



Association for the Development of Education in Africa

**ADEA Biennial Meeting 2003
(Grand Baie, Mauritius, December 3-6, 2003)**

Accelerating Paths to Quality: A Multi-faceted Reality

*by Jane G. Schubert
and
Diane Prouty-Harris*

American Institutes for Research

**Working Document
DRAFT**

PLEASE DO NOT DISSEMINATE

Doc 6.D

This document was commissioned by ADEA for its Biennial Meeting (Mauritius, December 3-6, 2003). The views and opinions expressed in this volume are those of the authors and should not be attributed to ADEA, to its members or affiliated organizations or to any individual acting on behalf of ADEA.

The document is a working document still in the stages of production. It has been prepared to serve as a basis for discussions at the ADEA Biennial Meeting and should not be disseminated for other purposes at this stage.

© Association for the Development of Education in Africa (ADEA) – 2003

Association for the Development of Education in Africa (ADEA)

International Institute for Educational Planning

7-9 rue Eugène Delacroix

75116 Paris, France

Tel.: +33(0) 1 45 03 77 57

Fax: +33(0)1 45 03 39 65

adea@iiep.unesco.org

Site web : www.ADEAnet.org

Contents

1. EXECUTIVE SUMMARY	7
2. INTRODUCTION	9
3. THE LANDSCAPE AROUND JOMTIEN	10
3.1. THE SITUATION	10
3.2. THE RELATIONSHIPS.....	11
4. PERSPECTIVES ON DEFINITIONS OF QUALITY.....	13
4.1. KNOWLEDGE FROM WELL-RESOURCED ENVIRONMENTS	15
4.2. KNOWLEDGE BASE FROM LESS-RESOURCED ENVIRONMENTS	18
4.3. USING KNOWLEDGE IN THE QUEST FOR QUALITY	21
5. ACCELERATING THE PATHS TO QUALITY: THE IEQ CYCLE OF CLASSROOM-ANCHORED RESEARCH	23
5.1. THE CYCLE OF IMPROVEMENT	25
5.2. KNOWLEDGE AND RESULTS FROM IEQ	27
5.3. GOING TO SCALE	30
6. APPLYING LESSONS FROM IEQ TO STRATEGIC PLANNING AND IMPLEMENTATION: A WAY FORWARD.....	32
7. REFERENCES	34

Tables and Figures

Table 1	Relevance factors for education systems in SSA.....	15
Figure 1	Aligning quantity and quality	24
Figure 2	The IEQ cycle of improvement	26
Figure 3	Teacher characteristics to pupil outcomes	27

Acronyms and abbreviations

ADEA	Association for the Development of Education in Africa
CONFEMEN	Conférence des Ministres de l'Éducation Nationale de langue Française
MLA	Monitoring Learning Achievement
NESIS	National Education Statistical Information Systems
PASEC	Programme d'Analyse des Systèmes Éducatifs des Pays de la CONFEMEN
PRSP	Poverty Reduction Strategy Papers
SACMEQ	Southern Africa Consortium for Monitoring Educational Quality
SAP	Structural Adjustment Programs
UNESCO	United Nations Educational, Scientific and Cultural Organization

1. EXECUTIVE SUMMARY

1. This Background Paper expands upon Chapter 2 (The Multi-Faceted Reality of Quality Improvement: Moving Toward Clarity) and Chapter 8 (Improving the Effectiveness of Schools). It examines more closely the evolution of the knowledge and experiences of the past three decades that frame the discussion on improving the quality of education. This evolution now brings researchers and educators to focus on quality as a change process that leads to measurable learning outcomes. The international focus on quality rests on the knowledge and challenge that pupils are not successfully completing the primary school cycle. The knowledge about change in terms of technical information, the increased capacity of research competence and the emerging interest in the school and classroom have not resulted in large-scale improvements in student achievement or accelerated student learning.

2. This Background Paper introduces a process for improving educational quality grounded in the school effectiveness and school improvement literature. The process utilizes a systematic classroom-anchored approach to look inside the classroom and examine what happens that influences instructional practices and pupil performance. The process (cycle for improvement) was developed by The Improving Educational Quality (IEQ) Project, funded by USAID (1991-2003). During that period, 17 countries applied the principles of the process to examine the implementation of host country education interventions. IEQ provided technical support to national teams who designed and implemented classroom-based research to better understand the dynamics and effects of host country reform initiatives designed to improve pupil performance. The IEQ process provides a framework, guided by assessment, as the entry point for classroom knowledge. The findings emerging from the research are shared with educators at all levels of the education sector (e.g. briefing papers; seminars) to provoke dialogue that leads to reforming national policy and improving local practice.

3. The Background Paper is organized as follows:

- **The post-Jomtien Education Landscape.** This section briefly summarizes the strategic development choices in post-colonial, sub-Saharan and the government-donor response to the overall declines in school enrollment and school quality. Africa was particularly challenged to implement and achieve EFA because of trends such as : disparities in enrollments, provision of educational services; curricula driven by high-stakes examinations; and lack of confidence in sending children to school, particularly girls, often because of the low quality.
- **Knowledge-base Stemming from Resourced Environments.** Three decades of research and evaluation from a variety of independent but complementary perspectives provide lenses through which quality may be viewed. The overall attempt to understand policy and practice assumed to result in increased performance of teaching and/or learning, has primarily occurred in industrialized environments. However, a critical review of the utility of the findings for raising student achievement reveals some limitations, particularly when applying the results to less resourced environments. But the knowledge gained from the school effectiveness and school improvement research provides a legacy upon which to build a new direction that integrates the collective findings and focuses teaching, learning and outcomes as the core of improving quality.
- **Knowledge-base Stemming from Less-Resourced Environments.** The attempts to apply the findings on school improvement from industrialized countries have met with mixed results. There is consensus among educators that any transfer of knowledge must be made cautiously and with careful attention to the context in

which the findings are to be used. The current movement shifts away from “templates” and strives to distinguish between what is and is not applicable to less-resourced, developing education environments. One size does not fit all! However, the new century brings guiding principles for focusing on quality by recognizing the school and the classroom as the unit of change and the need to establish effective management and implementation practices. Examples of principles include: focus on learning to raise achievement; establish a process for continuous improvements; collect and continually examine evidence for success; think strategically about the link between national policy, system management and local practice; and broaden civic participation to establish and implement education goals.

- **Using Research Findings to Accelerate the Path to Quality: the IEQ Process.** The IEQ process begins and ends in the classroom. Through dialogue with many stakeholders and host country colleagues, the team developed and implemented a “bottom up” approach to improving quality. The focus was to examine the dynamics of the classroom and gathering specific information about the reality: e.g. what teachers know about the content they are expected to teach and how they teach it; what pupils do when they come to school; what resources are and are not available and how they are used; what are pupils achieving throughout the primary cycle, not only at the end of cycle. This approach attempts to reduce the misalignment between Quantity (i.e. access) and Quality (i.e. learning). These dual pursuits of political and educational agendas share a common goal: the successful completion of a primary school curriculum. The IEQ cycle of improvement pinpoints the factors that sustain this misalignment and provide realistic and concrete information from the classroom that form the basis for corrective action in policy and practice. The idea is to bring quality and quantity into alignment.

4. The IEQ process employs a cycle of improvement that includes: assessment of teaching & learning, using a multi-methodological approach; analysis of qualitative and quantitative information; and actions (assumes sharing of the findings) based on the findings at any point in the education sector. The cycle repeats itself as an ongoing monitoring and evaluation of the quality. Quality is NOT static! It is always a work in progress. IEQ applied the lessons of the previous decades to develop an ongoing and systematic process that addresses the reality of the education context.

2. INTRODUCTION

It must not be forgotten where the ultimate power to change is and always has been in the heads, hands and hearts of the educators who work in our schools. True reform must go where the action is¹.

5. For more than a decade, **The Improving Educational Quality Project (IEQ)**, funded by the Agency for International Development, has been a leader and a champion on ways to improve teaching and learning and to inform education reform efforts – particularly those efforts targeting improvements to quality. IEQ received its mandate following the Jomtien global initiative to achieve Education For All. The project concluded in September 2003 after a 10-year implementation period. However the legacy of the experience is sustained through knowledge gained from classroom anchored research in 17 countries, hundreds of educators and researchers whose technical skills have been strengthened and continue to be applied in new activities, and the lessons learned and shared with the international community about improving educational quality have long-term potential. This paper highlights the significant role the project played in facilitating the dialogue on quality, based on concrete information from the school environment, such as factors influencing teaching and learning, and enabling conditions that contribute to an improved learning environment. It further describes how the information was used to guide efforts to transform the findings into action in local practice and national policy.

6. The paper is organized in three parts. The first part presents a profile of the educational landscape that drove the demand for more concrete information about what and how students are being taught, and how well are they learning. The second summarizes various perspectives about quality within the context of the body of literature that tremendously influenced efforts to achieve quality improvements. The third provides an overview of the IEQ activity – as it reflects the findings from the literature in pursuing the quest for quality and as the activity was implemented within the context of national education reform efforts. Examples of IEQ activities illustrate how country-specific conditions and practices at the system, school, classroom and community level influenced teaching and learning, and how those findings were circulated and shared within a learning network of stakeholders to change practice and influence policy.

7. The paper ends with the lessons learned from IEQ and how they can be applied to strategic planning and implementation of quality improvements.

¹ Sirontnik, K. (1989). "The school as the center of change." In T. J. Sergivanni and J. H. Moore (Eds). *Schooling for Tomorrow: Directing Reforms to Issues That Count*. Boston, MA: Allyn and Bacon.

3. THE LANDSCAPE AROUND JOMTIEN

3.1. The Situation

8. In the two decades following the 1960s, the world watched post-colonial Africa make strategic development choices, one of which was to increase investments in education. However, the massive and dramatic changes undertaken during this period left many countries in Sub-Saharan Africa struggling to meet the necessary financial burden. There were not only tremendous stresses on government coffers to meet these commitments, there was also a growing awareness that these investments were not leading to student achievement at minimal levels of competency in literacy and numeracy. Failure to teach students to read, write and perform numeric functions meant that students lacked the most basic skills to participate in their societies. By the first global EFA initiative in Jomtien, many countries on the continent were experiencing declines in both enrollments and the overall quality of education.²

9. Africa was particularly challenged to implement EFA. An overall assessment of education in Africa at this period highlights the following trends and conditions:

- Expenditures to the sector grew rapidly between 1970 and 1985. However, despite the swelling levels of investment the returns from these investments were marginal. In large part the exponentially growing fertility rate seriously undermined efforts to achieve EFA. Additionally, distribution of funds going to the sector favored secondary and tertiary levels of education impeding efforts to achieve universal primary enrollment.³
- The limited capacity of teachers and other educational professionals created a situation in which poorly qualified teachers exacerbated and further accelerated the cycle of decline through poor instruction and inadequate supervision.
- The internal efficiency of schooling was extremely low. Repetition rates soared across the continent as did both failure and dropout rates. In some countries it took an average of over 20 years to produce one primary school graduate – a situation that significantly contributed to the growing costs of education on the continent.⁴
- There was a growing lack of confidence in the benefit of going to school (particularly for girls) resulting in a concomitant decrease in demand for education. In part, this was due to concerns about the relevancy of the curriculum but increasingly questions were raised about poor student performance linked to the diminished quality of education.⁵ ⁶ Research conducted during this period comparing the performance of students in Africa to their cohorts in other parts of the world consistently showed lower scores on standard measures of achievement.
- High stakes public examinations used for selection to further education or employment were widely administered across the continent. This tended to drive the curriculum and contributed to the highly academic and irrelevant program of studies.⁷

² World Bank. (1988). *Education in Sub-Saharan Africa: Policies for Adjustment, Revitalization, and Expansion*. Washington, DC: The World Bank.

³ Ibid.

⁴ USAID. (1991). Mali Working Documents.

⁵ Tietjen, T. (1994). *Ethiopia Demand Study*. Washington, DC: USAID.

⁶ Prouty, D. (1991). *From the Outside Looking In: Women and Education in Francophone Central Africa*. East Lansing, MI: Michigan State University.

⁷ Kapper, J. (1996). *Testing to Learn, Learning to Test: A Policymakers Guide to Better Educational Testing*. Wilmington, DE: International Reading Association.

Because of the function that exam results played in providing “evidence” of school effectiveness, teachers often taught to the examination, further de-linking school from the realities of the students’ daily lives. The emphasis was placed on cognitive skills and achievement at low taxonomic levels that could be easily measured with pen and paper tests. This reinforced rote memorization and routine drill and practice typical of the “chalk and talk,” thereby neglecting higher order learning activities and teaching methods.⁸

- Tremendous disparities existed in enrollments. In particular, the enrollment and persistence of girls seriously lagged behind that of boys. The unequal patterns of enrollment became particularly serious at the secondary and tertiary levels where on average fewer than 5% of the students enrolled at the university level were girls. As a consequence, efforts to address the “gender gap” became both a policy and programmatic priority to target female students and teachers.^{9 10}
- Other disparities included differences in educational opportunities based on urban/rural, regional and linguistic factors. Limited access to education was accompanied by inequities in the quality of education delivered. These differences influenced all aspects of resource allocation including the physical plants, access to professional development for school level personnel, and the availability of textbooks and other learning materials. In extreme situations, children living in the more remote parts of the country were denied access to education because there were no teachers deployed to their areas.

3.2. The Relationships

10. But not all the factors affecting education on the continent were based around resource-specific issues. Another significant influence centered on the relationship between host countries and the donor community, and the manner in which decisions about foreign assistance supported the sector and reform efforts. Prior to 1989, most assistance was provided through projects whereby donors designed, appraised, implemented, supervised and evaluated their interventions. Often the decisions about the substance of assistance packages responded more to political agendas and priorities of the donor governments than the needs of the host country.

11. This form of assistance was problematic on multiple levels. In general, projects provided specific inputs such as materials production or teacher training and were often managed by foreign experts and specialists working out of a project implementation unit. The piecemeal approach of most of these projects meant that isolated inputs to one component of education failed to address the interconnectedness and integrated nature of education and system reform. Moreover, this approach did little to build local institutional and individual capacity, thereby raising concerns about local “ownership” and sustainability of the interventions. Most notably, it seldom resulted in policy reforms and administrative restructuring necessary to sustain systematic improvements.

12. The sector was in crisis and something needed to be done. Within the context of the crisis, there was a growing awareness of the need to focus on teaching and learning as a focus on the quality of education. *“Active and participatory approaches are especially valuable in assuring learning acquisition and allowing learners to research their fullest potential. It is therefore, necessary to define acceptable levels of learning*

⁸ Greaney, V. and Kellaghan, T. (1995). *Equity Issues in Public Examinations in Developing Countries*. Washington, DC: World Bank.

⁹ King, E. and Hill, M. (1993). *Women’s Education in Developing Countries*. Washington, DC: World Bank.

¹⁰ Wolf, J. and Prather, C. (1989). *The Social and Economic Impact of Educating Girls*. Washington, DC: ABEL/USAID.

acquisition for educational programs and to improve and apply systems of assessing learning achievement.”¹¹ This became the mantra of Jomtien. But the challenge, how to operationalize this shift in thinking, remained a paramount need.

13. One response to this situation was to develop strategies for assistance which emphasized policy dialogue with host country governments, based on a comprehensive approach to education reform and development. This approach called for collaboration among major donors and provided for host country support to strengthen analytic and management capacities to more effectively mobilize, allocate and manage resources in support of education policy reform.¹² This transformation was framed on changing perceptions of “*development among governments and donor agencies in which greater attention was given to mobilizing formerly passive “recipients” of aid into more active participants.*”¹³

14. Educational interventions now had to address quality improvements along with the earlier emphasis upon widening access and increasing efficiency.¹⁴ This really was no surprise. In his groundbreaking work in the late 1960s, Beeby predicted that “*sheer quantity should be the first to emerge as attention was turned...to the educational systems of developing countries...*”, that figures and not theories would consume the education of these initial efforts.¹⁵ But ultimately he knew the focus on figures and access would not achieve the results that would make the difference. That could only come about from a focus on quality.

15. Educators within and outside of Africa were uncertain about how to reverse the decline of quality, but it was becoming increasingly clear changes in quality meant a better understanding of what takes place in schools and classrooms. Some knowledge about the learning environment existed, but little was known about ways to embody this knowledge in reliable and cost-effective interventions within specific national, culturally-relevant contexts.

¹¹ UNESCO. (1990). World Conference on Education for All; 5.

¹² USAID. (1993). *A.I.D.'s Investment in Basic Education: A Description of Current Activities*. Washington, DC: ABEL.

¹³ Shaffer, S. (1992). “Educational Quality Redefined.” In *The Forum For Advancing Basic Education and Literacy*. Washington, DC: USAID/ABEL; 1.

¹⁴ USAID. (1991). “Improving Educational Quality: Project Paper.” Washington, DC: Bureau for Science and Technoloeffective Pedagogy.

¹⁵ Beeby, C. (1965). *The Quality of Education in Developing Countries*. Cambridge, MA: Harvard University Press.

4. PERSPECTIVES ON DEFINITIONS OF QUALITY

*I think there is such a thing as quality but that as soon as you try to define it, something goes haywire. You can't do it.*¹⁶

16. Phaedrus's response to his students when they resist his attempt to generate dialogue on quality may have been true a few decades ago, but the current global consensus among educators and stakeholders within the public and private sector is that quality exists when students demonstrate knowledge. Quality can be defined. The international focus on quality rests on the knowledge and challenge that pupils are not successfully completing the primary cycle. Despite the decades of research that fills volumes of journals, seminar proceedings, and the documents of professional meetings, it is both amazing and disappointing that so little of what is known from the vast body of knowledge generated by this research, has actually been utilized to improve national policy and local practice. The increasing knowledge about educational change and quality in terms of technical information, the expansion of research competence, and the emerging interest in teaching and learning at the classroom level, have not resulted in large scale improvements in student achievement or accelerated student learning.¹⁷ Indeed, most schools continue to function in very traditional ways, particularly in developing countries and efforts to increase access and enhance student persistence are disappointing.

17. The global alliance on EFA emphasizes quality. The Dakar Framework for Action includes a specific target on quality (Target 6): *Improving all aspects of the quality of education for all, so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy, and essential life skills.*¹⁸

18. Three decades of research and evaluation from a variety of independent but complementary perspectives provide several lenses through which quality may be viewed and upon which concrete action may be taken throughout the hierarchy of an education system. The overall attempt is to understand and ascribe meaning to education policy and practice assumed to result in increased performance of teaching and/or learning or both. The research is characterized by: studies of individual projects; reviews of national education sector strategies; case studies of activities; meta-analyses of clusters of studies; and reviews of reviews! The challenge is to extract the core elements of the knowledge base as a mechanism to stimulate dialogue that results in evidence-based policy and practice that addresses specific national priorities.

19. Defining quality is more frequently debated than articulated. Adams¹⁹ presents some persistent questions that surround attempts to define "quality." He draws distinctions between efficiency, effectiveness, equity and quality, identifies multiple meanings of quality (as defined in the literature as inputs, processes, outputs, outcomes, and value added) and attempts to operationalize how to achieve quality, by listing possible characteristics of quality such as: definable in context; integrated with efficiency and equity; not associated with high costs; potentially valuable across settings with agreed-upon goals and contexts.

20. Almost a decade after Adams' initial effort to construct a better understanding of quality, UNICEF presented a definition framed around five key

¹⁶ Pirsig, R. (1974). *Zen and the Art of Motorcycle Maintenance*. New York: Morrow; 184.

¹⁷ Hopkins, D. (2001). *School Improvement for Real*. New York: Routledge/Falmer; 54.

¹⁸ Dakar Framework for Action. (2000).

¹⁹ Adams, D. (1993). *Defining Education Quality*. Washington, DC: American Institutes for Research.

characteristics: (1) learners who are healthy and ready to learn; (2) environments that are safe and adequately resources; (3) content reflected in relevant curricula for acquiring basic skills; (4) processes that use child-centered learning; and (5) outcomes that encompass knowledge, skills and attitudes linked to national educational goals and civic participation. One feature of their model was the defining role outcomes held in reference to understanding what quality meant.²⁰

21. UNESCO expanded the definition and included a special emphasis on gender and the correspondence between the relevance of schooling to the world outside of school – particularly the social dimensions. Their definition was based on education for human rights and included areas such as: peace and human rights; improved quality of life; HIV/AIDS pandemic; literacy; and teacher education.²¹ All these definitions highlight the different elements of the basic input-process-output model that commonly underpins education research and policy analysis. It emphasized the importance of cognitive and affective results (mediated by quality inputs and processes) that are measured by the extent pupils achieve knowledge, skills and behaviors specified by a national curriculum.²²

The working definition of quality that guided IEQ activity and stimulated dialogue about quality in host countries points to the “essential elements of student progress toward meeting or exceeding locally appropriate standards (expressed in measurable outcomes such as academic achievement in numeracy, oral expression, and reading), conditions of learning environments and instructional strategies and resources that strive to treat all students equally so that learning is not hindered because of characteristics such as gender, socioeconomic status, geography or ethnicity.”²³

22. The central message that emerges from the knowledge base of the past few decades is that knowledge about what students have learned and can do links to instructional practice. This knowledge stems from systematic information about teaching and learning drawn from the classroom. They validate classrooms as the “workplace of learning” and the authentic setting where the intended beneficiaries of any educational change (i.e. reform) demonstrate measurable improvement (or non-improvement) as a consequence of that change.

23. The most abundant and widely quoted literature within the discourse of quality emerges from the research on school effectiveness and school improvement. Simply stated, the overall intent was to pinpoint the specific factors within the education system that influence teaching and learning, and ultimately the successful completion of schooling. In this way, others could learn from and build upon this knowledge, thereby avoiding a “reinvention of the wheel.” The next section summarizes the essence of these findings, first pulling from those addressing well-resourced environments and then exploring the application of those findings as they are used to address less-resourced environments.²⁴

²⁰ UNICEF. (2000). *Defining Quality of Education*. Education Working Paper. Programme Division. New York. A paper presented by Unicef at a meeting of the International Working Group on Education, Florence, Italy.

²¹ Pigozzi, M.J. (2000). *Quality Education – Addressing the MDGs and Goal 6 of the Dakar Framework for Action from a Gender Perspective*. Paris. Unpublished manuscript

²² Verspoor, A. (2003). *The Challenge of Learning: A Synthesis of Experience and Knowledge*. Presented at Bussy-Saint Georges.

²³ Schubert, J. (2002). “Introduction: The IEQ Cycle to Improve Teaching and Learning,” in *Pathways to Quality: The Improving Educational Quality Project*. Washington, DC: USAID; 6.

²⁴ Hopkins, D. (2002). “The Aga Khan Foundation School Improvement Initiative: An International Change Perspective,” in *Improving Schools Through Teacher Development*. Netherlands. GPB Gorter VV, 9 Steenwijk; Scheerens, J. (2000). *Improving School Effectiveness*. Paris: UNESCO, International Institute for Educational Planning.

4.1. Knowledge from Well-Resourced Environments

24. Scheerens compiled evidence from industrialized countries according to various strands of educational-effectiveness research: school effectiveness in equal educational opportunity research; economic studies on production functions; evaluation of compensatory program; effective-schools research; and studies on instructional effectiveness. He includes a table of the main components of 13 factors positively linked to effectiveness.²⁵ The following table presents examples of compelling factors with particular relevance for education systems in Sub-Saharan Africa.

Table 1 Relevance factors for education systems in SSA

Factors	Components
Educational Leadership	<ul style="list-style-type: none"> • School leader as information provider • Initiator and facilitator of staff professionalization
Curriculum quality / opportunity to learn	<ul style="list-style-type: none"> • Setting curricular priorities • Opportunity to learn
School climate	<p>(a) Orderly atmosphere</p> <ul style="list-style-type: none"> • The importance given to an orderly climate • Good conduct and behavior of pupils <p>(b) Climate in terms of effectiveness orientation and good internal relationships</p> <ul style="list-style-type: none"> • Perceptions of effectiveness-enhancing school climate • Pupils' engagement • Appraisal of roles and tasks
Evaluative potential	<ul style="list-style-type: none"> • Monitoring pupils' progress • School process evaluation • Use of evaluation results • Keeping records on pupils' performance
Effective learning time	<ul style="list-style-type: none"> • Time • Monitoring absenteeism • Time at classroom level

25. In their 1995 review of school effectiveness research, Sammons et al²⁶ identified 11 factors for effective schools: professional leadership; shared vision and goals; a learning environment; concentration on teaching and learning; purposeful teaching; high expectations; positive reinforcement; monitoring progress; pupil rights and responsibilities; home-school partnerships and a learning organization. What was most significant about their review was the consideration they gave to Scheeren's work and in particular the dynamics between school factors and classroom processes.

26. Within the past decade, an attempt was made to integrate the best and most useful findings of school effectiveness and school improvement to strategically focus on pupil learning. Hopkins refers to the emerging group as pragmatists that combine both

²⁵ Scheerens, J., from Hanushek, E.A. (1997). *Assessing the Effects of School Resources on Student Performance: An Update*. Educational Evaluation and Policy Analysis, 19(2), 47.

²⁶ Sammons, P., Hillman, J., and Morimore, P. (1995). *Key Characteristics of Effective Schools: A Review of School Effectiveness Research*. London: Institute of Education, University of London.

qualitative and quantitative methodologies.²⁷ He frames the need to move into this complex, evolving and more global society as the requirement to be “authentic” – to strategically focus policy and practice on learning. Authentic strategies address the process and the outcome of student achievement, but also acknowledge the necessity of productive management within schools.²⁸ This authenticity brings: a focus on outcomes; targeted focus on teachers and learners; consistent implementation of strategies; recognition of cultural context. However, the essence of the authentic school improvement strategies is that “*powerful learning and powerful teaching is the heartland of the authentic school improvement.*”²⁹ This means a transformation from test scores and results to skill-building cognitive and affective processes as well as helping teachers to instruct their students in *how* to learn while they are acquiring knowledge in specific curriculum content. Inherent in this transformation are requirements to:

- Improve our understanding of the relationship between a teacher’s education or pedagogical practices and student learning.
- Increase our recognition of the importance of external factors that influence learning – this means access not only in attendance, but the ability of a child to attend to the learning process while in class.
- Recognize mechanisms for improving literacy and numeracy may not be limited to traditional schooling.
- Recognize assumptions about what happens in a school or classroom do not reflect the reality of the experiences.
- Acknowledge the necessity of addressing each step involved in the successful implementation of a policy – from the national level to the classroom level.
- Move from “schooling” to learning as the target of action.

27. Another voice for the natural direction of integrating theories, experiences, and findings from several bodies of literature, particularly the effective schools and school improvement is Dimmock. He argues to restructure education, by drawing a more holistic approach that acknowledges the relationship among all segments of the education sector – and often to other sectors such as health, or democracy and governance. The current work on designing learner-centered schools utilizes knowledge from: learning theory, organizational theory, teacher development, management, and culture. Schools are therefore viewed as dynamic and flexible.³⁰ He offers a summary gleaned from the literature on school effectiveness and restructuring, a term that embraces “*policy and practice aimed at transforming education across all levels from the system through regional and district to school.*”³¹ The following schema captures his perspective illustrating the flow from system to the school and classroom level. The importance lies in the relationship among the components.

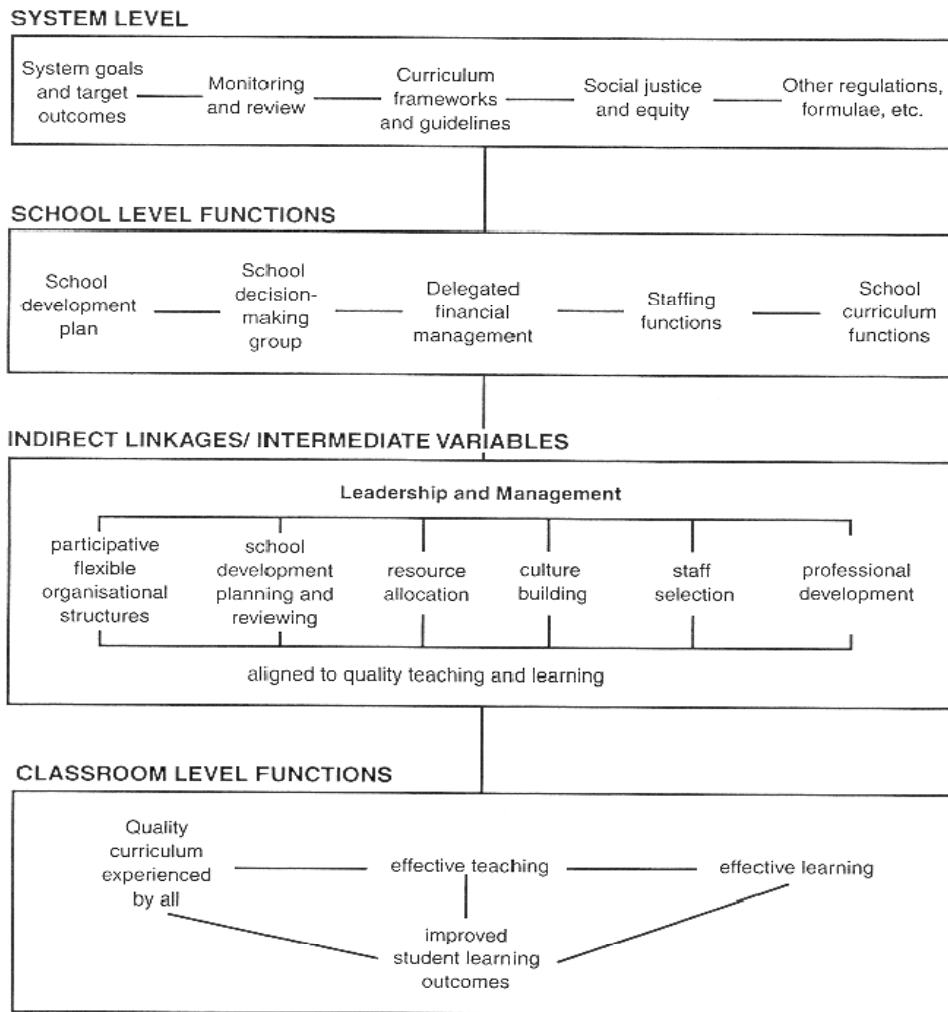
²⁷ Ibid, p. 57.

²⁸ Gauthier, C. et al. (2003). *Effective Pedagogy and Schools in Developed and Developing Countries: A Review of the Literature*. Background paper commissioned for the Challenge of Learning Study. Paris: ADEA; p. 69.

²⁹ Ibid, p.74.

³⁰ Dimmock, C. (2000). *Student Outcomes and the Reform of Education: A Cross-Cultural Perspective*. Designing the Learner-Centered School. London: Falmer Press.

³¹ Ibid, p.8.



28. The overall conclusions revealed by these analyses are that, in industrialized countries:

- The impact of resource-input factors is fairly small;
- There is agreement on the relevance of factors for school improvement such as leadership, staff cooperation, achievement oriented school policies but when subjected to meta-statistical analyses, the impact of school-organizational factors is small to medium;
- Between-school variance (achievement scores linked to “school-effectiveness”) factors explain a small (about 10%) proportion of total variance in student achievement.³² Although the average may conceal striking differences – as much as one year of schooling in the school experience of a student in one of the most effective schools compared to those going to the least effective schools.³³

³² Scheerens, J. (2000). *Improving School Effectiveness*. Paris: UNESCO, International Institute for Educational Planning, Fundamentals of Education Planning No. 68; pp. 70-73.

³³ Hopkins, D. (2001). *School Improvement for Real*. New York: Routledge/Falmer; p. 46.

4.2. Knowledge Base from Less-Resourced Environments

29. Applicability of the knowledge derived from industrialized countries to developing countries receives attention in some of the works presented earlier. In the review of studies related to effective pedagogy and schools, the research is often characterized by a litany of negative factors such as unstable political conditions, weakness of teacher preparation and support, exploding school participation, unsupportive conditions for teachers that mitigate studies of effectiveness. The transfer of knowledge is a risk. However, Scheeren's summary of the various "strands" concludes the provision of basic resources makes most of the difference in developing countries, particularly for the most deprived schools.³⁴ A decade ago, Farrell noted that resource-scarce environments require attention to cost-effectiveness and efficiency that may not be required in wealthier environments. Choices may require trade-offs that add to one activity while subtracting from another.^{35 36}

30. The knowledge base from research in developing countries began with a seminal effort in examining the change process at national and local environments within a development context. It was a cross-country study in Columbia, Ethiopia and Bangladesh³⁷. The combined effort of 14 researchers collected qualitative data over a four-year time period. Six critical factors emerged as enabling factors that improve quality.

- Concrete, locally available, ongoing in-service training linked to practice and peer collaboration;
- Timely and relevant support from local and district educators relates to instructional practice;
- An environment of high expectations produces results and share successes;
- Shared responsibility through decentralization of management and administration fosters ownership;
- Use of locally-developed teaching and learning materials enhance mastery of teaching and learning; and
- Active community participation in funding and management of schools enhances accountability and ownership.

31. In a review of more than 100 sources, Gauthier et al examined research on effective pedagogy and schools in both an industrialized and developing context. One intent of the research was to target studies that favored the success of students whose schooling may be influenced by malnutrition, absenteeism, repetition, and dropout, so as to derive commonalities between the two contexts and increase the relevance of the findings to a development context. One overall conclusion was, that within the literature on the industrialized countries, "*the most effective measures to favor students from disadvantaged milieus are found directly in the classroom.*"³⁸ The message is that "*school can make a difference in the academic performance of young people despite a*

³⁴ Scheerens, J. (2000). *Improving School Effectiveness*. Paris: UNESCO, International Institute for Educational Planning, Fundamentals of Education Planning No. 68; p. 72.

³⁵ Farrell, J. (1992). "International Lessons for School Effectiveness: The View from the Developing World," in *Teachers in Developing Countries: Improving Effectiveness and Managing Costs*. Washington, DC: World Bank.

³⁶ See Ginsburg and Schubert for a discussion on choices when discussing quality improvements. Ginsburg, M. and Schubert, J. (2001). *Choices: Improving Educational Quality: Conceptual Issues, the Ideal IEQ Approach, and the IEQ1 Experience*. Washington, DC: USAID.

³⁷ Dalin, P. et al. (1992). *How Schools Improve*. Norway: The International Learning Cooperative.

³⁸ Gauthier, et al. (2003). *Effective Effective pedagogy and Schools in Industrialized and Developing Countries: A Review of the Literature*. Theme 1. Pedagogical Renewal and Teacher Development. Bussy Saint-Georges.

*disadvantaged socioeconomic context.*³⁹ Further, the most effective instructional practices must focus on the teaching, on basic skills learning, and use direct instruction. The hope is that with this focus, over time, it will not only improve the ultimate success of the pupil, but also increase successful completion rates.

32. These important insights for the design of education reform programs in developing countries emerge from his review:

- Adopting instructional approaches should be done with caution, until they have been determined to result in student achievement – note particularly some “discovery” approaches whose success is linked to individuals rather than sustainable practices – or that they are logistically feasible for overcrowded classrooms, poorly prepared teachers, and the absence of learning materials.
- Depending on successful pilot projects to solve educational problems at the national level is not strategically sound as they often fail – often for logistical reasons.
- Viewing the school as an econometric input-output system ignores its important social system features – adapting teaching conditions to the local culture; integrating communities into the functions of the school; keeping parents informed of their children’s progress so as to engage them in supporting schooling.⁴⁰

33. In 1995 Jansen critiqued the effective schools literature. He applied a framework to his review; examined the limitations of the literature in the developing world; and proposed an alternative that rested on different methodological assumptions. His review traces the 1960s and early 1970s focusing primarily on large samples of quantitative studies. His conclusion was no surprise but confirmed what others such as Heneveld and Craig⁴¹ had also learned that indeed “schools mattered.” The next wave, emerging from research carried out in the late 1970s and early 1980s, is characterized by checklists and case studies and describes the properties of what works from effective schools. Studies in the 1990s revealed weaknesses in the earlier body of knowledge vis-à-vis student performance. Jansen suggests that a critical weakness of this literature is it takes a “recipe” approach to reform and doesn’t build on local understanding of the context and what needs to be done to achieve change.⁴²

34. A very informative set of research activities from 1993-1997 were conducted through an IIEP inter-regional research project. They deserve mention here because of their contribution to the knowledge about quality education and the focus on school functioning.⁴³ The outcome of the four-country analysis is a nine-dimensional framework used to analyze school functioning within the local education environment (e.g. characteristics of the context; relationships within the school; teaching/learning process; teaching process measured against objectives).⁴⁴ Research carried out in Mali utilizing this framework found what makes the difference between a high-performing and a low-performing school has less to do with material, pedagogical and human resources considered in isolation than with how these resources are used in school and with the

³⁹ Ibid, p. 22.

⁴⁰ Gauthier, et al. (2003). *Effective pedagogy and Schools in Industrialized and Developing Countries: A Review of the Literature*. Theme 1. Pedagogical Renewal and Teacher Development. Bussy Saint-Georges; pp. 35-37.

⁴¹ Heneveld, W. and Craig, H. (1996). *Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa*. Washington, DC: World Bank.

⁴² Jansen, J. (1995). “Effective Schools,” in *Comparative Education* (31); 181-200.

⁴³ Carron, G. and Châu, T. N. (1996). *The Quality of Primary Schools in Different Development Contexts*. Paris: UNESCO Publishing.

⁴⁴ Carron, G., da Costa, I., Diarra, I., Sangaré, S. and Traoré, A. (1997). *Fonctionnement des écoles fondamentales du 1er cycle au Mali*. Paris: UNESCO.

human interactions inside the school, between the school and the community, and between the school and educational administration.⁴⁵

35. The recently completed examination of the school improvement efforts of the Aga Khan Foundation over the past 15 years is particularly instructive to developing nations because the study takes place in Africa, responds to the challenging conditions under which the donor, the governments and the NGOs work, the activities stem from a common set of strategic principles applied in a variety of situations, and projects were no less than three years in duration and some were implemented as long as ten.⁴⁶ The six key design features underlying the overall effort to improve teaching and learning are that they should:

- Be school-based;
- Respond to the whole school as unit of change;
- Address ongoing teacher development;
- Include management and other organizational conditions to support teacher capacity to implement change;
- Strategically plan for institutionalization of the school improvement effort; and
- Bring in partners among stakeholders for substantive involvement.

36. Hopkins provided an external perspective on the Aga Khan initiative and offered several conclusions that merit attention for future planning:

- This approach fell short of fulfilling the results-oriented expectations of current performance-based standards around the world.
- He proposes a better balance between strengthening capacity and accountability measures at the local level.
- There is limited understanding and application of child-centered methods by teachers.
- There is little evidence of positive impact on student learning from child-centered methodologies.⁴⁷

37. In his examination Hopkins acknowledges the very challenging task of implementing reforms that result in student achievement. He suggests that one reason is the fragmented nature of policies that address only one component of the education system – e.g. teacher training and curriculum redevelopment. He reminds us that any shift in teaching and learning in the classroom must not only *involve teachers' behaviors but their beliefs*.⁴⁸ The implications for authentic school improvement are that:

- Change takes place over time.
- Change initially involves anxiety and uncertainty.
- Technical and psychological support is crucial.
- Learning new skills is incremental and developmental.
- Organizational conditions within and in relation to the school impact school improvement.

⁴⁵ Dembele, M. (2003). *Improving School Effectiveness: The African Experience*. Forthcoming in Verspoor, A. (2003). *The Challenge of Learning: Improving the Quality of Basic Education in Sub-Saharan Africa*. Discussion Paper for ADEA Biennial Meeting. Paris: ADEA.

⁴⁶ Anderson, S. Ed. (2002). *Improving Schools Through Teacher Development. Case Studies of the Aga Khan Foundation Projects in East Africa*. Netherlands. Swets and Zeitlinger B. V.

⁴⁷ Anderson, S. (2002). *The Double Mirrors of School Improvement: The Aga Khan Foundation in East Africa* in Anderson. Netherlands: Swets and Zeitlinger B. V.

⁴⁸ Hopkins, D. (2002). "The Aga Khan Foundation School Improvement Initiative: An International Change Perspective." In *Improving Schools Through Teacher Development*. Netherlands: GPB Gorter VV, 9 Steenwijk.

- Successful change involves pressure and support within a collaborative setting.⁴⁹

4.3. Using Knowledge in the Quest for Quality

38. This leads to the bottom line. What are the building blocks from all this knowledge and experience that enable policymakers and program developers to design activities that are technically sound, logistically manageable, and that address national priorities? It is important to note the shift away from the “templates” of the past and the need to be more reality-based in planning and implementing any policy or intervention that strives to improve student achievement. The world is different than it was when many of these “movements” began: schools are being called upon to respond and “fix” social problems; parents are demanding more accountability; students are pressured to consider choices and at an earlier age; governments are installing universal standards and increasing measurement to meet those standards. National boundaries are blurred as global priorities for work and leisure gain prominence.

39. “One size does not fit all.” The knowledge base enriches the dialogue within specific national activities but there is no known template for success. The new century brings guiding principles based on the accumulated wisdom and experience of previous decades, recognize the school and classroom as the unit of change and establishing effective management practices. Specifically, the knowledge base reveals the need to:

- Focus on learning – raise the level of pupil achievement and skill of teachers and teacher trainers.
- Establish a process of continuous improvements in teaching by ensuring coherence between teaching strategies, curriculum content and learning needs and developing the skills of teachers and teacher trainers
- Ensure that reform strategies are congruent with the hopes and aims of policy, the values of a school and the beliefs of a teacher.
- Attend to the implementation requirements necessary to insure that a scheme has a fair opportunity to be tested.
- Examine the evidence for success if adapting or adopting a particular strategy.
- Think strategically about the link between the national policy, system management and the local practice – in terms of ownership, capacity building, implementation, and sustainability.
- Broaden civic participation to establish education goals – be realistic so as not to build in failure.
- Create a common discourse for dialogue about how to improve policy and practice generated from the classroom
- Share knowledge at all levels of the education sector – from the classroom to the boardroom – to stimulate the translation of research into practice.
- Link factors that influence teaching and learning to increase understanding about the dynamics of the classroom.
- Involve host country educators at all levels to examine classroom dynamics and share the findings to strengthen local ownership of the process and build the capacity to sustain and integrate the process within a national system.

40. From the perspective of quality, the most revealing measure of the value of these lessons is the extent to which they are useful in improving student achievement. The way forward required an approach(es) or a process(es) that applies what has been learned

⁴⁹ Ibid, p. 276.

to a situation as it exists “on the ground” (i.e. the reality), and systematically examine how the policies and the interventions are being implemented and the extent to which they are making a difference in student performance. The next step on the path to quality as revealed by the research of the past few decades is to enter the classroom.

5. ACCELERATING THE PATHS TO QUALITY: THE IEQ CYCLE OF CLASSROOM-ANCHORED RESEARCH

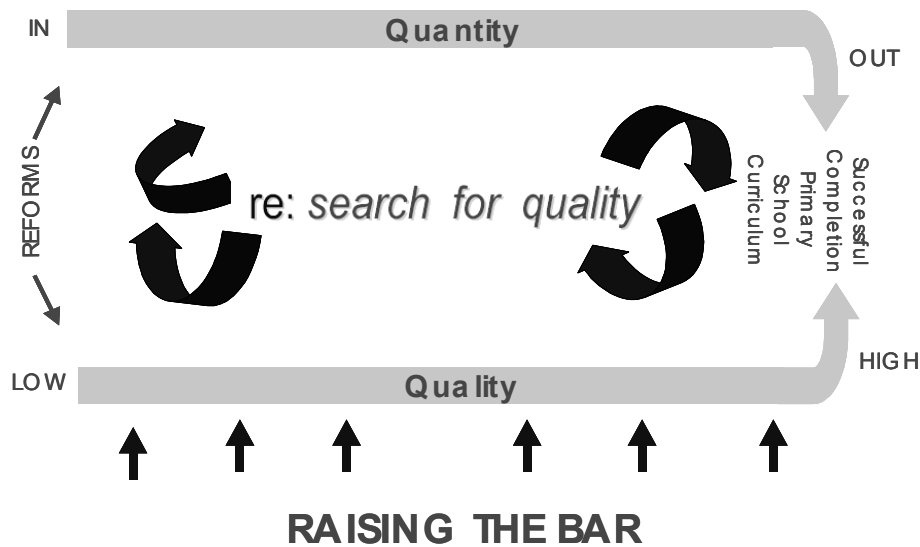
41. What follows is a description of the approach, implementation, and results drawn from the experiences of the Improving Educational Quality (IEQ) Project, funded by USAID and implemented in 17 countries. The mandate of IEQ in 1991 was one of the first donor efforts to focus on quality. Specifically, the intent was to design and implement activities that reflected the knowledge gleaned from the school effectiveness and school improvement literature and apply it to developing countries.⁵⁰ IEQ is a bottom up approach because the choices made in framing the activity around a set of principles, then applying these principles to country-specific reform efforts, led by host country teams began with information from the “ground.” The “cycle of improvement” begins and ends in the classroom and employs multi-methodological approaches to reduce the misalignment between the educational goal of quality and the political priority of quantity.

42. IEQ is both a process and an outcome. The cornerstone of IEQ rests on assessment as the entry point to learn about classrooms as a means to help education systems respond to the demands of universal access while maintaining a focus on quality. In this approach, the balance is achieved by strengthening the host country’s capacity to systematically examine local conditions of teaching and learning and to use the knowledge as a basis for reforming national policy and local practice. More than anything, IEQ demonstrates that the fulcrum for positive change rests in targeting efforts where there is the most to learn and the most to gain – classrooms: the process had to begin and end there.

43. The following graphic illustrates the interconnectedness and unfortunately, the misalignment, between quantity and quality. It underscores that if efforts to achieve both were to be met, attention had to focus on reducing, and ultimately, eliminating the gap. It also captures the intersect that exists between the dual pursuits of political and educational agendas: the successful completion for all children of the primary school curriculum. To achieve EFA one must be able to pinpoint the factors that sustain this misalignment and provide realistic and concrete information from the classroom to form the basis for corrective action in policy and practice. In order to achieve this goal – not only did one need to consider quality-as-product but it also had to address issues around quality-as-process.

⁵⁰ IEQ Project Paper. (1990).

Figure 1 **Aligning quantity and quality**



44. A key aspect of the IEQ efforts to address quality-as-a process rested on research that:

- reflects cultural context and the national reform priorities of each country;
- focuses on measures of teaching and learning; and
- forms partnerships with host country institutions and researchers to conduct the activity.⁵¹

45. Applying these principles drove the process of articulating quality in each country. Local conditions and needs became the focus of the country-based research. One of the special characteristics of IEQ is the absence of a project imported to a partner country. The selection of issues to be addressed, the research design, instrumentation, data collection, and analysis and reporting plans all grow out of dialog among IEQ core staff and host country research team members – a collaborative partnership.

46. Within this perspective on “defining quality,” each country team selected a component of the national reform strategy as the basis for its investigation. The team then conducted an in-depth examination at the classroom level to illuminate how the reform is being implemented and to build a base of useful knowledge about the factors that contribute to or impede improved teaching and learning. Once these factors were articulated, they were discussed by stakeholders at every level of the education system as well as by others in NGOs, private businesses and communities, etc. Discussions took place in annual national seminars, workshops, individual meetings – a variety of mechanisms. The goal was to reach the audience who would use the information to improve policy and practice. No aspect of the work is more important than sharing information and discussing the options for its use. Each team activity embraces dialog across hierarchical lines, in which colleagues with similar roles and responsibilities are engaged along with stakeholders who are outside the education system but nonetheless concerned with national development.

⁵¹ Schubert, J. (1994). *Classroom Profiles as a Stimulus for Improved Policy and Practice*. Consultative Meeting, Association for Educational Assessment in Africa, December 5-8, 1994, Mombasa, Kenya. Washington, DC: Author.

47. Educational quality is not a final destination. Instead, it is a never-ending journey for policymakers and practitioners who must understand what is driving and dampening school and classroom performance. With continuously expanding knowledge gleaned from classroom-based research as their guide, policymakers and practitioners are in a position to take responsible actions.

5.1. The Cycle of Improvement

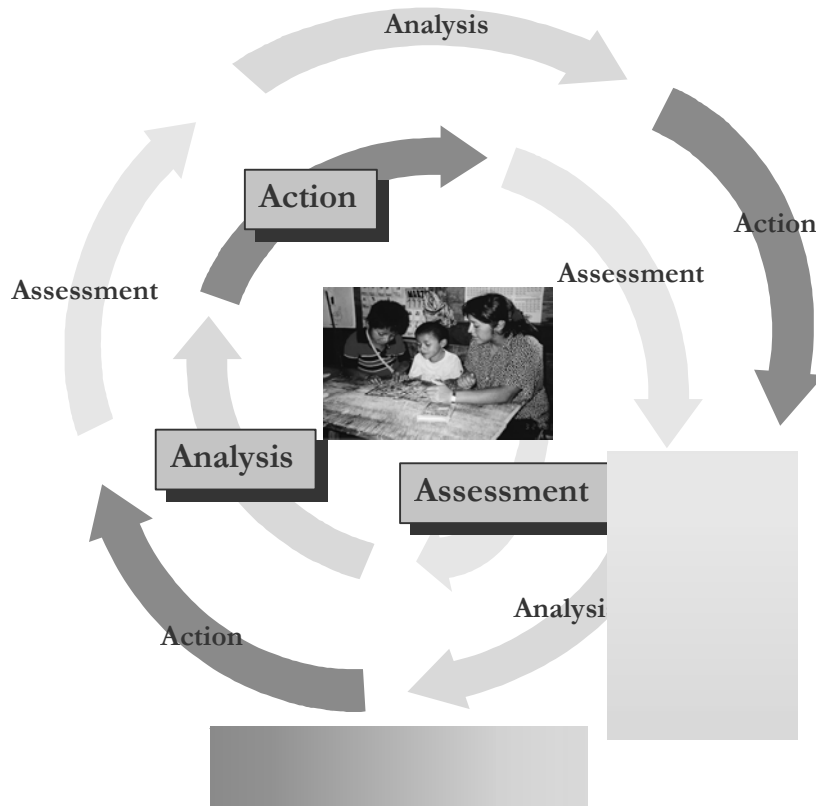
48. Assessment is the entry point. It is intrinsic to the IEQ process – viewed and used as empowering and as a basis for improving learning rather than for documenting deficits. As a way of determining the extent to which specific reform strategies or interventions are reaching the goals of improving teaching and learning, assessment is integrated into the process from the beginning and applied throughout. Feedback mechanisms then stimulate dialog and reveal options for incrementally improving teaching and learning. The following figure illustrates the overall IEQ cycle, in which assessment leads to analysis of the data, which in turn, permits informed deliberations and decisions about action steps that are supported by the finding. The cycle continues as the actions are assessed, data analyzed and new findings are implemented. Briefly stated:

49. Assessment employs a variety of measures to capture diverse perspectives on the school experience and the outcomes. For example, IEQ developed curriculum-based measures of literacy and numeracy from the national curriculum. Local teams also observed teacher pedagogical skills, measured teacher knowledge of content, interviewed teachers, pupils, community members, headteachers.

50. Analysis of the data combined both qualitative and quantitative procedures in order for the meaning of one to be enriched by the other. For example, if reading scores are low, then observing that pupils have little material to read pinpoints opportunities to take corrective action.

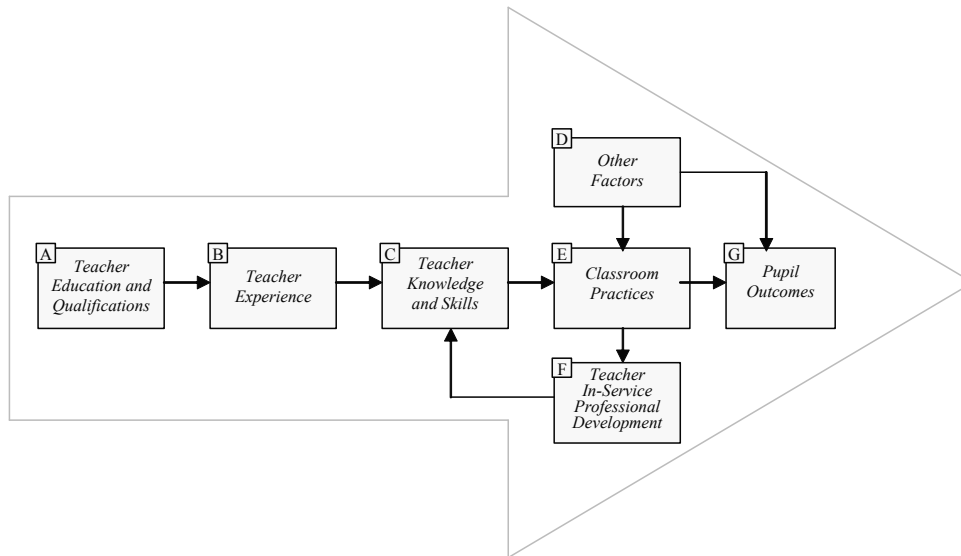
51. Action based on the findings is one measure of success. Practical use occurs by sharing information so as to consider the implications of the knowledge. Moving the knowledge from the researcher to the user is essential! For example, knowing that textbooks are not used in classrooms because teachers are held accountable for damage caused a revision of the policy to remove that provision.

Figure 2 The IEQ cycle of improvement



52. The following conceptual model⁵² developed by IEQ/Malawi (Heyman and Schubert) further examines the factors that influence learning by specifically examining the relationship between teacher factors and pupil outcomes. A critical need following the decision to introduce universal primary enrollment in Malawi (1994) centered on recruiting and preparing adequate supplies of teachers to meet the growing pupil enrollment across the country. IEQ wanted to better understand factors affecting teacher quality to learn how teacher skills and qualifications were influencing pupil outcomes. The hypothesis of this model is that teacher quality does influence pupil outcomes.

⁵² Heyman, C., Winicki, F., Kamingira, Y., and Zembeni, G. (2003). *Teacher Qualification, Classroom Practices, Classroom Resources and Pupil Learning*. Washington, DC: American Institutes for Research.

Figure 3 Teacher characteristics to pupil outcomes

53. This model hypothesizes that two sets of factors directly affect pupil outcomes in education. The first set is everything that takes place outside the classroom (Box D). This includes home, community, and school environments as well as pupil health and intellectual flexibility. The second set of factors includes Boxes A–E. For example, Box E examines the interactions that take place inside the classroom, such as teacher-pupil interactions, pupil-pupil interactions, and both teacher and pupil use of classroom resources.

54. The team used this model in examining the findings from a longitudinal study of the implementation of a teacher training strategy in one geographic region. The findings revealed some very interesting information – for example, the relationship between a teacher’s content knowledge and classroom practice (knowing content doesn’t necessary mean one can teach it). But overall, the findings were disappointing because the anticipated relationships about teacher qualifications and/or knowledge and practice resulting in higher pupil outcomes were not revealed. External factors influenced this outcome. However, it’s important “not to shoot the messenger” but to examine the implications of the findings for the professional development of teachers. If one believes that there is a relationship between teacher qualifications, knowledge, practice, and experience, and that non-classroom effects must be considered, then this model may be usefully applied to other situations.

5.2. Knowledge and Results from IEQ

55. The following examples are drawn from the knowledge gleaned from the classroom-anchored research and how this knowledge was used to bring about change in policy and practice. These examples provide a cross section of the many important lessons learned from the life of this project and represent the broader experience in other partner countries.

- **The classroom is the source of authentic knowledge about teaching and learning**
 - **Ghana:** Classroom observations revealed that few textbooks were visible in the classroom. In an effort to learn why teachers were not distributing textbooks to pupils, local researchers traced the path of textbooks from

production to school delivery and use. The findings revealed that although the textbooks had been delivered to the schools, only a few of the books had made it into the classroom and the hands of pupils. Most were stored safely in a cabinet because teachers feared they would be held accountable for damage to the books. When the findings were shared with national policymakers, the textbook accountability mechanism was revised to one that supported textbook distribution.⁵³

- **Guatemala:** During classroom research on the implementation of an new educational approach, teachers reflected that not all children seemed ready to benefit from the individualized materials. One outgrowth was the development of a simple tool for rapidly assessing if a child had mastered the necessary skills.⁵⁴
- **Honduras:** Curriculum developers were uncertain about the entry skills of the potential out-of-school registrants in the program being developed. Regular visits to nearby pilot centers to observe the newly developed lessons and to talk with participants and volunteer teachers complemented the more traditional baseline achievement data that had been collected.⁵⁵
- **Knowledge generated from the classroom creates a common discourse for dialogue about how to improve policy and practice. This was particularly important since it broke the isolation of teaching and fostered not only reflective teaching but also peer mentoring and collaboration**
 - **Southern Africa:** A sub-regional conference on assessment brought together 50 researchers from 11 countries to exchange models of continuous assessment. The exchange generated by the participants was deemed of value so that a second “annual” conference on assessment is scheduled for 2004.⁵⁶
 - **Uganda:** A national conference of a wide range of stakeholders was held to discuss the outcomes of the initial IEQ activity (a baseline of factors that influenced the primary school effectiveness and teachers’ work experience and pupils’ school experience as determinants of achievement in primary schools) to improve the use of findings at the school level. The result was the launching of an activity using participatory action research.⁵⁷
- **Knowledge shared stimulates the translation of practice into research into policy**
 - **Malawi:** The results of a baseline study to examine the implementation of a teacher training program revealed a 50% loss of teachers within a six-month period. The implementing NGO began an annual census (during an entire month) to count the number of teachers on a daily basis in each of its target school and also used the findings about teacher content knowledge to design

⁵³ Harris, A.M. and Okyere, B.A. (1997). *What Happens to the Textbooks?* Arlington, VA: Institutes for International Research.

⁵⁴ Baessa, Y. (1997). *Research Into Practice: Development of the Reading Comprehension Test.*

⁵⁵ Zelaya, E.M., Harris, A.M., Siri, C., Moncado, M., Mejia-Palacios, J.I., and Rodezno, T. E. (2002). *Evaluación para fortalecer el aprendizaje.* IEQ II-Honduras. Serie “Experiencias para una Educación de Calidad” N.o 8. Tegucigalpa.

⁵⁶ *Learner Assessment for Improved Educational Quality: An Exchange of Current Ideas and Best Practices.* (2003). Proceedings. Washington, DC: American Institutes for Research.

⁵⁷ Uganda IEQ Core Team. (1999). *Participation as a Method to Improve Education Quality: the Principles.* Arlington, VA: The Institutes for International Research.

courses for training teachers about how to teach maths, English and Chichewa.⁵⁸

- **Guatemala:** The findings from a longitudinal study of bilingual education resulted in: the revision and implementation of the test of knowledge in Mayan language for first grade and the design of indicators for bilingual and bi-cultural education.⁵⁹
 - **Ghana and Malawi:** Researchers were joined in their data collection efforts by local educators – staff developers, district supervisors, teacher training college lecturers, and so on – who never stopped talking about what they had learned in their visits to schools and how it had revitalized their everyday practice.
- **Linking factors that influence teaching and learning contributes to increased understanding about the dynamics of the classroom**
- **Guatemala:** Longitudinal data over four years revealed that the lowest trained teachers were placed in the lower primary grades where the highest dropouts were recorded. Government changed this posting policy to place more qualified teachers in the lower primary grades.⁶⁰
 - **Uganda:** Pupils provided useful insights into classroom dynamics as they participated in action research teams focused on pupils’ conceptions of good teachers and good pupils. Pupils in grades 2-6 said that good teachers explain work on the chalkboard, helps pupils when they fail and they do not get angry when pupils ask questions. Pupils posted their expressions in the teachers’ staff room. Pupils also addressed pupil tardiness by tracing the distance between the homes of pupils who were tardy and the school and then suggested ways for neighbors to help one another come to school on time.⁶¹
 - **Ghana and Malawi:** In two countries, examination of teachers’ home language; pupils’ home language and mother tongue instruction policy and language of the instructional materials revealed a disconnect. Materials may be in one language, teachers and pupils may not speak the same language and the implication for learning is that pupils’ opportunities to engage in learning is limited. At the national level, the policy makers’ awareness of the disconnect should influence teacher posting, development of instructional materials and teacher preparation.⁶²
- **Locating a cycle of improvement within host country institutions, using host country educators and researchers in leadership roles strengthens local capacity and knowledge in classroom-anchored research**
- IEQ research activities were housed in 16 national institutions – e.g. exams councils; post-secondary institutions; ministries of education; implementing agencies of government. The result is that at the conclusion of a “project”,

⁵⁸ Schubert, J.G. et al. (2002). “Malawi. Linking Research to Policy and Practice.” In *Pathways to Quality: The IEQ Project*. Washington, DC: American Institutes for Research.

⁵⁹ Ibid. “Guatemala. Research for Improving Bilingual Education in Bilingual Settings.”

⁶⁰ AIMAGUA. (2003). *Midiendo Resultados: Avances en Programas Educativos para Mayas en Guatemala*. Guatemala: AIMAGUA Editores.

⁶¹ Schubert, J.G. et al. (2002). “Uganda. Using Research to Define Quality in Learning.” In *Pathways to Quality: The IEQ Project*. Washington, DC: American Institutes for Research.

⁶² Mchazime, H., Chilora, H., Harris, A.M., and Jessee, C. (2003). *Language Policy and Education in Malawi in Exploring Factors that Influence Teaching and Learning: Collection of Selected Studies Using the IEQ/Malawi Longitudinal Data 1999-2002*. Washington, DC: American Institutes for Research.

the technical skills, knowledge and experience reside with approximately ...researchers, not inclusive of the number of colleagues who were involved for short-terms tasks.⁶³

- Leadership of an IEQ activity was held by host country Project Coordinators who guided teams of local researchers and educators. Consultants from the international community served as technical resources and in many cases had long-term relationships with the local teams as extended team members.⁶⁴

5.3. Going to Scale

56. Going to scale is and has been the rallying cry of national reformers and many donors who, while acknowledging the success of a pilot innovation, withhold complete enthusiasm for the success unless it can be expanded to more schools in diverse regions of a country and reach more students, who represent a wide range of geographic, economic and ethnic backgrounds. However, few success stories of going to scale exist but the reality of the challenge doesn't seem to influence the continuing high-energy innovations that generate enthusiasm during the life of the activity and often wither on the vine because they cannot be sustained without external support or for a variety of reasons, they could not be expanded beyond the pilot phase.

57. One shortcoming in designing and implementing small-scale innovations is the strategic thinking required for expansion does not occur at the time of the development so each component of the pilot study is undertaken with careful documentation of the condition that result in what is working or not working – why and what is required for the particular component to be implemented in a broader context. Although the idea of replicating (or more disturbingly cloning) small successes is inherently flawed because of the enormous range and variety of the “new” environments, it seems to persist. Perhaps the notion of “silver bullets” as solutions to persistent educational challenges lives, but its persistence undermines the hard work required to bring about successful reform.

58. Researchers have reviewed attempts at large-scale reform based on small initiatives and conclude with similar suggestions for breaking the cycle of failure in addressing the issue. Elmore⁶⁵ and Fullan⁶⁶ review overall issues of enabling large numbers of pupils and teachers to benefit from successes on smaller scale. Fullan illustrates with types of reforms (two are whole-district and one a state or national effort); Elmore examines evidence from two USA initiatives and concludes with recommendations about how to face the reality of “scale” – key to both analyses is the need for a stronger and more supportive infrastructure responsible for the expansion, sets standards for evaluating successes and principles for program outreach.

59. The ADEA review paper from the meeting in Arusha considered the implications of scaling up within the African context. One conclusion from the discussion at that biannual was no “*general blueprint exists and scaling up has proved all over the world to be a learning process.*”⁶⁷ We note the consensus on three key decisions: the

⁶³ Schubert, J.G. “The IEQ Cycle to Improve Teaching and Learning.” In *Pathways to Quality: The IEQ Project*. Washington, DC: American Institutes for Research.

⁶⁴ IEQ. (Spring 2002). *The Quality Link: Newsletter of the Improving Educational Quality Project*, Number 5.

⁶⁵ Elmore, R. (1996). “Getting to Scale with Good Educational Practice.” In *Harvard Educational Review*, 66, 1-26.

⁶⁶ Fullan, B. (2000). “The Return of Large-Scale Reform.” In *Journal of Educational Change*, 1, 5-28.

⁶⁷ ADEA. (2001). Proceedings. *Scaling up by focusing down: Creating space to expand education reform*: 13.

conditions for success need to be identified; readiness for change at the new local environment must be evaluated; and, a commitment for the systemic support required to transplant an innovation must be mobilized. Sadly, from the perspective of national reform efforts, these lessons learned are seldom heeded. This raises urgent concerns why this occurs and how this lesson fits within the rubric of quality.

60. The IEQ project focused on in-depth examinations of quality issues in specific regions of a country. By design, IEQ activities were not implemented nationally. However, the question has been raised about the applicability of this approach on a broader scale. This is an issue that must be addressed when considering large-scale reform and sustainability. The underlying assumption if something is working or making a difference, is that it should be more broadly (and equitably) implemented and sustained. But often, these assumptions are associated with “product” or specific innovations (e.g. reading program) and meaningful when specific inputs are needed to leverage results. Process-oriented approaches similar to IEQ should be viewed from a different perspective, particularly in resource-constrained environments. The IEQ Exchanges in which educators within each level of the education system listened to the findings and then discussed implications of those findings on a broader scale. What is learned in one classroom about teaching and learning (e.g. content knowledge of teachers, pupil failure to master grade level material, pupil-teacher interaction, teacher use of learning resources) may not need to be replicated in every classroom in a country or a district or region to provide meaningful data and insight to policymakers and practitioners to leverage broader change.

61. Another perspective is to consider how a process such as IEQ can be integrated into the national system, for example, as a monitoring and evaluation process. The idea is NOT to think of replicating projects, but to apply a “way of thinking” – an approach – about improvement into the manner in which the education system conducts business.

6. APPLYING LESSONS FROM IEQ TO STRATEGIC PLANNING AND IMPLEMENTATION: A WAY FORWARD

62. This is not a perfect world! Education reform as a mechanism for change brings a history of successes, failures and built in knowledge base, as do the individual efforts that comprise a reform. New activities are being discussed in a variety of contexts – governments, donor agencies, institutes of education and the private sector so as to improve the quality of education. It is not necessary to reinvent the wheel. The following recommendations build upon the lessons and experiences of many efforts and particularly those of the classroom-anchored research of the Improving Educational Quality project. They reflect the challenge of accelerating the pace toward quality in practical and realistic terms.

- **Engage the ultimate users in the planning and implementation of the reform.** Many mechanisms may be used – e.g. participatory research, national fora, series of local meetings, briefing papers – but the point is to engage in an inclusive process that builds countrywide consensus and support for a reform effort. Those who feel ownership and a “stake” will work toward success and capacity to address the issue of quality will be a national resource.
- **Think strategically about national implementation when starting with pilot activities.** Don’t fall into the trap of having successful small-scale activities languish because they can’t be cloned. Extract the principles of successes and failures that may be applied from the pilot environment to the new environment. Strategize how a small-scale activity may be integrated into the infrastructure of the education sector – e.g. teacher development, curriculum development.
- **Treat the attainment of quality as a process that requires ongoing assessment, reflection, and action.** Building a culture of learning around the goal of quality is a collective responsibility – this translates into gathering, sharing and using evidence from the classroom (teacher effective pedagogy, classroom environment, pupil achievement) about the progress toward quality.
- **Elevate the quest for quality above political agendas.** Meaningful change requires time – sustained interest in and commitment to a specific reform effort. The path toward quality should not be hostage to shifting priorities among governments and donors – stopping and starting new initiatives is disruptive. Keep your eye on the outcomes – enabling eligible pupils to successfully complete the school cycles.
- **Gather and use data.** Although this is inherently understood by all of us who work in education we sometimes fail to recognize the need for broader sharing of what is learned to other audiences including parents and stakeholders in the private sector. This is somewhat needed because of the expanding role accountability is playing in the global economy and global society. But we must not forget that the value of any data is measured by its utility to policymakers and program developers and ultimately to how it reaches the intended beneficiaries in the classroom. Information travels many paths through an education system before it reaches the classroom. In order for it to travel usefully, it must be in a format that can be easily digested and presented in a forum where users throughout the system are able to review and reflect on the information to consider the implications and subsequent actions.
- **Use the process to form the substance.** One of the most significant understandings growing from the ten year IEQ experience is the growing awareness that the process is the product. Although we often operate with the underlying construct that research

informs policy and practice, one lesson that emerged is that too often we fail to acknowledge that practice informs policy. Reform doesn't always emanate from "thinkers" and decision-makers at the "top." More often than not, effective ways to address problems in the system – particularly around issues of teaching and learning – "trickle up" from the school and classroom level where effective instructional leaders are already doing things that make a difference. What is needed is a mechanism – a conduit – to move these successful practices from the place where they are happening to other places. Providing teachers a role and "voice" in setting research agendas and providing them a legitimate role in the efforts to carry out that research is one way to do this.

- **Recognize it's OK not to know where you're headed.** A driving force in development rests on being able to identify at the beginning of an activity where you will end up in the end. However, as logical as this may seem, in the quest to improve teaching and learning this may not be the best approach. It assumes that by defining the results (e.g. gains in scores) it will help us determine how best to achieve them. The changing dynamics of classrooms and what happens in the lives of the pupils and teachers demand that a more adaptive model be used – one which acknowledges that classrooms are learning systems and must respond to the unique learning needs of all the pupils and teachers. This "Piagetian" construct builds on the fluidity of the learning cycle, research on multiple intelligences and ways of learning and how we continually accommodate new knowledge and experiences with previous knowledge and experiences.
- **Be aware the point of the beginning is really our end.** The "point of the beginning" is a term that is used in geographical surveys to verify accuracy. If the surveyor doesn't arrive back at the point where the survey first began, it indicates that somewhere a mistake has occurred. In efforts to address quality and improve teaching and learning if we don't end up at the "point of beginning" – asking the same questions – somewhere a mistake has occurred. Efforts to improve teaching and learning are iterative. We will always deal with the same issues – hopefully at a different and improved plane – but the issues remain the same. This feature grounds us in our work and signals that we're on track, keeping focused and efficient.

63. The IEQ experience reveals a deliberate shift from technical support to partnership and ownership. It requires a commitment to membership in a learning community, recognizes and accepts that no team member has a monopoly on knowledge. The collaborative process requires "vigilance" by all – it requires time and patience and well-developed listening skills and creating a new climate for working in partnership with host countries and with a tone of reciprocity among colleagues. More than anything, IEQ demonstrates that pathways to quality require the active participation of government, community, family, and business in order to create a culture that supports the successful completion of students through the educational cycle. This is the keystone of national economic and social development.

7. REFERENCES

- Adams, D. (1993). *Defining Educational Quality. IEQ Publication #1: Biennial Report*. In collaboration with Juárez and Associates, Inc. and the University of Pittsburgh. Arlington, VA: Institute for International Research.
- ADEA (Association for the Development of Education in Africa). (2001). *Proceedings. Scaling up by focusing down: Creating space to expand education reform* (p. 13). Paris: Author.
- ADEA. (2002). *Reaching Out, Reaching All. Sustaining Effective Policy and Practice for Education in Africa. Fighting HIV Aids*. Proceedings of the ADEA Biennial Meeting, Arusha, Tanzania, October 7-11, 2001. Paris: Author.
- ADEA. (2003). *Background Paper. Monitoring Performance: Assessment and Examinations in Africa*. The Challenge of Learning: Improving the Quality of Basic Education in Sub-Saharan Africa. Bussy Saint-Gorges: Author.
- ADEA. (2003). *Theme 1: Pedagogical Renewal and Teacher Development*. The Challenge of Learning: Improving the Quality of Basic Education in Sub-Saharan Africa. Bussy Saint-Gorges: Author.
- AIMAGUA (Asociación de Investigadores Mayas de Guatemala). (2003). *Midiendo Resultados: Avances en Programas Educativos para Mayas en Guatemala*. Guatemala: AIMAGUA Editores.
- American Institutes for Research. (2002). *Pathways to Quality*. In collaboration with Juárez and Associates, Inc., Academy for Educational Development, Education Development Center, Inc., University of Pittsburgh. Improving Educational Quality Project (IEQ). Washington, DC: Author.
- Anderson, S. Ed. (2002). *Improving Schools Through Teacher Development. Case Studies of the Aga Khan Foundation Projects in East Africa*. Netherlands: Swets and Zeitlinger B. V.
- Anderson, S. (2002). *The Double Mirrors of School Improvement: The Aga Khan Foundation in East Africa* in Anderson. Netherlands: Swets and Zeitlinger B. V.
- Baessa, Y. (1997). *Research Into Practice: Development of the Reading Comprehension Test*.
- Beeby, C. (1965). *The Quality of Education in Developing Countries*. Cambridge, MA: Harvard University Press.
- Borman, G.D., Hwes, G.M., Overman, L.T., and Brown, S. (2003). *Comprehensive School Reform and Achievement: A Meta-Analysis in Review of Educational Research*. Summer 2003. Vol. 73. No. 2.
- Carasco, J.F., Munene, J.C., Kasente, D.H., Odada, M. (1996). *Factors Influencing Effectiveness in Primary Schools: A Baseline Study*. Arlington, VA: IEQ I/Uganda.
- Carron, G., Châu, T.N. (1996). *The Quality of Primary Schools in Different Development Contexts*. Paris: UNESCO.
- Carron, G., da Costa, I., Diarra, I., Sangaré, S., and Traoré, A. (1997). *Fonctionnement des écoles fondamentales du 1er cycle au Mali*. Paris: UNESCO.
- Dalin, P. et al. (1992). *How Schools Improve*. Norway: The International Learning Cooperative.
- Dakar Framework for Action. (2000). The Millennium Challenge Account, the Fast Track Initiative, the G8 summit and the USA No Child Left Behind Act (2001) all represent the global alliance on quality basic education.
- Dalin, P. et al. (1992). *How Schools Improve*. Norway: The International Learning Cooperative
- Dembele, M. (2003). *Improving School Effectiveness: The African Experience*. Forthcoming in Verspoor, A. (2003). *The Challenge of Learning: Improving the Quality of Basic Education in Sub-Saharan Africa*. Discussion Paper for ADEA Biennial Meeting. Paris: ADEA.

- Dimmock, C. (2000). "Student Outcomes and the Reform of Education: A Cross Cultural Perspective." In *Designing the Learning-Centered School* (pp. 5-108). London: Falmer Press.
- Dimmock, D. (2000). *Designing the Learner-Centered School. A Cross-Cultural Perspective*. London: Falmer Press.
- Elmore, R. (1996). Getting to Scale with Good Educational Practice. *Harvard Educational Review*, 66, 1-26.
- Farrell, J. (1992). "International Lessons for School Effectiveness: The View from the Developing World," in *Teachers in Developing Countries: Improving Effectiveness and Managing Costs*. Washington, DC: World Bank.
- Fullan, M. (1999). *Changing Forces: The Sequel* (pp. 1-16). London: Falmer Press.
- Fullan, B. (2000). "The Return of Large-Scale Reform," in *Journal of Educational Change*, 1, 5-28.
- Gauthier, C.; Bissonnette, S.; Richard, M.; Djibo, F. (2003). *Effective Pedagogy and Schools in Developed and Developing Countries: A Review of the Literature*. Background paper commissioned for the Challenge of Learning Study. Paris: ADEA.
- Gauthier, C., Bissonnette, S., Richard, M., and Djibo, F. (2003). *Effective Pedagogy and Schools in Industrialized and Developing Countries: A Review of the Literature*. Theme 1. Pedagogical Renewal and Teacher Development. Bussy Saint-Georges.
- Ginsburg, M. and Schubert, J. (2001). *Choices: Improving Educational Quality: Conceptual Issues, the Ideal IEQ Approach, and the IEQ1 Experience*. Washington, DC: American Institutes for Research.
- Greaney, V. and Kellaghan, T. (1995). *Equity Issues in Public Examinations in Developing Countries*. Washington, DC: World Bank.
- Hanushek, E.A. (1997). Assessing the Effects of School Resources on Student Performance: An Update. *Educational Evaluation and Policy Analysis*, 19(2), 141-164.
- Harris, A.M. and Okyere, B.A. (1997). *What Happens to the Textbooks?* Arlington, VA: Institutes for International Research.
- Heneveld, W. and Craig, H. (1996). *Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa*. Washington, DC: World Bank.
- Heyman, C., Winicki, F., Kamingira, Y., and Zembeni, G. (2003). *Teacher Qualification, Classroom Practices, Classroom Resources and Pupil Learning*. Washington, DC: American Institutes for Research.
- Hopkins, D. (2001). *School Improvement for Real*. New York: Routledge/Falmer.
- Hopkins, D. (2002). "The Aga Khan Foundation School Improvement Initiative: An International Change Perspective." In *Improving Schools Through Teacher Development*. Netherlands: GPB Gorter VV, 9 Steenwijk.
- IEQ Project Paper. (1990).
- IEQ. (Spring 2002). *The Quality Link: Newsletter of the Improving Educational Quality Project*, Number 5.
- Jansen, J. (1995). "Effective Schools," in *Comparative Education* (31); 181-200.
- Kapper, J. (1996). *Testing to Learn, Learning to Test: A Policymakers Guide to Better Educational Testing*. Wilmington, DE: International Reading Association.
- King, E. and Hill, M. (1993). *Women's Education in Developing Countries*. Washington, DC: World Bank.
- Learner Assessment for Improved Educational Quality: An Exchange of Current Ideas and Best Practices*. (2003). Proceedings. Washington, DC: American Institutes for Research.
- McClure, M. (2003). *Cheating Death in the Schoolyard: The Convergence of Crisis Education and Development Education*. Pittsburgh, PA: University of Pittsburgh.

- Mchazime, H., Chilora, H., Harris, A.M., and Jessee, C. (2003). *Language Policy and Education in Malawi in Exploring Factors that Influence Teaching and Learning: Collection of Selected Studies Using the IEQ/Malawi Longitudinal Data 1999-2002*. Washington, DC: American Institutes for Research.
- Organisation for Economic Co-operative Development (OECD). (2002). *Towards a Conceptual Framework for Indicators on Teaching and Learning*. Revised draft paper for Networks A and C Task Forces on Teaching and Learning. Paris: OECD.
- Pigozzi, M.J. (2000). *Quality Education – Addressing the MDGs and Goal 6 of the Dakar Framework for Action from a Gender Perspective*. Paris: Unpublished Manuscript.
- Pirsig, R. (1974). *Zen and the Art of Motorcycle Maintenance* (p. 184). New York: Morrow.
- Postelthwaite, T.N. (1999). *International Studies of Educational Achievement: Methodological Issues* (pp. 74-75). Hong Kong: Comparative Education Research Centre, The University of Hong Kong.
- Prouty, D. (1991). *From the Outside Looking In: Women and Education in Francophone Central Africa*. East Lansing, MI: Michigan State University.
- Prouty-Harris, D. (2003). *The Case For Classrooms: A Collaborator's Perspective on Lessons Learned from the Improving Educational Quality Project (IEQ)*. Washington, DC: American Institutes for Research.
- Sammons, P., Hillman, J., and Morimore, P. (1995). *Key Characteristics of Effective Schools: A Review of School Effectiveness Research*. London: Institute of Education, University of London.
- Samoff, J., Sebataane, E., Dembélé, M. (2001). Session 1, From Pilot to Scale: Issues and Experience. *Scaling up by focusing down: Creating space to expand education reform. Papers from the ADEA 2001 Biennial Meeting, Arusha, Tanzania* (pp. 1-48). Paris: Association for the Development of Education in Africa.
- Scheerens, J. (2000). *Improving School Effectiveness*. Paris: UNESCO, International Institute for Educational Planning, Fundamentals of Education Planning No. 68.
- Schubert, J. (1993). *Defining Educational Quality: an IEQ Framework*. Arlington, VA: Author, Institutes for International Research.
- Schubert, J. (1994). *Classroom Profiles as a Stimulus for Improved Policy and Practice*. Consultative Meeting, Association for Educational Assessment in Africa, December 5-8, 1994, Mombasa, Kenya. Washington, DC: Author.
- Schubert, J. et.al. (2002). *Pathways to Quality*. In collaboration with Juárez and Associates, Inc., Academy for Educational Development, Education Development Center, Inc., University of Pittsburgh. Improving Educational Quality Project (IEQ). Arlington, VA: American Institutes for Research.
- Schubert, J. (2002). "Introduction: The IEQ Cycle to Improve Teaching and Learning" In *Pathways to Quality: The Improving Educational Quality Project*. Washington, DC: American Institutes for Research.
- Shaffer, S. (1992). "Educational Quality Redefined," in *The Forum For Advancing Basic Education and Literacy*. Washington, DC: USAID/ABEL.
- Sirontnik, K. (1989). "The school as the center of change." In T. J. Sergivanni and J. H. Moore (Eds). *Schooling for Tomorrow: Directing Reforms to Issues That Count*. Boston, MA: Allyn and Bacon.
- Sperling, G. (2003). *Toward a Global Compact on Universal Education*. Testimony of G. Sperling to the House Committee on Appropriations, Foreign Operations Subcommittee, May 14, 2003. Washington, DC: Author.
- Tietjen, T. (1994). *Ethiopia Demand Study*. Washington, DC: USAID.
- Uganda IEQ Core Team. (1999). *Participation as a Method to Improve Education Quality: the Principles*. Arlington, VA: The Institutes for International Research.
- UNESCO. (1990). *World Conference on Education for All*.
- UNESCO. (2001). *Monitoring Report on Education for All*. Paris: Author.

- UNICEF. (2000). *Defining Quality of Education*. Education Working Paper. Programme Division. New York. A paper presented by UNICEF at a meeting of the International Working Group on Education, Florence, Italy.
- USAID. (1991). "Improving Educational Quality: Project Paper." Washington, DC: Bureau for Science and Technoloeffective Pedagogy.
- USAID. (1991). Mali Working Documents.
- USAID. (1993). *A.I.D.'s Investment in Basic Education: A Description of Current Activities*. Washington, DC: ABEL.
- USAID. (2003). *Assuring Donor Support: Convergent Data Analysis*. Presentation at the Annual Meeting of the Comparative International Education Society (CIES), New Orleans, LA, March 2003.
- Verspoor, A. (2003). *The Challenge of Learning: A Synthesis of Experience and Knowledge*. Presented at Bussy-Saint Georges.
- Verspoor, A., Sedel, C. (2003). MS PowerPoint resentation. *The Challenge of Learning. Improving the Quality of Basic Education in Sub-Saharan Africa. A Synthesis of Experience and Knowledge*. Washington, DC: World Bank/UNESCO.
- Wolf, J. and Prather, C. (1989). *The Social and Economic Impact of Educating Girls*. Washington, DC: ABEL/USAID.
- World Bank. (1988). *Education in Sub-Saharan Africa: Policies for Adjustment, Revitalization, and Expansion*. Washington, DC: World Bank.
- Zelaya, E.M., Harris, A., Siri, C., Moncada, M., Palacios, J., and Elvir, T. (2001). *Evaluation to Support Learning. The evaluation process of the 7th-9th grade*. In collaboration with Juárez and Associates, Inc., Academy for Educational Development, Education Development Center, Inc., University of Pittsburgh. Improving Educational Quality Project (IEQ). Washington, DC: American Institutes for Research.
- Zelaya, E.M., Harris, A.M., Siri, C., Moncado, M., Mejia-Palacios, J.I., and Rodezno, T.E. (2002). *Evaluación para fortalecer el aprendizaje*. IEQ II-Honduras. Serie "Experiencias para una Educación de Calidad" N.o 8. Tegucigalpa.