THE IMPACT OF THE SOUTHERN AND EASTERN AFRICA CONSORTIUM FOR MONITORING EDUCATIONAL QUALITY (SACMEQ)

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Introduction

The focus of the preceding article was on the mission that guides the work of the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ), the structure of its research and training programme, and on the technical standards of its research and training programme. SACMEQ projects represent a major investment by member countries[1] and the agencies that support it in high-quality research and training, the hope being that clear benefits will accrue to participating countries. A major research area that still remains, however, pertains to the impact that such large-scale survey research studies, especially those of a cross-national nature, have on the education policies and practices. This article is, firstly, a review of SACMEQ's impact on education systems in Eastern and Southern Africa. Secondly, it summarizes the limitations of cross-national studies' contribution to policy-reform processes. Lastly, by examining the factors in SACMEQ's experiences that have either facilitated or hindered policy reform based on the processes and outcomes of SACMEQ's work, it

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concludes by providing caveats to those who have just embarked on, or wish to launch, similar initiatives in other parts of the world.

Uses to which SACMEQ results have been put

The mechanism for monitoring the impact of SACMEQ's research programme, as well as the training component associated with it, contains three elements. Firstly, SACMEQ ministries are periodically requested to report on any impacts observed as part of reporting on progress. Secondly, the information provided by ministries is complemented by observations made through monitoring visits made by the SACMEQ Director, national research co-ordinators (NRCs) and members of technical teams. The third element comprises the experiences – some of them anecdotal – shared at the various forums that bring the different SACMEQ players together. The impacts reported by different SACMEQ countries are summarized under five headings: (a) monitoring and evaluating quality; (b) capacity-building; (c) enhancing the quality of statistical and non-statistical information systems; (d) policy-making and systems-improvement processes; and (e) choosing pathways to the achievement of Education for All (EFA).

MONITORING AND EVALUATING QUALITY

As implied by its name, SACMEQ's key role is to monitor and evaluate the quality of education. The linkages within the different data sets collected by SACMEQ allow for comparisons against country-specific norms or expectations, across countries and over time. Furthermore, the use of classical item analysis and modern item response theory facilitates a descriptive account of learners' performances. There has been a general dearth of data on the quality of education in member countries because there was no systematic, rigorous method of measuring and evaluating it. The data SACMEQ generated has enabled countries to have a fairly good idea of the quality of education that their systems offer (from an input, process and outcome perspective). Ministries can therefore make assessments of their systems' performance (in terms of learning outcomes) against other countries, and against standards that they have independently set for themselves. This is illustrated in Table 1.

It is clear from the table, for example, that 37.4% of all pupils reached the 'minimum' level (set by each of the countries *before* the test was administered) on the SACMEQ II reading test, and 10.4% reached the 'desirable' level on the same test. Similarly, from the SACMEQ II data available (but not presented here), it can be seen that, when measured on the same scale and without taking contextual factors into account, the SACMEQ II mathematics score for Ugandan pupils (506) fell above the SACMEQ mean of 500,[3] and was a little higher than the one for South African pupils (486). However, Ugandan pupils' reading score (483) was somewhat lower than that for South African pupils (493). SACMEQ ministries now know that, in mathematics, eight ministries' SACMEQ II scores fell above the SACMEQ mean of 500, and in reading seven ministries' scores fell above the mean. All the six ministries that participated in both SACMEQ I (1995) and SACMEQ II (2000) registered an overall rise in resource provisions to schools, but all of

TABLE 1. Mean national scores and percentages of pupils reaching 'minimum' and 'desirable' levels of mastery in reading (SACMEQ I & II)[2]

SACMEQ country	SACMEQ I			SACMEQ II		
	Mean score*	% reaching level		Mean score*	% reaching level	
		minimum	desirable		minimum	desirable
Botswana	n.d.**	n.d.	n.d.	521	48.2	12.7
Kenya	529	64.8	23.4	547	60.0	14.4
Lesotho	n.d.	n.d.	n.d.	451	11.0	1.5
Malawi	450	21.6	0.6	429	5.2	0.2
Mauritius	535	52.8	26.7	538	52.7	25.0
Mozambique	n.d.	n.d.	n.d.	517	50.7	2.7
Namibia	460	25.9	7.6	449	15.0	5.8
Seychelles	n.d.	n.d.	n.d.	582	65.5	34.1
South Africa	n.d.	n.d.	n.d.	493	32.4	15.7
Swaziland	n.d.	n.d.	n.d.	530	48.6	5.9
Tanzania	n.d.	n.d.	n.d.	546	61.4	16.0
Uganda	n.d.	n.d.	n.d.	483	28.8	7.4
Zambia	464	25.8	2.3	441	16.4	3.4
Zanzibar	476	46.1	5.2	479	27.8	0.8
Zimbabwe	491	56.4	37.0	n.d.	n.d.	n.d.
SACMEQ	500	41.9	14.7	500	37.4	10.4

*The mean score was based on *all* test items.
**n.d. means 'no data'. Countries so marked did not participate in the relevant project.

them experienced either a decline or a stagnation in reading achievement (Ross et al., 2004). While Table 1 focuses on outcomes only, a much larger set of input and process data was collected. Ministries can therefore use the data to establish the extent to which the provision of different learning resources has reached benchmarks set by policy (input variables), and can tell the frequency with which pupils are given homework, get help at home with such homework, or take extra-tuition (process variables). These data provide answers to the concerns SACMEQ policy-makers have expressed over the quality of their education systems, and these concerns are stated as research questions. This information has equipped countries with information on the areas where learners and teachers are experiencing problems, has served as an impetus for a variety of school improvement programmes and has shaped policies that focus on quality enhancement.

TABLE 2. Number of cycles and amount of time required for the completion of SACMEQ II data cleaning

School system	Date when cleaning started	Date when cleaning finished	Number of cleaning cycles	Number of months
Botswana	8-Feb-01	5-Dec-01	15	10
Kenya	20-Jun-01	23-Oct-02	24	16
Lesotho	20-Mar-01	25-Jan-02	15	10
Malawi	15-Dec-02	5-May-03	13	5
Mauritius	9-Oct-01	15-Apr-03	11	18
Mozambique	8-Feb-01	27-Jan-03	23	24
Namibia	2-May-01	25-Jan-02	9	9
Seychelles	15-Feb-01	13-Jun-01	5	4
South Africa	9-Mar-01	26-Aug-02	22	18
Swaziland	7-Jun-01	27-Sep-02	14	16
Tanzania	26-Mar-01	19-Nov-02	25	20
Uganda	26-Feb-01	22-Jan-03	31	23
Zambia	23-Jan-01	29-Nov-02	25	22
Zanzibar	15-Jun-01	23-Apr-03	27	22

While SACMEQ's methodology meets the standards of other reputable international research initiatives, such as the International Association for the Evaluation of Educational Achievement (IEA), there still have been major controversies over the impact of contextual variables on learning outcomes, and this makes comparisons across countries a sensitive and tricky affair. However, the fact remains that, for various reasons, some countries clearly do better than others on selected variables, and how they have been able to do so provides lessons for others. For instance, the only country whose learning outcomes did not decline between 1995 and 2000 was Kenya, and this was a result of a combination of factors, the most probable among them being good teacher training (with specialization in mathematics) and the meritocratic practices that are a natural consequence of the stiff competition for limited vacancies at the post-primary level. In Seychelles, the high-performance levels have been partly a result of ability streaming, and in Mauritius long hours of extra-tuition (which most pupils have to pay for) partly accounts for the high performance. SACMEQ countries are also studying the internationally perplexing phenomenon of girl pupils in Seychelles who, in SACMEQ II, outperformed boys by a wide margin in *both* reading and mathematics (Saito, 2004).

The factors accounting for high performance (e.g. streaming and extra tuition) may themselves be a subject of controversy. The fact is that existing policies in all SACMEQ ministries are opposed to ability streaming, and yet it is an endemic practice. In several

countries, e.g. Seychelles, Zimbabwe and Mauritius, extra tuition has reached levels that are morally not justifiable. But since both of them are associated with good learning outcomes, they tend to find implicit support among educators and parents. This notwithstanding, it is recognized that within the practices of ability streaming and extra tuition there are identifiable elements of good practice that can be applied in such a way that positive results are achieved without endangering pupil welfare. For example, by employing pedagogical practices that cater to the different needs of both fast and slow learners, higher achievement levels can be attained. Likewise, good results can be realized by motivating teachers to provide regulated, free, quality extra tuition within school settings. Nor do all countries need to set a priority on high learning achievement: countries whose gross and net enrolment ratios are unacceptably low would, rather, choose to focus on expanding access before they turn their attention to issues of improving the quality of education.

The facts emerging from SACMEQ I and II have helped countries monitor trends in quality and the impact of new policies. Kenya's Ministry of Education, for instance, has been concerned with the impact on the quality of education of the policy of free primary education (FPE) that was introduced in 2002, and has been designing strategies to ensure that acceptable levels of quality are maintained. Similarly, Malawi has acknowledged that, being a relatively poor country, it has had to postpone the quality agenda until such time as the more pressing goal of universalizing access has been achieved.

CAPACITY-BUILDING

Because one of the key goals of SACMEQ is to build capacity within SACMEQ ministries of education in order to evaluate and monitor the quality of the education being offered, training is an integral component of the research process. Such training focuses on the key skills that planning officers need in order to generate valid, evidence-based information required for policy development. The range of skills required is very wide, and encompasses at least the 'traditional' research activities (such as planning and designing a research study, instrument development, test development, sampling, data collection, data capture and cleaning, data analysis, data interpretation and policy report preparation). However, there are other, subtle elements of the policy research process that require more specialized skills. Among these skills are the management of the consultative process that facilitates dialogue with policy-makers at every stage of the research cycle, the dissemination of research findings to the different stakeholders and the creation of linkages with other partners who might benefit from the use of the information generated. Several experts have viewed this form of policy development as one of the most potent, especially in the African context (see, for example, ADEA, 1995; Chisholm et al., 1998; Marope, 1998; Namuddu, 1998; Colclough, 1999).

In Zanzibar, the successful implementation of SACMEQ I has led to the intensification of efforts to train officers at different levels of the education system in research methodology, with a focus on sampling, the design of research instruments, data collection and data management. This has had the overall effect of enhancing the Ministry's capacity to carry out its key policy development functions. Similarly, in Zambia efforts

TABLE 3. Percentage of pupils who had repeated a grade at least once and those who received private or extra tuition (SACMEQ II)

Country	% of pupils who had repeated at least once		% of pupils receiving private/ extra tuition	
	Mean	Standard error	Mean	Standard error
Botswana	31.4	1.02	53.2	2.47
Kenya	64.1	1.67	87.7	1.91
Lesotho	60.8	1.60	49.3	3.17
Mauritius	18.7	0.82	86.5	1.10
Mozambique	78.9	0.95	66.4	2.54
Namibia	54.1	1.16	44.7	2.33
Seychelles	10.3	2.40	47.7	3.41
South Africa	42.3	1.95	58.6	3.34
Swaziland	59.3	1.39	36.3	3.81
Tanzania	23.3	1.81	86.6	1.37
Uganda	53.6	1.91	81.8	2.45
SACMEQ average	43.9		63.5	

have been made to develop within-country capacity through the implementation of SACMEQ-type training programmes, and the Ministry reported that, by 2000, it was more or less fully equipped with the skills needed to undertake large-scale, scientific surveys on learning achievement. Zambia is one of the countries that has developed a sound national assessment system (NAS), and in this country the process has benefited from the fact that the SACMEQ NRC has also played a leading role in the development of Zambia's NAS.

Every SACMEQ ministry has reported positively on the benefits of capacity-building, but the countries where this impact has been reported to be the most dramatic were Botswana, Lesotho, Seychelles and Malawi. In Botswana, five educational planners and statisticians were comprehensively trained in large-scale surveys. In Lesotho SACMEQ training has been linked to the Annual Training Programme of the International Institute for Educational Planning (IIEP) and has thus created a stable team of highly skilled officers. Seychelles has a three-member team with high-level skills in research design and the collection and management of research data, and this has facilitated the efficient implementation of projects. When Malawi failed to collect data of an acceptable quality, a team of trainers from fellow SACMEQ countries, the SACMEQ Co-ordinating Centre and the IIEP trained a 12-strong Malawi team in sampling, data collection and data analysis in June 2002. By September of the same year, Malawi had put its sampling frame in order and had completed SACMEQ II data collection and capture to expected standards.

SACMEQ has also been instrumental in enhancing other elements of ministries' capacity. For instance, SACMEQ demands the use of high-powered computers that facilitate efficient data storage and archiving systems, as well as the latest software that ensures accuracy. In Tanzania, for example, the Ministry of Education has set up an office dedicated to SACMEQ and related activities, complete with computer facilities, access to the internet and space for hardcopy archiving. These facilities have been used for other tasks beyond SACMEQ (such as the capture and processing of census data and specific research studies on education), thus yielding benefits to the entire system. This illustrates a shift in organizational culture, with ministries' policy-makers placing greater emphasis on the role that information and its efficient management plays in the development of their education systems.

ENHANCING THE QUALITY OF INFORMATION SYSTEMS

One of the hallmarks of SACMEQ's research is high-quality data. For this purpose it ensures that quality is built into the entire process of data collection, with meticulous care taken to ensure its accuracy and validity at every stage. An accurate sampling frame, for example, is a prerequisite for a representative sample. Valid, reliable data are a product of the correct administration of good instruments on a good sample. In short, quality is viewed as a cumulative product of interlinked processes that place emphasis on quality. There have been instances of educational databases that were outdated or had serious gaps, such as schools that were overlooked. SACMEQ studies only draw samples when it has been established that the relevant education system's database is up-to-date and accurate. Where this condition is not met, time and effort are invested in the preparation of an accurate statistical database.

One control mechanism that illustrates SACMEQ's emphasis on quality is demonstrated in the measures SACMEQ takes to ensure that the data collected and captured are 'clean'. Validity checks made to ensure the integrity of data frequently involve several cycles of checking and data cleaning. In SACMEQ II, for instance, the lowest number of cycles that it took to get a country's data absolutely clean was 5, and the largest number was 31, with the average number of cycles for all countries being 21. This is illustrated in Table 2.[4]

The fact that data cleaning required such an intensive process may have implications for the quality of other data collected by governments. The realization by NRCs and other ministry officers that getting 'clean' data is an arduous process, requiring many cycles of checking and cross-checking, has in itself fostered a culture of quality. The first component of ministries' data to benefit from this has been the education management information systems (EMIS) data. It was quite common, for instance, that efforts to ensure the accuracy of a country's sampling frame unearthed major gaps in the EMIS data. In the worst cases, some countries did not have an accurate, up-to-date record of the number of schools. As an illustration, for SACMEQ I, Kenya's statistical database was so flawed that it failed to provide an accurate number of grade 6 pupils in each school, and it had to be reconstructed from information generated from records in the National Examinations Council. SACMEQ NRCs have therefore worked closely with the National Education Statistical Information Systems (NESIS) Project that has been

operating in all SACMEQ ministries. NESIS's goal has been to build capacity for the timely collection and compilation of accurate statistical data, and ensuring that countries presented the data in a form that left it amenable for ready use by different stakeholders. One advantage has been that the NESIS project, in most ministries, has been located within the planning and statistics units, and some SACMEQ NRCs were also NESIS national co-ordinators.

There are many concrete examples of countries that have benefited in this way. Botswana, for example, has taken advantage of the opportunities provided by SACMEQ to build its capacity for the production of an accurate and up-to-date EMIS. It has subsequently used the data as a tool for diagnosing the education system's performance and for planning the development of the system. In Kenya, the high standards of data collection and management adopted by SACMEQ have prompted the Ministry of Education to adopt similarly rigorous data collection and cleaning practices as part of regular, established practice. In Swaziland, SACMEQ has strengthened the EMIS and research function of the Ministry of Education, thus creating a solid base for subsequent research that focused on specific issues of concern to the ministry.

STRENGTHENING POLICY-MAKING AND SYSTEMS-IMPROVEMENT PROCESSES

Perhaps the greatest impact SACMEQ has had on ministries of education is on policy-related, system development processes. An area of specific concern that SACMEQ's research activities have brought to the attention of ministries is the problem of policy implementation deficits that have taken a variety of forms.

SACMEQ found out was that, in most education systems, there was an absence of a comprehensive and up-to-date list of standards or norms for resource inputs to schools. In Zimbabwe, for instance, norms for resource provisions were available within the ministry, but their presence remained unknown to policy-makers and implementers alike. It was only when SACMEQ-related research sought to establish them that these norms were pulled out from the files, only to discover that there was a discrepancy between the ideal and the reality regarding the provision of inputs to schools.

In Kenya, the situation was even worse because norms largely did not exist, and where they existed, there were wide gaps between official standards in the books and the reality on the ground. This prompted the ministry to embark on an exercise where it prepared a comprehensive set of appropriate standards to be reached by all primary schools to ensure their smooth operation. In Malawi, SACMEQ I revealed that there was under-provision of educational inputs, and the recommendations presented in the SACMEQ I report featured in submissions to the Malawi Education Policy Investment Framework prepared for the period 2000–2015. These were then used to generate policies concerning the provision of teaching materials and classroom furniture for the primary education system as a whole. In Seychelles, there were concerns over equity in the allocation of basic resources to schools and classes, and SACMEQ findings were used to establish standards in the allocation of these resources and to systematically improve the distribution of facilities and resources across schools.

Two discrepancies between policy rhetoric and practice that are worth mentioning are those of grade repetition and extra tuition. In all countries, existing policies encouraged neither of the two, while official records did not indicate that either of them was a serious problem. Nevertheless, SACMEQ found out that, in most countries, repetition rates and the provision of extra tuition (which is frequently paid for) were unacceptably high. In Table 3 data on the proportion of grade/standard 6 pupils (selected SACMEQ countries only) who had repeated a grade at least once, and those who regularly received extra tuition, has been presented.

In Kenya, SACMEQ I results showed that a large proportion of children in primary school were over-aged, and that in SACMEQ II the average age had risen from 165.9 months to 168.4 months. This phenomenon was linked to the observed fact that nearly two-thirds of the pupils had repeated a grade at least once. The high repetition rates were partly a result of the shortage of school places at certain levels, and at the same time they exacerbated intra-system pressure for school places. Over-aged pupils therefore left school prematurely. When statistics were presented at a meeting of the Forum for African Parliamentarians for Education (FAPED), attended by senior ministry of education officials and parliamentarians in November 2002, they were received with disbelief. In response to this, the government's non-formal education programme put in place mechanisms for the provision of alternative educational opportunities for over-age children who had missed a chance to join the formal education system, and they also started to consider effective policy measures for dealing with the problem of grade repetition. In Swaziland, where it was discovered that some schools had introduced specialization at grade 6, clearly against Ministry policy, inspectors have re-focused their school supervision visits so as to address this problem.

In several countries, SACMEQ results served as input to key documents that were linked to the development planning, policy review and educational reform processes. The release of the Mauritian SACMEQ I national report, for example, coincided with the national review of the implementation of the Mauritius Education Master Plan, and it served as a key resource document at the review workshops. A large number of copies of the report were distributed throughout the education system, and this provided teachers and school principals with an opportunity to make a meaningful contribution to the national debate concerning the quality of education and the search for quality. In Kenya, the 2002 education sector analysis made extensive use of the findings of SACMEQ I for the development of proposals aimed at addressing deficiencies observed in its education system. Mozambique's Education Sector Strategic Plan highlighted that the primary school system faced the multiple challenge of low access rates, perceived low quality, high costs of educational provision and the challenge of sustainability. It therefore used the preliminary results from SACMEQ to inform decisions on the best strategies for tackling these challenges. As a result, there has been a growing culture of systematic information gathering on the factors that have impacted on two key elements of the education system, namely, quality and efficiency.

The findings and policy suggestions from SACMEQ I informed debates and deliberations of Namibia's 1999 Presidential Commission on Education and Training, just as they did in Zimbabwe's 1997 Presidential Commission on Education and Training. In

Namibia, SACMEQ findings were used to make recommendations on issues relating to equity and the quality of education in Namibia. SACMEQ results were also used in the development of the Ministry of Basic Education, Sport and Culture's Strategic Plan for the period 2001 to 2006. These priorities were: equitable access; equitable distribution of educational resources; quality (by ensuring that pupils mastered basic competencies in English, mathematics, science and skills-related subjects by 2006); strengthening teacher education and support; provision of physical facilities; efficiency and effectiveness; and HIV/AIDS. SACMEQ data thus provided research-based information that has been used in assessing the status of resource allocation to schools across educational or political regions, and for tracking changes that may have occurred over time. SACMEQ results were also used to develop appropriate policy and programme interventions based on the Strategic Plan. In Zimbabwe, the commission made extensive use of SACMEQ findings to recommend policies regarding the provision of essential inputs to schools and the revision of the curriculum.

One country that has used SACMEQ results extensively for planning the development of the education sector is Uganda. The preliminary findings of SACMEQ II, for example, were used to shape the strategic direction of Uganda's education system. The vision for Uganda's Ministry of Education has been 'Quality education and sports for all'. The objective that has been central to this vision is the improvement of quality in education by raising achievement levels in primary education, and SACMEQ, together with the National Assessment of Progress in Education (NAPE) projects, were given prominence in assessing the status of quality and in formulating strategies that facilitated the achievement of this objective. At Uganda's eighth Education Sector Review (ESR) held from 21 to 25 October 2002, SACMEQ results served as inputs to the design of the Education Sector Medium-Term Budget Framework and in determining the budget cycle's priorities. This review meeting also brought together high-profile national and international stakeholders from the education sector in Uganda, among them were Members of Parliament, top management and technical officers from the Ministry of Education and Sports, as well as representatives from the Ministries of Finance, Planning and Economic Development, Public Service, Local Government, Health, the President's Office and the Office of the Prime Minister. Other participants were from funding agencies and diplomatic missions, district officials, religious institutions, associations representing teachers, school heads, directors, principals and representatives from local authority officials, security forces, non-governmental organizations and the private sector. Consultants and distinguished educators also participated in this event.

As a trigger for the release of funds from Uganda's Education Funding Agencies Group, 'Critical and process undertakings' were agreed upon for future ESRs. The four critical undertakings adopted for assessment at the April and October 2003 ESRs were: (a) financial commitment; (b) public expenditure management; (c) quality enhancement indicators (e.g. teacher/pupil ratios, percentage of trained teachers, adequacy of classrooms and textbooks); and (d) education outcomes which focused on quality (largely reading and mathematics scores) and equity (size of disparities in learning outcomes by geographical location, socio-economic group, gender and others). It was recognized that SACMEQ results provided essential inputs to the critical undertakings (particularly the

last one), and it was therefore agreed that the SACMEQ II report should be presented at the May 2003 ESR to guide the decisions to be made. The presentation has since generated broader interest in the use of SACMEQ results for policy reform.

For Zimbabwe, the policy suggestions generated from the 1991 study received the attention of the Heads of Divisions, which constitutes the ministry's principal decision-making body. In the special meeting convened for this purpose in 1993, a tight programme for the implementation and follow-up of recommendations generated by the study was put together.[5] Similarly, in Zambia SACMEQ was identified as one of the two projects that could help to assess the levels of learning achievement within the context of the Basic Education Sub-sector Investment Programme (BESSIP) implemented by the Ministry of Education since 1998. BESSIP is an integrated investment programme with overarching programmes whose two main objectives are the improvement of access and participation, as well as the enhancement of the quality of education.

Results that were 'unexpected' frequently ignited serious policy debates. In Mauritius and Seychelles, when the prevalence of ability streaming and the scale of private tuition was highlighted, it sparked off heated national debates, and ultimately decisions were taken to regulate both. In Seychelles, the Director for Policy, Innovation and Strategic Planning subsequently consulted the appropriate persons to review the policy on streaming and ensure that schools adopted new procedures for allocating pupils to classes. Furthermore, it was proposed that a study be undertaken to link the SACMEQ data with the data generated by the child-development study at the University of Rochester (USA) to predict the extent to which streaming affected scholastic success. A similar debate around the inequitable distribution of resources erupted in Namibia and, on the instructions of the minister, top managers in the ministry developed a system of allocating resources (especially textbooks) that sought to gradually reduce disparities in learner achievement across educational and political regions. In Zanzibar, SACMEQ results were associated with an intense debate on the quality of education; the debate was taken to cabinet level. In particular, there has been discussion on the issue of class size which, according to SACMEQ I findings, stood at 53 pupils instead of the official figure of 45. This issue has enhanced the momentum of the policy discussions that have been instrumental in reviews of standards and benchmarks relating to school size, expected standards of achievement, provision and assessment of classwork and the provision and monitoring of homework. School sizes were reviewed, with excessively large schools split into smaller ones. A research study on teachers' working conditions was subsequently carried out by the ministry (based on what teachers had indicated in SACMEQ I as the most important aspects of their work). This led to the review of teacher salaries as one of the several ways of enhancing teacher motivation.

CHOOSING PATHWAYS TO EDUCATION FOR ALL

Few SACMEQ countries have achieved universal primary education (UPE). Following the impetus from the Jomtien Declaration on Education for All (1990), there has been renewed efforts in favour of the universalization of basic education, and several countries have implemented reform measures to this effect. The most recent efforts were by

countries such as Namibia, Malawi and Kenya. Due to their differing national contexts, each country has found itself facing unique sets of obstacles in the march towards EFA. The results from SACMEQ research have provided each of these countries with research-based suggestions on the path they can follow in order to achieve EFA (Dolata, Ikeda & Murimba, 2004).

Kenya is one specific example of a country that is currently grappling with a massive expansion of access to basic education following the introduction of 'free primary education' in 2003. It has actually used the findings of SACMEQ in its consultative meetings at the provincial and district levels. SACMEQ's findings on gender, regional disparities and internal inefficiencies were issues that were discussed and were used to guide the development of district, provincial and national EFA action plans. Lesotho has largely achieved universal access, and has been working on the quality dimension on its global EFA 2000 assessment and EFA 2015 assessment. SACMEQ and EFA national committees have shared resources and expertise in order to raise levels of learners' achievement, with SACMEQ providing monitoring indicators on educational quality. Some of the indicators used were the condition of school buildings, the level of book sharing, teacher qualifications and pupil mean scores. Swaziland similarly achieved UPE in 1985, but the real threat is the sustenance of EFA goals in the face of dwindling national resources. The focus, therefore, is on enhancing the quality and relevance of primary education as one strategy for ensuring that schools continue to attract and retain pupils. This has entailed expanding the existing schools, providing quality teachers and facilities throughout the country, developing an integrated system of education that provides equal opportunities to all pupils, and developing teaching/learning strategies that reduce wastage, repetition and dropout. Data generated through SACMEQ research have been used to monitor progress in this regard, as well as in monitoring the implementation of Swaziland's national EFA plan. This plan has learning achievement as one of its areas of focus.

Limitations, facilitating and inhibiting factors

The usefulness of SACMEQ research is so vast that most countries have managed to exploit only a small proportion of the possible benefits. At the theoretical level, results of SACMEQ, just like other cross-national studies, have their own limitations, and Beaton et al. (1999) summarize these. The ministries' ability to make fuller use of SACMEQ results and heighten impact is determined by many other factors, among them were implementation capacity, resources and commitment. SACMEQ's goal is to expand capacity so that there is in each country a critical mass of experts in policy research, evaluation and assessment. In June–July 2004, SACMEQ initiated a co-ordinated system of collaboration with universities and other similar institutions in each SACMEQ country so that they not only take an interest in SACMEQ's work, but put at the disposal of SACMEQ and the ministries any expertise in these institutions. The new thrust is also to institutionalize the SACMEQ process in education systems through the deliberate, planned integration of SACMEQ processes into regular ministry functions, such as routine data collection. For the majority of SACMEQ countries, this goal is yet to be fully realized and a lot more work around SACMEQ reports and data is needed.

SACMEQ studies, like other cross-national studies, have frequently raised several concerns among ministers and their officials. One of the key concerns has been that of unfair comparisons of national performance. SACMEQ has already experienced a situation where one of its members publicly aired this concern, and it has taken considerable effort to allay these fears by demonstrating to all countries that the presentation of cross-national results did not focus on 'cognitive Olympics', but on more important issues far beyond this.

An additional limitation is the frequent turnover or loss of NRCs. Because of the specialized training they receive through SACMEQ, NRCs frequently find themselves appointed to other positions within the ministry of education, or in other sector ministries, or even outside the employ of government where their skills cannot be put to day-to-day use. As long as they remain within their countries or region, this may not represent a total loss of capacity as such. Nevertheless, some countries (e.g. Kenya) have been better able than others to make such skills available by ensuring that former NRCs continue to make their skills available to the ministry in different capacities. In other countries, the loss has been near-total and SACMEQ has become a victim of its own success. Efforts have been underway at regional level to create a network of SACMEQ 'graduates' so that the capacity built is not only not lost, but is regularly used in a variety of ways.

SACMEQ countries have employed a research cycle whose elements are the same across countries, but SACMEQ's impact has not been the same in different countries. The three key factors that have influenced the magnitude of impact are: (a) the organizational culture of the host ministry; (b) opportunities created by other forces impacting on educational policy reform; and (c) technical and advocacy skills of the NRCs and their partners.

ORGANIZATIONAL CULTURE

Different ministries exhibit different cultures that are reflected in the patterns of authority and communication, decision-making processes and in-built incentive systems. In ministries that place planning functions and processes at the centre of the system's decision-making processes, SACMEQ results have found more use and therefore had a bigger impact on policy. Where planning functions are marginalized, in some cases leading to weakened planning units, results of SACMEQ have not been accorded the importance they deserve. SACMEQ findings have, in some countries, ignited debate that initiated the process of educational reform, but since reform has a destabilizing effect on systems, ministry officials have initiated, participated in and promoted change in cases where the underlying values supported change rather than the *status quo*. In systems that have a measure of inertia, change is risky, and thus requires courage and daring. In one country, a SACMEQ NRC received a 'punishment posting' when he reported that, from SACMEQ results, it was clear that extra tuition in the education system had reached alarming proportions. The punishment posting took him away from the capital to be an education director in a remote district. There are other examples of this, but the general observation made is that ministries that embraced a culture associated with a learning organization gave SACMEQ results an opportunity to impact positively on the system.

OPPORTUNITIES FOR EDUCATIONAL POLICY REFORM

In countries such as Kenya, Malawi, Namibia and Zambia, there have been significant educational reforms that made the system naturally 'unfreeze' resulting in opportunities for the use of results from SACMEQ and other research initiatives in shaping new policies. In Namibia, for example, the Minister of Education himself took a personal interest in SACMEQ results because they were useful in advancing the reform agenda whose focus was on achieving greater equity in the allocation of resources. He, for example, required the SACMEQ NRC to brief him on SACMEQ-related matters directly. Similarly, on 29 September 2003, the Kenyan Minister invited his NRC, the Director of SACMEQ and the IIEP Programme Specialist for a private meeting to discuss Kenya's SACMEQ results and assess how these could be used to monitor the impacts of FPE introduced earlier in the year. Zambia and Malawi are other examples of countries where major educational reforms created a situation of flux that provided fertile ground for the use of SACMEQ results.

NRCS' TECHNICAL AND ADVOCACY SKILLS

The NRC of each country and his or her team are the key advocates in SACMEQ's work at national level. In some countries, NRCs actively and regularly inform their ministries' decision-makers on the outcomes of SACMEQ research at every stage, and this helps create broader interest and participation. In Namibia, for example, the ministry set aside a budget that enabled the NRC and his team to hold feedback meetings in each province. The content of each of these meetings focused on results that were relevant to the specific province and to the stakeholders invited to the feedback meeting. The NRC for Seychelles has made a range of presentations to various stakeholders, such as head teachers, school managers, parent/teacher associations, teacher trainers and professional development officers. He also secured a spot on the radio show 'Windows on the World' and was, at the time of writing, preparing presentations to teachers in schools. In Kenya, a tradition of regular feedback was established from the early days of SACMEQ and, despite the fact that there has been a rapid turnover of NRCs, SACMEQ findings have continued to play a big role in decision-making processes. In those countries where NRCs maintained a low profile, SACMEQ's impact has correspondingly been less. Indeed, it must be stated that, although the regular Assembly of Ministers meetings have ensured that they debate policy issues brought up in their reports, the importance that each minister attaches to SACMEQ's research and training programme is different. Where a minister expresses his or her interest in SACMEQ openly, the decision-making structures below him have invariably responded positively, and this has heightened SACMEQ's impact.

Caveats for similar initiatives

SACMEQ was born out of the efforts of one country that was prepared to share its experiences and data with planners from other countries. The first draft of Zimbabwe's

1991 report was written collaboratively by these planners, a phenomenon that is rare because a foundation of trust and goodwill has to be established by all participating countries so that they can begin to collaborate genuinely, share expertise and experiences, and support one another.

The high standards SACMEQ has achieved in its research and training, place considerable demands on participating ministries, but, once established, the tradition of quality remains. When Malawi did not meet the expected standards in SACMEQ II, it was the ministry itself that decided to go back to the drawing board and embark on a fresh process. South Africa has not been totally satisfied with the quality of its sample, and has raised concerns in an effort to avert a repeat. The high standards set and achieved, however, were only possible because the best experts in all elements of policy research, evaluation and assessment were invited to provide technical leadership in the first instance, and these happened to have had a long association with the IEA. This is where SACMEQ's association with IIEP has been important. IIEP is an 'external friend' that facilitates SACMEQ's access to the best experts.

SACMEQ's impact could be a lot greater if it networked with those institutions that have specific competencies in areas such as advocacy, social mobilization and capacity development. Networking with such institutions and organizations is one of the key challenges that SACMEQ faces. Immense opportunities for curriculum reform have remained largely untapped in some countries. In the area of teacher development, only Mozambique has used SACMEQ results to stimulate innovative pedagogical practices. SACMEQ's plan is to benefit from the associative strength emerging from the comparative advantages of sister initiatives and the region's institutions of higher and tertiary education. Hence the recent thrust in networking and collaboration.

It is pertinent to point out that, as more countries become more involved in an initiative of this nature, the co-ordination of tasks becomes more complex and therefore time-consuming. Zimbabwe's 1991 survey took only 11 weeks. SACMEQ I (with 7 countries) was completed in 2 years, and SACMEQ II (with 14 countries) took 3 years. Because different countries have different capacities, they move at different paces. When a country's pace is slow, it holds up progress among the other countries, and there is need to provide timely support in order to avoid delays.

In SACMEQ I, the focus was on reading, but SACMEQ II expanded the focus to cover mathematics as well. In addition, teachers were also tested. However, some ministries are already indicating that their needs are changing, and that they now need to have similarly high-quality information about the performance of their systems at the post-primary level. Others have expressed a strong sentiment that the issues of HIV and AIDS should receive greater prominence in SACMEQ III, and a decision has already been made in this direction. Yet others feel that the scope of the data should now expand to cover science and life-skills. These are all ambitious suggestions, but there is a limit to what a research and training initiative can tackle and accomplish. The process has to be incremental, with lessons from previous waves incorporated into the plans and implementation of successive projects.

Conclusion

SACMEQ is fast emerging as a globally recognized initiative in the area of the monitoring and evaluation of educational quality, and the results of its research and training have not only been used within the member countries, but elsewhere too. SACMEQ has had a presence in the whole of Southern and Eastern Africa, and has contributed to the broader debate on the quality of education at a variety of forums, such as the Southern Africa Development Community (SADC), Save the Children Alliance, the Association for the Development of Education in Africa (ADEA), UNESCO's Conference of Ministers of Education of African Member States (MINEDAF), the Forum for African Parliamentarians for Education (FAPED) and others. The SACMEQ data archive that is now open to the world will, no doubt, offer opportunities for secondary research, contributing to a lively debate on the quality of education. SACMEQ celebrates its 10th anniversary in 2005 and has an ambitious programme for the next 10 years. Some of the activities foreseen include specialized training workshops, dissemination meetings, implementing a research fellowship programme, distribution of the SACMEQ I and II data archive, and the publication of articles on a variety of educational issues emerging from the data it has generated. Now that it has its own website, it will reach many more people. The immense potential SACMEQ has demonstrated has prompted other regions to set up their own consortia along the SACMEQ model and the latest example is the one taking shape in South-East Asia.

Notes

1. SACMEQ is made up of 15 ministries of education in 14 countries, with Zanzibar and Tanzania Mainland (which make up one country, the United Republic of Tanzania) treated as two ministries of education because education is not a union matter. Therefore, when reference is made to 'countries' the number is 14, and when reference is made to 'ministries' the number is 15.
2. The table is based on the published SACMEQ I national policy reports for the respective countries and on the SACMEQ Data Archive, compiled in September 2003 and containing all data sets for all countries.
3. To facilitate interpretation and comparisons, reading and mathematics scores were transformed so that the SACMEQ mean was 500, with a standard deviation of 100.
4. The fifteenth SACMEQ ministry (Zimbabwe) was not included because it did not take part in SACMEQ II.
5. The details were reported in an article by Moyo and Murimba (1994).

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