2011 from <http://www.info.gov.za/view/DownloadFileAction?id=79404>

Van der Berg, S. 2007. Apartheid's enduring legacy: inequalities in education. *Journal of African Economies*, 16(5): pp.849–880.

Van Wyk, C. 2006. The development of an education management information system from a sense making perspective and the application of quantitative methods to analyse education data sets. Unpublished doctoral thesis. Stellenbosch: Stellenbosch University.

Jean Baxen
School of Education
University of the Witwatersrand

jean.baxen@wits.ac.za

Yvonne Nsubuga
Faculty of Education
University of Fort Hare (Alice)

ynsbga@yahoo.com

Lori Hill
American Educational Research Association and University of Michigan

lohill@umich.edu

Anne T. Craig
The University of Michigan

atcraig@umich.edu