SYSTEMS APPROACH FOR BETTER EDUCATION RESULTS

SABER
Working Paper Series

Number 3 June 2012

What Matters Most for School Health and School Feeding: A Framework Paper

THE WORLD BANK

This document is intended to be read in conjunction with the following comprehensive summaries of the evidence base for school health and school feeding.

Bundy, D. A. P. 2011. "Rethinking School Health: A Key Component of Education for All." Directions in Development. World Bank, Washington, DC.
http://issuu.com/world.bank.publications/docs/9780821379073

Bundy, D. A. P., C. Burbano, M. Grosh, A. Gelli, M. C. H. Jukes, and L. J. Drake. 2009. "Rethinking School Feeding: Social Safety Nets, Child Development, and the Education Sector." Directions in Development Series. World Bank, Washington, DC.
http://issuu.com/world.bank.publications/docs/9780821379073

Contents

Abbreviations and Acronyms

AIDS	Acquired immune deficiency syndrome
CCT	Conditional cash transfer
CFS	Child-Friendly Spaces
CSHP	Coordinated School Health Program
EAC	East African Community
ECD	Early child development
ECOWAS	Economic Community of West African States
EDC	Education Development Center, Inc.
EFA	Education for All
FAO	Food and Agriculture Organization of the United Nations
FRESH	Focusing Resources on Effective School Health
GCNF	Global Child Nutrition Forum
HDNED	Human Development Network, Education Department
HGSF	Home Grown School Feeding
HIV	Human immunodeficiency virus
IFPRI	International Food Policy Research Institute
IQ	Intelligence quotient
LSHTM	London School of Hygiene and Tropical Medicine
M&E	Monitoring and evaluation
MCH	Maternal and child health
MDG	Millennium Development Goal
MoE	Ministry of Education
MoH	Ministry of Health
NCD	Non-communicable disease
NTD	Neglected tropical disease
PCD	The Partnership for Child Development
SABER	Systems Approach for Better Education Results
SD	Standard deviation
SHN	School health and nutrition
SHPP	School Health Promotion Program
SP	Social protection
THR	Take-home rations
THTM	Teenage Health Teaching Modules
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
WFP	United Nations World Food Programme
WHO	World Health Organization

Introduction

The provision of quality schools, textbooks, and teachers can result in effective education only if a child is in school and ready and able to learn. The child is at the center of efforts to achieve Education for All (EFA) by 2015 and to address the Millennium Development Goals (MDGs) of universal basic education and gender equality in educational access. A child who is hungry or sick will not be able to complete a basic education of good quality. In order to achieve EFA, it is essential that the poorest children, who suffer most from ill health and hunger, are able to attend school and learn while there.

The health of the learner

School health and nutrition (SHN) programs can contribute to EFA and have become a part of national development policy worldwide. They have a long history in rich countries, where they were among the first social protection programs to emerge at the beginning of the 20th century. In middle- and low-income countries, school health programs were viewed primarily as having health sector-specific objectives until the World Education Forum in Dakar in 2000. Since then, there has been increasing recognition of the role of good SHN programs in achieving the EFA goals.

Some of the most common health conditions of school-age children affect their education. Malaria and worm infections can reduce enrolment and increase absenteeism, while hunger and anemia can affect cognition and learning, thus, exacerbating the problems of even those children who do go to school. The pain associated with tooth decay, and the diarrhea and respiratory diseases associated with poor hygiene, may also affect both attendance and learning.

These are not rare problems. The major health conditions that affect children's education are highly prevalent among poor schoolchildren. It is estimated that in low-income countries, worms infect some 169 million school-age children, each of whom loses some 3.75 IQ (intelligence quotient) points as a consequence. Some 300 million schoolchildren have iron-deficiency anemia, causing them to lose some 6 IQ points per child. Hunger affects learning and attention: some 66 million schoolchildren go to school hungry. All of these conditions translate into the equivalent of between 200 million and 500 million days of school lost to ill health in low-income countries each year. The potential scale of benefit from school health programs is therefore exceptionally great, particularly among the poorest children. This pro-poor outcome is relatively unusual among education interventions, the majority of which offer greater benefit to the more capable children who can better take advantage of the opportunities on offer.

The School as a Delivery Platform for Learner Health

A pervasive school system provides a platform for delivering simple health interventions to schoolchildren. This approach may be more cost-effective than the health system, as there are typically more teachers than nurses and more schools than clinics, often by an order of magnitude. In cost-benefit analyses, school health programs often compare well with many other education interventions and have the additional advantage of optimizing the benefits of the education already being offered to poor children. These programs are often remarkably low in cost; for example, deworming and iron supplements cost less than a dollar per child per year. In the complex set of conditions required for a child to learn well, improved health can be one of the simplest and cheapest to achieve.

School Health and School Feeding in World Bank Sector Strategies

School health and school feeding are both incorporated into the World Bank human development sector strategies.

- In the *Education Sector Strategy 2020: Learning for All* (World Bank 2011), school health and school feeding are featured as part of the range of child development interventions for "investing early," "investing smartly," and "investing for all," which ensure children are ready to learn, to keep children in school, and to improve learning at school.
- In the *Social Protection and Labor Strategy 2012–2022: Resilience, Equity, and Opportunity* (World Bank 2012), school feeding features as one of the key safety nets under equity, "through protecting against destitution and promoting equality of opportunity".

Including School Health in the SABER Framework

Recognizing the importance of school health, the World Bank's Human Development Network, Education Department (HDNED) has developed the Systems Approach for Better Education Results (SABER)-School Health and School Feeding to assess school health and school feeding policy frameworks. SABER-School Health and School Feeding are part of a larger exercise launched by the World Bank's HDNED and aimed at benchmarking all of the education domains. The main purpose of this initiative is to provide standards of good practice against which countries can rate themselves (World Bank 2012).

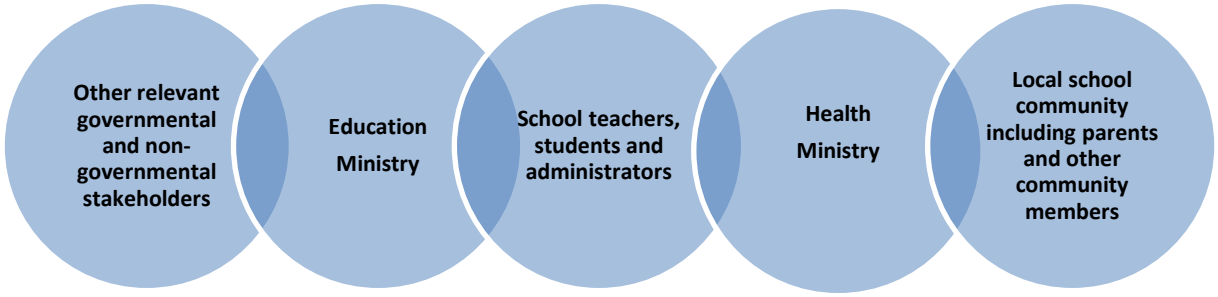
Although school feeding is a component of a broader school health program, the costs and scale of school feeding are much greater than other school health program components. For this reason, a separate rubric-framework has been developed for assessing school feeding policies. This paper includes discussion of both the school health and the school feeding rubric-frameworks as the interventions involved are mutually reinforcing. For example, delivery of micronutrients and deworming provide a supportive context for the delivery of school feeding and may reinforce the effects (WFP and UNICEF 2005).

This paper will articulate the reasoning behind the SABER-School Health and School Feeding frameworks. The paper will describe: 1) the history and development of a common framework for implementing school health programs; 2) how SABER-School Health and School Feeding have built on this history to create rubric-frameworks for benchmarking education policies in developing countries; 3) the evidence base for the rubric-frameworks; and 4) the plan for implementing these frameworks.

SABER framework-rubrics structure

The primary focus of the SABER-School Health and School Feeding exercise is gathering systematic and verifiable information about the quality of the policies rather than gathering data about the quality of policy implementation. This is premised on an understanding that the foundation for effective implementation is a sound policy framework. As such, SABER is designed to provide a snapshot of the policy framework and lay the groundwork for a deeper analysis of the implementation of this framework at a later stage. Figure 1 shows the actors in the school health and school feeding domains.

Figure 1: Actors in school health and school feeding.



The core of the SABER process is the SABER framework-rubric. This framework-rubric identifies the core policy goals, which are the core areas of focus for school health and school feeding programs. In addition to the core policy goals discussed above, there are policy levers, which indicate progress towards achieving the strategic goals. Linked to each policy lever is a set of indicators that a government can take to improve its policy framework. For each indicator, there are four stages of development that have been identified and standardized. These four stages are *latent, emerging, established, and advanced*:

1) *Latent:* Very little policy implementation;
2) *Emerging:* Policy implementation between the levels of latent and established;
3) *Established:* Minimum policy implementation; and
4) *Advanced:* Implementation of a comprehensive policy framework.

Using diagnostic tools developed for SABER-School Health and School Feeding to determine a country's progress in implementing each indicator can provide a snapshot of the developmental status of school health policy in the country. The SABER-School Health and School Feeding framework-rubrics are provided in Annexes 1 and 2.

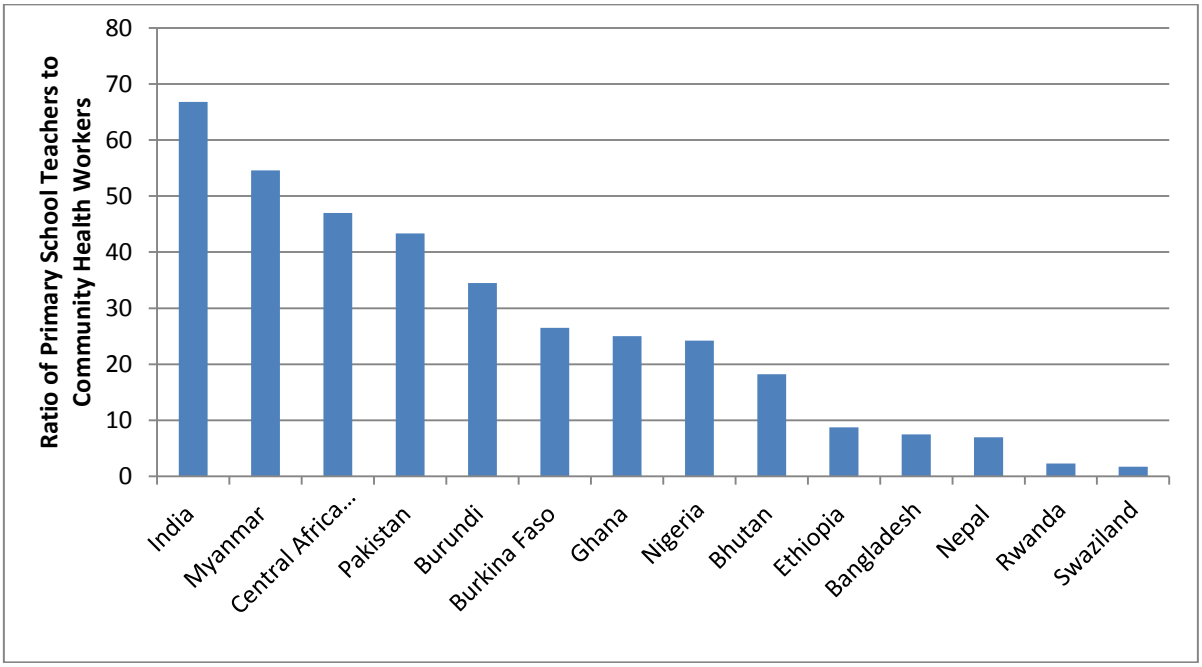
Rationale for benchmarking standards

School health and school feeding programs are almost ubiquitous in high-income countries. However, the model used in high-income countries is significantly different to the one that has been developed in recent years for low- and middle-income countries. There are two main reasons for this.

1) **Capacity and resource constraints** in developing countries mean that health systems in these countries cannot provide health care as comprehensively as in developed countries. The model in rich countries is for the health sector to take responsibility for health delivery to schools. In low- and middle-income countries school-age children are not priorities for the health sector, which typically lacks the resources to reach out to schools. The human resources in the health sector in these countries are often considerably lower than the education sector, in terms of those public health workers who can potentially reach school-age children. This is demonstrated in Figure 2,

which shows the ratio of primary school teachers to community health workers in 14 low- and lower-middle-income countries. Additionally, many low- and middle-income countries have far less health infrastructures than education infrastructures. These countries face the challenge of finding alternative means of ensuring the health and wellbeing of school-age children, which presents an opportunity for schools to serve as an entry point for delivering health services to schoolchildren.

Figure 2: Ratio of primary school teachers to community health workers in 14 low- and lower-middle-income countries.



Source: Data on the number of primary school teachers are from the UNESCO Institute for Statistics (http://stats.uis.unesco.org), and data on the number of community health workers are from the WHO Global Health Observatory Data Repository (http://apps.who.int/ghodata/).

2) **Communicable diseases** pose at least as great a challenge as non-communicable diseases in low- and middle-income countries, whereas the challenge in high-income countries is almost exclusively for non-communicable diseases (NCDs). In turn, factors such as the school environment and hygiene promotion become more significant in low- and middle-income countries because of their role in the spread of communicable diseases. Furthermore, the evidence suggests that while NCDs are important for health they may be less important to education and so less of a priority for the education sector.

It is the poorest countries that face these challenges most starkly, and school health programs in these countries have a unique opportunity to "level the playing field" by improving the health and in turn, the educational outcomes of school-age children. Keeping this in mind, the model that is currently

recognized as best practice for school health in developing countries, is one that is pro-poor, school-based and focused on education outcomes. The best practices of this model have been used to inform the development of SABER-School Health and School Feeding.

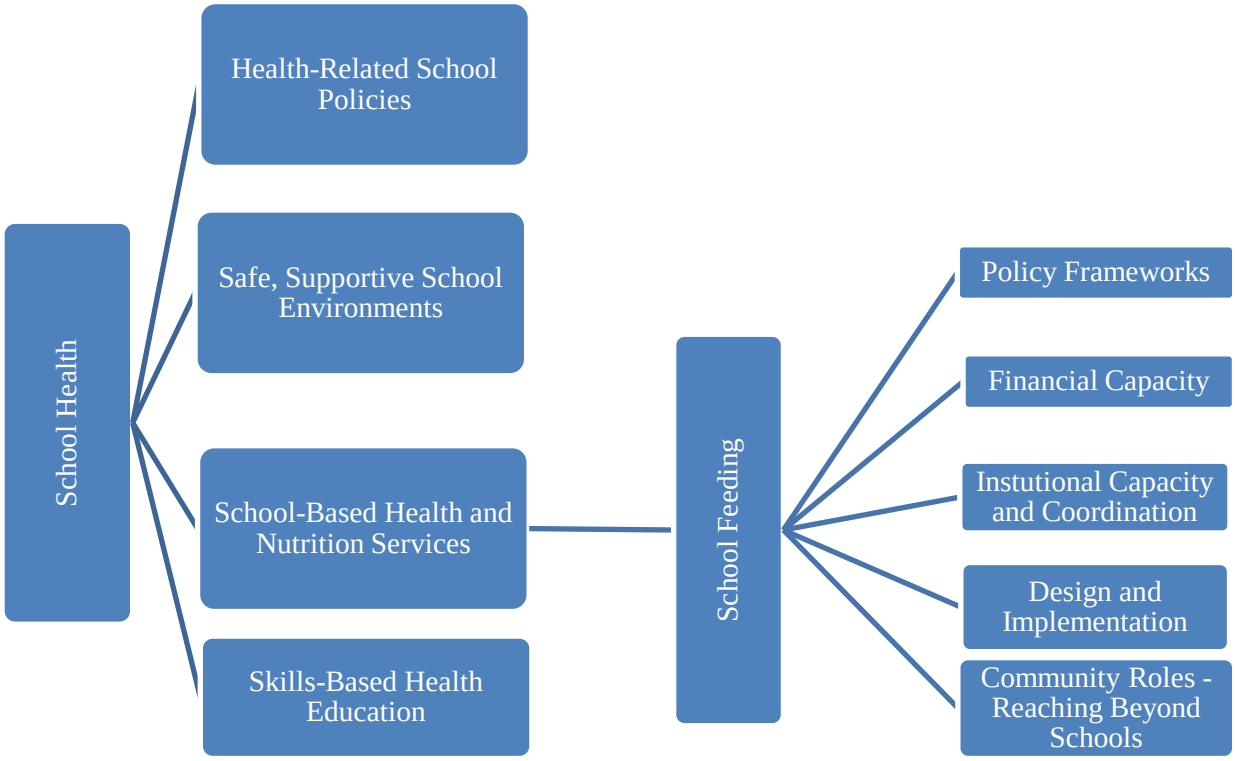
Relationship between SABER-School Health and School Feeding Domains

SABER-School Feeding is a component of the broader SABER-School Health domain. The term "school health" in this paper includes a range of interventions that can be delivered from a school platform—which, in addition to impacting education outcomes, variously aim to improve health, enhance nutrition, alleviate hunger, or prevent disease—while recognizing that any individual intervention may address only one of these aims. "School health" is used to refer to school-based interventions that address health conditions specifically, reserving the use of "nutrition" for when a specific nutrition outcome is sought, such as correcting a micronutrient deficiency. When an intervention involves the supply of food specifically, the term "school feeding" is used.

Most of the range of school health interventions are at a common scale both in terms of logistics and cost, but school feeding dwarfs the other interventions in terms of complexity and cost. As a result, school feeding programs tend to have their own national budget line with special and separate mechanisms for implementation and monitoring and evaluation. In light of these considerations, we have chosen to focus particular attention on school feeding as an expanded domain of school-based health and nutrition services, as shown in Figure 3.

It is important to note that, as one of the range of school health interventions, school feeding programs are most effectively implemented only where a framework for broader school health policies is firmly in place. Working across education, health, social protection, and other sectors, school feeding good practice builds upon and links with the broader school health multisectoral policy.

Figure 3: Relationship between SABER-School Health and School Feeding domains.

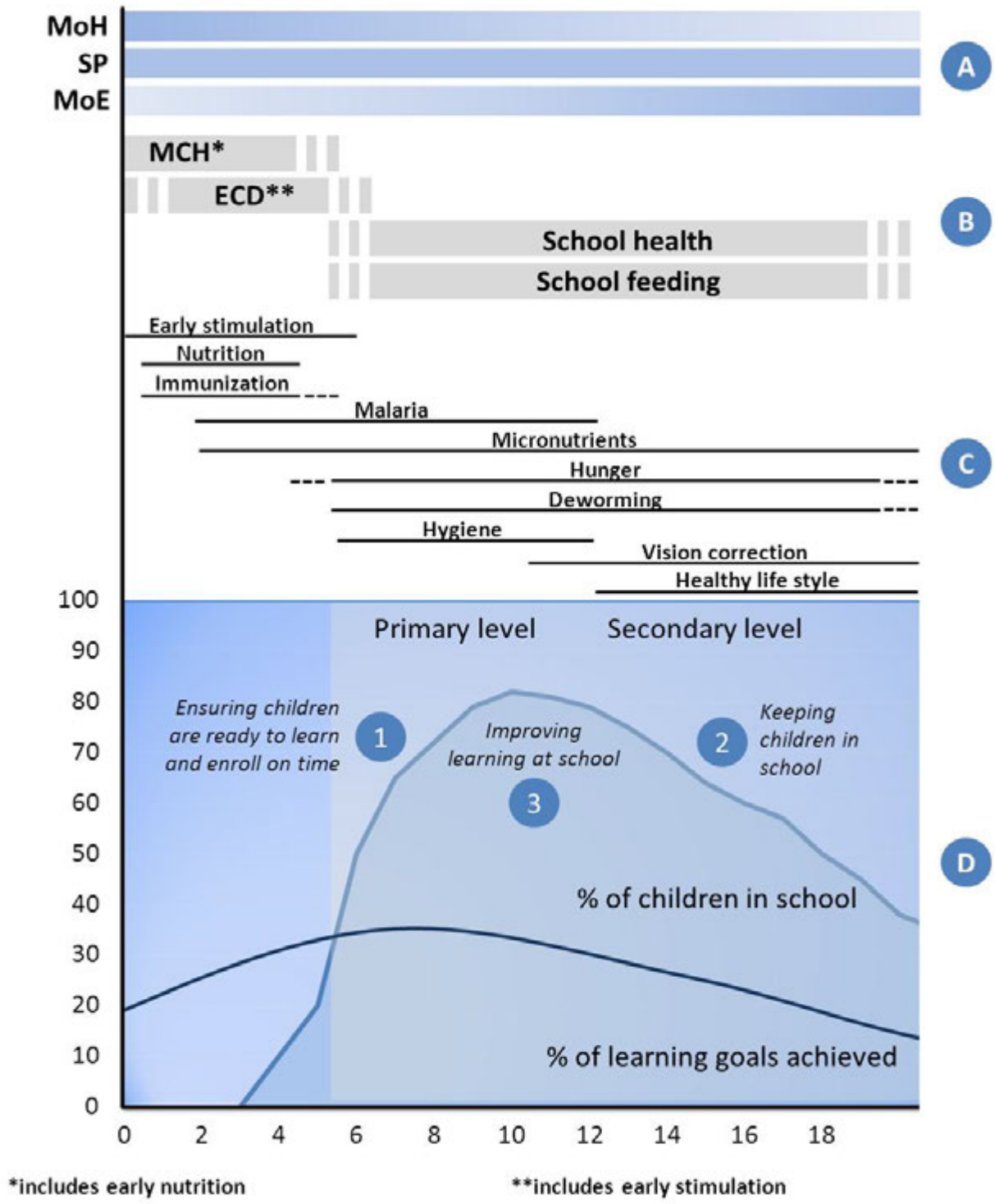


Conceptual frameworks for SABER-School Health and School Feeding

Conceptual Framework for SABER-School HealthBenefits of school health programs

School health is a key aspect of ensuring the success of the learner. Figure 4 is based on the main elements of the World Bank education strategy for basic education, which identifies three key objectives for intervention at sequential stages in the life-cycle of a child to (i) ensure that children are ready to learn and enroll on time; (ii) keep children in school by enhancing attendance and reducing dropout rates; and (iii) improve learning at school by enhancing cognition and educational achievement. SABER-School Health and School Feeding is premised on the evidence that interventions to improve health and nutrition and avoid hunger can contribute to these three objectives.

Figure 4: Health and nutrition interventions throughout childhood contribute to education outcomes.



Source: Bundy 2011. *Note:* MoH= Ministry of Health; SP= social protection; MoE= Ministry of Education; MCH= Maternal and child health; ECD= Early child development.

Figure 4 shows schematically how the age-specific patterns of education are related to the age-specific patterns of disease and programmatic intervention. Figure 4 also shows that the sectoral responsibility for these interventions is to some extent age dependent. The health sector typically takes the lead in delivering the maternal and child health programs that are so important to children in the age range covering fetal development and the first two years of life—a range often called the window of opportunity and identified by the shorthand – 9 to 24 months. There is then a mix of sectors, including education, that contribute to the period covered by early child development (ECD) programs, usually taken to be 2 to 6 years of age. Thereafter, SHN programs seek to support children of school-age. Thus, there is a shifting of the center of gravity of responsibility from the health to the education sectors as children age, with social protection playing a potentially important role throughout. However, this is a generalization, as approaches vary considerably among countries.

School Health and School Feeding Programs Build on the Foundation of Early Child Development Programs

ECD is a crucial program in ensuring the school readiness of children. These issues are explored in detail in the SABER-ECD framework. But child development is a continuing process and the gains made in the early years must be consolidated as the child grows.

For example, even if early interventions have helped children enroll in school at the appropriate age, it is commonly reported that illness can cause children to miss school. Malaria in some areas of Africa has been cited as the source of more than 50 percent of preventable absenteeism (Brooker 2009). Worm infection in Kenya is also associated with absenteeism; schoolchildren who were given treatment against worms (hookworm and bilharzia) recorded improvements in school participation in a combined measure of enrollment and attendance (Miguel and Kremer 2004). In the first year of treatment, participation increased by 7 percentage points (from a baseline of around 75 percent participation). Table 1 provides other examples of interventions that have improved school attendance.

Table 1: Effectiveness of interventions on improving school attendance.

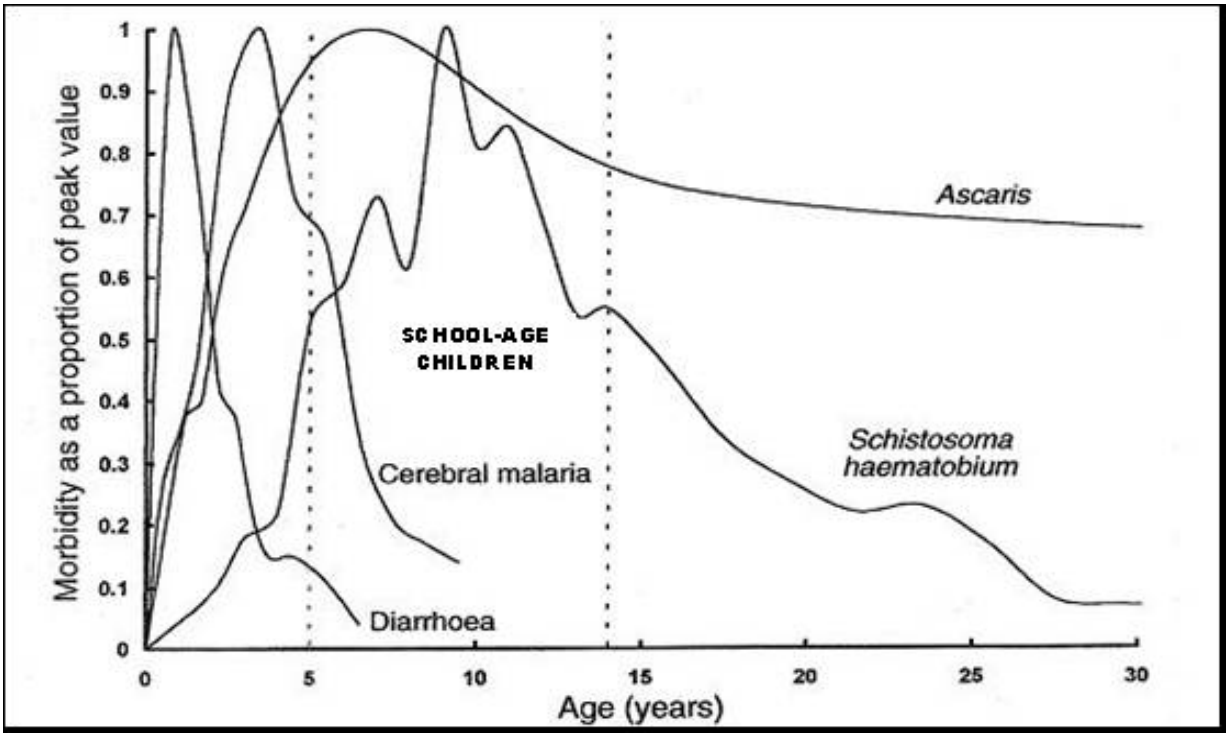
Study	Country	Intervention	Age (years)	Sample characteristics	Increase in % attendance
Feeding					
Powell et al. (1998)	Jamaica	Daily breakfast for 1 year	M=9		2.3
van Stuijvenberg et al. (1999)	South Africa	Fortified biscuits	6–11		15.0
Deworming					
Simeon et al. (1995)	Jamaica	Deworming	7–10	Mild-moderate whipworm	6.7*
Miguel and Kremer (2004)	Kenya	Deworming	6–18		7.0
Malaria prevention					
Fernando et al. (2006)	Sri Lanka	Anti malaria pills (chloroquine)	6–12		3.4

Source: Jukes, Drake, and Bundy (2008). *Notes:* * For children with poor nutritional status only. M= mean.

School Health and School Feeding Improve Learning at School by Enhancing Cognition and Educational Achievement

Children's learning continues to suffer from poor health and nutrition while they are at school. Figure 5 illustrates the age-dependency of some common conditions, and shows how some are actually more common among school-age children. Cognitive abilities in this age group are poorer among children who, for example, are hungry and have malaria, worm infections, or iron deficiency. Treating children for these diseases and conditions can improve their potential to learn. Table 2 shows some examples of how health and nutrition interventions affect the cognitive function and educational achievement of school-age children. It illustrates that, perhaps surprisingly, the quality of evidence tends to be stronger in this area than for more simple metrics, such as enrollment, perhaps reflecting the relative sophistication of the experimental designs needed to measure cognitive outcomes.

Figure 5: Age distribution of infection-specific morbidity.



Source: Bundy and Guyatt (1996).

Table 2: Impact of health interventions on cognitive function and educational achievement of school-age children.

Study	Country	Intervention	Age (years)	Sample characteristics	Effect size (SD)	Outcomes
IRON						
Pollitt et al. 1989	Thailand	Iron supplementation	9–11	Iron deficient	No effect	Raven's Progressive Matrices
						Education tests
Soemantri, Pollitt, and Kim 1985	Indonesia	Iron supplementation	10–11	Iron deficient	0.42	Education tests
					0.51	Concentration
Seshadri and Golpadas 1989	India	Iron supplementation	8–15	Iron deficient	+ve[a]	4 cognitive tests
FEEDING						
Powell et al. 1998	Jamaica	Daily breakfast for 1 year	M= 9		0.11[b]	Arithmetic
					No effect	Reading
					No effect	Spelling
Whaley et al. 2003	Kenya	Meat/energy[c] supplement for 2 years	M=7.6		0.16[d]	Raven's Progressive Matrices
					No effect	Verbal comp
					0.11–0.15	Arithmetic
MICRONUTRIENTS						
Vazir et al. 2006	India	Multiple micronutrients for 1 year	6–15		+ve	Attention test
					No effect	2 cognitive tests
					No effect	IQ
					No effect	4 education tests
MALARIA PREVENTION						
Fernando et al. 2006	Sri Lanka	Antimalaria pills (chloroquine)	6–12		0.65	Mathematics
					0.59	Language
Clarke et al. 2008	Kenya	IPT (amodiaquine and sulfadoxine-pyrimethamine)	10–18		0.20–0.55	Sustained attention
DEWORMING						
Nokes et al. 1992	Jamaica	Deworming	9–12	Moderate-high whipworm infection	0.16–0.26	3 cognitive tests
					No effect	5 cognitive tests
Simeon, Grantham-McGregor, and Wong 1995	Jamaica		7–10	Mild-moderate whipworm	~0.15[e]	Verbal fluency
					No effect	6 cognitive tests
Simeon et al. 1995	Jamaica		6–12	Whipworm infection	0.16[f]	Spelling
					No effect	Reading
					No effect	Arithmetic
Sternberg et al. 1997	Jamaica		M=10.3	Mild-moderate whipworm	No effect	7 cognitive tests
Nokes et al. 1999	China	Deworming	5–16	*S. japonicum* infection	0.59[g]	Verbal fluency
					Ns	4 cognitive tests
Grigorenko et al. 2006	Tanzania	Deworming	11–13	Heavy *S. haematobium*	0.08–0.32	3 "dynamic" cognitive tests
				Moderate hookworm infection	0.09	1 cognitive test
					No effect	7 cognitive tests

Source: Jukes, Drake, and Bundy (2008). *Note:* a. Effect is positive in: 2/4 cognitive tests for girls given 60 mg of iron daily and boys given 30 mg of iron, and all tests for boys given 40 mg of iron. b. Effect only for youngest children. c. A milk supplement had no effect. d. No effects from energy supplement. e. Effect only for children with poor nutritional status. f. Effect only for children with heaviest worm loads. g. Effect only for youngest children.

In interpreting these results, it is important to recognize that improving health may improve cognition, but quality education is then needed to help children exploit this potential. One study from Tanzania illustrates how, for most children, treatment alone cannot eradicate the cumulative effects of lifelong infection, nor compensate for years of missed learning opportunities. Deworming does not lead inevitably to improved cognitive development, but it does provide children with the potential to learn. Children in Tanzania who were given deworming treatment did not improve their performance on various cognitive tests, but did benefit from a teaching session in which they were shown how to perform the tests (Grigorenko et al. 2006). Performance on a reasoning task at the end of the study was around 0.25 standard deviations (SD) higher in treated children than in those who still carried worm infections. The treated children's performance was similar to that of children who began the study without infection. This suggests that children are more ready to learn after treatment for worm infections and that they may be able to catch up with uninfected peers if their improved learning potential is then exploited effectively in the classroom.

In general, improving health and nutrition brings the greatest educational benefits to the poorest and most vulnerable schoolchildren. In some cases, greater benefits are seen for children suffering from several conditions of ill health. For example, the greatest benefits of deworming are seen for children with heavy worm loads who also have poor nutritional status (Simeon et al. 1995). In many countries, girls are disadvantaged in educational access, but malaria prevention helps reduce the enrollment gap between girls and boys (Jukes et al. 2006). Health and nutrition interventions also help the most economically disadvantaged children. Early childhood nutritional supplements also have a greater long-term effect on children from poor families.

A number of studies (Simeon and Grantham-McGregor 1989; Pollitt, Cueto, and Jacoby 1998; Simeon 1998) have found that missing breakfast impairs educational performance to a greater extent among children with poor nutritional status. In one study in Jamaica, eating breakfast improved the scores of malnourished children by 0.25 SD more than adequately nourished children in three cognitive tests of memory and processing speed and one test of arithmetic (Simeon and Grantham-McGregor 1989). This finding echoes those of several other studies reviewed in this paper: the effects of various health and nutritional problems on children's education interact with one another. Invariably, the children who are initially worst off benefit the most.

These studies show that the greatest benefits of intervention accrue to the children who are worst off at the outset—the poor, the sick, and the malnourished—which suggests that school health and school feeding programs can be pro-poor.

This indicates that a major advantage of SHN programs is that they do something that few other education interventions do: they offer the greatest benefit to the poorest children. To understand why this is the case, the concepts of 'double jeopardy' and 'capability theory' needs to be invoked. The concept of double jeopardy was originally applied to at-risk children in the United States (Parker, Greer, and Zuckerman 1988) and refers to the way in which the poorest people in society suffer twice at the hands of disease and poor nutrition. First, poor people are in jeopardy by being more likely to suffer

from poor health and poor nutrition. With few exceptions, the diseases that affect children and their education are most prevalent in poor countries and the poorest communities within those countries. Second, as the evidence shows, these conditions of poor health and nutrition have the biggest educational impact on the poor and, even when a disease reaches rich and poor alike, the poor are most likely to experience disruption to their learning as a result.

Benefits of School Health and Nutrition for the Most Marginalized Out-of-School Children

The impact of school health programs extends to all children, beyond those who are school going. These programs have been shown to draw children—especially girls—into schools and encourage them to stay.

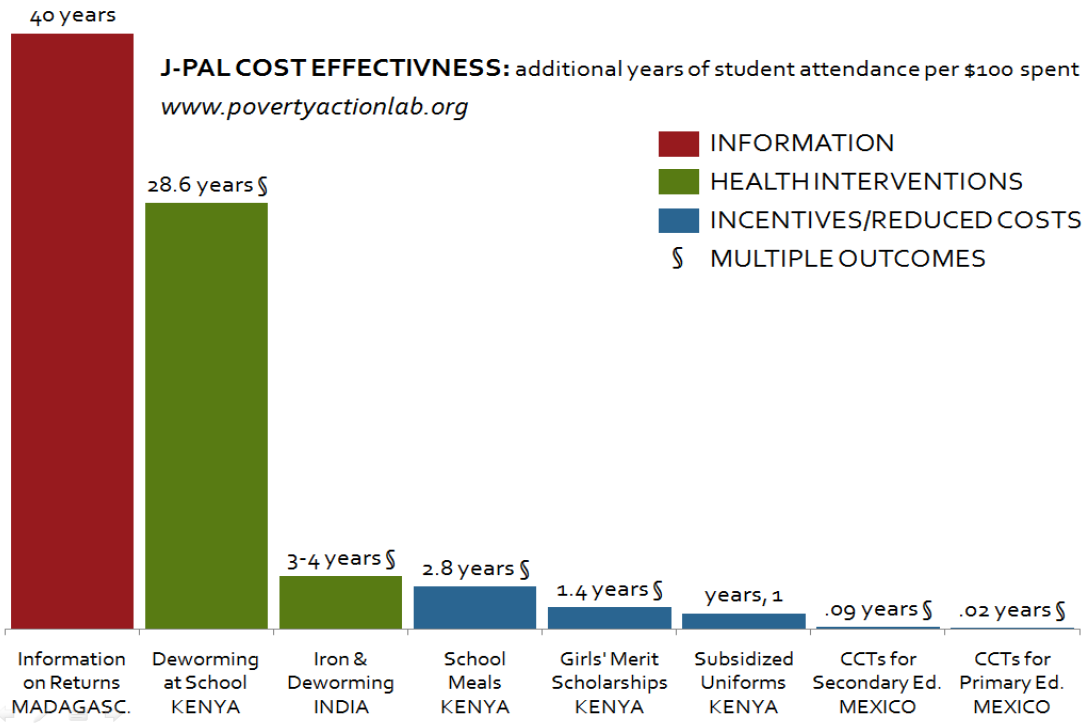
Despite EFA efforts, more than 67 million primary school-age children are out of school; most of these children are poor and marginalized and 53 percent are girls (UNESCO 2011). School health programs, such as those in Guinea and Madagascar, have consistently demonstrated that many of these children will take advantage of simple services, for example deworming, provided in schools (Del Rosso and Marek 1996) and can benefit from school feeding programs (Bundy et al. 2009). In these cases the school acts essentially as a community center. It has also been demonstrated that deworming programs in schools benefit out-of-school children by reducing disease transmission in the community as a whole (Bundy et al. 1990), which has the important consequence for EFA of more children attending school (Miguel and Kremer 2004).

This suggests that SHN programs should be considered alongside other approaches to promote enrollment and attendance, such as abolition of school fees and provision of quality education. Nevertheless, it is apparent that children who remain out of school cannot benefit from many of the important components of school-based programs. Thus, there remains a need for more flexible approaches that combine the best of non-formal, informal, and community-based interventions to ensure that the most disadvantaged out-of-school children still have access to the most important health messages, such as skills-based health education and life-skills development programs to prevent HIV.

Comparing School Health and Nutrition Programs with Other Programs to Improve Education Outcomes

An important question is how school health and school feeding programs compare with other interventions to improve education. This is an area of study that is underdeveloped generally but particularly so for interventions that offer benefits across sectors; it is also an area that is particularly open to misinterpretation. Figure 6 compares different types of interventions in terms of the number of extra years of schooling that can be bought for a US$100 investment. School-based deworming, school-based micronutrient supplements, and school feeding all seem to be particularly good investments, although one has to take care not to apply a simplistic interpretation. Not only are the interventions very different, but so too are the range of outcomes and political economies of the countries in which the studies were conducted.

Figure 6: Additional years of schooling per US$100 invested in a program.



Source: http://www.povertyactionlab.org/policy-lessons/education/student-attendance
Note: Graph includes interventions on deworming and iron, school feeding, incentives and subsidies, as well as actionable knowledge.

The results of studies on conditional cash transfers (CCTs) in Mexico help illustrate the difficulties of interpretation. Although CCT interventions have, relatively, the smallest return, this rate of return (in the context of Mexico) has long-run benefits that make the CCT program, Comunidades, a particularly good investment. This is even truer because CCTs offer substantial additional benefits, especially for health and social protection (see Fiszbein et al. 2009). CCT programs are thus, potentially a very cost-effective method to increase school enrollment (Morley and Coady 2003; Fiszbein et al. 2009). The Comunidades program is estimated to have increased enrollment by 3.4 percent and increased schooling by 0.66 years, with an average cash transfer for grades 3 to 8 of about US$136 per child per school year (Schultz 2004). Gains from a similar program in Nicaragua were estimated at 0.45 years of school at a cost of US$77 per year (Maluccio and Flores 2005).

Experience with CCTs has now been documented in some 30 countries and similarly encouraging results obtained. Yet it is still unclear to what extent the CCT approach is applicable generally. In Cambodia a CCT program resulted in a 20 percent increase in enrollment, an effect that is even more impressive because it was achieved with an income transfer of around 2 percent, rather than the 20 percent of Comunidades (Filmer and Schady 2010). However, in Morocco and the Republic of Yemen, efforts to introduce similar programs have foundered on logistical issues.

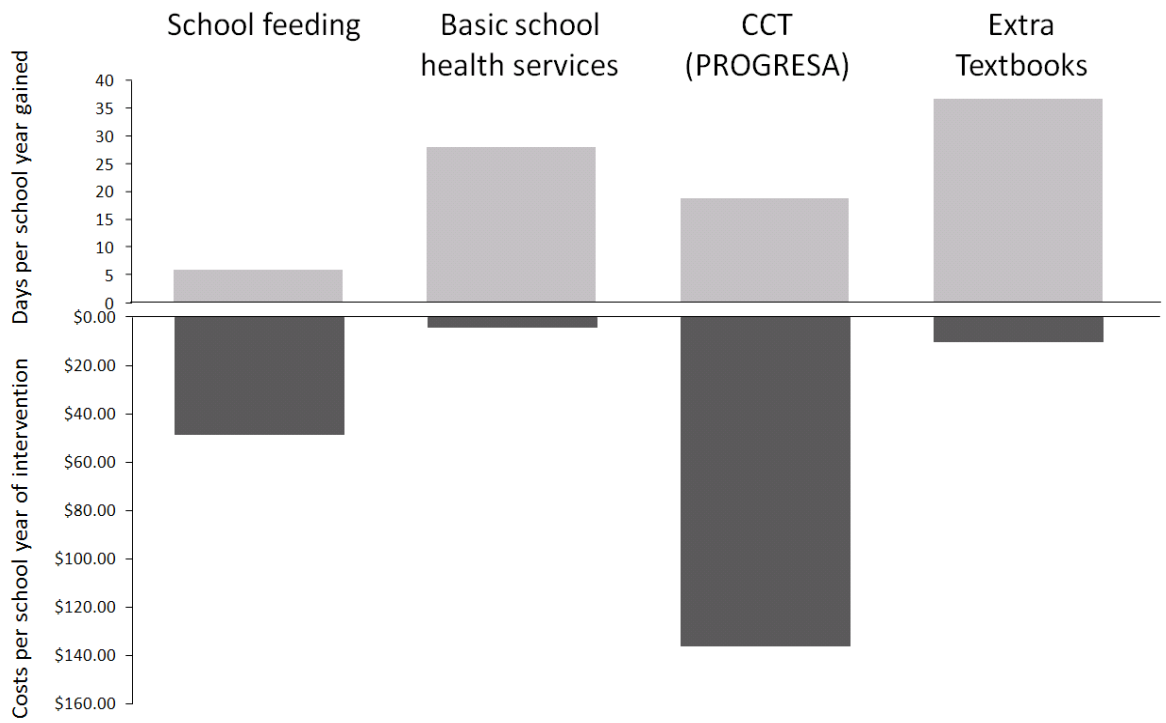
In practice, most middle-income countries offer school health services and, often, school feeding programs alongside their CCT programs. There may be several reasons for this. The way in which benefits are achieved introduces an important distinction in interpreting comparative studies. CCTs and other incentive and subsidy interventions have their main education effects on attendance and have little measurable benefit on learning outcomes. Health and nutrition programs also benefit attendance and can have additional effects on cognition and learning. From the school health perspective, CCTs resemble the benefits of a take-home ration rather than the physiological benefits of the delivery of health services and food.

It is also perhaps worth noting the very different scale of investment required. Successful CCT programs are generally very large in scope, representing a commitment of between 0.1 and 0.2 percent of gross national income. This is much greater than the cost of school feeding, and several orders of magnitude greater than the cost of basic school health services such as deworming.

Additionally, it seems probable that these programs benefit the poorest and most marginalized children who may not be captured in the CCT processes.

The educational gains of SHN programs should also be considered in the context of alternative educational inputs, such as improving teacher salaries and qualifications, reducing class size, improving school infrastructure, or providing additional instructional materials. This consideration is addressed in Figure 7. There are many studies that relate student outcomes to school characteristics, but few provide information on the relative or actual costs of the educational inputs (Pritchett and Filmer 1999). The evidence from the few randomized evaluations that have been conducted suggests that the scale of impact of additional education inputs is typically of a similar or lower magnitude compared to that of SHN programs (Kremer 2003). In Brazil and India, instructional materials (such as additional textbooks) had the highest productivity, raising student test scores significantly more than other inputs for each dollar spent. However, even these interventions only had an impact of between 0.06 SD and 0.4 SD (Lockheed and Verspoor 1999). In Kenya, textbook provision had no impact on the lowest-achieving 60 percent of the students and raised test scores by 0.2 SD for the highest-achieving 40 percent. Data on SHN interventions suggest that they improve educational achievement by a similar amount (0.25–0.4 SD).

Figure 7: Comparative cost and effectiveness of education interventions in terms of outcomes.



Source: JPAL (2005); Jukes, Drake, and Bundy (2008).

Unfortunately there are no meta-analyses that specifically compare outcomes for a range of SHN interventions in low-income countries. The nearest analysis is a recent study of the cognitive impact of ECD interventions in 23 countries, only 9 of which could be classified as low-income. This analysis showed that the six studies that used cash transfers as an intervention had the smallest average effect on cognition and the six studies using nutrition interventions achieved an intermediate effect, while the largest effect was achieved by the majority of studies (*n* = 26) that used education alone or in combination with other interventions (Nores and Barnett 2009).

Evolution of needs and opportunities for school health programs

The evidence discussed above, clearly demonstrates the impact a learner's health has on their educational achievement. Although the evidence base for this is a relatively recent development, this symbiotic relationship has long been recognized and promoting the health of children through schools is not a new practice. There is a long history of school health in the developed world because of the recognition that it is in the best interests of the education sector to address the health of children in schools. Ultimately, healthy children learn better and the evidence, discussed above, clearly indicates this. The World Health Organization (WHO) *Ottawa Charter for Health Promotion* in 1986 provided momentum for global recognition of the importance of addressing health in the educational context (WHO 1986). The application of these principles by WHO evolved into the concept of the Health

Promoting School. Soon after that the Scottish Health Education Group further developed this concept which has since been implemented in Europe through the Schools for Health in Europe network. In the United States, a parallel project was underway in the form of the Coordinated School Health Program (CSHP). More than a decade later, WHO led an effort to expand this concept globally. An Expert Committee on Comprehensive School Health Education and Promotion was convened to review trends and research in school health and ultimately informed the launch of the Global School Health Initiative.

The 1980s ushered in a movement of school health programs with a pro-poor and education outcomes focus. In low-income countries, school health programs began to shift focus away from a medical-based approach that favored elite schools in urban centers towards school-based programs that sought to improve education access and completion, particularly for poor students, by improving health and tackling hunger. In 1990, this concept of health promotion in school was revisited in the global commitment to achieve EFA for children as the World Conference on Education formally recognized the issues of health and education as key contributors of success in education.

In 2000, at the World Education Forum in Dakar, Senegal, a multi-agency initiative between the United Nations Educational, Scientific and Cultural Organization (UNESCO), WHO, the United Nations Children's Fund (UNICEF) and the World Bank was launched to provide guidance on the development and implementation of school health programs. This initiative known as the FRESH (Focusing Resources on Effective School Health) framework was developed based on the principles common to various programs outlined above. It was designed to provide a set of unifying principles to guide school health policies and programs globally. The document *Rethinking School Health* commissioned for a high-level EFA meeting in 2010 elaborates on the thematic areas of the FRESH framework (Bundy 2011). The demand for this book reflects recognition of the crucial role of school health programs in contributing to the goals of EFA by improving educational access and quality for the poorest children. Recognizing this vital focus, SABER-School Health has developed a rubric-framework for school health programs to ensure that when possible, the school can serve as an entry point for health care for school-age children, and "level the playing field" for all children to have access to a high quality education.

Framework policy goals

The FRESH framework suggests that the following four core components form the basis of an effective school health program (see also Figure 8):

1. *Health-related school policies:* Including those that address HIV and AIDS and gender;
2. *Safe, supportive school environments:* Including access to safe water, adequate sanitation and a healthy psychosocial environment;
3. *School-based health and nutrition services:* Including deworming, micronutrient supplementation, school feeding, dengue prevention and psychosocial counseling; and
4. *Skills-based health education:* Including curriculum development, life skills training, and learning materials, including HIV.

The FRESH framework also suggests that these components can only be implemented effectively when they are supported by strategic partnerships between the health and education sectors (Bundy 2011). Subsequently the FRESH approach promotes a shared framework that focuses on schools to promote health and learning. FRESH also seeks to involve the entire school community, including children, teachers, parents and other community members while linking schools to health services and integrating school health, hygiene and nutrition as a strategic means of improving education outcomes.

The adoption of this framework does not imply that these core components and strategies are the only important elements of a school health program, but rather that these components will provide a sound foundation for any pro-poor school health program. As discussed above, FRESH was developed on the basis of a sound evidence base, a reflection of best practices in school health, and is supported by the strong international consensus of all partners and stakeholders involved in school health. In light of this, the FRESH framework serves as the primary guiding principle for SABER-School Health framework-rubric. Other sources have also informed the conceptualization of the framework-rubric, including the core indicators of the monitoring and evaluation (M&E) framework for school health programs developed by FRESH partners; the experience from benchmarking other education domains; advice from an advisory committee of experts[1]; and previous work on survey education policies in various parts of the world, including the Caribbean, in 2009.[2]

The SABER framework-rubric identifies the following core policy goals, which are aligned with the four pillars of the FRESH framework:

Figure 8: Four components of the FRESH framework.

[1] Including representatives of the neglected tropical diseases (NTDs) drug donations for schools (GlaxoSmithKline), International Food Policy Research Institute (IFPRI), London School of Hygiene and Tropical Medicine (LSHTM), The Partnership for Child Development (PCD), Save the Children, the United Nations Children's Fund (UNICEF), the World Bank, the United Nations World Food Programme (WFP), and the World Health Organization (WHO).
[2] A rapid survey of school health policies in 13 countries in the Caribbean in 2009, coordinated by CARICOM.

Health-Related School Policies

Establishing health-related school policies are a vital aspect of ensuring effective school health programming. The process of setting a school health policy provides an opportunity for national leadership to demonstrate a commitment to school health programming. School health policies also play a role in ensuring accountability for quality school health programming by providing a clear basis for monitoring school health program implementation (PCD 2012).

Safe, Supportive School Environments

Ensuring a safe and supportive school environment is the second core policy goal for SABER- School Health. A safe and supportive school environment will provide adequate water and sanitation facilities but also includes a healthy psychosocial environment. Diseases related to poor sanitation and water scarcity can lead to illnesses and children are often most vulnerable to these diseases (PCD 2012). Apart from the obvious health benefits of safe water and sanitation, providing safe and separate sanitation facilities for girls has been shown to be a factor in preventing girls from attending school and consequently, addressing this can improve girl's attendance rates (PCD 2012). There is also evidence that a positive psychosocial environment at school influences the overall behavior of students. Research has shown that factors such as "relationships between teachers and students in classrooms; opportunities for student participation and responsibility; and support structures for teachers are consistently associated with student progress" (WHO 2003a). Conversely, there is a strong relationship between a negative psychosocial environment and health compromising behaviors, such as smoking, teen sex and alcohol misuse among students (WHO 2003a). Ultimately, both the physical and psychosocial school environment have been shown to impact education and subsequently a safe and supportive school environment is a critical component in improving educational access and outcomes.

School-Based Health and Nutrition Services

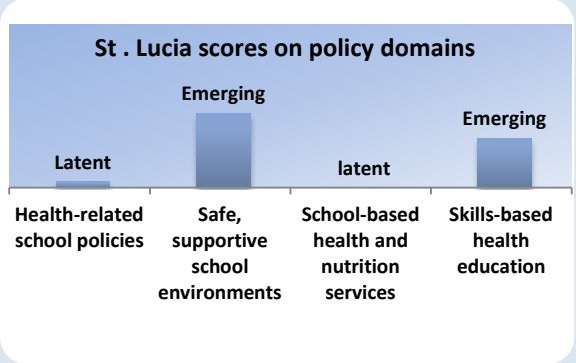
The third core policy goal of SABER-School Health is to ensure the delivery of school-based health services. School-based health and nutrition services include screening and referral for health problems as well as the provision of anthelmintics for treatment of parasitic infections, micronutrient supplementation and other simple treatments that are easily administered by teachers. This critical component of a school health program has an impact on the educational achievement of school-age children because the diseases are highly prevalent among schoolchildren (Jukes et al. 2008). Diseases such as worm infection, malnutrition, and anemia have been shown to impact school attendance as well as a child's cognitive abilities, in turn affecting their educational performance. These diseases are also often preventable and treatable with simple, easily administered treatments (Jukes et al. 2008). School-based health and nutrition services provide a cost-effective means of addressing these diseases by utilizing the existing infrastructure of the school (including a skilled workforce of teachers and administrators) together with the resources of the health, nutrition, and sanitation sectors to deliver large gains in health and education.

Skills-Based Health Education

Effective skills-based health education is the final policy goal of SABER-School Health. The school provides a crucial platform to impact the behavior and inform the choices of school-age children and adolescents. However, there is increasing evidence that effective behavior change among children requires more than teaching health knowledge (WHO 2003b). Behavior change requires a skills-based approach to health education that focuses on the development of knowledge, attitudes, values, and skills (including life skills such as inter-personal skills, critical and creative thinking, decision making and self-awareness) needed to make positive health-related decisions and act on them (WHO 2003b). A skills-based health education is critical to improving the individual behavior, alleviating social and peer pressure, addressing cultural norms and discouraging abusive relationships: all of which contribute to the health and wellbeing, and ultimately impact the educational opportunities and outcomes of school-age children.

For an example of how these four policy goals can be summarized, a synopsis report from piloting work carried out in St. Lucia is presented in Box 1.

Box 1: SABER-School Health synopsis report from St. Lucia



Health-related school policies

The school health policy framework in St. Lucia is at a **LATENT** stage in this policy goal. There is no national school health policy in St Lucia; no national budget line for school health; and no situation analysis has been conducted to assess health-related school needs. The gender dimension of health is also not addressed in national education policy.

Safe, supportive school environments

St. Lucia is at an **EMERGING** stage in its policies to ensure a safe school environment for its schoolchildren. It is advanced in its attention to the physical school environment: National standards are in place for the physical school environment and there is clean water and adequate sanitation in most schools and mechanisms are in place to monitor the quality of these facilities. There are also standards for the safety of school infrastructure, schools built after these standards were established follow these regulations and there are mechanisms in place to update old schools.

In the area of psychosocial wellbeing, there is more room for growth. HIV, physical and mental disability

have all been identified as sources of stigma and issues of stigma are covered in the life-skills curriculum but there are no systematic mechanisms in place to respond to stigmatization in schools; and there are no support groups to address specific stigma issues faced by teachers or students. There are no national standards and guidelines on addressing institutional violence in schools, but teachers receive pre- and in-service training to teach this in the curriculum. There is, however, provision for psychosocial support for teachers and students who have faced trauma due to shock.

School-based health and nutrition services 

St. Lucia is at a **LATENT** stage in this policy goal. School-based health and nutrition interventions have not been identified in a situation analysis and as such, there is no provision for implementing these interventions; this is also the case with school-based screening and referral services. There is also no provision for teacher training for referral of adolescent pupils to the appropriate adolescent health services.

Skills-Based Health Education 

St. Lucia is at an **EMERGING** stage in this policy goal. The national school health curriculum is partially developed and teachers are receiving pre- and in-service training to teach this curriculum but coverage is not universal. There are also participatory approaches for age-appropriate and sex-specific life-skills for health and these approaches have been integrated into the national curriculum. Pre and in-service teacher training is provided for teaching the life-skills curriculum and it is being taught in most schools but the material is not covered in school examinations.

Conceptual Framework for SABER-School Feeding

In response to enhanced demand for school feeding programs from low-income countries affected by the social shocks of the recent global crises, the United Nations World Food Programme (WFP) and the World Bank undertook a joint analysis titled *Rethinking School Feeding* (Bundy et al. 2009). This publication examined the evidence base for school feeding programs with the objective of better understanding how to develop and implement effective school feeding programs both as a productive safety net that is part of the response to the social shocks of the global crises, and as a fiscally sustainable investment in human capital as part of long-term global efforts to achieve EFA and to provide social protection to the poor.

What is school feeding?

School feeding is defined here as the provision of food to schoolchildren. There are as many types of programs as there are countries, but they can be classified into two main groups based on their modalities: in-school feeding, where children are fed in school; and take-home rations, where families are given food if their children attend school. In-school feeding can, in turn, be divided into two common categories: programs that provide meals, and programs that provide high-energy biscuits or snacks. In some countries, in-school meals are combined with take-home rations for particularly vulnerable students, including girls and children affected by HIV, to generate greater impacts on school enrollment and retention rates, and reduce gender or social gaps.

Further discussion on modalities is found in the section "'What Matters' in School Feeding" of this paper.

Needs and opportunities for national school feeding programs

Available data suggest that today, perhaps for the first time in history, almost every country for which we have information is seeking to provide food, in some way and at some scale, to its schoolchildren. The coverage is most complete in rich and middle-income countries—indeed, it seems that most countries that can afford to provide food for their schoolchildren do so. But where the need is greatest—in hunger, poverty, and poor social indicators—the programs tend to be the smallest, though usually targeted to the most food-insecure regions. These programs are also those most reliant on external support, and nearly all are supported by WFP.

So the key issue today is not whether countries will implement school feeding programs, but how and with what objective. Some of these programs, especially in low-income countries are poorly designed, expensive, regressive and too reliant on food aid. The near universality of school feeding, and the considerable variation in quality provides important opportunities for WFP, the World Bank, and other development partners to assist governments in rethinking their programs with the aim of designing and implementing more effective and sustainable school feeding programs.

The global food, fuel, and financial crises, and the refocusing of government efforts on school feeding that has followed, provide an important new opportunity to help children today, and to revisit national policies and planning for long-term sustainability tomorrow. Taking full advantage of this opportunity will require a more systematic and policy-driven approach to school feeding by both governments and development partners; a goal that the SABER process aims to support.

Benefits of school feeding

The justification section below will lay out more of the detailed evidence on the benefits of school feeding programs. An overview of the education, social protection, and nutrition impacts of these programs are outlined here. These issues have been reviewed recently (Alderman and Bundy 2012) emphasizing that school feeding programs in low-income countries have been successful mainly as a social safety net, with support to the education system as a common secondary objective, and much more limited evidence that programs contribute effectively to improving nutrition.

School feeding programs provide an explicit or implicit transfer to households of the value of the food distributed. The programs are relatively easy to scale up in a crisis and can provide a benefit per household of more than 10 percent of household expenditures, and even more in the case of take-home rations (Bundy et al. 2009).

In terms of education, there is evidence that school feeding programs increase school enrollment (Ahmed 2004; Gelli, Meir, and Espejo 2007), attendance (Jacoby, Cueto, and Pollitt 1996; Powell et al. 1998; Kristjansson et al. 2007), cognition (Whaley et al. 2003; Kristjansson et al. 2007; Jukes et al. 2008),

and educational achievement (Tan, Lane, and Lassibille 1999; Ahmed 2004; Adelman et al. 2008), particularly if supported by complementary actions such as deworming and micronutrient fortification or supplementation (Simeon, Grantham-McGregor, and Wong 1995; van Stuijvenberg et al. 1999; Jukes et al. 2002). In many cases the programs have a strong gender dimension (Drèze and Kingdon 2001), especially where they target girls' education, and may also be used to benefit specifically the poorest and most vulnerable children.

Well-designed school feeding programs, which include micronutrient fortification and deworming, can provide nutritional benefits and should complement and not compete with nutrition programs for younger children, which remain a clear priority for targeting malnutrition overall.

The clear education benefits of the programs are a strong justification for the education sector to own and implement the programs, while these same education outcomes contribute to the incentive compatibility of the programs for social protection. Policy analysis also shows that the effectiveness and sustainability of school feeding programs is dependent upon embedding the programs within national sector policies, in particular education sector policies.

Framework policy goals

The standards for effective school feeding programs outlined in *Rethinking School Feeding* form the five core policy goals for the framework-rubrics, defining "what matters" for the school feeding sub-system (Bundy et al. 2009). Quality school feeding program have been found to have the following in place: (1) a national policy framework; (2) stable and predictable funding; (3) sufficient institutional capacity for implementation and coordination; (4) sound design and implementation; and (5) community participation; each of which are described below.

In addition to this existing international consensus, the SABER-School Feeding framework-rubrics also have built on experience from benchmarking other education sub-systems as well as advice from an advisory committee of experts[3].

Policy Frameworks

A policy basis for the program helps strengthen its potential for sustainability and the quality of implementation. In nearly all the cases where countries are implementing their own national programs, school feeding is included in national policy frameworks (Bundy et al. 2009; WFP 2012).

In many developing countries, school feeding is mentioned in the countries' poverty reduction strategies, or in sectoral policies or plans (Svensson 2009). National planning for school feeding should ensure that the government has identified the most appropriate role for school feeding in its development agenda.

[3]Including representatives of the NTDs drug donations for school based deworming (GlaxoSmithKline), IFPRI, LSHTM, PCD, Save the Children, UNICEF, the World Bank, WFP, and WHO.

Financial Capacity

Stable funding is a prerequisite for sustainability. The degree to which school feeding is included in the national planning and budgeting process will determine whether the program gets resources from the national budget and whether it benefits from general budget support allocations.

In most countries where implementation is supported by external partners, funding for the program comes from food aid and from government in-kind or cash contributions. As the program becomes a national program, it needs a stable and independent funding source. This may be through government core resources or through development funding. In the long-term, a national budget line for school feeding is needed.

Another important finding from the *Rethinking School Feeding* analysis is that in low-income countries school feeding programs exhibit large variations in cost, with concomitant opportunities for cost containment (Bundy et al. 2009).

Institutional Capacity and Coordination

Another key component in the transition to national ownership is institutional capacity and coordination. Best practice suggests that school feeding programs are better implemented if there is an institution that is mandated and accountable for the implementation of such a program, with adequate resources, managerial skills, staff, knowledge, and technology at the central- and sub-national-levels.

Effective school feeding programs include the involvement of many sectors, such as education, health, agriculture and local government, along with an explicit link between school feeding and other SHN or social protection programs; and established coordination mechanisms.

Design and Implementation

Additionally, school feeding programs should be designed based on an assessment of the situation in a particular country. It is important that the program clearly identifies the problems, objectives, and expected outcomes in a manner that corresponds to country-specific context. It is also important that the program targets the right beneficiaries and chooses the right modalities of food delivery and an adequate food basket. Complementary actions such as food fortification and deworming, where needed, should be a standard part of any school feeding program.

School feeding requires a robust implementation arrangement that can procure and deliver large quantities of food to targeted schools, ensure food quality, and manage resources in a transparent way. Countries and partners should carefully balance international, national, and local procurement of food to support local economies without jeopardizing the quality and stability of the food supply.

Community Roles−Reaching Beyond Schools

School feeding programs that respond to community needs, are locally-owned, and incorporate some form of parental or community contribution, tend to be the strongest programs and the ones most likely to make a successful transition from donor assistance. Care should be taken to avoid overburdening of communities.

For an example of how these five policy goals can be summarized, a synopsis report from piloting work carried out in The Gambia is presented in Box 2.

Box 2: Status of school feeding policy framework in The Gambia

Policy Frameworks 

The Gambia is **EMERGING** in the goal of a well-established policy framework. School feeding is included in the country's published national-level poverty reduction strategy (equivalent national policy); including specifications as to where school feeding will be anchored and who will implement it. School feeding is also included in published sectoral policies or strategies with clearly defined objectives and sectoral responsibilities. There is recognition of the need for a technical policy related to school feeding, but one has not yet been developed or published. There is also recognition of the need for a comprehensive school feeding policy, but one has not yet been developed or published.

Financial Capacity 

The Gambia is at a **LATENT** stage in this policy goal. School feeding is included in the national planning process and national funding is stable through a budget line but unable to cover all needs; there is no budget line at regional- and school-levels. There is recognition of the need for mechanisms for disbursing funds to implementation-levels, but these are not yet in place.

Institutional Capacity and Coordination 

The Gambia is at an **EMERGING** stage in this policy goal. Any multisectoral steering committee coordination efforts are currently non-systematic. The need for engagement between the government and other school feeding stakeholders is recognized, but is currently minimal; while non-government school feeding programs may exist, coordination of these by the government is lacking. A school feeding unit exists at national-level, but it has limited resources and limited staff numbers and lacks a clear mandate; while coordination mechanisms between the national-, regional-, local-, and school-levels are in place, they are not fully functioning. Most schools have a mechanism to manage school feeding, based on national guidance. Some staffing and resource needs may have been assessed, but not all in a systematic manner; a comprehensive assessment is planned.

Design and Implementation 

The Gambia is at an **EMERGING** stage in this policy goal. A situation analysis was conducted that assessed school feeding needs. A government M&E plan exists for school feeding with intermittent data collection and reporting, occurring especially at national-level. The importance of food safety is recognized, but systems are not yet in place for school feeding procurement to follow WHO guidelines for food safety. The need for targeting is recognized, but neither targeting criteria nor a targeting methodology has been established yet. There is also recognition of the need for national standards for food modalities and the food basket, but these do not exist yet. Finally, there is recognition of the need for national standards for procurement and logistics arrangements, but these do not yet exist.

Community Roles–Reaching Beyond Schools 

The Gambia is at an **ESTABLISHED** stage in this policy goal. The school feeding management committee comprises representatives of teachers, parents, and community members and communities have accountability mechanisms to hold school feeding programs accountable at school-level.

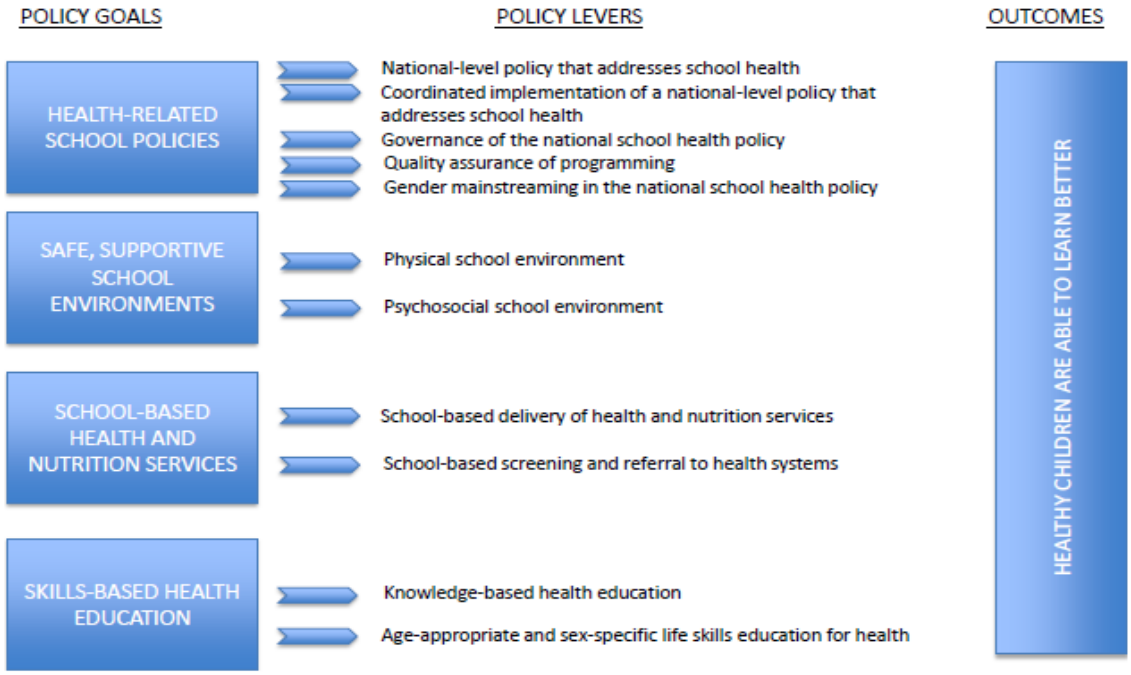
"What Matters" in School Health and School Feeding

Two recent "Directions in Development" publications, *Rethinking School Health* (Bundy 2011) and *Rethinking School Feeding* (Bundy et al. 2009), have reviewed the literature and provide the basis for determining "what matters" in school health and school feeding, in response to demand from national governments and EFA partners (UNESCO 2010a). The sections below summarize the findings of these publications, where more detail can be found, and highlights salient and recent contributions to the evidence base.

"What matters" in school health

The basic building blocks of the SABER-School Health performance rubric is the FRESH framework discussed previously. SABER-School Health has identified four policy goals in line with the four pillars of the FRESH framework. To enable governments to identify the link between policy and programming, SABER-School Health has identified a set of policy levers. These policy levers reflect leading indicators of policy development in each of the four core policy goals of SABER-School Health. Linked to each of the policy levers is a set of indicators that governments can take towards establishing a strong policy framework for SABER-School Health. Figure 9 identifies the policy goals and policy levers for school health. Each of the policy levers together with the indicators have been developed on the basis of international consensus on best practices in school health policy, theoretical underpinnings, and the evidence base for school health.

Figure 9: Policy goals and policy levers for school health.



The next section of this paper articulates the reasoning behind each of the policy levers and the indicators that have been identified to advance them.

Policy Goal 1: Health-Related School Policies

Establishing clear policies on school health is a critical first step to ensuring the sound implementation of school health programming. Clearly articulated policies on school health signal government commitment in this area and provide the structure for a safe, secure and non-discriminatory school environment. While there are various ways of approaching the delivery of SHN, a review of best practices in school health programming suggests that there are certain roles consistently played by governmental and non-governmental agencies. Taking into account these best practices, SABER-School Health has identified five key policy levers, which support school health programming. These are outlined below together with the indicators that support them. These policy levers are intended to build and reinforce one another. For instance, the existence of a school health policy, however well-articulated, cannot be a sufficient indicator of the strength of a school-based health policy. However, the existence of a multisectoral steering committee that coordinates the implementation of the program may reflect a government's intention to ensure that this policy is enforced.

Policy Lever 1: National-level policy that addresses school health

A country's commitment to a national policy reflects the government's vision for school health and its contribution to the goals of equity and access to a quality education for all school-age children in the country. Vision, strategic planning, and program ownership, key elements in successful school health programming, are cultivated in the process of developing a national-level policy on school health (WHO 1999b). A review of best practices in school health suggests that the process of articulating a national policy on school health also serves to shape and cement the national vision and conceptual understanding of school health programming, allowing a country to begin the process of taking ownership of school health programs (Whitman and Aldinger 2008). In addition to crystallizing the strategic vision for school health and encouraging program ownership, a well-articulated national school health policy also provides the necessary structure to guide and shape school health programming in the country.

Indicator 1A: School health is included in the national poverty reduction strategy or in the equivalent national policy

Poverty is a key consideration in the design of SHN programs. As previously discussed, school health programs have the greatest impact on the poorest children. Consequently, these programs can serve as key poverty reduction tools and including them in a nation's poverty reduction strategy reflects a government's vision for the role of school health in improving the health and ultimately, the educational outcomes of the poorest children. Including school health in a country's Poverty Reduction Strategy Paper can also serve to prioritize school health in the public sector agenda.

Indicator 1B: Published and distributed national policy that covers all four components of FRESH

Applying international policies and recommendations to the development of school health policy has been identified as key elements in the success of school health programming. The FRESH approach, which reflects the international consensus on best practices in school health programming, suggests that a set of core activities form the basis of any comprehensive school health program. This does not imply that these are the only elements to be considered in the design of effective school health programs, rather that these are the common elements that provide a solid foundation for any pro-poor program (Bundy 2011). Ensuring that all the FRESH components are covered in the national school health policy is a first and crucial step in ensuring that the policy is comprehensive in its scope. A key step in ensuring that the policy is fully enforced is wide dissemination of the policy, including publishing and distributing the policy to all relevant stakeholders.

Indicator 1C: Published national policy is multisectoral in its approach

School health programs are multisectoral in nature and a common element of successful school health programming is the clear coordination and cooperation of education, health and other relevant sectors. In many school health programs, the Ministry of Education is the lead implementing agency, reflecting a growing recognition of the importance of school health in improving education outcomes. This also reflects a recognition that the education system provides the most complete and sustainable infrastructure for reaching school-age children (Bundy 2011). However, the Ministry of Health has ultimate responsibility for the health of all children and any education sector actions require the explicit agreement of the health sector (Jukes et al. 2008). Failure to develop a multisectoral approach has led to resistance to teacher delivery of basic health interventions, for example, health sectors in some areas of Africa and Central Asia resisted teacher delivery of deworming drugs despite WHO recommendations (Jukes et al. 2008). A successful school health policy must be supported by all relevant sectors and a key indicator of this is to ensure that the published policy is multisectoral in its approach.

Policy Lever 2: Coordinated implementation of a national-level policy that addresses school health

Indicator2A: A multisectoral steering committee coordinates implementation of a school national health policy

A review by the WHO Expert Committee on Comprehensive School Health Education and Promotion identified the lack of coordination in implementation as a key barrier to effective programming. This observation has been reinforced in various other reviews of best practices in school health programming, which have also shown that a coordinated implementation of a national-level policy is a pre-requisite for effective school health programming (Whitman and Aldinger 2008). Accordingly, the FRESH framework recognizes this as one of three vital supporting strategies for effective school health programming. A government's initiative in establishing a multisectoral steering committee is another indicator of its commitment to an effective national school health policy.

The successful School Health Promotion Program (SHPP) in Sri Lanka is an example of strong partnerships between the Ministries of Health and Education. A joint steering committee (consisting of representatives of Health and Education Ministries, including two school health units) meets regularly to

oversee policy and planning for the implementation of the SHPP which operates in majority of Sri Lanka's 10,000 schools.

Policy Lever 3: Governance of the national school health policy

Indicator 3A: A national budget line(s) and funding allocated to school health: funds are disbursed to the implementation levels in an effective and timely manner.

Clear linkages between programming and public expenditure have been identified as pre-requisites for effective implementation of programs (World Bank 1998). As such, any sound policy framework should ensure consistent and streamlined mechanisms for funding school health programming.. A national budget line for school health is a clear indicator of a government's commitment to school health. Consistent with the need for a multisectoral approach to the implementation of the program, the budget line for school health should exist in both the Education and Health Ministries. In addition to national budget lines for the program, mechanisms should be in place for disbursement to implementation-levels in a timely and effective manner.

Policy Lever 4: Quality assurance of programming

Indicator 4A: A situation analysis assesses the need for inclusion of various thematic areas, informs policy, design, and implementation of the national school health program such that it is targeted and evidence-based

To be effective, a school health program must be designed to meet the needs of a particular population. A useful policy tool is a situation analysis, which assesses the need for the inclusion of various thematic areas. This is the first step a government can take to ensure that its school health program is appropriately designed to meet the needs of its school-age children. Decisions about which interventions to include in a school health program are partly based on matching local needs to the costs of the responses. Ensuring that the situation analysis is comprehensive can avoid misappropriation of resources and provide guidance for strategic evidence-based delivery of school health interventions; maximizing resources and ensuring that school-health services are cost-effective. Box 3 provides an example of successful school health planning in Eritrea.

Box 3: Identifying priority interventions in Eritrea

The first step taken in developing a strategic plan for health and nutrition programs in Eritrea was to conduct a situation analysis to review the different health conditions affecting schoolchildren in the country and to consider how these conditions could be addressed using the four components of the FRESH framework. This exercise enabled policymakers to identify the conditions affecting Eritrean children that could effectively be addressed through school-based health and nutrition services. Once the relevant conditions were identified, decision making matrices were constructed to enable policymakers to consider the need, benefit, cost, and feasibility of different services. The results of the situation analysis, together with the knowledge and experience of members of the Ministries of Health and Education, were then used to determine which health services would be delivered in different parts of the country.

Decision Making Matrix for Conditions That Can Be Treated by Teachers in Schools

Condition	*Scale of Benefit*			*Per Capita Cost ($)*	*Feasibility of Universal Access*
	Need	*Education*	*Health*		
Bilharzia	+++	+++	+++	**0.80**	+++
Anemia	+++	+++	+++	**1.20**	+++
Vitamin A Supplementation	+++	+	+++	**0.30**	+++
Skin Infections	+	+	+	**3.00**	++
First Aid	++	++	++	**0.50**	++

Indicator 4B: Monitoring and Evaluation

Another indicator of policy intent is the government's initiative in the area of M&E. Efficient M&E systems are critical for ensuring accountability and transparency of operations. An effective M&E system should provide the tools to monitor school health programming and evaluate the effectiveness of these programs in achieving their intended health and education outcomes. Integrating an M&E plan into the wider national M&E system will ensure that the system is sustainable and once again assessed in line with the wider goals of the education sector.

Policy Lever 5: Gender mainstreaming in the national school health policy

Indicator 5A: Gender dimension of health addressed in the national education policy

Pregnancy, sexual harassment, privacy and sanitation are sources of health gender dimension. The enrolment and retention rate of girls in schools is much lower than boys in many countries and investing in the education of girls is one of the best investments a country can make (World Bank 2008). Health and nutrition interventions can promote gender equity and equality as well as contribute to Goal 3 of the Millennium Development Goals (Bundy 2011). It is apparent that school health programs can play an important gender role in promoting EFA, since there is a gender dimension to the management of some of the most common health conditions and their associated interventions. For example:

- Deworming and iron supplementation both offer particular benefits to girls because women and girls are, for physiological reasons, more likely to experience high rates of anemia.
- Various country case studies have shown that avoiding malaria infection early in life has resulted in increased participation by girls in education at school-age; in The Gambia this difference was equivalent to an extra year of schooling (Bundy 2011).

One of the key outcomes of a high quality school health program is to ensure that the school is a safe, welcoming provider of quality education for all children, including girls. Recognizing the gender dimension of health in its national education policy is an important step a government can take in addressing issues of gender equality in schools.

Policy Goal 2: Safe, Supportive School Environments

The school environment, which includes both the physical and psychosocial school environment, is one of the many determinants of school quality. Schoolchildren and adolescents spend a significant part of their day in school, which makes the school an ideal environment in influencing their physical and mental health (Weist and Evans 2005). In some parts of the world, respiratory diseases such as asthma and wheezing appear to be on the rise with unsafe and polluted physical school environments being contributory factors (Storey et al. 2003). In other parts of the world, lack of safe water and adequate sanitation contributes to the high rates of disease and mortality among school-age children, negatively impacting their educational achievement.

The physical school environment encompasses "the school building and all its contents including physical structures, infrastructure, furniture, and the use and presence of chemicals and biological agents; the site on which a school is located; and the surrounding environment including the air, water, and materials with which children may come into contact, as well as nearby land uses, roadways and other hazards. Key indicators of a safe physical school environment are clean water and adequate sanitation facilities and a safe physical school infrastructure" (WHO 2002; p. 6).

The psychosocial dimension of a safe school environment is equally important to fostering the health, wellbeing and learning potential of school-age children. A healthy psychosocial school environment includes a supporting learning environment; personal security; a fully gender sensitive environment; healthy relations between pupils and teachers; and respectful and non-discriminatory associations between boys and girls. Children need to be mentally healthy as well as physically healthy to take full advantage of every opportunity to learn. Research shows that a positive psychosocial environment can influence the behavior of students, ensure their mental health and wellbeing and improve learning outcomes (WHO 2003a). SABER-School Health has identified the two key policy levers together with relevant indicators for creating a safe, supportive school environment.

Policy Lever 1: Physical school environment

Indicator 1A: Provision of water facilities
Indicator 1B: Provision of sanitation facilities

Two clear and basic indicators of a healthy physical school environment are adequate water and sanitation facilities. Waterborne diseases, parasitic infections, diarrhea, cholera, and dehydration are among the many physical and physiological threats to the health and wellbeing of schoolchildren. Inadequate water and sanitation facilities in school can result in these diseases that prevent children from attending school, and in turn, impact their educational achievement. On the other hand, ensuring that these facilities are available in schools can serve to reinforce health and hygiene messages and provide an example for the wider community.

Sanitation refers to infrastructure and service provision required for safe management of human excreta, including latrines, sewers, and wastewater treatment. The provision of safe water and sanitation facilities is an important aspect of hygiene promotion and is among the most cost-effective

child survival interventions (Bundy 2011). Diarrheal diseases, the second most common global illness affecting young children, is closely linked with poor sanitation, poor hygiene, and lack of access to safe and sufficient supplies of water and food (WHO 2002). Although diarrheal diseases are most prevalent in the developing world, they also pose a significant health threat in developed countries and as with developing countries, contaminated water can be a source of diarrhea in the developed world. The largest outbreak of diarrhea in the United States affected over 400,000 people when the municipal water supply of Milwaukee, Wisconsin was contaminated with Cryptosporidium, a parasite from farm animal waste (WHO 2002). Interventions such as simple hand-washing have been shown to reduce sickness from diarrheal diseases by up to 47 percent. In addition to ensuring that children are healthy, adequate sanitation is also an important factor in encouraging girls to remain in school. In the developing world, providing separate sanitation facilities for girls is an important contributing factor in reducing dropout during and before menses (WHO 2002).

Comprehensive actions towards achieving this will include 1) setting national standards for adequate water and sanitation facilities; 2) conducting a needs assessment of these school facilities; and 3) developing implementation plans to ensure that these standards are met along with mechanisms for monitoring the quality of these facilities to meet standards.

Sri Lanka, again serves a good example of planning in this area. Following the development of a school health policy in 2006, standards were developed for water and sanitation facilities and a national needs assessment was carried out in schools across the country. Plans to increase coverage of adequate water and sanitation facilities was then integrated into the country's 5-year education sector plan.

Indicator 1C: Provision of sound school structures (including accessibility for children with disabilities) and school safety

Any comprehensive policy to address the physical school environment should include guidance on developing the safety of the school's physical infrastructure. Poorly maintained school structures may also pose a health threat to children. Cracks in walls, floors, or foundations provide homes for insects such as hookworms, mites and jigger fleas, while broken windows, dilapidated steps, exposed nails, and missing stair rails increase the risk of injury to children (WHO 2002). More than 50 percent of children who die in earthquakes each year die inside their school buildings (UNICEF 2009). An indicator of whether this policy is comprehensive will be reflected in whether: 1) there are national standards on a sound physical infrastructure; 2) a needs assessment has been conducted on the basis of these standards; and 3) plans have been developed to ensure that all schools meet and maintain these standards.

Policy Lever 2: Psychosocial school environment

A safe school environment should promote the psychosocial wellbeing of children as well as their physical wellbeing. A longitudinal 3-year study looking at the impact of the psychosocial school environment suggests that a negative psychosocial school environment may result from poorer health status, especially among girls (Gådin 2003). There is also evidence that school and classroom conditions

relate directly to academic achievement (Hurwitz and Weston 2010). Research shows that when students mental health needs are properly addressed, the likelihood of school success increases. High quality, effective school mental health promotion has been linked to increases in academic achievement and competence (Hurtwiz and Weston 2010). In contrast, schools that ignore the mental health needs of students miss out on the opportunity to reach an entire population of children whose academic ability is affected by emotional distress (Hoganbruen et al. 2003). Recognizing the importance of addressing the mental health and wellbeing of schoolchildren, SABER-School Health has identified the following indicators to promote the emotional and mental wellbeing of schoolchildren.

Indicator 2A: Issues of stigmatization are recognized and addressed by the education system

Mental or physical disability, HIV and AIDS as well as other diseases can all be sources of stigmatization, marginalization, and bullying in schools. Addressing these issues is a key aspect of creating a safe and secure psychosocial environment for all children. As stated in the *EFA Global Monitoring Report 2010: Reaching the Marginalized,* "Disability is one of the least visible but most potent factors in educational marginalization. Beyond the immediate health-related effects, physical and mental impairment carries a stigma that is often a basis for exclusion from society and school" (UNESCO 2010b; p. 181). According to the same report, "the link between disability and marginalization in education is evident in countries at different ends of the spectrum for primary school enrolment and completion" (UNESCO 2010b; p. 182). Case studies in Burkina Faso, Malawi and Tanzania show that disability significantly increases the risk of children having never attended school or in being out–of-school (Bundy 2011). HIV and AIDS has also been identified as a key source of stigmatization in schools. In addition to providing a platform for preventative and rehabilitative responses to these conditions, school health programs can create enabling environments to redress attitudinal and physical barriers and reduce the stigma that leads to further marginalization (Bundy 2011). Stigmatization often results in bullying, which can result in depression, anxiety, negative self-esteem, and in worst cases, child suicides (NHSP 2009).

Indicator 2B: Protection of learners and staff against violence

The world report on violence against children by UNESCO identifies the main forms of violence as:

1) Physical and psychological punishment;
2) bullying;
3) sexual and gender-based violence; and
4) external violence (e.g. effects of gangs, conflict situations, weapons and fighting) (UNESCO 2012).

"The effects of violence, physical injury, psychological effects and behavioral problems reduce attendance at school, impair concentration and detrimentally affect cognitive development. In addition, fear of violence or abuse at school or en route to school, or displacement that results from violence and war, can all prevent or reduce attendance and diminish children's ability to learn" (WHO 1999a). Schools also have a role in addressing the violence perpetrated against students, teachers, and all members of the school community by addressing a broad range of behaviors, skills, communication patterns, attitudes and school policies and conditions that support and perpetuate violence.

Although there is no uniform solution to address bullying and violence in schools, there are certain elements common to best practices in this area. Policy development, curriculum planning, staff and teacher development have all been identified as key elements in responding to bullying and violence in schools. The establishment of policies against bullying as well as guidelines and standards in addressing violence in schools not only indicates recognition of the magnitude of the problem but can also shape the vision and strategy for further developing mechanisms (NHSP 2009).

Evaluations of school-based violence prevention programs show that such efforts can be highly effective. A case study of 12 violence prevention programs across the United States by Education Development Center, Inc. (EDC) found positive effects on student knowledge, attitudes and behavior; teacher attitudes and competence in violence prevention skills; school climate; school statistics in violence/behavior; program implementation; and general response to/support of programs (WHO 1999a). Another study assessing the Norwegian Ministry of Education's *Olweus Bullying Prevention Program* to reduce bullying in elementary schools, found that frequency of bullying decreased by over 50 percent in 2 years following the campaign (Olweus 1990; WHO 1999a). An evaluation of *Second Step: A Violence Prevention Curriculum* used in over 10,000 elementary schools in the United States and Canada, indicated that the curriculum led to a moderate decrease in physically aggressive behavior and an increase in pro-social behavior in schools (WHO 1999a). These programs demonstrate that violence and bullying in schools can be effectively addressed through national policy, innovative ideas and an education curriculum.

Indicator 2C: Provision of psychosocial support to teachers and students who are affected by trauma due to shock

Natural disasters, the effects of the HIV and AIDS epidemic, and armed conflict are unfortunately, common sources of trauma for school-age children (UNICEF 2011). The literature on the mental health of children documents the profound impact of childhood trauma on the emotional, behavioral, cognitive, social, and physical functioning of children (World Bank 2011). In the 1990s alone, more than 2 million children died as a result of armed conflict and nearly three times as many have been permanently disabled or injured by conflict (UNICEF 2011). Ensuring that children and teachers who have been affected by trauma have access to appropriate services to psychosocial care either in school or through referral is a critical aspect of a healthy psychosocial school environment. In addition to counseling services, Child-Friendly Spaces (CFSs) or temporary learning spaces are widely used in emergencies as a first response to children's needs and an entry point for working with affected communities. CFSs or temporary learning spaces are designed to support the resilience and wellbeing of children through community organized, structured activities conducted in a safe, child-friendly and stimulating environment. CFSs can be established quickly to provide a means of ensuring the protection, psychosocial wellbeing, and non-formal education of children who are affected by trauma in emergency situations (UNICEF 2011).

Policies that reflect an understanding of the importance of addressing issues of stigma, violence and the need for psychosocial support for teacher s and students are clear and concrete steps that a

government can take in creating an enabling environment to promote the emotional and psychological health of schoolchildren.

Policy Goal 3: School-Based Health and Nutrition Services

Diseases that affect education are highly prevalent and schoolchildren bear the greatest burden of these diseases. Given the existing infrastructure in schools (including location and human resources) schools can be a highly cost-effective means of addressing many of these diseases. The WHO Expert Committee on Comprehensive School Health Education and Promotion recommends that where possible, schools should:

1) Provide safe, nutritious food with micronutrients to combat hunger, prevent disease and foster growth and development;
2) treat helminth, malarial, skin and respiratory infections, as well as other infectious diseases;
3) identify and treat when possible oral health, vision and hearing problems; and
4) identify psychological problems and refer those affected for appropriate treatment (WHO 1999b).

In view of this, SABER-School Health has identified the following policy levers, along with indicators to guide the implementation of comprehensive school-based health and nutrition service delivery. Note that school feeding aspects of Policy Lever 1 are dealt with separately in the subsequent section on "What Matters" in School Feeding (see also Figure 3).

Also, due to the inherent delivery focus of school-based health and nutrition services, this policy goal is much more on implementation than the other school health policy goals.

Policy Lever 1: School-based delivery of health and nutrition services

Indicator 1A: The school based delivery of health and nutrition services identified in the situation analysis and outlined in the national policy are being implemented.

Schools can deliver simple health interventions that effectively address diseases and health concerns such as malnutrition, short-term hunger, micronutrient deficiencies, vision and hearing impairments and worm infections, which act as major constraints on learning. These diseases can impair the physical and mental development of children. Worm infection, for instance, can lead to anemia and malnourishment and has been shown to affect cognitive abilities such as concentration and memory (Jukes et al. 2008). Approximately 20 to 50 percent of African schoolchildren in areas of stable high transmission experience clinical malaria attacks each year (Clark et al. 2008). In Africa, malaria contributes 5 to 8 percent of all causes of absenteeism from school. It has also been shown to impair cognition, learning, and educational achievement. Micronutrient deficiencies also contribute to the negative impact on school performance (Bundy 2011).

Schools have the necessary infrastructure to deliver the simple and effective treatments for these diseases. The treatment for worms is simple, safe and inexpensive and has positive impacts on educational outcomes, such as absenteeism (Miguel and Kremer 2004). In areas of high worm prevalence, WHO recommends regular treatment of all schoolchildren. This treatment can be delivered easily and inexpensively through schools and can result in large gains in education (Jukes et al. 2008). Micronutrients, such as iron and iodine, maybe administered through food fortification in schools, or "point-of-use" fortification in schools, but should be based on the knowledge of the deficiency in the target population (Bundy 2011). There is a clear policy context for school-based responses to malaria. In addition to the development of knowledge, attitudes, skills and behaviors to prevent the malaria infection, insecticide-treated nets can be distributed to children through schools. The delivery of antimalarial treatment services are also an option in some countries. In Kenya, the mass drug administration of antimalarial drugs to schoolchildren once a term greatly reduced the malaria parasitemia (the number of parasites in the blood of infected children) and the rates of anemia. This program was also shown to significantly improve cognitive abilities (Clark et al. 2008).

It is clear that that these diseases have an impact on education and that they are effective and proven school-based responses to treat them. However, the success of these interventions is heavily reliant on a comprehensive situation analysis. A situation analysis is critically important to identify the specific health and nutritional status of school-age children in a particular region and also the most cost-effective means of delivering these interventions to scale in a country. Ensuring that the delivery of these interventions is informed by a comprehensive situation analysis is the key to cost-effective delivery of school health services that are appropriately targeted and can be scaled up to achieve maximum results.

Policy Lever 2: School-based screening and referral to health systems

Indicator 2A: Remedial services (e.g. refractive error, dental, etc.)

Dental and vision problems are also common health issues among school-age children. It is estimated that dental decay affects more than half of all school-age children and is estimated to be the most prevalent non-communicable disease worldwide. A 2006 study in the Philippines reported that 97 percent of children in the country suffered from tooth decay, which is associated with pain, anemia, lower body mass index and lower educational achievement (Bundy 2011). In high-income countries school health programs address both the prevention and treatment of oral health issues. Low-income countries typically focus on curative approaches to these problems. School health programs are well suited for oral health promotion. Schools can support prevention through the provision of fluoride, encourage behavior change to promote oral health, but also serve as a link to the formal health care system by initiating referrals to health care practitioners.

Vision deficiency, like oral health is a common problem among school-age children. It is estimated that 12 million school-age children need glasses but do not have them. School health programs in Eritrea and Kenya have demonstrated that appropriately trained teachers can identify children whose vision is impaired by refractive error. Once again, schools can serve as entry points for addressing visual

impairment, either through referral services or spectacles on sight. Addressing visual deficiency can increase a child's learning capabilities and allow them to take full advantage of their educational opportunities.

School-based screening and referral to health systems is an essential component of a strong school-based health service delivery, but to be effective these programs must be informed by a comprehensive situation analysis which identifies: those issues that are prevalent in a particular population; the magnitude of these issues; and the most appropriate cost-effective measures to address them through school-based screening and referral.

Indicator 2B: Adolescent health services

Adolescence is a crucial stage in life where young people become more vulnerable to a range of reproductive health problems, including too-early pregnancy and childbearing; infertility; genital mutilation; unsafe abortion; sexually transmitted infections including HIV; and gender-based violence, including sexual assault and rape (WHO 2009). These problems are preventable and education is a key component of prevention. In addition to education, there are various health services and counseling services that adolescents may need access to. While the infrastructure for this may not be available in the school, schools can also play an important role in providing a referral service to adolescent-friendly health or counseling services when appropriate (WHO 2009). In order to provide effective referral services, teachers need to be trained to address these issues and know how and when to provide such referrals.

Policy Goal 4: Skills-Based Health Education

A comprehensive health education aims at developing knowledge, attitudes, skills, and life skills that are necessary for health promoting behaviors. Box 4 contains definitions of each of these concepts.

Box 4: Health education concepts

Knowledge refers to a range of information and the understanding thereof. To impart this knowledge, teachers may combine instruction on facts with an explanation of how these facts relate to one another (Greene and Simons-Morton 1984). For example, a teacher might describe how HIV infection is transmitted and then explain that engaging in sexual relations with an intravenous drug user elevates the risk of HIV infection.

Attitudes are personal biases, preferences, and subjective assessments that predispose one to act or respond in a predictable manner. Attitudes lead people to like or dislike something, or to consider things good or bad, important or unimportant, worth caring about or not worth caring about. For example, gender sensitivity, respect for others, or respecting one's body and believing that it is important to care for, are attitudes that are important to preserving health and functioning well (adapted from Greene and Simons-Morton 1984). For the purposes of this document, the domain of attitudes comprises a broad range of concepts, including values, beliefs, social norms, rights, intentions, and motivations.

Skills are grouped in this document into life skills (defined below) and other skills. In general, skills are abilities that enable people to carry out specific behaviors. The phrase 'other skills' refers to practical health skills or techniques such as competencies in first aid (e.g., bandaging, resuscitation, and sterilizing utensils etc.), in

hygiene (e.g., hand-washing, brushing teeth, and preparing oral rehydration therapy etc.), or sexual health (e.g., using condoms correctly etc.).

Life skills are abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life (WHO definition). In particular, life skills are psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathize with others, and cope with managing their lives in a healthy and productive manner. Life skills may be directed toward personal actions or actions toward others, or may be applied to actions that alter the surrounding environment to make it conducive to health.

Source: WHO 2003b.

Health education has been defined as "any combination of learning experiences designed to facilitate voluntary adaptations of behavior conducive to health" (Green at al. 1980). A health education curriculum typically covers a broad range of content areas, such as emotional and mental health; hygiene education; nutrition; alcohol, tobacco, and other drug use; reproductive and sexual health; injuries; and other topics, with human rights and gender fairness as important cross-cutting or underpinning principles (WHO 2003b). Skills development has always been included in health education but as health education and life skills have evolved during the past decade, there is growing recognition of and evidence for the important role of psychosocial and interpersonal skills in the healthy development of young people (WHO 2003b). Psychosocial and interpersonal skills include communication, decision making and problem solving, coping and self-management, and the avoidance of health compromising behaviors. These skills can strengthen the ability of young people to protect themselves from health threats, build competencies to adopt positive behaviors and develop healthy relationships. Life skills have also been linked to specific health choices, such as choosing not to use tobacco, eating a healthy diet, or making safer and informed choices about relationships. The policy levers of health education are outlined below, together with the relevant indicators.

Policy Lever 1: Knowledge-based health education

Indicator 1A: Provision of basic, accurate health, HIV and AIDS, nutrition and hygiene information in the school curriculum relevant to behavior change

The three primary ways for implementing knowledge-based health education within schools have been identified as:

1) A core health education subject: Skills-based health education can be a core (or separate) subject in the broader school curriculum.
2) Carrier subject: Skills-based health education is sometimes placed in the context of related health and social issues within an existing, so-called carrier subject that is relevant to the issues, such as science, civic education, social studies, or population studies.
3) Infusion across many subjects: Health topics can be included in all or many existing subjects by regular classroom teachers (WHO 2003b).

A knowledge-based health education typically covers hygiene education, nutrition education and issues of diet and physical activity; and HIV and AIDS issues. Hygiene education is a necessary component in ensuring the health and safety of schoolchildren. To ensure that schoolchildren fully benefit from the provision of adequate water and sanitation facilities, or school health services such as deworming or malaria treatment, the behavioral aspects of these diseases should be addressed in a knowledge-based health education curriculum. Health education can also address issues of diet and physical inactivity—two well-recognized health risk behaviors that can accelerate the development of non-communicable diseases (Bundy 2011). The school has an important role to play in addressing these diseases that are related to lifestyle by providing the knowledge and skills to influence behavioral changes. This is particularly relevant as the epidemiological evidence today shows that many non-communicable diseases are growing in importance (Bloom et al. 2006).

HIV and AIDS is a major threat in many regions of the world. It is not only a communicable disease but also a social disease. A child's access to education is likely to be reduced if his or her family is affected by HIV. The education sector has a crucial role to play in HIV prevention education programs. Schools are one of the few institutions that reach almost everyone in a society. Furthermore, programmatic evidence suggests that children who participate in HIV prevention programs are more likely to delay sexual activity or adopt sex practices than older adolescents and adults who are already sexually active. Nearly all studies of sexuality education programs demonstrate increased knowledge and about two-thirds demonstrate positive results in behavior change.

The inclusion of thematic areas in a health education curriculum should be informed by a situation analysis. A situation analysis will ensure that interventions are relevant to local conditions and cultures. This process can also provide insight into the health issues and behaviors in a community. A situation analysis should typically collect the following types of information:

- Health status, including local public health data on morbidity and mortality;
- health priorities of children and adolescents;
- behaviors and health conditions that are influencing priority health issues;
- knowledge, attitudes, beliefs, values, skills and services related to priority health issues for young people and their associated behaviors and conditions;
- relevant policies; and
- available resources (human, financial, and material) and existing programs that address health and social issues (WHO 2003b).

Where quality assurance for school health programming is firmly in place, a situation analysis will have been conducted with sufficient scope to inform the design and development of an effective and relevant school health curriculum. Informed by this situation analysis, the information, attitudes, and skills that comprise the program content should be selected for their relevance to specific health-related risk and protective behaviors.

Policy Lever 2: Age-appropriate and sex-specific life-skills education for health

Indicator 2A: Participatory approaches are part of the curriculum and used to teach key age-appropriate and sex-specific life skills for health themes

To contribute to skills-based health education goals and achieve the objectives of skills-based health education, teaching and learning methods must be relevant and effective. Reviews of the various approaches to health education have shown that active participatory learning approaches are the most effective method for developing knowledge, attitudes, and skills for students to make healthy choices (WHO 2003b).

An effective skills-based health should replicate the natural processes by which children learn behavior. Research suggests that children and adolescents who have the opportunity to practice the skills in the safety of a classroom environment are more prepared to use them in and outside of school. "Participatory learning utilizes the experience, opinions, and knowledge of group members; provides a creative context for the exploration and development of possibilities and options; and affords a source of mutual comfort and security that aids the learning and decision-making process" (CARICOM and UNICEF 1999; p. 13).

Social learning theory also provides some of the theoretical foundations for why participatory teaching techniques work. Albert Bandura's research shows that people learn what to do and how to act by observing others. His research also suggests that behaviors can be more easily retained when people mentally rehearse or actually perform modeled behavioral patterns (Bandura 1977).

Research (WHO 2003b) has shown that a skills-based health education can:

- reduce the chances of young people engaging in delinquent behavior (Elias 1991), interpersonal violence (Tolan and Guerra 1994), and criminal behavior (Englander-Goldern et al. 1989);
- delay the onset age of using alcohol, tobacco, and other drugs (Griffin and Svendsen 1992; Caplan et al. 1992; Werner 1991; Errecart et al. 1991; Hansen et al. 1988; Botvin et al. 1984, Botvin et al. 1980);
- reduce high risk sexual activity that can result in pregnancy, sexually transmitted infections or HIV infections (Kirby 1997; Kirby 1994; WHO/GPA 1994; Postrado and Nicholson 1992; Scripture Union n.d., Zabin et al. 1986; Schinke, Blythe, and Gilchrest 1981);
- prevent peer rejection (Mize and Ladd 1990) and bullying (Oleweus 1990);
- teach anger control (Deffenbacher et al.1995; Deffenbacher et al. 1996; Feindler et al. 1986);
- promote positive social adjustment (Elias et al. 1991) and reduce emotional disorders (McConaughy, Kay, and Fitzgerald 1998);
- improve health-related behaviors and self-esteem (Young, Kelley, and Denny 1997); and
- improve academic performance (Elias et al. 1991).

The role of the teacher in delivering skills-based health education is to facilitate participatory learning in addition to conducting lectures or employing other appropriate and efficient methods for achieving the learning objectives. Effective programs require teachers who believe in the program and receive adequate training. A comprehensive training program should give teachers and peers information about the program as well as practice in using the teaching strategies in the curricula. Research and case studies (Box 5) show that teacher training for the implementation of a comprehensive secondary school health education curriculum positively affects teachers' preparedness for teaching skills-based health education and has positive effects both on curriculum implementation and on student outcomes (WHO 2003b). Ensuring that teachers are well-trained to teach and that participatory approaches are well-integrated into the curriculum should be a cornerstone of the policy framework on school health.

Box 5: Case study on teacher training for a skills-based health education curriculum

Developers of Teenage Health Teaching Modules (THTM), a skills-based health education curriculum in the United States, effectively trained program providers in the following:

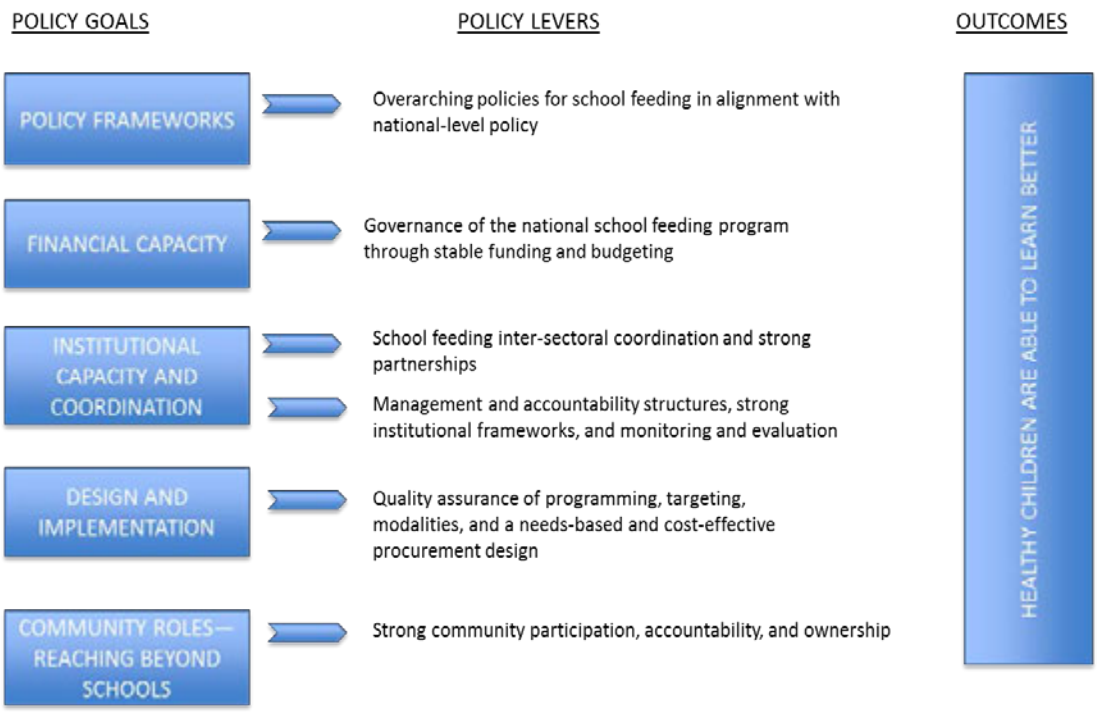
1) Establishing a program environment in which open communication and positive peer interaction are valued and constructive problem solving occurs.
2) Using participatory teaching strategies.
3) Modeling skills and applying them to particular behaviors, including how to give encouragement and praise to reinforce positive social norms.
4) Teaching complex social skills.
5) Providing resources for health information and referral.
6) Dealing with sensitive issues.

A study involving 85 schools found that pre-implementation training in THTM positively affected teacher preparedness to teach THTM and student outcomes. Trained teachers implemented the curriculum with a significantly higher degree of fidelity than untrained teachers. Teacher training also had positive effects on student outcomes. Students' knowledge and attitude scores were significantly higher for classes taught by trained teachers than by untrained teachers. At senior high school-level, trained teachers also accounted for curbing self-reported use of illegal drugs.

Source: WHO 2003b.

"What matters" in school feeding

Figure 10: Policy goals and policy levers for school feeding.



As illustrated by Figure 3, the school feeding policy goals are addressed here as a subset of School-Based

Health and Nutrition Services. The school feeding sub-system is given this separate prominence because of the relatively high cost and complexity of this intervention. The policy goals for school feeding are the five standards of *Rethinking School Feeding* (Bundy et al. 2009). As with SABER-School Health, in each of these policy goals, policy levers have been identified (Figure 10). These policy levers are sub-divided into indicators to help governments take concrete steps towards achieving effective and sustainable school feeding programs. The evidence base, theoretical underpinnings, and international consensus that formed these indicators are detailed below.

Policy Goal 1: Policy Frameworks

National planning for school feeding should ensure that the government has identified the most appropriate role for school feeding in its development agenda. The degree to which school feeding is articulated in national policy and budgeting frameworks varies from country to country, but a policy basis for the program helps strengthen its potential for sustainability and accountability as well as the quality of implementation. In many developing countries school feeding is mentioned in the Poverty Reduction Strategy, often linked to the education, nutrition or social protection sectors, or in sectoral policies or plans.

Policy Lever 1: Overarching policies for school feeding in alignment with national-level policy

Indicator 1A: National-level poverty reduction strategy or equivalent national strategy as well as sectoral policies and strategies identify school feeding as an education and/or social protection intervention, clearly defining objectives and sectoral responsibilities

An important starting point for any country to begin the transition process to national ownership is for the government to review the role of school feeding in the development agenda and, where appropriate, integrate the program into the national policy, budgeting, and institutional frameworks. In a majority of programs currently dependent on external support, national policies are largely silent about the role of school feeding. In 70 low-income countries where school feeding programs have been implemented by other agencies at the request of the government, school feeding is mentioned in 20 of 57 Poverty Reduction Strategy Papers, and in 23 of 63 national education sector plans (Svensson 2009). In contrast, nearly all countries with national ownership of programs have well-articulated national policies on the modalities and objectives of school feeding (WFP 2012). Indeed, the most developed programs have the highest level of political and legal support, for example, in India where the program is supported by Supreme Court Rulings (Supreme Court of India 2004), Chile where it is part of National Law and the education policy (Winch 2009), and Brazil where it is included in the Constitution (Federative Republic of Brazil 2010).

Mainstreaming a development policy for school feeding into national education sector plans is critical to sustainability and offers the added advantage of aligning support for school feeding with the processes already established to harmonize development partner support for education, such as under the Global Partnership for Education. Integrating the program into national plans may also help attract resources because, with donor harmonization efforts underway, it is increasingly important that school feeding is included in sector plans that form the basis for basket funding or sector-wide approaches that determine the allocation of donor resources. These approaches may help increase the availability of resources allocated.

Indicator 1B: Evidence-based technical policy related to school feeding which addresses the four other school feeding policy goals

Establishing clear policies on school feeding, as for school health, is a critical first step to ensuring the sound implementation of school feeding. School feeding program policy should be based on a correct assessment of the situation in a particular country. It is important that the program clearly identifies the problems, the objectives and the expected outcomes in a manner that corresponds to country-specific context and comprehensively addresses the four other school feeding policy goals (financial capacity; institutional capacity and coordination; design and implementation; and community participation).

Policy Goal 2: Financial Capacity

Stable funding is a prerequisite for sustainability. Typically, governments plan and budget for their priorities on an annual basis based on a national planning process. The degree to which school feeding is included in this planning and budgeting process will determine whether the program gets resources from the national budget and whether it benefits from general budget support allocations. In most

countries where implementation is supported by external partners, funding for the program comes from food aid and from government in-kind or cash contributions. As the program becomes national, it needs a stable and independent funding source. This may be through government core resources or through development funding. In the long-term, a national budget line for school feeding is needed.

Policy Lever 1: Governance of the national school feeding program through stable funding and budgeting

Indicator 1A: National budget line(s) and funding are allocated to school feeding and funds disbursed to implementation-levels in a timely and effective manner

Achieving financial sustainability of the program through national resources is a key factor in the transition to national ownership. Information from case studies indicates that this is a gradual process involving interim solutions, perhaps with bilateral development partners providing programmatic support. Guyana, Laos and Madagascar, for example, recently received funding for school feeding through the Global Partnership for Education (Madagascar Ministère de l'Éducation Nationale et de la Recherche Scientifique 2008; Guyana Ministry of Education 2008). Ghana secured budgetary support from the Dutch Government for its national Home Grown School Feeding (HGSF) program, which has been ongoing since 2005 (Government of Ghana 2011).

A case study on El Salvador illustrates how countries can also find national sources of funding to carry them through this interim stage (Bundy et al. 2009). The program was entirely funded by WFP initially, and then was increasingly supported by the interest on a National Trust fund established with the proceeds of the privatization of the country's telecommunications company. A law passed in 2000 required that this interest be allocated to social programs, including school feeding. The National Trust fund has generated around US$32 million for school feeding and in 2008 contributed approximately 30 percent of the total government budget for the school feeding program. During the interim stage the program also received funds from the United States Agency for International Development and the United States Department of Agriculture. In 2005, El Salvador's Legislative Assembly approved a national budget line for school feeding and institutionalized the program, which since 2008 is entirely supported by the government.

Case studies, like El Salvador, illustrate two important points. First, although different sources of external funding can sustain the program until national capacity is in place, there is a need to secure funds from the national budget in the long run. Second, countries appear to benefit from a planned transition process. An initial agreement between the government and donors on school feeding should include a clear understanding of the duration of donor assistance and possible alternatives to external funding as the program evolves.

Policy Goal 3: Institutional Capacity and Coordination

School feeding programs are complex interventions that require significant institutional capacity for implementation. Capacity requirements range from expertise in procurement and transportation of high quantities of food, to managing frequent disbursements of funds, food preparation, ensuring nutritional

quality and safety standards of food, and M&E. An important policy decision is to determine who does what and at what level.

Best practice is for school feeding programs to have an institution that is mandated and accountable for the implementation of the program, with adequate resources, managerial skills, staff, knowledge and technology at central- and sub-national-levels. It also requires strong commitment from whichever agency responsible for education if another agency is designated to lead for school feeding, as well as full engagement of teachers and school administration.

School feeding requires robust implementation arrangements that can procure and deliver large quantities of food to targeted schools, ensure the quality of the food and manage resources in a transparent way.

Policy Lever 1: School feeding inter-sectoral coordination and strong partnerships

Indicator 1A: Multisectoral steering committee to coordinate implementation of a national school feeding policy

Well-designed school feeding programs include the involvement of many sectors (such as education, health, agriculture and local government) as well as link with other school health and nutrition or social protection programs. In Brazil, the national school feeding program – PNAE is part of the country's Food and Nutrition Security System, which promotes inter-sectorality, articulating actions to guarantee access to healthy food and to strengthen family farming. The Brazilian school feeding program provides an example of linking food production, school meals and nutrition education through comprehensive programs and policies. As seen in Brazil and elsewhere, an established coordination mechanism (task force, working group, sector group, etc.) and strong operational partnerships are key.

Policy Lever 2: Management and accountability structures, strong institutional frameworks, and monitoring and evaluation

Indicator 2A: National school feeding management unit and accountability structures are in place, coordinating with school-level structures

A critical element in any transition to national ownership is that the government must have the capacity to design, manage and implement the national program. There are examples of middle-income countries, such as Lesotho, that choose to continue to work with external partners for implementation (WFP 2010). Another option is outsourcing to technical partners, as in the private sector program developed in Chile (Catalan et al. 2009). Whatever the mechanisms, the *Rethinking School Feeding* analysis suggests that full government capacity to actually manage and implement the program in its entirety is often the last part of the process to be completed (Bundy et al. 2009). But for this to happen, the strategies to strengthen the different institutions involved in the program should be planned from the outset and carried out throughout the life of the program.

Case studies show that increasing government capacity for school feeding entails time and a large investment in a variety of activities (e.g. assessments, training, infrastructure, information management systems, and equipment). Capacity development strategies seem to yield better results when they are planned in a systematic way, based on an initial capacity-gaps assessment and on in-depth knowledge of the context and institutional characteristics (OECD 2006; WFP 2008).

Indicator 2B: School-level management and accountability structures are in place

Another important aspect, especially in programs that are decentralized, are proper quality assurance and reporting mechanisms at implementation-level to ensure operational accountability and efficiency. District or school-based programs as in Kenya and Mali often rely on lower-level structures for the bulk of the implementation of the program, including the management of resources. Although decentralized programs offer an opportunity to increase community participation and thus, promote accountability from 'bottom up', there is also a need to ensure the proper controls and monitoring systems are in place so that norms and standards are ensured.

Policy Goal 4: Design and Implementation

Related to the assessment of the country situation described in the policy section above, an evidence-based school feeding program design is fundamental. Important elements of effective design and implementation are targeting of the right beneficiaries, selection of the right modalities of food delivery, and a food basket of the right quality. Complementary interventions such as food fortification and deworming, where needed, should be a standard part of any school feeding program.

In terms of costs of school feeding programs, these will generally depend on several different factors, including the choice of modality, the composition and size of the rations, whether the food is purchased locally or is imported, and the number of beneficiaries and school feeding days per year. Logistics, security, and climatic conditions have an impact on program expenditures. The geographical context will also affect the overall cost; programs in landlocked countries will generally face greater operational costs than countries implementing the same type of program but have access to seaports, depending on the provenance of the food. An analysis of costs from WFP project data is summarized by modality in Table 3.

Additionally, domestic procurement is the most common approach within national programs, and is emerging as the more common approach overall. Local procurement is being actively evaluated as a means to achieve sustainable school feeding programs and at the same time to use the purchasing power of the program as a stimulus for the local agricultural economy. As such, local purchase of food for school feeding is seen as a force multiplier, benefiting children and the local economy at the same time.

Table 3: School feeding costs and per child cost-efficiency metrics by modality, excluding school-level costs.

Modality	N=	School feeding project cost/child	Standardized school feeding cost/child	Standardized cost/child — range	Standard-ized cost/ 100 Kcal	Standard-ized cost/ g Protein	Standard-ized cost/ mg Iron	Standard-ized cost/ 100 µg Vitamin A	Standard-ized cost/ 100 µg Iodine
On-site meals	43	27	44	17–122	6.2	2.4	7.2	23	1,742
Biscuits	6	11	23	15–25	7.5	2.9	2.9	9.4	34
THRs	6	43	75	29–213					
On-site meals + THRs	22	36	61	23–140					
TOTAL	**77**	**29**	**48**	**15–213**					

Note: Costs in US$ including WFP and government contributions; THRs= take-home rations. *Source*: Gelli et al. 2011.

The implementation of national policies will often require redesign of the program itself, especially where the program has been designed and implemented by external partners and is largely dependent on food aid. There may be a need to reassess ongoing school feeding programs with regard to, for example, relative costs of procuring commodities locally or internationally, long-term implications of substitution for current commodities provided under food aid, and decentralization of implementation arrangements. Redesigning the program may help reduce costs or reduce reliance on foreign exchange.

Policy Lever 1: Quality assurance of programming and targeting, modalities, and procurement design, ensuring design that is both needs-based and cost-effective

The sustainability and effectiveness of school feeding programs can be optimized by evidence-based decisions about the design of the program. Program objectives can be met through careful selection based on the objectives of the program and trade-offs between different targeting approaches, feeding modalities, and costs.

Indicator 1A: A functional M&E system is in place as part of the structure of the lead institution and used for implementation and feedback

A government-led strategy for the M&E of a national school feeding program is the cornerstone for the development of a sustainable and efficient M&E system (Gelli and Espejo forthcoming). Experiences from the health sector show that program effectiveness is enhanced when the implementation of a national school feeding strategy is supported by a national M&E strategy agreed upon by all country partners and stakeholders (UNAIDS 2005).

The school feeding M&E strategy is generally integrated within a national school feeding program strategy, developed during the program design and planning stages after a context analysis and needs assessment has been conducted. The development and implementation of the national M&E strategy is generally government-led and includes key stakeholders (Ministry of Education, school staff, community, and national office of statistics, etc.) in the process. The involvement of government agencies, such as the Ministry of Education and the national office of statistics, is essential to ensuring M&E systems are aligned along national-, regional-, and local-levels.

Consensus building around the M&E strategy is essential to ensure that partners' activities contribute to the same national objectives and align their efforts with one national system, as elaborated in the *Paris Declaration on Aid Effectiveness* (OECD 2008). The development of a national M&E strategy in a participatory multi-stakeholder format also helps to ensure that adequate resources and capacities are allocated by all partners to the national M&E system.

Indicator 1B: Program design identifies appropriate target groups and targeting criteria corresponding to the national school feeding policy and the situation analysis

Targeting of school feeding programs is important for two reasons: 1) to keep the program within budget constraints and maximize impact of spending in line with the objectives–ensuring programs are sustainable; and 2) to ensure equity by redistributing resources to poor and vulnerable children—contributing to "leveling the playing field."

There are a number of different targeting methodologies available as each is context-specific and depends on program objectives. Thus, before defining the target population, an important first step for the government is to define the objectives of school feeding. Where it aims to sustain or strengthen education for the most vulnerable, the target population could be, for example, girls or boys to address gender disparities in access to education, orphans and vulnerable children, or children living in areas with low educational indicators. In each case, the objective of the program defines the target population. In some countries where school feeding is seen as an instrument to ensure children's rights to education and or to food, such as in India and Brazil, the coverage of programs is universal.

In high- and middle-income countries free school meals are generally integrated within social protection programs targeted to individual children on the basis of vulnerability and means-based proxies. Children not considered at risk would normally pay for the meal, though often at subsidized cost. These approaches, which require national systems of targeting and registries, are a standard good practice to ensure equity. However, they are not always a feasible option. Targeting is administratively demanding and costly, especially so in poor countries, and requires high levels of information and capacity, which are not easily available. Social costs—in terms of social cohesion or stigma for instance—can also be significant. This is why, in contrast, the majority of school feeding programs in low-income countries tend to be limited in geographical scope and to target children living in vulnerable, food insecure contexts. Certain school feeding programs combine both forms of targeting offering on-site feeding to all pupils in schools in food insecure areas and also providing take-home rations to vulnerable children (e.g. girls in areas with large gender inequality or vulnerable children in the context of HIV, etc.).

Rethinking School Feeding points out that school feeding does not necessarily reach the poorest where enrolment is not universal. Enrolment rates are often the lowest among the poorest, and therefore exclusion errors remain a challenge. Special targeting efforts are needed to ensure programs, including programs that seek to be universal, are reaching out to the marginalized.

Geographical targeting

Geography is the most frequent explicit criterion for targeting school feeding programs. Programs may be offered in some schools or districts and not in others. A poverty and food insecurity map, whether

crude or sophisticated, informs decisions about the locations where school feeding programs operate. Sometimes, in addition to the geographic location, school characteristics that correlate with poverty are used. Where school feeding programs are relatively small, geographic targeting can be powerful and can result in most of the benefits going to the poor. A program that serves 10 percent of schools and is placed only in the poorest districts would have few errors of inclusion. But as coverage increases and grows toward being universal, school feeding programs will include higher portions of non-poor children. In low-income countries, school feeding programs can be targeted on the basis of food insecurity as well as on an analysis of the educational context in each country to identify the areas with greatest educational need. In addition, the level of provision can vary depending on the poverty and vulnerability levels of regions and communities–even in universal programs. In Brazil for instance, while the national school meal program should provide on average 20 percent of daily nutritional needs of students, in schools located in indigenous communities and *quilombos* (descendants of slaves), it should provide at least 30 percent of the daily nutritional needs (FNDE 2009).

Individual targeting

Different forms of proxy means testing has been developed to target school feeding assistance to individual children on the basis of vulnerability and wellbeing indicators. Targeting criteria are context dependent, and involve inputs from multiple stakeholders at different levels. Decentralized targeting at village-level was found to be effective in Bangladesh (Galasso and Ravallion 2005). The systems and data requirements for individual targeting are fairly resource intensive and to date have generally been considered out of scope for most low-income countries, though there are effective examples of national programs in middle- and high-income countries.

The national program in Chile is considered an example of good practice regarding individual targeting, not least because the targeting mechanisms have been evolving since the 1960s, reflecting a deeper understanding of the drivers of poverty and educational exclusion (Kain, Uauy, and Taibo 2002). Initially, schools are provided free school meal allocations on the basis of a school vulnerability index built on socioeconomic household data of first grade schoolchildren. In the past, teachers were then asked to target free meal allocations to the most vulnerable children in the classroom; other children in the class would receive meals but at a cost. Progressively, capacity and resources for more information intensive systems were made available, and nowadays individual targeting is linked to national social protection registries.

While targeting individual children on the basis of need can have considerable benefits in cost-effectiveness, it has potential social costs from stigmatization. In certain contexts, beneficiaries of targeted school feeding assistance have been marginalized by other children not being assisted. Strong buy-in from the community is needed to ensure that the negative effects of individual targeting are minimized.

<u>Indicator 1C: Food modalities and the food basket correspond to objectives, local habits and tastes, availability of local food, food safety guidelines, and nutrition content requirements</u>

As there are differences between the benefits of in-school feeding (meals or biscuits) and take-home rations, program objectives are a key determinant of the school feeding modality. Based on the evidence reviewed in *Rethinking School Feeding*, Table 4 provides a qualitative assessment of the relative effect of school feeding (including in-school meals, take-home rations, and fortified biscuits) as well as complementary interventions. It is clear that all of these actions have effects on key educational indicators (Bundy et al. 2009). Meals distributed to girls and boys can have relatively higher effects on enrollment of girls than of boys, although this may be context-specific (Alderman and King 1998; Drèze and Kingdon 2001). The stronger effects of take-home rations on school access of girls depend on whether they are targeted to girls or other disadvantaged groups. Both meals and take-home rations increase cognition and educational achievement. While there may be more studies showing this effect with meals, the only two studies (Burkina Faso and Uganda) that compare meals and take-home rations under similar contexts found little difference (Alderman, Gilligan, and Lehrer 2010; Kazianga, de Walque, and Alderman 2010).

Table 4: Assessment of the effect of school feeding and complementary actions on education outcomes and cognition.

School Feeding Activity	Enrollment	Attendance	Educational Achievement	Cognition
In-school meals	+ **(♀ effect)**	+++	+++	+++
Take-home rations	+ **(♀ effect)**	+	++	++
Fortified biscuits	+	++	+	++
Supplementation	+	+++	+++	+++
Deworming	**n.a.**	+++	++	++

Note: n.a. = Not assessed; + = evidence from quasi-experimental evaluation.;++ = evidence from at least one randomized controlled trial; +++ = evidence from more than one randomized controlled trial; ♀ effect = enhances enrollment of girls. *Source:* Bundy et al. 2009.

Similarly, there are significant differences in the appropriateness of the different modalities to local capacity and contexts. Some of the important operational trade-offs are explored below.

In-school meals and snacks

The timing and composition of school meals depend on such local factors as the length of the school day, the nutritional status of children, local eating habits, availability of commodities, ease of preparation, and shelf life of different commodities, and costs, as well as on the availability of trained cooks, cooking facilities, and clean water. If short-term hunger is a problem, the meal needs to be provided in the morning, or when children arrive at school, to increase children's ability to concentrate and learn (Simeon and Grantham McGregor 1989).

Fortified high-energy biscuits and bars may have similar educational benefits to in-school meals but do not require the local costs for food preparation and serving. They can also be made locally, as Bangladesh, Egypt, Iraq and Pakistan (Sidaner, Helman, and Licina 2011). Their distribution is usually less disruptive to the school day than cooked meals. Through fortification, biscuit snacks can be an

important source of micronutrients. If school access is to be improved along with learning, biscuits may not have sufficient economic and thus, incentive value, although a well-designed study using biscuits in Bangladesh showed incentive and learning potential comparable to meal programs and at lower cost (Ahmed 2004).

To the extent possible, food should be fortified with minerals and vitamins to benefit nutritional and learning outcomes. When local capacity to process and fortify foods is lacking, fortification at the point of use and just before consumption with micronutrient powder is an emerging technology used in Afghanistan, Ghana and Madagascar (Sidaner, Helman, and Licina 2011).

Take-home rations

Take-home rations have the main benefit of being readily targeted to individual groups suffering particular educational disadvantages, and function rather like conditional cash transfer programs. The size of the rations can be expanded to increase the value of the transfer to households. They are less complex to implement than conventional school meal programs, but may have certain drawbacks for the same reasons (e.g. little community and parental involvement in the school itself and fewer opportunities for job or profit creation).

In some contexts, school feeding programs combine on-site meals or snack programs with an extra incentive from take-home rations targeting a specific group of vulnerable children. By spreading the extra costs of the take-home rations across all the assisted population, benefits to targeted vulnerable groups can be achieved at relatively small additional cost (Bundy et al. 2009).

Indicator 1D: Procurement and logistics arrangements are based on procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline

Countries that have made a successful transition have often explored linking school feeding programs to agriculture development—an approach also known as HGSF (Espejo, Burbano, and Galliano 2009; Gelli, Neeser, and Drake 2010). This is most clear for middle-income countries such as Brazil, but evidence from Côte d'Ivoire, Ghana, Kenya and Nigeria provides increasing support for the concept of linking smallholder production with school feeding demand to create new markets in low-income countries (Sumberg and Sabates-Wheeler 2011).

Since 2003, African Governments decided to include locally-sourced school feeding programs as a key intervention within the food security pillar of the Comprehensive Africa Agriculture Development Programme (CAADP 2009). That same year, the New Partnership for Africa's Development, launched a pilot HGSF program, designed to link school feeding to agricultural development through the purchase and use of locally and domestically produced food (NEPAD 2003). As school feeding programs run for a fixed number of days a year (on average 180) and normally have a predetermined food basket, they provide the opportunity to benefit local farmers and producers by generating a stable demand for their products.

HGSF programs provide an integrated framework with potentially multiple impacts across agriculture, health, nutrition and education, but even with recent efforts, there are several important gaps in the knowledge on optimal implementation and measures of effectiveness of HGSF. HGSF programs are complex and they exhibit different, context-specific models or configurations. Different approaches can even co-exist within the same country, where, for instance, program implementation is owned by decentralized institutions (e.g. individual states in Brazil or India), or where agencies like WFP are complementing the national programs (e.g. Ghana and Kenya). A specific area for attention to move forward is to develop new ways for the agriculture and education sectors to work together, including the construction of a coherent evidence base from which to evaluate specific outcomes within each sphere.

Policy Goal 5: Community Roles–Reaching Beyond Schools

School feeding programs that respond to community needs, are locally-owned and which incorporate some form of parental or community contribution, whether it be a cash payment or in-kind, for example, through donated food or labor, tend to be the strongest programs and the ones most likely to achieve successful transition from external assistance. Community participation should go well beyond contributing to the program implementation and be considered at each stage, from the initial assessment to design, management, implementation and M&E. However, care should be taken to avoid overburdening of communities especially under crisis or post-crisis situations.

Policy Lever 1: Strong community participation, accountability and ownership

Indicator 1A: Community participates in school feeding program design, implementation, management and evaluation and contributes resources (in-kind, cash or as labor)

It is important to find the right balance between programs that count on community participation and ownership—a very positive factor in sustainability—and programs that seek to be largely funded by communities. There is a tendency to consider community-sustained programs as an option in reducing dependence on external assistance, but this places significant expectations on communities that they may not be able to fulfill. Indeed, there is anecdotal evidence from many low-income countries that communities introduce fees or in-kind contributions to support such programs and by so doing erect barriers to education, particularly for girls and the poor (Bundy et al. 2009).

In some cases, communities themselves establish school feeding programs independent of formal structures and in many places, this is the only model implemented. As it is already established, it could be an effective channel to distribute additional resources to communities. In Togo, for example, children are usually given a small allowance by their parents to buy meals prepared and sold by members of the community (the *mamans*). This system is relatively efficient but is becoming increasingly expensive because of the food price crisis. By the end of the 2007/08 school year, the cost of a basic meal (e.g. 120 grams of rice with fish sauce) had increased by almost 50 percent. As a response to the food crisis, the Togo Community-Based School Feeding Program was launched in 2008 in primary schools located in food-deprived rural areas. The *mamans* directly received the cost of an individual meal (US$0.31 per day), a simple procurement approach, based on individual purchasing of a limited amount of food,

which allowed for greater ownership and accountability at the grassroots-level. The program has also been found to increase school enrolment and attendance, improve dietary intake, and increase savings and income (Andrews et al. 2011).

In cases where the government has decided to place responsibility on the community for sustaining the school feeding program, specific support to communities can be put in place, for example, by linking agricultural programs to school feeding as in the case of Njaa Marafuku Kenya (Eradicate Hunger in Kenya), a school feeding program managed by the Ministry of Agriculture, which is geared toward agricultural development and includes extension services to farmers.

Also, a solid policy framework would still be needed that recognizes the existence of this program and an institutional setup would be needed to determine guidelines, minimum standards, and support to the community. In certain cases, the government may wish to consider a mixed model of implementation, where a basic food basket would be provided by the state, which could then be complemented by the community, such as in Mali where the government is providing staples and the community is providing perishables (Masset and Gelli 2011). This way, the food supply of the program can be protected, and minimum nutritional and quality standards can be maintained.

Making Policy Choices: Trade-Offs in the Development of School Health and School Feeding Programs

There is no single set of policy options that will be relevant to all countries. In developing national and sub-national policies, it is important to recognize that there are always trade-offs in the choices made. This section highlights some of the crucial trade-offs that have been reported in practice.

- The adoption of the FRESH framework and the *Rethinking School Feeding* standards does not imply that these core components and strategies are the only important elements of a school health and school feeding program, but rather that these components will provide a sound foundation for pro-poor interventions. Even then there is considerable diversity in successful options for such programs. A country's policy context, resource constraints, and the health needs of its school-age children will ultimately inform the parameters for particular programs.

- Poverty is a key consideration in the design of school health and school feeding programs. It is evident that the educational impact of disease and poor nutrition is greatest for the poorest children. Thus, expanded coverage is critical for program effectiveness. Analysis suggests that universal coverage is most easily achieved through public sector interventions. However, the private sector approach to health and nutrition programs has also proven sustainable in some places, such as urban Indonesia. Such an approach may require a technical infrastructure and local market base that are lacking in predominantly rural low-income countries.

- One of the main arguments for using the school as a platform for health delivery is the potential savings offered by the school system, rather than the health system, as the delivery mechanism. From this perspective, schools are seen as providing a pre-existing mechanism, so costs are marginal, but also a system that aims to be sustainable and pervasive, reach disadvantaged children, and promote social equity. Schools do not replace the health system, which remains the main formal conduit for public health delivery and referrals. However, under specific circumstances, the school system can provide a useful complement to traditional health system delivery mechanisms.

- The options for school-based responses to the various diseases affecting school-age children vary depending on the nature of the treatment required. However, in most cases there is a clear policy context for integrating the treatment and control of the diseases in school-age children into wider school health programs. In the case of malaria, for instance, there is a clear policy context for an education sector response. Previous experience has shown that stand-alone school malaria programs are not always effective or sustainable. Rather, it is important to see malaria interventions in schools as part of a broader school health program. Another example is the case of refractive errors. It is essential that these refractive error programs be integrated into the health system, particularly into school health programs to be effective and sustainable. Required services include screening and referral at primary level, refraction and optical dispensing at district level, and supported advanced care, including pediatric and contact lens services, at tertiary level. In most low-income countries, however, this range of services is not available. It is essential that these services be linked not only to the health system, but also horizontally to education and social development services.

- The use of schools as a delivery platform should not detract from their primary role of teaching and learning—that is, the delivery of health and nutrition interventions should not function as a tax on the education system that it is trying to help. Similarly, the potentially large increase in demand for education created by these interventions must be matched by a concomitant increase in the supply of quality education. In other words, school health and school feeding programs should be mainstreamed within a systematic education sector plan. There are good examples of countries that have recognized these issues and rolled out effective programs that have avoided these potential pitfalls.

- Enough is known now to recognize the importance of school health and school feeding programs as contributors to educational achievement in low-income countries. However, it is important to note that these programs should be viewed alongside more traditional interventions (for example, school fee abolition, cash transfers, and incentives or subsidies) as important components of the battery of responses that can contribute to increasing participation in education. These interventions may not be relevant everywhere, but in many communities and countries using schools to promote good health and avoid hunger, they may make a crucial contribution to achieving the EFA goals.

Implementing the SABER Framework

SABER-School Health and School Feeding is intended as framework to assist governments to assess the quality of their school health and school feeding programs, and benchmark them against other programs.

In order to facilitate the collection of data using the SABER format, questionnaire instruments have been developed, based on the SABER-School Health and School Feeding frameworks. The rubrics were first developed and evaluated with 30 countries in two sub-regions of Africa: those in the Economic Community of West African States (ECOWAS) and those in the East African Community (EAC). A questionnaire was then developed jointly by representatives from the education, health, and agriculture sectors, before piloting in countries in Africa (Kenya and The Gambia); South Asia (Sri Lanka); Latin America and the Caribbean (Barbados, Dominica, Grenada, Guyana, and St. Lucia). Based on this experience, a plan for supporting countries to implement the SABER approach has been developed, including the following steps.

1. Data collection: An experienced principal investigator will collect the policy information and data necessary to fill out the data collection instrument, by drawing on his or her knowledge of the system and on government contacts. Or, an alternative approach may involve convening a workshop of experts, including government officials, and use that group process to collect the evidence and code data. In either case, data sources are clearly identified and made public when the data are posted.

2. Analysis: The data will be used to analyze how developed the country's school health and school feeding policies and institutions are, from the perspective of achieving key education goals. In the process, it will also generate benchmarks of progress in those specific areas against other countries or provinces. These evaluations will be embedded in a more in-depth report discussing policy options and relevant experiences from other countries. While the principal investigator/team in each country may carry out the initial analysis, the central SABER-School Health and School Feeding team is responsible for completing the analysis and ensuring cross-country comparability.

3. Validation and discussion: The team will present the data to World Bank regional team leaders and government officials, to ensure that SABER reports the country's policies and institutions correctly. Any corrections to the information on which the analysis is based will be incorporated before publication. In addition, the team (or, preferably, the World Bank regional staff member) will discuss the resulting report with government counterparts before it is finalized and made public.

4. Publication of analyses and data: Both the country report and the data underlying it are made public on the SABER website.

Experience suggests the following indicative timeline for implementation:

1. Collect data through interviews with knowledgeable respondents→ 3 weeks.
2. Review data and follow-up to improve data quality→ 3 weeks.
3. Analyze data and draft SABER-School Health and School Feeding report→2 weeks.
4. Review of report by interested parties and finalize→ 2 to 4 weeks.

Once the Framework has been approved, it is intended to finalize the data collection instrument, an implementation manual, and example country reports, as a prelude to working with interested countries to implement the SABER-School Health and School Feeding tool.

Conclusion

There have been major changes in SHN programming over the past decade. Since 2000, there has been an increasing recognition in middle- and low-income countries that SHN programs offer important benefits to education and can sometimes serve as a productive social safety net. This recognition has resulted in a movement away from the traditional perception of SHN programs as primarily a health-promotion tool implemented by the health sector toward a vision of programs that aim to improve educational outcomes. Such programs are largely implemented by the education sector and designed to reach the poorest segments of the population.

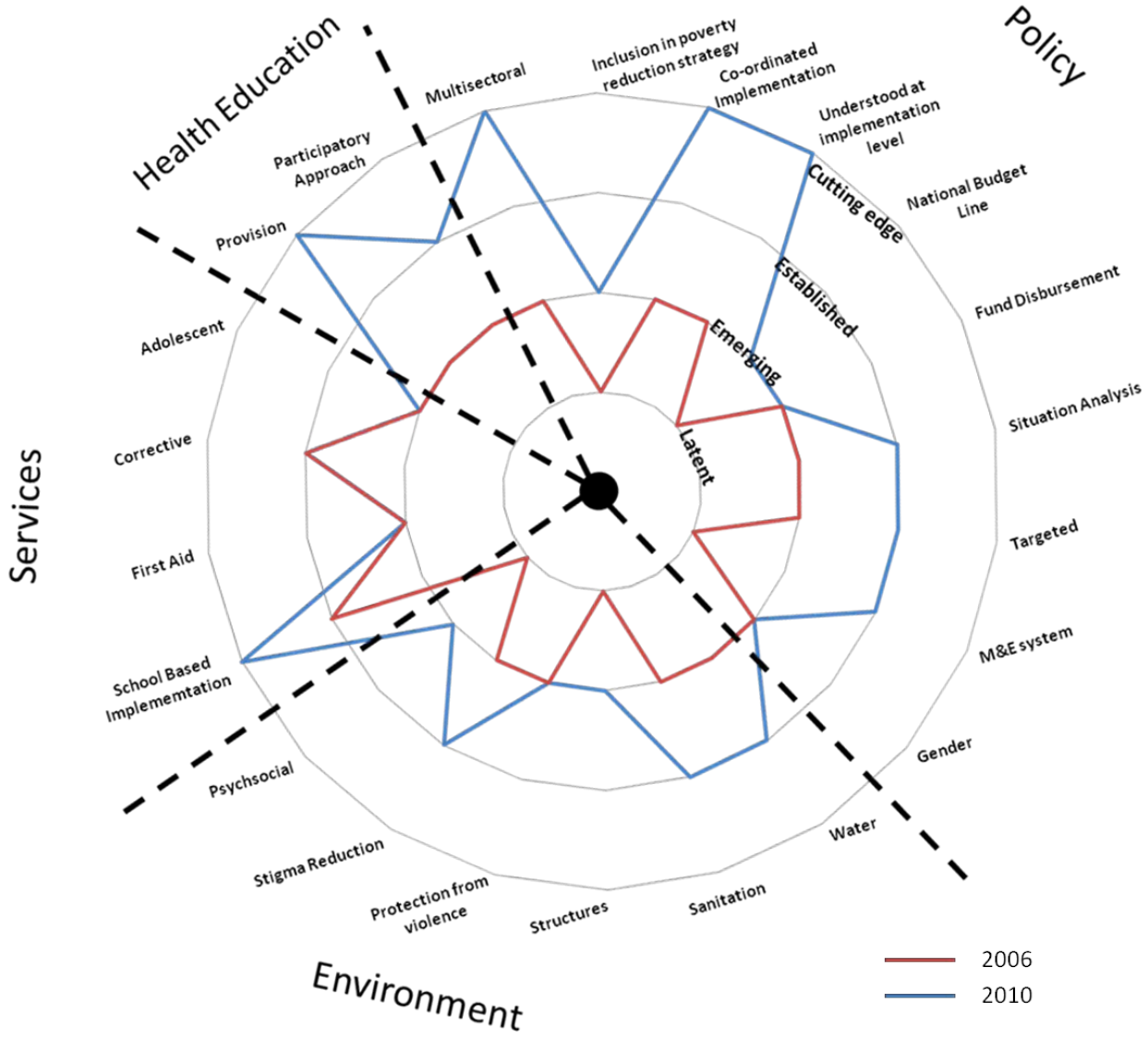
These changes have been surprisingly rapid, especially given the apparent inertia in the education sector prior to 2000, and have coincided with national, regional, and global efforts to achieve EFA. A causal link seems probable; it may be argued that for many countries, SHN programs are viewed as part of the spectrum of efforts necessary to achieve universal primary completion, alongside fee abolition, expansion of the teaching force, and other interventions that fall within the more traditional role of the education sector.

A second part of this change is the recognition that SHN programs are part of a larger, life-cycle process that supports child development. From a programmatic point of view this might be seen as a sequence of programs throughout the life of a child, each program building on the success of its predecessor. From this perspective, maternal and child health (MCH) programs address the health and nutrition needs of children from fetal development through the age of 2 years (that is, from 9 to 24 months), ECD programs add behavioral stimulation to good health and nutrition until the child goes to school (2 to 6 years), and school-based interventions address health, nutrition, and hunger issues during school age. The education sector has a role to play in each stage of this process—and a notable self-interest in promoting MCH and ECD programs—but the sector's major role is in supporting school-age children.

The SABER framework presented here is based on the best available current evidence. However, it is a dynamic framework which will continue to evolve as new evidence emerges on what matters most for school health policy is developed. There are two key sources that will provide new insights: 1) the many impact evaluations that are ongoing in middle- and low-income countries; and 2) the data collected through the implementation of the SABER framework itself.

The implementation of the SABER framework will also provide insights into longitudinal changes in policy, which have not been documented before. A graphical example of how such longitudinal data could be presented is shown in Figure 11, based on piloting done in Sri Lanka. There is a lack of robust research on the evolution over time of policies in both school health and school feeding. A better understanding of those processes and transitions will help decision-makers identify the most efficient ways to manage change.

Figure 11. Example on the evolution of the Sri Lanka SABER-School Health policy goals over time.



In concluding, it is important to recognize that the SABER-School Health framework is part of the larger SABER initiative that collects information on several domains of education systems, including teacher policies, student assessment policies, finance, education management and information systems, equity and inclusion, autonomy and accountability, private sector development, early childhood education, tertiary education and workforce development, and information and communication technologies. This larger initiative helps emphasize that effective education requires the systematic implementation of a broad range of inputs.

References

Adelman, S., H. Alderman, D. O. Gilligan, and K. Lehrer.2008."The Impact of Alternative Food for Education Programs on Learning Achievement and Cognitive Development in Northern Uganda." IFPRI, Washington, DC.

Ahmed, A. U. 2004. "Impact of Feeding Children in School: Evidence from Bangladesh." International Food Policy Research Institute, Washington, DC.

Alderman, H., and E. M. King. 1998. "Gender Differences in Parental Investment in Education." *Structural Change and Economic Dynamics* 9 (4): 453–68.

Alderman, H., D. O. Gilligan, and K. Lehrer. 2010. "The Impact of Food for Education Programs on School Participation in Northern Uganda." Draft, World Bank, IFPRI, and University of Oxford.

Andrews, C., E. Galliano, C. Turk, and G. Zampaglione. 2011. "Social Safety Nets in Fragile States: A Community-Based School Feeding Program in Togo." Social Protection Discussion Paper No. 1117. World Bank, Washington, DC.

Alderman, H., and D. A. P. Bundy. 2011. "School Feeding Programs and Development: Are We Framing the Question Correctly?" World Bank Research Observer. World Bank, Washington DC.

Bandura, A. 1977."Social Learning Theory." Prentice Hall, Englewood Cliffs, NJ.

Bloom, B. R., C. M. Michaud, J. R. La Montagne, and L. Simonsen. 2006."Priorities for Global Research and Development Interventions." In Disease Control Priorities in Developing Countries, 2nd ed., ed. D. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. Evans, P. Jha, A. Mills, and P. Musgrove, 103–18. World Bank and Oxford University Press, New York.

Botvin, G. J., A. Eng, and C. L. Williams.1980. "Preventing the Onset of Cigarette Smoking Through Life Skills Training." *Preventative Medicine* 9: 135-143.

Botvin, G. J., E. Baker, E. M. Botvin, A. D. Filazzola, and R. B. Millman. 1984. "Alcohol Abuse Prevention through the Development of Personal and Social Competence: A Pilot Study." *Journal of Studies on Alcohol* 45: 550−552.

Brooker, S. 2009. *Malaria Control in Schools: A Toolkit on Effective Education Sector Responses to Malaria in Africa*. Washington, DC: World Bank and London: Partnership for Child Development.

Bundy, D. A. P., C. Burbano, M. Grosh, A. Gelli, M. C. H. Jukes, and L. J. Drake. 2009. "Rethinking School Feeding: Social Safety Nets, Child Development, and the Education Sector." Directions in Development Series. World Bank, Washington, DC.

Bundy, D. A. P., M. S. Wong, L. L. Lewis, and J. Horton. 1990. "Control of Geohelminths by Delivery of Targeted Chemotherapy through Schools." *Transactions of the Royal Society of Tropical Medicine and Hygiene* 84: 115–20.

Bundy, D. A. P. 2011. "*Rethinking School Health: A Key Component of Education for All*." Directions in Development. World Bank, Washington, DC.

CAADP (Comprehensive Africa Agriculture Development Programme). 2009. “Pillar III: Framework for African Food Security (FAFS).”NEPAD, South Africa. http://www.nepad-caadp.net/pdf/CAADP%20FAFS%20BROCHURE%20indd.pdf

Caplan, M., R. Weissberg, J. Grober, P. Sivo, K. Grady, and C. Jacoby. 1992. “Social Competence Promotion with Inner-City and Suburban Young Adolescents: Effects on Social Adjustment and Alcohol Use.” *Journal of Consulting and Clinical Psychology* 60 (1): 56−63.

CARICOM and UNICEF. 1999. “Health and Family Life Education (HFLE): Empowering Young People with Life Skills for Healthy Living. An Information Package.” UNICEF Caribbean Office, Bridgetown, Barbados.

Catalan, J., R. Epstein, M. Guajardo, D. Yung, L. Henriquez, C. Martinez, and G. Weintraub. 2009. “No Such Thing As A Free Lunch?” ORMS, Hanover, MD.http.orms-today.com

Clarke, S. E., M. C. H. Jukes, J. Njagi, L. Khasakhala, B. Cundill, J. Otido, C. Crudder, B. B. Estambale, and S. Brooker. 2008. "Effect of Intermittent Preventive Treatment of Malaria on Health and Education in Schoolchildren: A Cluster-Randomised, Double-Blind, Placebo-Controlled Trial." *Lancet* 372 (9633): 127-138.

Deffenbacher, J., E. Oetting, M. Huff, and G. Thwaites.1995. “Fifteen-Month Follow-Up of Social Skills and Cognitive-Relaxation Approaches to General Anger Reduction.” *Journal of Counseling Psychology* 42 (3): 400−405.

Deffenbacher, J., R. Lynch, E. Oetting, and C. Kemper.1996. “Anger Reduction in Early Adolescents.” *Journal of Counseling Psychology* 41 (2): 149−157.

Drèze, J., and G. Kingdon. 2001. "School Participation in Rural India." *Review of Development Economics* 5 (1): 1–24.

Elias, M. J. 1991. “An Action Research Approach to Evaluating the Impact of a Social Decision-Making and Problem-Solving Curriculum for Preventing Behavior and Academic Dysfunction in children.” *Evaluation and Program Planning* 14 (4): 397–401.

Englander-Goldern, P., J. Jackson, K. Crane, A. Schwarzkopf, and P. Lyle. 1989.“Communication Skills and Self-Esteem in Prevention of Destructive Behaviors.” *Adolescence* 14: 481−501.

Errecart, M. T., H. J. Walberg, J. G. Ross, R. S. Gold, J. L. Fiedler, and L. J. Kolbe. 1991. “Effectiveness of Teenage Health Teaching Modules.” *Journal of School Health* 61 (1): 26–30.

Espejo, F., C. Burbano, and E. Galliano. 2009. “Home-Grown School Feeding: A Framework For Action.” World Food Programme, Rome.

Federative Republic of Brazil. 2010. “Constitution of the Federative Republic of Brazil, 3rd Edition.” Articles 205 and 208.Chamber of Deputies, Publishing Coordination, Brasilia.

Feindler, E., R. Ecton, D. Kingsley, and D. Dubey. 1986. “Group Anger-Control Training for Institutional Psychiatric Male Adolescents. *Behavior Therapy* 17: 109−123.

Fernando, D., D. de Silva, R. Carter, K. N. Mendis, and R. Wickremasinghe. 2006. “A Randomised, Double-blind, Placebo-controlled, Clinical Trial of the Impact of Malaria Prevention on the Educational Attainment of Schoolchildren.” *American Journal of Tropical Medicine and Hygiene* 74 (3): 386–93.

Filmer, D., and N. Schady. 2010. “Promoting Schooling through Scholarships in Cambodia: Evidence from the Cambodia Education Sector Support Project.” Impact Evaluation Brief. World Bank, Washington, DC.

Fiszbein, A., N. Schady, F. H. G. Ferreira, M. Grosh, N. Kelleher, P. Olinto, and E. Skoufias. 2009. “Conditional Cash Transfers: Reducing Present and Future Poverty.” World Bank Policy Research Report. World Bank, Washington, DC.

FNDE (Fundo Nacional de Desenvolvimento da Educação). 2009. Resolução/CD/FNDE Nº 38, de 16 de Julho de 2009. http://comunidades.mda.gov.br/portal/saf/arquivos/view/alimenta-o-escolar/RES38_FNDE.pdf

Gådin, K. G. 2003. “Do Changes in the Psychosocial School Environment Influence Pupils' Health Development? Results From a Three-Year Follow-Up Study.” *Scandinavian Journal of Public Health*31 (3): 169–177.

Galasso, E., and M. Ravallion. 2005. "Decentralized Targeting of an Antipoverty Program." *Journal of Public Economics* 89 (4): 705–27.

Gelli, A., U. Meir, and F. Espejo. 2007. "Does Provision of Food in School Increase Girls’ Enrollment? Evidence from Schools in Sub-Saharan Africa." *Food and Nutrition Bulletin* 28 (2): 149–55.

Gelli, A., K. Neeser, and L. J. Drake. 2010. “Home Grown School Feeding: Linking Small Holder Agriculture to School Food Provision.” PCD Working Paper 212. The Partnership for Child Development, London.

Gelli, A., A. Cavallero, L. Minervini, M. Mirabile, L. Molinas, and M. Regnault de la Mothe. 2011. “New Benchmarks for Costs and Cost-Efficiency of School-Based Feeding Programs in Food-Insecure Areas.” *Food and Nutrition Bulletin*32 (4): 324–32.

Gelli, A., and F. Espejo. Forthcoming. “School Feeding, Moving from Practice to Policy: Reflections on Building Sustainable Monitoring and Evaluation Systems.” *Public Health Nutrition*.

Government of Ghana. 2011. “Ghana School Feeding Program 2011 Annual Operating Plan.” Government of Ghana, Accra.

Green, L. W., M. W. Kreuter, S. G. Deeds, and K. B. Partridge. 1980. “Health Education Planning: A Diagnostic Approach.” Mayfield Publishing, Palo Alto, CA.

Greene, W. H., and B. G. Simons-Morton. (1984). “Introduction to Health Education.” Waveland Press, Prospect Heights, IL.

Griffin, T., and R. Svendsen.1992.“Promising Prevention Strategies for the 90s.”Alcohol/Drug Abuse Resource Centre and Clearinghouse. Piscataway, New Jersey.

Grigorenko, E. L., R. J. Sternberg, M. Jukes, K. Alcock, J. Lambo, D. Ngorosho, C. Nokes, and D. A. P. Bundy. 2006. "Effects of Antiparasitic Treatment on Dynamically and Statically Tested Cognitive Skills over Time." *Journal of Applied Developmental Psychology* 27 (6): 499–526.

Guyana Ministry of Education. 2008. “Education Strategic Plan 2008-2013.”Ministry of Education, Georgetown.

Hoganbruen, K., C. Clauss-Ehlers, D. Nelson, and M. Faenza. 2003."Effective Advocacy for School-Based Mental Health Program. In Handbook of School Mental Health Programs: Advancing Practice and Research (pp. 45-59) eds. M. D. Weist, S.W. Evans, and N.A. Lever. Kluwer Academic/Plenum Publishers, New York. http://www.scribd.com/doc/22577296/Anti-Bullying-Guidance-for-Schools

Hurwitz, L., and K. Weston.2010. "Using Coordinated School Health to Promote Mental Health for All Students." NASBHC, Washington DC. http://www.nasbhc.org/atf/cf/%7Bcd9949f2-2761-42fb-bc7a-cee165c701d9%7D/white%20paper%20csh%20and%20mh%20final.pdf

Jacoby, E., S. Cueto, and E. Pollitt. 1996. "Benefits of a School Breakfast Programme among Andean Children in Huaraz, Peru." *Food and Nutrition Bulletin* 17 (1): 54–64.

JPAL (Jameel Poverty Action Lab). 2005. "Education: Meeting the Millennium Development Goals." *Fighting Poverty: What Works* 1.

Jukes, M. C. H., C. A. Nokes, K. J. Alcock, J. K. Lambo, C. Kihamia, N. Ngorosho, A. Mbise, W. Lorri, E. Yona, L. Mwanri, A. D. Baddeley, A. Hall, and D. A. P. Bundy. 2002. "Heavy Schistosomiasis Associated with Poor Short-Term Memory and Slower Reaction Times in Tanzanian School Children." *Tropical Medicine and International Health* 7 (2): 104–17.

Jukes, M. C. H., L. J. Drake, and D. A. P. Bundy. 2008. "School Health, Nutrition and Education for All: Levelling the Playing Field." CABI Publishing, Wallingford, UK.

Jukes, M.C.H., M. Pinder, E. L. Griogorenko, H. B. Smith, G. Walraven, E. M. Bariau, R. J. Sternberg, L. J. Drake, P. Milligan, Y. B. Cheung, B. M. Greenwood and D. A. P. Bundy. 2006. "Long-Term Impact of Malaria Chemoprophyalaxis on Cognitive Abilities and Educational Attainment: Follow-up of a Controlled Trial." *PLoS Clinical Trials* 1 (4): e 19.

Kain, J., R. Uauy, and M. Taibo. 2002. "Chile's School Feeding Programme: Targeting Experience." *Nutrition Research* 22: 599–608.

Kazianga, H., D. de Walque, and H. Alderman. 2010. "Educational and Health Impacts of Two School Feeding Schemes: Evidence from a Randomized Trial in Rural Burkina Faso." World Bank, Washington, DC.

Kirby, D. 1994. "School-Based Programmes to Reduce Sexual Risk-Taking Behaviors: Sexuality and HIV/AIDS Education, Health Clinics, and Condom Availability Programmes." Paper presented at the annual meeting of the American Public Health Association, San Diego, California, 31October 1994. American Public Health Association, San Diego, California.

———. 1997. "No Easy Answers: Research Findings on Programmes to Reduce Teen Pregnancy." National Campaign to Reduce Teen Pregnancy, Washington, DC.

Kremer, M. 2003. "Randomised Evaluations of Educational Programmes in Developing Countries: Some Lessons." *American Economic Review* 93 (2): 102–6.

Kristjansson, E., V. Robinson, M. Petticrew, B. MacDonald, J. Krasevec, L. Janzen, T. Greenhalgh, G. Wells, J. MacGowan, A. Farmer, B. J. Shea, A. Mayhew, and P. Tugwell. 2007. "School Feeding for Improving the Physical and Psychosocial Health of Disadvantaged Elementary School Children." *Cochrane Database of SystematicReviews* 1.

Lockheed, M. E., and A. M. Verspoor. 1999. *Improving Primary Education in Developing Countries*. Washington, DC: World Bank and Oxford University Press.

Madagascar Ministère de l'Éducation Nationale et de la Recherche Scientifique. 2008. "Education Pour Tous." Education Sector Plan 2008.

Maluccio, J., and R. Flores. 2005. *Impact Evaluation of a Conditional Cash Transfer Program: The Nicaragua* Red de Protección Social. Research Report 4. Washington, DC: IFPRI.

Masset, E., and A. Gelli. 2011. "Community Participation and the Links Between Agriculture, Nutrition and Education: Design of a Randomised Field Experiment of "Home-Grown" School Feeding in Mali." PCD Working Paper Series. The Partnership for Child Development, London.

McConaughy, S. H., P. J. Kay, and M. Fitzgerald. 1998. "Preventing SED Through Parent-Teacher Action Research and Social Skills Instruction: First-Year Outcomes. *Journal of Emotional and Behavioral Disorders* 6 (2).

Miguel, E., and M. Kremer.2004. "Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities." *Econometrica* 72 (1): 159-217

Mize, J., and G. Ladd. 1990. "A Cognitive-Social Learning Approach to Social Skill Training with Low-Status Preschool Children." *Developmental Psychology* 26 (3): 388–397.

Morley, S., and D. Coady. 2003. *From Social Assistance to Social Development: Targeting Educational Subsidies in Developing Countries*. Washington, DC: Center for Global Development and IFPRI.

National Healthy Schools Program (NHSP). 2009. "Anti-Bullying Guidance for Schools" ". http://www.scribd.com/doc/22577296/Anti-Bullying-Guidance-for-Schools#download

NEPAD (New Partnership for Africa's Development). 2003. "The NEPAD Home-Grown School Feeding Programme: A Concept Note." NEPAD, South Africa.

Nokes, C., S.M. Grantham-McGregor, A. W. Sawyer, E. S. Cooper, B. A. Robinson and D. A. P. Bundy. 1992. "Moderate to Heavy Infections of Trichuristrichura Affect Cognitive Function in Jamaican School Children." *Parasitology* 104 (3): 539–47.

Nokes, C., S. T. McGarvey, L. Shiue, G. Wu, H. Wu, D. A. P. Bundy, and G. R. Olds. 1999. "Evidence for an Improvement in Cognitive Function Following Treatment of *Schistosoma japonicum* Infection in Chinese Primary Schoolchildren." *American Journal of Tropical Medicine and Hygiene* 60 (4): 556–65.

Nores, M and Barnett, W.S. 2009. "Benefits of Early Childhood Interventions Across the World: (Under) Investing in the Very Young." *Economics of Education Review* 29 (2): 271–82.

OECD (Organisation for Economic Co-operation and Development). 2006. "The Challenge of Capacity Development: Working Towards Good Practice." DAC Guidelines and Reference Series, Paris.

———. 2008. "The Paris Declaration on Aid Effectiveness and the Accra Agenda for Action." OECD: Paris.

Oleweus, D. 1990. "A National Campaign in Norway to Reduce the Prevalence of Bullying Behavior." Paper presented at the Biennial Meeting of the Society for Research on Adolescence, Atlanta, 10–12 December. As cited in WHO, 1994. Society for Research on Adolescence, Atlanta.

Parker, S., S. Greer, and B. Zuckerman. 1988. "Double Jeopardy—The Impact of Poverty on Early Child Development." *Pediatric Clinics of North America* 35 (6): 1227–40.

PCD (The Partnership for Child Development). 2012."Schools and Health: FRESH Homepage" PCD, London. http://www.freshschools.org/Pages/HealthRelatedSchoolPolicies.aspx

Pollitt, E., S. Cueto, and E. R. Jacoby. 1998. "Fasting and Cognition in Well- and Under-nourished Schoolchildren: A Review of Three Experimental Studies." *American Journal of Clinical Nutrition* 67 (4): 779s–784s.

Pollitt, E., P. Hathirat, N. J. Kotchabhakdi, L. Missell, and A. Valyasevi. 1989. "Iron Deficiency and Educational Achievement in Thailand." *American Journal of Clinical Nutrition* 50 (3 Suppl): 687–96.

Postrado, L. T. and H. J. Nicholson. 1992. "Effectiveness in Delaying the Initiation of Sexual Intercourse of Girls Aged 12–14: Two Components of the Girls Incorporated Preventing Adolescent Pregnancy Programme." *Youth and Society* 23 (3).

Powell, C. A., S. P. Walker, S. M. Chang, and S. M. Grantham-McGregor. 1998. "Nutrition and Education: A Randomized Trial of the Effects of Breakfast in Rural Primary School Children." *American Journal of Clinical Nutrition* 68: 873–9.

Pritchett, L., and D. Filmer. 1999. "What Education Production Functions Really Show: A Positive Theory of Education Expenditures." *Economics of Education Review* 18 (2): 223–39.

Rosso, J. M. Del, and T. Marek. 1996. *Class Action: Improving School Performance in the Developing World through Better Health and Nutrition*. Washington, DC: World Bank.

Schinke, S., B. Blythe, and L. D. Gilchrest. 1981. "Cognitive-Behavioral Prevention of Adolescent Pregnancy." *Journal of Counseling Psychology* 28: 451−454.

Schultz, T. P. 2004. "School Subsidies for the Poor: Evaluating the Mexican Progresa Poverty Program." *Journal of Development Economies*. 74 (1): 199–250.

Scripture Union. (n.d.). "All the right moves: Life Skills for an Aids-Free Generation: Twelve to Fifteen Year Programme." Scripture Union, Rondebosch, South Africa.

Seshadri, S., and T. Gopaldas. 1989. "Impact of Iron Supplementation on Cognitive Functions in Preschool and School-aged Children: The Indian Experience." *American Journal of Clinical Nutrition* 50 (3 Suppl): 675–84a.

Sidaner, E., M. Helman, and J. Licina. 2011."Synthesis of Locally Produced Fortified Foods in 13 WFP Countries." World Food Programme, Rome.

Simeon, D. T., and S. M. Grantham McGregor. 1989. "Effects of Missing Breakfast on the Cognitive Functions of School Children of Differing Nutritional Status." *American Journal of Clinical Nutrition* 49 (4): 646–53.

Simeon, D. T. 1998. "School Feeding in Jamaica: A Review of its Evaluation." *American Journal of Clinical Nutrition* 67 (4): 790s–794s.

Simeon, D. T., S. M. Grantham-McGregor, J. E. Callender, and M. S. Wong. 1995. "Treatment of *Trichuris trichiura* Infections Improves Growth, Spelling Scores, and School Attendance in Some Children." *Journal of Nutrition* 125 (7): 1875–83.

Simeon, D. T., S. M. Grantham-McGregor, and M. S. Wong. 1995. "*Trichuristrichiura* Infection and Cognition in Children: Results of a Randomized Clinical Trial." *Parasitology* 110 (4): 457–64.

Soemantri, A. G., E. Pollitt, and I. Kim. 1985. "Iron Deficiency Anemia and Educational Achievement." *American Journal of Clinical Nutrition* 42 (6): 1221–28.

Sternberg, R. J., C. Powell, P. McGrane, and S. M. Grantham-McGregor. 1997. "Effects of a Parasitic Infection on Cognitive Functioning." *Journal of Experimental Psychology—Applied* 3 (1): 67–76.

Storey, E., M. Cullen, N. Schwab, and N. Alderman. 2003. "A Survey of Asthma Prevalence in Elementary Schools." Environmental and Human Health Inc., Connecticut. http://www.ehhi.org/reports/asthma03/asthma03.pdf

Sumberg, J., and R. Sabates-Wheeler. 2011. "Linking Agricultural Development to School Feeding in Sub-Saharan Africa: Theoretical Perspectives." *Food Policy* 36: 341–9.

Supreme Court of India. 2004. "Mid-day Meals: Supreme Court Orders." http://www.righttofoodindia.org/mdm/mdm_scorders.html.

Svensson, M. 2009. "School Feeding, Realizing the Right to Education: A Legal Analysis." Master's Thesis. University of Gothenburg School of Law, Gothenburg.

Tan, J.-P., J. Lane, and G. Lassibille. 1999. "Student Outcomes in Philippine Elementary Schools: An Evaluation of Four Experiments." *World Bank Economic Review* 13 (3): 493–502.

Tolan, P., and N. Guerra. 1994. "What Works in Reducing Adolescent Violence: An Empirical Review of the Field. Boulder, Colo.: Center for the Study and Prevention of Violence. UNAIDS Inter-agency Working Group on HIV/AIDS, Schools and Education. HIV/AIDS, schools and education, global strategy framework. Draft, July 2001.

UNAIDS (Joint United Nations Programme on HIV/AIDS). 2005. "The "Three Ones" in Action: Where We Are and Where We Go From Here." UNAIDS, Geneva.

UNESCO. 2010a. "Ninth Meeting of the High-Level Group on Education for All.Addis Ababa Declaration." 23–25 February 2010. Addis Ababa, Ethiopia.

———. 2010b. "EFA Global Monitoring Report 2010: Reaching the Marginalized." UNESCO Publishing Oxford University Press, Paris.

———. 2012. "Stopping Violence in Schools: A Guide for Teachers". UNESCO Publishing Oxford University Press, Paris. http://unesdoc.unesco.org/images/0018/001841/184162e.pdf

———. 2011. "EFA Global Monitoring Report 2011. The hidden crisis: Armed conflict and education." UNESCO, Paris.

UNICEF. 2009. "Child-Friendly Schools: Schools as Protective Environments." UNICEF, New York. http://www.unicef.org/devpro/files/CFSManual_Ch05_052009.pdf

———. 2011. "Guidelines for Child-Friendly Spaces in Emergencies." UNICEF, New York. http://www.unicef.org/protection/Child_Friendly_Spaces_Guidelines_for_Field_Testing.pdf

van Stuijvenberg, M. E., J. D. Kvalsvig, M. Faber, M. Kruger, D. G. Kenoyer, and A. J. S. Benade. 1999. "Effect of Iron-, Iodine-, and Beta-Carotene-Fortified Biscuits on the Micronutrient Status of

Primary School Children: A Randomized Controlled Trial." *American Journal of Clinical Nutrition* 69 (3): 497–503.

Vazir, S., B. Nagalla, V. Thangiah, V. Kamasamudram, and S. Bhattiprolu. 2006. "Effect of Micronutrient Supplement on Health and Nutritional Status of Schoolchildren: Mental Function." *Nutrition* 22 (1): S26–32.

Weist, M. D., and S.W. Evans. 2005. "Expanded School Mental Health: Challenges and Opportunities In An Emerging Field." *Journal of Youth and Adolescence* 34: 3–6.

Werner, M. 1991. "Adolescent Substance Abuse: Risk Factors and Prevention Strategies." Maternal & Child Health Technical Information Bulletin. National Center for Education in Maternal and Child Health, Washington, DC.

WFP (World Food Programme) and UNICEF. 2005. "The Essential Package: Twelve Interventions to Improve the Health and Nutrition of School-Age Children." World Food Programme, Rome.

WFP (World Food Programme). 2008. "Summary Report of the Evaluation of WFP's Capacity Development Policy and Operations." World Food Programme, Rome.

———. 2010. "Lesotho Development Project Number 200199. School Meals Programme." World Food Programme, Paris. http://one.wfp.org/operations/current_operations/project_docs/200199.pdf

———. 2012. "Global School Feeding Survey." World Food Programme, Rome.

Whaley, S. E., M. Sigman, C. Neumann, N. Bwibo, D. Guthrie, R. E. Weiss, S. Alber, and S. P. Murphy. 2003. "The Impact of Dietary Intervention on the Cognitive Development of Kenyan School Children." *Journal of Nutrition* 133 (11): 3965S–71S.

Whitman, V. C., and C. Aldinger. 2008. "Case Studies in Global School Health Promotion: From Research to Practice." Springer, New York.

Winch, M., and M. Leland. 2009. "Political Will, Equality of Opportunity, and Innovation: Foundations of the Success of the School Feeding Program in Chile." Chapter 2 p.12. In International Approaches to School Feeding: Country Experiences from Mali, Chile and India, ed. M. Winch and M. Leland. GCNF, National Harbor, MD.

World Bank. 1998. "Public Expenditure Management Handbook." World Bank, Washington DC. http://www1.worldbank.org/publicsector/pe/handbook/pem98.pdf

———. 2008. "Girls' Education in the 21st Century: Gender Equality, Empowerment, and Economic Growth." Eds. M. Tembon and L. Fort. Directions in Development, Human Development. World Bank, Washington DC. http://siteresources.worldbank.org /EDUCATION /Resources /278200-1099079877269/547664-1099080014368/DID_Girls_edu.pdf

———. 2011. "No Small Matter: The Impact of Poverty, Shocks, and Human Capital Investments in Early Childhood Development." Ed. H. Alderman. Human Development Perspectives. World Bank, Washington DC.

———. 2011. "Education Sector Strategy 2020: Learning for All." World Bank, Washington DC. http://siteresources.worldbank.org/EDUCATION/Resources/ESSU/Education_Strategy_4_12_2011.pdf

———. 2012. “SABER: Systems Approach for Better Education Results.” World Bank, Washington DC. http://go.worldbank.org/NK2EK7MKV0

———. 2012. “Social Protection and Labor Strategy 2012–2022: Resilience, Equity, and Opportunity.” World Bank, Washington DC. http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/280558-1274453001167/7089867-1279223745454/7253917-1291314603217/SPL_Strategy_2012-22_FINAL.pdf

WHO (World Health Organization). 1986. “Ottawa Charter for Health Promotion.” First International Conference on Health Promotion. Ottawa, 21 November 1986 – WHO/HPR/HEP/95.1. WHO, Geneva. http://www.who.int/hpr/NPH/docs/ ottawa_charter_hp.pdf.

———. 1999a. “Violence Prevention: An Important Element of a Health Promoting School.” Information Series on School Health. WHO, Geneva.

———. 1999b. “Improving Health Through Schools: National and International Strategies.” Information Series on School Health. WHO, Geneva. http://www.who.int/school_youth_health/media/en/94.pdf

———. 2002. “The Physical School Environment: An Essential Component of a Health-Promoting School. Information Series on School Health. WHO, Geneva.

———. 2003a. “Creating an Environment for Emotional and Social Wellbeing: An Important Component of Health Promoting and Child-Friendly Schools.” Information Series on School Health. WHO, Geneva. http://www.who.int/school_youth_health/media/en/sch_childfriendly_03_v2.pdf

———. 2003b. “Skills for Health, Skills-Based Health Education Including Life Skills: An Important. Component of a Child-Friendly/Health-Promoting School.” Information Series on School Health. WHO, Geneva.

———. 2009. “Promoting Adolescent Sexual and Reproductive Health through Schools in Low Income Countries: An Information Brief.” WHO, Geneva.

WHO (World Health Organization)/GPA (Global Program on AIDS). 1994. “School Health Education to Prevent AIDS and STD: A Resource Package for Curriculum Planners.” World Health Organization/Global Program on AIDS, Geneva.

Young, M., R. Kelley, G. Denny. 1997. “Evaluation of Selected Life-Skills Modules from the Contemporary Health Series with Students in Grade 6. *Perceptual and Motor Skills* 84: 811−818.

Zabin, L. S., M. B. Hirsch, E. A. Smith, R. Streett, and J. B. Hardy. 1986. “Evaluation of a Pregnancy Prevention Program for Urban Teenagers.” *Family Planning Perspectives* 18: 119–126.

Appendix 1: Saber-School Health Framework-Rubrics

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
Policy Goal 1: Health-related school policies					
National level policy that addresses school health	School health included in national-level poverty reduction strategy or equivalent national policy	School health not yet included in national-level poverty reduction strategy or equivalent national policy	School health discussed by members and partners during preparation of PRSP but not included in final PRSP	School health included in the PRSP or equivalent national policy	School health included in national-level poverty reduction strategy or equivalent national policy, accompanied by targets and/or milestones set by the government
	Published and distributed national policy covers all four components of FRESH[1] (health-related school policies, safe school environment, school-based health and nutrition services, and skills-based health education)	National recognition of the importance of school health exists but a national policy has not been published as yet	Published national policy that covers some but not all four components of FRESH (e.g. a policy on HIV in education only); some regional and school-level stakeholders have copies	Published national policy that covers some aspects of all four components of FRESH; almost all regional and school-level stakeholders have copies of the national school health policy and have been trained in its implementation	Comprehensive approach to all four areas promoting inclusion and equity; almost all regional and school-level stakeholders have copies of the national school health policy and have been trained in its implementation and written school-level policies exist that address school health
	Published national policy involves a multisectoral approach	National recognition of the importance of a multisectoral approach to school health exists but a national policy has not been published as yet	Published national policy by the education or health sector that addresses school health	Published national policy by the education and health sectors that addresses school health	Published national policy jointly by both the education and health sectors that addresses school health and includes other relevant sectors (e.g. water, environment, agriculture)

[1] FRESH is a common framework for school health programmes which was internationally agreed upon in April 2000 at the World Education Forum in Dakar, Senegal. The FRESH partners include many international organizations including Child-to-Child Trust, EDC, Education International, Food and Agriculture Organization of the United Nations (FAO), International Red Cross, PCD, Roll Back Malaria Partnership, Save the Children, Joint United Nations Programme on HIV/AIDS (UNAIDS), UNESCO, UNICEF, United Nations Office on Drugs and Crime (UNODC), WFP, WHO and the World Bank.

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
Coordinated implementation of a national level policy that addresses school health	Multisectoral steering committee coordinates implementation of a national school health policy	Any multisectoral steering committee coordination efforts are currently non-systematic	Sectoral steering committee from education or health coordinates implementation of a national school health policy	Multisectoral steering committee from both education and health coordinates implementation of a national school health policy	Multisectoral steering committee from education, health, and one or more other relevant sectors (e.g. water, environment, agriculture) coordinates implementation of a national school health policy
Governance of a national school health policy	National budget line(s) and funding allocated to school health; funds are disbursed to the implementation levels in a timely and effective manner	A national budget line or funding does not yet exist for school health; mechanisms do not yet exist for disbursing funds to the implementation levels	National budget line and funding for school health exists in either the health or education sector; school health funds are disbursed to the implementation levels intermittently	National budget line and funding for school health exists in both the health and the education sectors; school health funds are disbursed to the implementation levels in a timely and effective manner	National budget line and funding for school health exists in health, education, and one or more other sectors; school health funds are disbursed to the implementation levels in a timely and effective manner and implementers have the capacity to plan and budget as well as request resources from the central level
Quality assurance of programming	Situation analysis assesses need for the inclusion of various thematic areas[2], informing policy, design, and implementation of the national school health program such that it is targeted and evidence-based	A situation analysis has not yet been planned to assess the need for the inclusion of various thematic areas and inform policy, design, and implementation of the national school health program	Incomplete situation analysis that assesses the need for the inclusion of various thematic areas; policy, design, and implementation of some thematic areas are based on evidence of good practice	Situation analysis conducted that assesses the need for the inclusion of various thematic areas; policy, design, and implementation of these thematic areas are based on evidence of good practice and are targeted according to situation analyses of what thematic area interventions to target in which geographic areas	Situation analysis conducted that assesses the need for the inclusion of various thematic areas, along with costings; policy, design, and comprehensive implementation of these thematic areas are based on evidence of good practice and are targeted according to situation analyses of what thematic area interventions to target in which geographic areas

[2] Thematic areas may include: Children with Special Needs; Deworming; Disaster Risk Reduction/Emergences; Education for Sustainable Development; General Life Skills/Social and Emotional Learning; HIV and AIDS; Hygiene, Water and Sanitation; Malaria; School Feeding; Nutrition; Oral Health, Vision and Hearing; Physical Activity; Prevention and Response to Unintentional Injury; Sexual and Reproductive Health; Substance Abuse; and Violence in the School Setting.

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
	Monitoring and Evaluation (M&E)	Systems are not yet in place for M&E of implementation of school health programming	A M&E plan exists for school health programming and data collection and reporting occurs intermittently especially at national level	The M&E plan for school health is integrated into national monitoring or information management systems and data collection and reporting occurs recurrently at national and regional levels	The M&E plan for school health is integrated into national monitoring or information management systems and data collection and reporting occurs recurrently at national, regional and school levels; baseline carried out and program evaluations occur periodically
Gender	Gender dimension of Health addressed in national education policy (e.g. pregnancy, sexual harassment, privacy and sanitation)	Gender dimension of Health is not yet formally addressed in national education policy	Gender dimension of Health addressed in national education policy but implementation is uneven	Gender dimension of Health is addressed in published education policy and is implemented nationally	Gender dimension of Health is addressed in published education policy, implemented nationally, and the M&E mechanism includes oversight of the gender mainstreaming
Policy Goal 2: Safe, supportive school environments					
Physical school environment	Provision of safe water in schools	The need for provision of safe water is acknowledged, but standards are absent, and coverage is uneven	The need for safe water provision in all schools is recognised, standards have been established	National surveys (needs assessments) have been conducted to assess whether schools meet the standards for safe water and implementation plans are in place to ensure that all schools achieve these standards.	Plans, based on a needs assessment, are in place to ensure that all schools achieve these standards and plans for monitoring and maintaining these facilities are also in place.
	Provision of sanitation facilities	The need for provision of sanitation facilities is acknowledged, but standards are absent, and coverage is uneven	The need for provision of sanitation facilities in all schools is recognised, standards have been established, but national coverage has not been achieved	National surveys have been conducted to assess whether schools meet the standards for safe water and a plan is in place to ensure that all schools achieve these standards.	Plans, based on a needs assessment, are in place to ensure that all schools achieve these standards and plans for monitoring and maintaining these facilities are also in place.

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
	Provision of sound school structures (including accessibility for children with disabilities) and school safety	Construction and maintenance of school buildings is unregulated and national standards are lacking on what constitutes sound school structures and school safety	New schools being built have sound structures and school safety issues are taken into account, but coverage is not universal among older schools	Sound school structure standards are set and an update program is in place for older buildings; teachers, schoolchildren, families and other local stakeholders are mobilized to achieve and sustain a healthy school environment	National and local standards for sound school structures are fully implemented building structures are regularly monitored and maintained
Psychosocial school environment	Issues of stigmatisation (e.g. HIV, disability) are recognised and addressed by the education system	Any responses to issues of stigmatisation in schools are currently non-systematic	Some schools are effectively responding to stigma issues, but coverage is not universal; in-service teacher training on stigma issues is being provided	Stigma is covered in life skills education, pre- and in-service teacher training are being provided universally, and bullying as a result of stigma is effectively dealt with at the school level	Stigma is covered in life skills education, pre- and in-service teacher training are being provided universally, bullying as a result of stigma is effectively dealt with at the school level, and support groups responding to specific stigma issues are in place for both learners and teachers
	Protection of learners and staff from violence (including corporal punishment, fighting, physical assault, gang activity, bullying, sexual harassment, and gender-based violence)	National standards on how to address violence in schools are lacking	National standards on how to address some forms of institutional violence in schools are in place, guidelines are being developed, and in-service training is being provided	National standards and guidelines on how to address some forms of institutional violence in schools are published and disseminated; pre- and in-service teacher training are being provided universally	Mechanisms are in place to respond to all forms of institutional violence in schools

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
	Provision of psychosocial support to teachers and students who are affected by trauma due to shock (e.g. conflict, orphaning, etc.)	Provision of psychosocial support for learners and teachers affected by trauma due to shock is non-uniform	Some psychosocial support is available to learners and teachers either in school or through referrals but coverage is not universal	Available psychosocial support for learners and teachers is mobilised (either in school or through referral services) and there is provision of appropriate psychosocial support activities for teachers and students in temporary learning spaces and in child-friendly spaces for young children and adolescents	Effective school-based intervention for supporting students' psychosocial well-being is developed and there is provision of appropriate psychosocial support activities for teachers and students in temporary learning spaces and in child-friendly spaces for young children and adolescents; impact on psychosocial wellbeing and cognitive function is being monitored
Policy Goal 3: School-based health and nutrition services					
School-based delivery of health and nutrition services	The school-based health and nutrition services identified in the situation analysis and outlined in the national policy are being implemented (e.g. deworming, first aid, malaria control, micronutrients, school feeding, vaccination, etc.)	A situation analysis has not yet been undertaken to assess the need for various school-based health and nutrition services	Situation analysis has been undertaken that assess the need for various school-based health and nutrition services but systematic implementation is yet to be underway	Situation analysis has been undertaken, identifying cost-effective and appropriate school-based health and nutrition interventions, some of which are being implemented and taken to scale in a targeted manner in the available budget	All of the school-based cost-effective and appropriate health and nutrition services identified in the situation analysis and outlined in the national policy are being implemented and taken to scale in a targeted manner in the available budget
School-based screening and referral to health systems	Remedial services (e.g., refractive error, dental, etc.)	A situation analysis has not yet been undertaken to assess the need for school-based screening and referral to various remedial services	Situation analysis has been undertaken that assess the need for school-based screening and referral to various remedial services but implementation is uneven	Situation analysis has been undertaken, identifying those cost-effective and appropriate school-based screening and referral to various remedial services that are being taken to scale in the available budget; in-service teacher training is being provided	All of the school-based cost-effective and appropriate screening and referral to remedial services identified in the situation analysis and outlined in the national policy are being implemented and taken to scale in the available budget; pre- and in-service teacher training are being provided
	Adolescent health services	Any referrals of pupils to treatment systems for adolescent health	Teacher training for referral of pupils to treatment systems for adolescent health	Teacher training for referral of pupils to treatment systems for adolescent health	Pre- and in-service training of teachers for referral of pupils to treatment systems for adolescent health services with referral ongoing

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
		services occur non-systematically	services	services with referral ongoing	

Tools for more detailed analysis of focus areas (full list available from http://go.worldbank.org/NK2EK7MKV0).

- Brooker, S. 2009. *Malaria Control in Schools: A Toolkit on Effective Education Sector Responses to Malaria in Africa*. Washington, DC: World Bank; London: Partnership for Child Development.
- Dixon, R., J. Kihara, A. Tembon, S. Brooker, K. Neeser, K. Levy, A. Fishbane, A. Montresor, D. A. P. Bundy, and L. J. Drake. 2010. School-based Deworming: A planners' guide to proposal development for national school based deworming programs." Conference Edition. Washington, DC: Deworm the World.
- Global Atlas of Helminth Infection. www.thiswormyworld.org
- World Bank. 2003. *Education and HIV/AIDS: A Sourcebook of HIV/AIDS Prevention Programs.* Washington, DC: World Bank.
- World Bank. 2008. *Education and HIV/AIDS: A Sourcebook of HIV/AIDS Prevention Programs; Volume 2: Education Sector-wide Approaches*. Washington, DC: World Bank.
- World Bank, UNICEF, and Water and Sanitation Program. 2005. "Toolkit on Hygiene, Sanitation, and Water in Schools." World Bank, Washington, DC.
- World Bank. 2011. "SABER-School Feeding." Draft Framework Rubrics. 27 April 2011.

Policy Goal 4: Skills-based Health education					
Knowledge-based health education	Provision of basic, accurate health, HIV, nutrition and hygiene information in the school curriculum that is relevant to behaviour change	Some schools are teaching some health, HIV, nutrition and hygiene information, but coverage is not universal nor is the information provided	Some health, HIV, nutrition and/or hygiene information is included in the curriculum, but it may not be comprehensive; in-service teacher training is being provided, and the majority of schools are teaching the curriculum covered health information, but coverage is not universal	Curriculum comprehensively covers health (linked to the health issues identified in the situation analysis), HIV, nutrition and hygiene knowledge; pre- and in-service training is being provided; and all schools are teaching the curriculum	Curriculum comprehensively covers health (linked to the health issues identified in the situation analysis), HIV, nutrition and hygiene knowledge; pre- and in-service training is being provided; all schools are teaching the curriculum; and the knowledge is covered in school exams
Age-appropriate and sex-specific life skills education for health	Participatory approaches are part of the curriculum and are used to teach key age-appropriate and sex-specific life skills for health themes[3]	Some life skills education is taking place in some schools using participatory approaches, but it is non-uniform and does not cover all of the life skills for health themes	Participatory approaches are part of the national curriculum; some of the key life skills for health themes are covered in the curriculum; in-service training is being provided; and teaching of the participatory approaches is taking place in the majority of schools, but is not universal	Participatory exercises to teach life skills for health behaviours are part of the national curriculum; pre- and in-service training is being provided; and materials for teaching life skills for health in schools are in place and made available and teaching is	Participatory exercises to teach life skills for health behaviours are part of the national curriculum; pre- and in-service training is being provided; materials for teaching life skills for health in schools are in place and made available and teaching is ongoing in most schools; and school

[3] Essential life skills (social and emotional learning); Basic nutrition and healthy life styles (nutrition, school gardens, and physical activity); Basic health issues (malaria, helminths, influenza outbreaks – these should be linked to the health issues identified in the situation analysis); Basic safety issues (road safety, safety at home and at school, first aid, emergency preparedness); Personal health and hygiene issues (hygiene, oral health, vision and hearing); Physical, emotional and social development and sexual and reproductive health; HIV and AIDS; Substance abuse; Violence prevention; Sustainable development (climate change, resource management, environmental protection, disaster risk reduction); and Gender issues.

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
				ongoing in most schools	curricula guidelines identify specific life skills for health learning outcomes and measurement standards, including examinations

Appendix 2: Saber-School Feeding Framework-Rubrics

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
Policy Goal 1: Policy frameworks					
Overarching policies for school feeding - sound alignment with the national policy	National-level poverty reduction strategy or equivalent national strategy as well as sectoral policies and strategies (education sector plan, nutrition policy, social protection policy) identify school feeding as an education and/or social protection intervention, clearly defining objectives and sectoral responsibilities	There is recognition of school feeding as an education and/or social protection intervention, but school feeding is not yet included in the published national-level poverty reduction strategy, equivalent national policy, or sectoral policies and strategies	School feeding discussed by members and partners during preparation of national-level poverty reduction strategy, equivalent national policy, or sectoral policies and strategies but not yet published	School feeding included in published national-level poverty reduction strategy or equivalent national policy (including specifications as to where school feeding will be anchored and who will implement); published sectoral policies or strategies have clearly defined objectives and sectoral responsibilities	School feeding included in published national-level poverty reduction strategy or equivalent national policy (including specifications as to where school feeding will be anchored and who will implement and accompanied by targets and/or milestones set by the government); published sectoral policies or strategies have clearly defined objectives and sectoral responsibilities, including what school feeding can and cannot achieve, and aligned with the national-level poverty reduction strategy or equivalent national strategy
	An evidence-based technical policy related to school feeding outlines the objectives, rationale, scope, design, and funding and sustainability of the program and comprehensively addresses all four other policy goals (institutional capacity and coordination, financial capacity, design and implementation, and community participation)	There is recognition of the need for a technical policy related to school feeding, but one has not yet been developed or published	A technical policy and situation analysis under development by the relevant sectors that address school feeding	A technical policy related to school feeding is published, outlining the objectives, rationale, scope, design, funding and sustainability of the program and covering some aspects of all four other policy goals, including links with agriculture development	A technical policy related to school feeding is published, outlining the objectives, rationale, scope, design, funding and sustainability of the program and comprehensively covering all four other policy goals with a strategy for local production and sourcing, including links with agriculture development and small holder farmers; policy is informed by a situation analysis of needs and aligned with national poverty reduction strategies and relevant sectoral policies and strategies
Policy Lever	**Indicator**	**Latent**	**Emerging**	**Established**	**Advanced**

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
Policy Goal 2: Financial capacity					
Governance of the national school feeding program - stable funding and budgeting	National budget line(s) and funding are allocated to school feeding; funds are disbursed to the implementation levels (national, district and/or school) in a timely and effective manner	There is recognition of the need to include school feeding in the national planning process, but this has not yet happened; the government is fully reliant on external funds and does not have provision in the national budget to allocate resources to school feeding; there is recognition of the need for mechanisms for disbursing funds to the implementation levels, but these are not yet in place	School feeding is included in the national planning process and national funding is stable through a budget line but unable to cover all needs; there is no budget line at regional and school levels; existing school feeding funds are disbursed to the implementation levels intermittently	School feeding is included in the national planning process and is fully funded through a national budget line; all ministries involved in the program implementation have a budget line or funds allocated; budget lines also exist at regional and school levels; school feeding funds are disbursed to the implementation levels in a timely and effective manner	School feeding is included in the national planning process and is fully funded through a national budget line consistent with the school feeding policy and situation analysis including options for engaging with the private sector; budget lines and plans also exist at regional and school levels, sufficient to cover all the expenses of running the program ; school feeding funds are disbursed to the implementation levels in a timely and effective manner and implementers have the capacity to plan and budget as well as request resources from the central level
Policy Goal 3: Institutional capacity and coordination					
School feeding coordination - strong partnerships and inter-sector coordination	Multisectoral steering committee coordinates implementation of a national school feeding policy	Any multisectoral steering committee coordination efforts are currently non-systematic	Sectoral steering committee coordinates implementation of a national school feeding policy	Multisectoral steering committee from at least two sectors (e.g. education, social protection, agriculture, health, local government, water) coordinates implementation of a national school feeding policy	Multisectoral steering committee from at least three sectors (e.g. education, social protection, agriculture, health, local government, water) coordinates implementation of a national school feeding policy; this government-led committee provides comprehensive coordination (across international agencies, NGOs, the private sector and local business representatives as well) and is part of a wider committee on school health and nutrition

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
Management and accountability structures, including staffing - strong institutional frameworks for implementation	National school feeding management unit and accountability structures are in place, coordinating with school level structures	A specific school feeding unit does not yet exist at the national level; coordination between the national, regional/local (if applicable), and schools is lacking	A school feeding unit exists at the national level, but it has limited resources and limited staff numbers and lacks a clear mandate; while coordination mechanisms between the national, regional/local (if applicable), and school level are in place, they are not fully functioning	A fully staffed school feeding unit with a clear mandate exists at the national level, based on an assessment of staffing and resources needs; coordination mechanisms between the national, regional/local (if applicable), and school level are in place and functioning in most instances	A fully staffed school feeding unit exists at the national level, based on an assessment of staffing and resources needs, with a clear mandate, and pre- and in-service training; coordination mechanisms between the national, regional/local (if applicable), and school level are in place and fully functioning
	School level management and accountability structures are in place	Mechanisms for managing school feeding at the school level are non-uniform and national guidance on this is lacking	National guidance on required mechanisms for managing school feeding are available at the school level, but these are not yet implemented fully	Most schools have a mechanism to manage school feeding, based on national guidance	All schools have a mechanism to manage school feeding, based on national guidance, with pre- and in-service training for relevant staff
Policy Goal 4: Design and implementation					
Quality assurance of programming and targeting, modalities, and procurement design, ensuring design that is both needs-based and cost-effective	A functional monitoring and evaluation (M&E) system is in place as part of the structure of the lead institution and used for implementation and feedback	The importance of M&E is recognised, but government systems are not yet in place for M&E of school feeding implementation	A government M&E plan exists for school feeding with intermittent data collection and reporting occurring especially at the national level	The M&E plan for school feeding is integrated into national monitoring or information management systems and data collection and reporting occurs recurrently at national and regional levels	The M&E plan for school feeding is integrated into national monitoring or information management systems and data collection and reporting occurs recurrently at national, regional and school levels; analysed information is shared and used to refine and update programs; baseline is carried out and program evaluations occur periodically

Policy Lever	Indicator	Latent	Emerging	Established	Advanced
	Program design identifies appropriate target groups and targeting criteria corresponding to the national school feeding policy and the situation analysis	The need for targeting is recognised, but a situation analysis has not yet been undertaken that assesses school feeding needs and neither targeting criteria nor a targeting methodology has been established as yet	Targeting criteria and a targeting methodology is being developed corresponding to the national school feeding policy; a situation analysis assessing needs is incomplete as yet	Targeting criteria and a targeting methodology exists and is implemented corresponding to the national school feeding policy and a situation analysis assessing needs	Targeting criteria and a targeting methodology exists and is implemented corresponding to the national school feeding policy and situation analysis (including costings for various targeting and designs); M&E information is used to refine and update targeting and coverage on a periodic basis
	Food modalities and the food basket correspond to the objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements	There is recognition of the need for national standards for food modalities and the food basket, but these do not exist yet	National standards on food modalities and the food basket have been developed and correspond to two or more of the following: objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements	National standards on food modalities and the food basket have been developed and correspond to objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements	National standards on food modalities and the food basket have been developed and correspond to objectives, local habits and tastes, availability of local food, food safety (according to WHO guidelines), and nutrition content requirements; M&E information is used to refine and update food modalities and food basket on a periodic basis
	Procurement and logistics arrangements are based on procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline	There is recognition of the need for national standards for procurement and logistics arrangements, but these do not exist yet	National standards on procurement and logistics arrangements have been developed and are based on three or more of the following: procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline	National standards on procurement and logistics arrangements have been developed and are based on procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline	National standards on procurement and logistics arrangements have been developed and are based on procuring as locally as possible, taking into account the costs, the capacities of implementing parties, the production capacity in the country, the quality of the food, and the stability of the pipeline; M&E information is used to refine and update procurement and logistics arrangements
Policy Lever	**Indicator**	**Latent**	**Emerging**	**Established**	**Advanced**
Policy Goal 5: Community roles–reaching beyond schools					

Community participation and accountability - strong community participation and ownership (teachers, parents, children)	Community participates in school feeding program design, implementation, management and evaluation and contributes resources (in-kind, cash or as labor)	Systems and accountability mechanisms are not yet in place for consultation with parents and community members on the design, monitoring and feedback of the school feeding program	A school feeding management committee exists but parent and community member participation could be strengthened and awareness on the opportunity to monitor and feedback on the school feeding program is lacking	The school feeding management committee comprises representatives of teachers, parents, and community members and communities have accountability mechanisms to hold school feeding programs accountable at the school level	The school feeding management committee comprises representatives of teachers, parents, and community members and has clearly defined responsibilities and periodic training. Accountability mechanisms are in place by which communities can hold school feeding programs accountable at the school, regional, and national levels

Appendix 3: The Development of the Saber School Health and School Feeding Framework–Rubrics and Questionnaires

SABER-School Health and School Feeding Framework Development Process Outline

Identifying Priority Areas and Building on International Consensus

January-February 2011

The initial phase in the development of SABER-School Health and School Feeding sub-systems began in January 2011. This process involved building on existing international consensus to determine "what matters" for these sub-systems (identifying goals within a policy framework) as well as to develop metrics for policy goals, policy levers, and indicators, including stages of development. The process included consultations with advisory committees of experts, including representatives from GlaxoSmithKline, International Food Policy Research Institute, London School of Hygiene and Tropical Medicine (LSHTM), The Partnership for Child Development (PCD), Save the Children, UNICEF, the World Bank, WFP and WHO, who met on January 18, 2011, to discuss SABER-School Health and on January 20, 2011, to discuss SABER-School Feeding.

In addition to building on knowledge from the benchmarking of other education sub-systems (through initial consultative meetings with the workforce development, teacher policies, and Early Child Development teams), SABER-School Health has built upon the internationally-recognized FRESH framework[4] and the M&E framework that the FRESH partners have been developing. SABER-School Feeding has also drawn on the joint World Bank and WFP publication *Rethinking School Feeding* and the standards therein. Following these guiding principles, draft framework-rubrics for both sub-systems were developed and reviewed for further input from the advisory committees of experts. Their feedback was incorporated in revisions of the framework-rubric.

Consultation Process

February-March 2011

The first series of consultations was held during the World Bank ***Human Development Forum and Learning Weeks*** where the draft frameworks were presented to staff both at the Headquarters and Country Offices. Key feedback included recommendations to standardize the stages of development for all the indicators, integrate implementation throughout, and reduce the number of indicators to aid subsequent questionnaire development. During this time, the draft framework-rubrics were also shared with the coordinating group for the M&E framework on school health (discussed above), made up of FRESH partners, who provided further feedback.

Pilot Testing SABER Tools in Countries

[4]FRESH (see also pages 11-13) is a common framework of school health programs that was internationally agreed upon in April 2000 at the World Education Forum in Dakar, Senegal. The FRESH partners include many international organizations including Child-to-Child Trust, Education Development Center Inc., Education International, FAO, International Red Cross, PCD, Roll Back Malaria Partnership, Save the Children, UNAIDS, UNESCO, UNICEF, WFP, WHO and the World Bank.

March 2011

The first regional pilot of the SABER-School Health and School Feeding sub-systems frameworks was conducted during the ECOWAS (Economic Community of West African States) and Mauritania Ministries of Education School Health Focal Point Technical Workshop in Mali. The participants from 17 countries[5] worked in country teams and completed the draft framework for both sub-systems. The most significant findings of the pilot exercise were that participants understood the framework clearly and found them useful for strategic planning. Some countries (e.g. Mauritania) are now requesting technical assistance in moving forward with key areas highlighted by the initial analysis.

April 2011

The SABER-School Feeding was piloted in Haiti during the National School Feeding joint consultation mission with WFP.

The framework was also validated through a consultative meeting with stakeholders from the School Health Unit of the Ministry of Education, Government of Sri Lanka.

May 2011

The SABER-School Feeding was presented at the 2011 Global Child Nutrition Forum (GCNF) in Nairobi as part of a comprehensive technical assistance planning process for school feeding in sub-Saharan African countries.

July 2011

The SABER-School Health and School Feeding questionnaire was pilot tested during the Kenya School Health, Nutrition and Meals Technical Review workshop. The team was given an overview of the SABER-School Health and School Feeding tools as a mechanism for benchmarking a country's progress on school health and school feeding programs. The team reviewed the questionnaire and provided valuable recommendations on how to improve the quality and applicability of the tool.

The SABER team revised the tool, based on the recommendations and feedback provided by the technical team, and further pilot tested the questionnaires in a coordinated effort between the CARICOM Secretariat and the World Bank. The questionnaires were also piloted at the 4th Eastern and Southern Africa Ministries of Education School Health Focal Points meeting in Kampala, Uganda.

December 2011

The second regional pilot of the SABER-School Health and School Feeding frameworks were conducted during the 4th Eastern and Southern Africa Network of Ministries of Education School Health Focal Points' meeting in Uganda. The participants from 13 countries[6] worked in country teams and completed the draft framework and the questionnaire tools for both sub-systems. The outcome of the pilot exercise was that there was: (i) a clear understanding of the framework by the country representatives;

[5]Benin, Burkina Faso, Cameroon, Democratic Republic of Congo, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo, and Uganda.

6Burundi, Ethiopia, Guinea, Kenya, Madagascar, Malawi, Mozambique, Rwanda, Senegal, Tanzania Mainland, The Gambia, Uganda, Zambia and Zanzibar.

(ii) preliminary regional benchmarking with a snapshot of where countries currently stand; (iii) an understanding for further consultation with participating countries to identify key areas of technical assistance needs.

The CARICOM Secretariat facilitated the SABER-School Health and School Feeding questionnaire administration process through their Health and Family Life Education in CARICOM member states. The result was a preliminary report on the results of the SABER-School Health benchmarking exercise in five Caribbean countries: Dominica, Barbados, Grenada, Guyana, and St. Lucia.

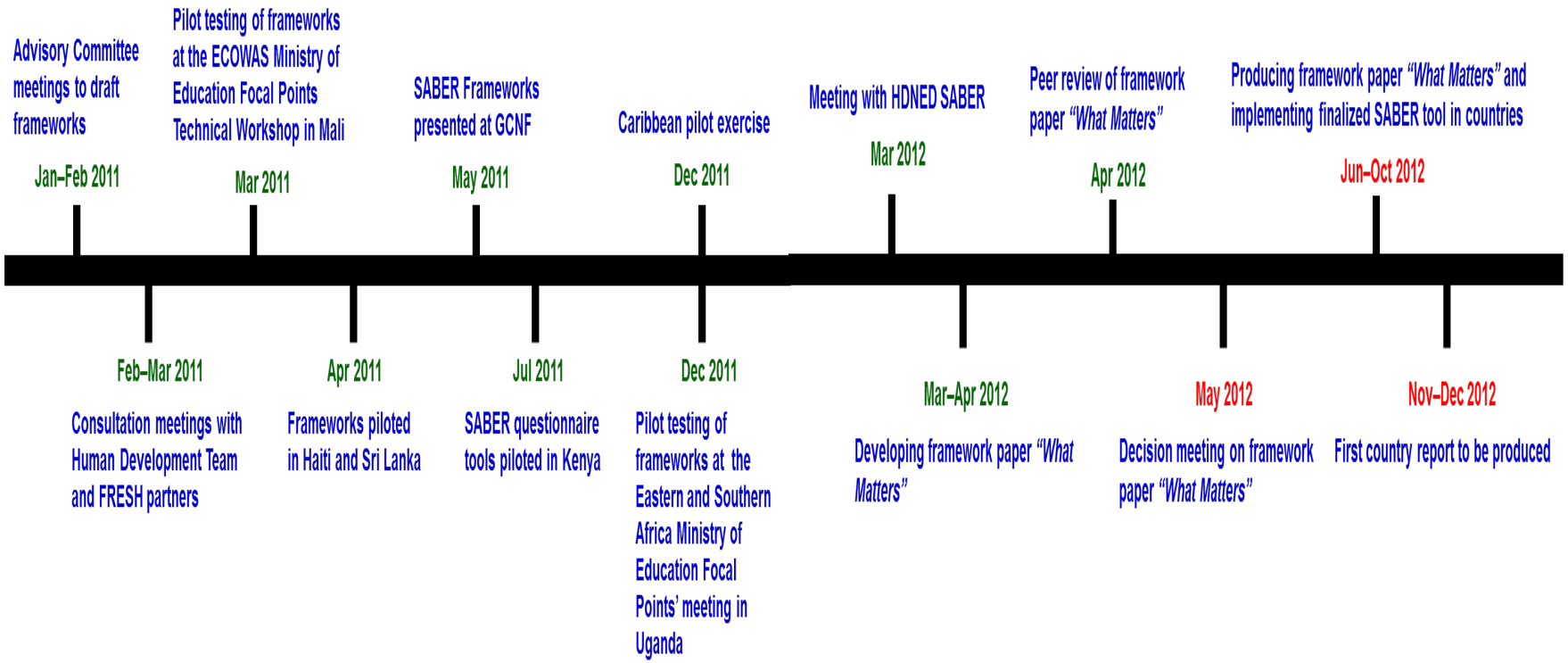
March 2012

The SABER-School Health and School Feeding team met with the HDNED SABER coordinating team to update them on achievements so far and to seek their guidance for the next steps, which resulted in:

- Development of this framework paper on "*What Matters" in School Health and School Feeding*. This policy education paper will be published as part of the SABER "*What Matters*" Series.
- Peer review of the "*What Matters*" *in School Health and School Feeding* paper, followed by a final decision meeting in late May 2012.
- Determining a timeline on when to implement the tool in countries and to produce the first country report.

The timeline of the SABER-School Health and School Feeding process is depicted below.

Chronology of SABER-School Health and School Feeding Process



worldbank.org/education/saber

The Systems Approach for Better Education Results (SABER) initiative collects data on the policies and institutions of education systems around the world and benchmarks them against practices associated with student learning. SABER aims to give all parties with a stake in educational results—from students, administrators, teachers, and parents to policymakers, business people, and political leaders—an accessible, detailed, objective snapshot of how well the policies of their country's education system are oriented toward delivering learning for all children and youth.

This report focuses specifically on policies in the area of School Health and School Feeding.

THE WORLD BANK