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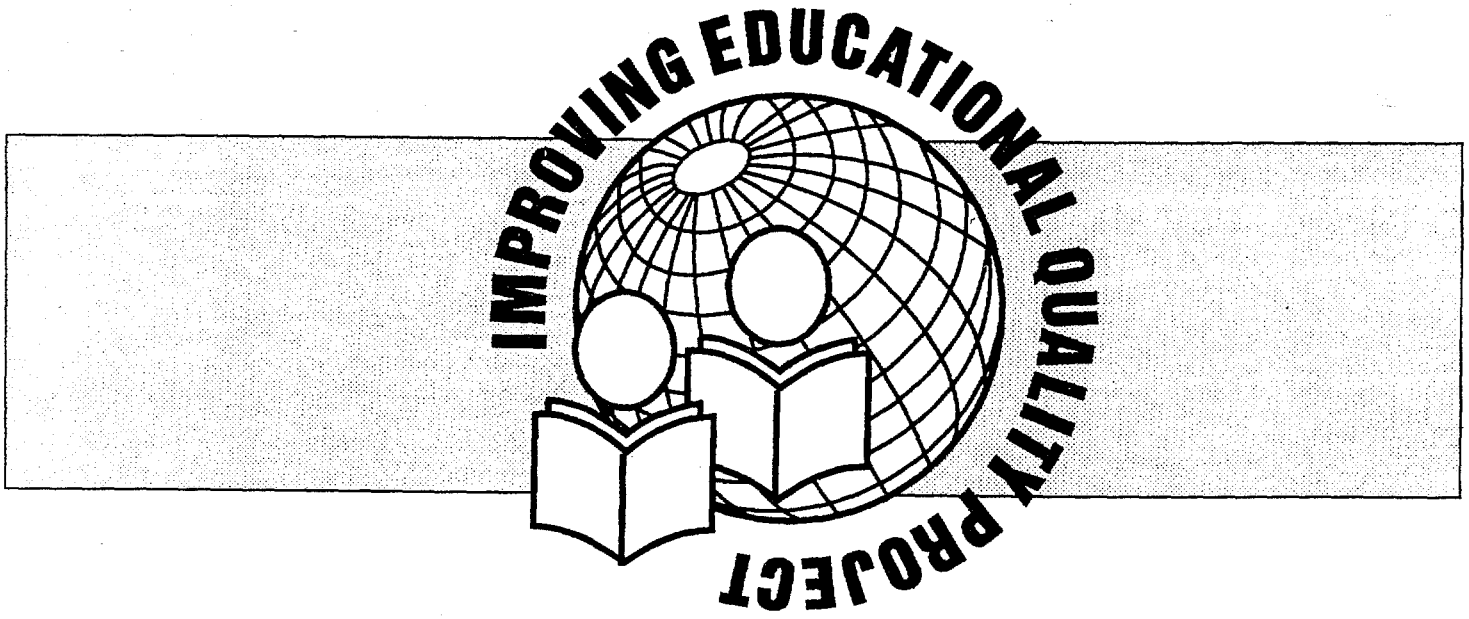

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IEQ Publication #1: Biennial Report

DEFINING EDUCATIONAL QUALITY

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University of Pittsburgh

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FOREWORD

> *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.*
>
> Phaedrus' response to his students when they resist his attempt to generate dialogue on quality. Zen and the Art of Motorcycle Maintenance, p. 184.

The Improving Educational Quality (IEQ) Project engages in a continuing dialogue on defining educational quality with colleagues in the United States and developing countries. As Phaedrus found with his class in Zen and the Art of Motorcycle Maintenance, dialogue is a difficult process, but critical if improving educational quality is to be taken seriously, especially in rapidly changing political and social environments.

IEQ's framework for defining quality is contextual and evolving. Defining quality thus becomes a "work in progress," characterized by discussion and debate among policy makers, practitioners and other groups. In those countries where IEQ activities currently are being carried out (Ghana, Guatemala, and Mali) IEQ staff are collaborating to operationalize educational quality through such mechanisms as professional dialogue, classroom and school-based research and the development of standards of student performance. Because of differences in national, regional and local expectations and values, a universally accepted definition is unlikely to be found in any country.

In IEQ collaborating countries, educational quality must include recognition of student progress in meeting or exceeding appropriate standards. These standards evolved from agreed-upon learning objectives in specified knowledge, skills, attitudes and values. Student achievement, particularly in numeracy and literacy, must be set in measurable terms. Moreover, a major assumption of IEQ is that quality translates into equitable learning situations that offer all children, irrespective of gender, ethnicity, or socioeconomic conditions, a fair chance to learn and to use their educational experience.

The process as well as the product of a continued effort to understand and improve educational quality is important. Quality is at once a desirable educational outcome and an instrument for achieving other objectives. Definitions of educational quality and the means and interchanges by which they emerge should be areas of research and reflection which contribute to the professional growth and enlightenment of the learning community and the design and implementation of changes that improve learning. Refining the meaning and measures of higher quality classrooms and schools becomes a tool for policy makers and practitioners.

The IEQ Project, initiated in October 1990, is funded by the Office of Education, Bureau for Research and Development, United States Agency for International Development (USAID). It represents USAID's continuing commitment to assist developing nations educate their people.

The need for assistance arose as newly independent nations coped with the legacy of colonialism: skeletal educational systems and a paucity of citizens who could read and write. The early response to these diminished systems consisted mainly of building schools, training teachers to staff the facilities, and developing programs to increase literacy. Aid and assistance helped strengthen ministries of education and the infrastructures that supported the teaching profession. The principal thrust of educational development was to create learning opportunities for the millions of young people who had been untutored in colonial administrations.

Despite the enormous investment of human and fiscal resources, the educational systems were inefficient. In 1984, USAID (Office of Education, Bureau for Research and Development) embarked on a series of three centrally funded projects, each with a specific mandate to improve the efficiency of the systems. The first, Improving the Efficiency of Educational Systems (IEES) was designed to introduce long-term educational sector assessments, planning, and implementation efforts to bring about sustainable educational improvements in a systematic way. The second, Basic Research in Improving Educational Systems (BRIDGES) aimed at identifying policy options on access, early school leaving, quality of learning, and educational resources. The third, Advancing Basic Education and Literacy (ABEL) Project assists USAID missions to improve the design and implementation of basic education programs.

But access does not guarantee quality. Many nations witnessed the construction of schools and increased class enrollments without the expected improvement in pupil performance. The Jomtien World Conference on Education for All recognized the need for governments and donor agencies to assume more responsibility for the quality of the school and classroom environments where formal schooling takes place. USAID responded by funding IEQ, an attempt to better understand the dynamics and effects of initiatives that improve pupil performance. IEQ collaborates with host country researchers to conduct systematic inquiries of factors that influence classroom teaching and learning and improve the quality of education.

"Defining Educational Quality" is the first in a series of IEQ publications that will culminate with a monograph on "Improving Educational Quality in Classrooms and Schools in Developing Countries" during the fifth year of the project. Other occasional papers and country studies will be produced throughout the life of the project. We invite you to participate in the IEQ dialogue on quality.

Jane G. Schubert

Jane G. Schubert
Director
Improving Educational Quality Project

DEFINING EDUCATIONAL QUALITY

Don Adams, University of Pittsburgh

Introduction

One of the striking characteristics of the 1980s and 1990s is the international focus on educational quality. To some extent plans and policies calling for higher quality schooling now supplement or even replace earlier attention given to such priorities as educational expansion and school access. The universal assumption seems to be that current education is inadequate to cope with the social and economic transformations underway or to which people aspire.[1]

Conditions both external and internal to education appear to account for this recent trend. External or environmental factors include a reaction to an extended period of fiscally demanding emphasis on quantitative growth which in general failed to achieve the prevailing national expectations and resulted in many "educated" unemployed, and economic and technological changes, which have increased demand for higher level skills and knowledge. A major educational factor internal to the educational system relates to contemporary school and class-room level research which has created a new sense of professional optimism by suggesting that schools, irrespective of their socioeconomic environment, can be designed to increase learning.

Yet even under intense scrutiny the concept of educational quality has remained somewhat elusive, and many persistent questions surround any attempt at definition. What knowledge bases or theories can be of assistance in trying to define quality: Social theories? Learning theories? Instructional theories? Effective schools research? Educational production-function studies? Do various educational theories and paradigms generate different definitions? What is the relationship of politics and power to conceptualizations of educational quality? That is, it may be important to ask, quality for whom or, quality according to whom? Who decides on the operational definitions of quality? Are there differences in definitions given by those at the "top," e.g., the central ministries or national policy groups, and those at the "bottom," e.g., community leaders or teachers? To what extent can generalizations be made across nations, communities, schools, or even classrooms? When are there tensions between the educational interests of the state and those of communities and families? If different clientele have different definitions, how can policies be developed which address contradictions? And, in attempts to design better educational systems, how are size, selectivity and diversity of student population related to quality? Do policies of universalization lead to lower quality?

These are but a few of the questions which arise when trying to understand, and utilize for planning purposes, the concept of educational quality. In this brief paper (1) distinctions are drawn between quality and some of the other related educational concepts used to characterize and assess educational systems, organizations and programs, (2) multiple meanings of educational quality are identified, and (3) a beginning attempt is made at operationalization of the term quality for purposes of easier communication, planning and evaluation of educational change.

Some Distinctions Between Efficiency, Effectiveness, Equity, and Quality

Education literature is frequently imprecise and inconsistent in the use of the terms quality, efficiency, effectiveness and equity. A comprehensive review of the development and many usages of these terms would require exploration of several disciplines and easily could fill a large volume. The following brief examinations of distinctions between these concepts may, however, contribute to better communication among those associated with the planning and evaluation of educational change.

In practice quality and its associated concepts are usually defined as outputs, outcomes, process or inputs. Outputs typically refer to changes in student achievement, completion rates, certification, skills, and certain attitudes and values. Outcomes, if distinguished from outputs, are conceptualized as the longer term consequences of education such as employment, earnings and changes overtime in attitudes, values, and behavior. Inputs, if limited to factors subject to policy manipulation, include characteristics of teachers, pupils, facilities, curriculum, and fiscal and other resources necessary for the maintenance or change of the educational enterprise. In a broader sense contextual influences may also be considered as inputs. Process is usually interpreted as the forms of interaction between teachers, students, administrators, materials and technology in educational activities.

Efficiency and Effectiveness

Efficiency may be defined simply as the relation of outputs to inputs. Or more precisely: "Economic efficiency is defined as existing when the value of an output is maximized for a given cost of inputs or where the cost of inputs is minimized for a given value of output."[2] A more inclusive definition is offered by persons associated with the USAID supported IEES Project: "The concept of efficiency provides a broad perspective from which to analyze an educational system: one in which the costs of educational inputs and processes can be related to benefits, such as improved effectiveness . . . this concept has meaning only if

outputs and outcomes are correctly specified and measured."[3] However, inputs, outputs and outcomes may vary significantly from one country, region, or community to another. Outputs and outcomes, for example, may involve combinations of affective and cognitive results, and group, as well as individual effects.

Efficiency is typically seen by managers and planners as a requisite of institutions in order to maximize the use of, and to avoid the wastage of, human and other resources in the attainment of outputs and outcomes. (Such terms as "use" and "wastage" are, of course subject to multiple interpretations.) In educational planning and economics of education, it is customary to distinguish internal efficiency from external efficiency. Internal efficiency refers to the wise use of resources -- getting the most output for the same input or getting the same output with a reduction of input. Measures of outputs, objectives or targets are associated with costs of inputs and processes. Lockheed[4] makes a further distinction between internal efficiency and internal effectiveness. In her conceptualization internal efficiency is equated to effectiveness/cost with the measure of output given in nonmonetary terms and the measure of input given in monetary terms. Internal efficiency thus does not necessarily mean lower costs. "Better" ratios of outputs to inputs may even require larger unit costs. In Lockheed's scheme, internal effectiveness (not to be confused with effectiveness/cost) or "technical efficiency" describes the ratio of outputs to inputs, when both are measured in nonmonetary terms.

External efficiency relates input costs to outcomes, i.e., the longer term effects of education. Consistent with this logic, external effectiveness refers to the ratio of nonmonetary inputs to outcomes. Windham[5] notes that for purposes of planning and implementing educational change: "...effectiveness or efficiency enhancement activities must be part of a stochastic process wherein the planner or administrator attempts to maximize the probability of increased effectiveness or efficiency based on: (1) the available information on inputs and their influence on process effects; (2) the probable relationships of process variables to the desired outputs and outcomes; and (3) the probable costs of reforms relative to the expected availability of resources."

Equity

Equity* is customarily defined in terms of opportunities,

*A thorough understanding of the sophisticated and subtle ideas of quality and equity obviously require a much more extensive examination than they are given here. For one formal analysis of the "best" and "equal" principles applied to education the reader may refer to: Green, T. (1980). *Predicting the Behavior of the Educational System.* Syracuse: Syracuse University Press. Chapter 7. Green's provocative definition of "best" is ". . . the education that the rich provide for their sons." (p. 120) Yet he also argues that the claim that the two principles are jointly satisfied under the

distribution, or consequences. Cobbe[6] defines it succinctly: "By equity in education, we mean fairness between distinguishable groups in terms of access to, participation in, and achievement of the educational system." Thus, if the distribution, opportunities or consequences are viewed as unfair, "efficient" policies of education may need to be supplemented by other policies in order to achieve an adequate level of equity. As might be expected, persistent controversy may be found in many countries over the acceptable criteria against which equity should be judged and over specific social and educational programs developed to attain greater equity. Attempts in schools to address programmatic and assessment issues in terms of equity or to use legal tools to guarantee equal educational rights have often resulted in acrimonious debate. Even with agreement in principle consensus of practice may not follow.

Although equity considerations may be aspects of a definition of quality educational programs, quality and equity at times have been viewed as conflictual. The choice is often phrased as "equity or excellence?" Such wording may imply that provisions of resources or other inputs and processes to support the latter should have priority over attempts at further developing a more equitable distribution of educational services and outputs. Learners vary in cultural and linguistic backgrounds, aptitudes,and abilities. Equity fundamentally implies that such differences are recognized and appropriate adaptations are made in educational practice. In a number of countries the use of legal tools has been necessary to reduce practices interpreted to be educationally discriminatory. In the United States, for example, constitutional guarantees of equal rights including educational rights, are now found in several states and specific state and federal funding has been forthcoming to ensure compliance.

Quality

The term "quality," like efficiency and equity has a number of uses. As a concept quality has both descriptive and normative characteristics. Thus, quality may be an attribute or an intrinsic characteristic of an individual or organization, e.g., "a school is an organization which has teachers." Quality may also refer to status or relative degree of worth, e.g., "schools A and B are good schools;" or "school A is a better school than B." In the context of educational reform and innovation, most discussions of quality assume or imply a normative usage of the term.

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conditions that constitute realization of the best principle is spurious. He concludes: ". . . what we seek in the system is some balance between these two principles without the sacrifice of either. What is sought is (1) the provision of the best education for each, so that (2) what is provided for some is not significantly different from what is provide to all others. The equal principle expresses the demand for an education for each that is the same as that provided for all others." (p. 133)

Quality is often defined, synonymously with effectiveness, as the degree to which objectives are met or desired levels of accomplishment achieved. Higher quality thus typically means a real or anticipated increase in effectiveness, that is, "better" or larger output, process, input or outcome. Easton[7] explains:

> On the one hand, quality is defined as the embodiment or approximation of characteristics that are socially accepted as proof of excellence. Thus, if all teachers in an academic secondary school have Master's degrees, the group will be considered a high quality staff. On the other hand, quality is defined as the proven ability to produce results. . . .

Snyder[8] personalizes quality: "Quality is a personal evaluation. Although it may be influenced by physical conditions and circumstances, quality entails feelings, attitudes and values, and it is more than the sum of objective indicators."

Clarifying the Multiple Definitions of Educational Quality

The conceptual confusion over the idea of educational quality comes through clearly in education literature. Redundancies and tautologies abound. The definitions offered frequently are on the order of "good quality programs are those which produce good results" or "high quality schooling is associated with excellence," and thus are of little value for purposes of planning or evaluation. Many educators are probably sympathetic with Pirsig[9], who noted in frustration: ". . . obviously some things are better than others . . . But what's the 'betterness'? . . . so round and round you go, spinning mental wheels and nowhere finding any place to get traction. What the hell is quality? What is it?"

At least six common views of quality appear to be given by educators: quality as reputation; quality as resources and inputs; quality as process; quality as content; quality as outputs and outcomes; and quality as "value added." The application of the definition "quality as reputation" is probably most prevalent in assessment of higher educational institutions but not infrequent in evaluations of lower educational levels. Astin[10] perhaps has reputation in mind when he argues that it is easy to reach consensus on the most excellent colleges and schools and he concludes: "What . . . this suggests to me is that there exists in the minds of most people in this country [the United States] a folklore about which are the 'best' educational institutions in the country." The basis for reputation, although usually not fully clear, would seem to often include information or assumptions about inputs and outputs.

Quality as resources and other inputs has been a popular definition

with professional bodies of accreditation and also is extensively reflected in the work of international agencies. Data on fiscal resources, number and education of teachers, extent of facilities, and even the social and learning histories of students are often more easily available than data on the consequences of education.

Quality as process suggests that not only inputs or results but also the nature of the intra-institutional interaction of students, teachers and other educators, or "quality of life" of the program, school or system, is valued.[11] Teachers usually include and sometimes emphasize the view of quality as process. There is the assumption that a judgment of quality need not await assessment of results, outputs and outcomes but can be made from an examination of the judgment, pleasure, enthusiasm, or other interpretations of teachers and students. Process may itself be an objective, or the processes of interaction and student engagement may be seen only as proxies for the outputs sought.

Quality as content reflects the particular bias of a country, community or institution toward some body of knowledge, skills or information. To some extent, although many regional and community variations may be found throughout the world, a trend toward common educational content can be recognized in the movement toward an internationally recognized core curriculum at the earlier levels of schooling (consisting of the 3Rs, national language(s) and history). However, content is not an adequate synonym for curriculum. Curriculum (core or extended) may be conceived as a many faceted process of interaction involving a wide variety of cognitive, affective, and social activities in the search for meaning. Thus, in one conceptualization of curriculum process and content may be seen as inseparable.

Quality considered as outputs or outcomes, in spite of measurement difficulties, is highly popular with policy makers. Typical measures of this definition of quality are achievement in cognitive skills, entrance ratios to next levels of education, income, and occupational status.

Box 1. Definitions of Educational Quality as Inputs, Processes, Outputs, Outcomes, and Value Added

As Inputs

Academic (educational) program quality is best understood as a set of discrete dimensions, independently measuring faculty quality, student quality, size, resources, and overall prestige.

> *Fairweather, J.S. & Brown, D.F. (1991). "Academic Program Quality." School Administrator, Volume 14(2).*

As Processes

I mean by school regimen (whole school environment) the quality of living that seems to permeate the school. . . . The quality of living in the school not only reinforces the specific purposes of the school, but also more than any thing else, seems to be the way by which the school can achieve the purpose it shares with other agencies/groups in the culture.

> *Frymier, J. (ed.) (1983). "Bad Times, Good Schools." Kappa Delta Pi, p. 17.*

As Outputs and Outcomes

Quality pertains also to how well the school or system prepares students to become responsible citizens and instills attitudes and values relevant to modern society (pp. 31-32).

Quality thus encompasses how well the education system does the job of accommodating modern market oriented skills to traditional, home-based values and needs (pp. 31-32).

> *Education in Sub-Saharan Africa: Policies for Adjustment, Revitalization and Expansion. (1989). A World Bank Policy Study.*

UNESCO subscribes to the view that a *good quality* primary schooling and the provision of essential knowledge and skills for adults to cope with the diverse demands of a modern society should be available to all people.

> *Education for All. (1990). Bulletin of the UNESCO Principal Regional Office for Asia and the Pacific.*

We are defining quality simply as the acquisition level of output student knowledge and skills as measured by achievement examinations.

> *IEQ Project Paper (936 - 5836). (1991). Office of Education. Bureau for Research and Development. USAID.*

As Value Added

The quality of an educational program can be adequately assessed only if one can determine the extent to which the program has directly contributed to the desired outcomes. This is called the *value-added* definition of quality.

> *Bergquist, W.H. & Armstrong, J. (1986). Planning Effectively for Educational Quality. Jossey-Bass Publishers.*

The quality of a school or an education programme is defined in terms of the intrinsic nature and purpose of education to enlarge human capacities.

> *Commonwealth Secretariat. (1991). Improving the Quality of Basic Education, (p. 4). London.*

Quality may be interpreted as a measure of change. Quality as "value added" typically refers to the impacts, influence, or effects of the institution or system on the student; that is, how the student has changed because of the program, the culture and the norms of the school. Education is sometimes said to " enlarge human capacities" or to help students to achieve their "potential." In principle the change being examined could focus not only on the individual but also on social groups or institutions. The "value added" definition implies that the higher the quality of the education the more the contribution to the knowledge, attitudes, values and behavior of the students. Typically the focus is on some assessment of student growth and development. Operationally, this definition thus combines output or outcomes considerations with pertinent base line data on the student at the point of entry to the program or school.

Examples of quality defined as inputs, processes, outputs, outcomes, and value added are provided in Box 1. However, definitional statements of educational quality frequently include combinations of input, processes, content, outputs or their relationships. A trend in this direction can be found in the recent international research literature, and to less extent in international policy and planning documents. Box 2 provides examples which encompass elements of two or more of the six views of quality.

Box 2. Educational Quality as Some Combination of Inputs, Processes, Outputs, Outcomes, and Value Added

Ultimately, of course, the quality of an educational program will be defined by input, output and value added measures, assessed in desired outcomes, interrelationship with one another.

Bergquist, W.H. & Armstrong, J. (1986). Planning Effectively for Educational Quality (p. 2). Jossey-Bass Publishers.

. . . the meaning of educational quality should be clarified. The term can be defined in two ways in terms of either inputs, or outputs. In the first, the quality of education is linked to school inputs, such as teachers' qualifications, class size, teaching methods, pedagogical materials and curriculum. Educational quality is said to be high when these inputs are considered good. In the second, educational quality is linked to the output of the system, regardless of its internal operation. Quality is considered high if exiting students achieve many of the curriculum objectives.

Mingat, A. & Ping Tan, J. (1988). Analytical Tools for Sector Work in Education (p. 59). Washington, DC: The World Bank.

Quality of education can also be seen in the form of selected characteristics which are intrinsic to education, and to which we give a significant meaning as worthwhile goals to be realized, as standard of our education.

. . .the quality of education calling for good education is basically a claim for redefinition and redirection of educational practice as a whole . . .

Quality of Education: What Art Thou (November 1991). Third SEAMEO INNOTECH International Conference. Philippines, (pp. 5 & 16).

[Improving school quality is]. . . a systematic, sustained effort aimed at change in learning conditions and other related internal conditions in one or more schools, with the ultimate aim of accomplishing educational goals more effectively.

Bollen, R. (1989). School Improvement (p. 10). Acco, Amersfoort (The Netherlands).

A basic quality education is a process which can enable students to transform their potential into actuality.

Basic Quality Education: An Interim Report. (1974). Helena: Montana State Department of Public Instruction. Helena.

Quality in Ghana and Guatemala

Statements pertaining to ongoing educational reforms in Guatemala and Ghana, two of the countries with which the IEQ Project is involved, also reflect broad views of educational quality. The definition of quality in Guatemala (Box 3) emphasizes inputs and processes, particularly those associated with teaching, that are assumed to lead to higher student performance. Explicit consideration of equity and, in a limited way, costs

are recognized as integral aspects in achieving quality. By including a partial critique of existing conditions, this detailed definition provides an assessment of constraints to qualitative change and sets certain initial criteria for raising quality.

Box 3. Definition of Quality - Guatemala

In Guatemala, educational quality has been defined as material inputs and non-material characteristics of schools which have been shown to improve student learning. Poor teaching is seen as the principal factor in poor student performance. Deficient supervision and staff development, isolation, poor teacher placement, lack of parental/community support, minimal teaching materials and supplies, and lack of achievement standards are among the problems cited as contributing to poor teaching and the resultant waste and inefficiency through student dropout and repetition. Thus, recent educational reform has focused on upgrading teachers skills through improved in-service training and supervision to aid teachers to use existing resources more effectively, and on developing low cost materials to assist teachers in providing better instruction (interactive radio, multigrade teaching techniques and instructional materials). Equity is of primary concern as many of the interventions being developed are aimed at those students who have traditionally had the least success in the Guatemalan primary school system - the rural poor, minority language populations, and girls.

Internal memorandum prepared by IEQ Project staff, November 2, 1992

The statements on educational quality in Ghana by Ghanaian educators (Box 4) reflects the recent history of extreme neglect of the education system. Quality in this context becomes associated with rebuilding as well as redesigning the whole educational enterprise. Higher levels of inputs, a revitalized, more interactive, learning environment, and specific, practical outputs useful in everyday life are all called for as basic building blocks for improved quality.

Box 4. Educational Quality in Ghana

Ghanaian educational standards declined in the early 1980s: many trained teachers migrated to other African countries; the government interest shifted away from education; we had no supervision and no inputs; the literacy skills of our school leavers were undeveloped. The system was grinding to a halt. Something had to be done.

In 1985 the World Bank supplied basic items for basic education. We directed our attention to the curriculum and integrated Ghanaian values and culture. We introduced courses to teach technical skills that related to socioeconomic needs and predisposed young people to avenues of employment.

Mrs. Camille Haldane-Lutterodt
Coordinator, PREP/Management Unit
Ministry of Education
Accra, GHANA

In the late '80s, the government began to put resources into the schools. We converted the middle schools to the junior secondary schools. We looked at ways to predispose our students to vocational skills. Schools offered crafts that were developed within the community. The teachers began to return. We are now phasing out all unqualified middle school teachers, those who failed to pass the O level examinations. Our priority is to teach students to read and write. I want our students to live a better life; to read the signs on the road; to go to the bank and sign their names; to be useful in the community; to be able to read a pamphlet that provides nutritional information; to know that it is critical to boil water before drinking; and to write your name and vote. Our focus is to train teachers who can help students learn. We're now taking a census to determine how many must leave so we can plan our training. Perhaps 14%.

Mrs. Sara Opong
Director of Basic Education
Ministry of Education

In reform, we stress creativity. We want students to be active and to ask questions. For example, we are adopting an integrated approach to teaching and learning. We want to create new learning environments. What is important to know and do in the life after school? We want our children to have confidence to do things for themselves and to have an inquiring mind. In our teacher training programs, we focus on the teacher as a facilitator. We want teachers to interact with students.

Dr. John Atta-Quason
Deputy Director-General
Ghana Education Service

Definitions collected by Dr. Jane Schubert, Director of IEQ Project

Further Operationalization of the Concept of Educational Quality[12]

This brief review of the concept and the various definitions of educational quality suggests:

- Quality has multiple meanings.

- Quality may reflect individual values and interpretations.
- Quality is often multi-dimensional; it may subsume equity and efficiency concerns.
- Quality is dynamic, it changes over time and by context.
- Quality may be assessed by either quantitative or qualitative measures.
- Goals of quality may conflict with efficiency, equity or other goals.
- The meaning of quality is grounded in values, cultures and traditions; it may be specific to a given nation, province, community, school, parent, or individual student.
- Different stakeholding groups often have different definitions of quality. Thus, "winners" and "losers" may be associated with any particular definition.

It should be further noted that because of the characteristics identified above, comparisons of levels or degrees of educational quality are extremely difficult. Because educational programs and activities can be designed for many different purposes and interpreted in different ways, international, inter-community, inter-school or even inter-classroom evaluations of quality may have little meaning.

It is frustrating, to be sure, to have to work with such a slippery idea, yet one need not necessarily become overwhelmed. A more optimistic list of characteristics of educational quality could include:

- Quality is definable in context.
- Under some assumptions it can be measured "objectively."
- Quality often supplements, complements or is integrated with interpretations of efficiency and equity.
- Quality is not necessarily associated with high costs.
- Given similar missions and goals and comparable contexts, educational quality can be evaluated across educational settings.
- Even if there is lack of agreement on what quality is there often is agreement that it should be approved.

Considering this sample of characteristics, perhaps a useful general statement about defining quality can be fashioned. The specification of an operational definition, one useful in planning and implementing change, as opposed to the identification of a generic category, e.g., "quality as content," is facilitated by:

(1) a clear sense of direction(s), objective(s), and mission(s);

(2) an understanding of the ethical and moral constraints in the process or path taken to attain the chosen definition of quality.

(3) knowledge of the range of learning that any given classroom, school, program or system is, and is not, capable of fostering, e.g., can a school teach honesty?;

(4) a user-friendly monitoring and accountability system of performance review which not only addresses the question "how are we doing" but also asks why the particular information on quality is needed; and

(5) a long term commitment to illuminate further the idea and full range of meanings and standards of quality.

It is not the purpose of this paper to analyze the professional or socio-political processes by which educational quality becomes conceptualized, operationalized or "institutionalized." A subsequent paper will discuss at length problems and strategies of improving or implementing qualitative educational change. However, following the guidelines above, introductory comments are made here regarding a few of the activities typically assumed to be necessary in order to move from isolated definitions of quality to a process of examining quality within the context of reform and innovation. In planned attempts at improving educational quality three types of activities are usually viewed as unavoidable: implicit or explicit identification of objectives; acceptance of a descriptive model of high quality education; and development of qualitative or quantitative measures or indicators of educational quality. A brief discussion of each activity can illustrate the potential complexity of the tasks involved.

Identification of Objectives

The bottom line of concerns for educational quality is typically the achievement of particular or shared objectives. Box 5 provides a few illustrative examples of the many possible educational objectives.

Box 5. Educational Quality Objectives

Student achievement

Equal access

Equal success

High student expectations and satisfaction

High parent expectations and satisfaction

Civic responsibility

Democratic decision making

Employability

Objectives evolve and change. Each objective may be viewed as an aspect of one or more explicit or implicit broader goals which in turn respond to a need or problem. An ongoing process of planning, including developing of "mission statements," would be necessary before the objectives could be prioritized. A major problem could generate several goals, each of which could be linked to numerous objectives at various educational levels. In practice, the over-arching goals may not exist and educators must work with explicit or implicit objectives at the school, program or project level.

A few questions focussed on the objectives in Box 5 are suggestive of discussions, professional debates and political battles which might be associated with selecting and operationalizing objectives. Development and utilization of measures or indicators for these objectives require answers to questions such as:

- To what extent is specification of objectives prior to initiating reform desirable or possible? How can differences in the educational objectives associated with various interest groups be reconciled?

- In terms of student achievement, for which student groups are the greatest gains sought? Or should the purpose be to maximize "achievement yield," i.e., the most gain for the most students? Does achievement demand critical literacy and higher-order skills? Who decides which knowledge and skills are to be required of which students? What ethical principles are involved in the above choices?

- In what forums should questions be raised about ethnicity, gender, family and cultural contexts pertaining to equality and equity?

- How realistic in terms of costs and human resources are attempts to determine and respond to student and parent expectations? Who has priority in terms of "satisfaction" -- parents or teachers?

- Should objectives of civic responsibilities and democratic decision making support a critical examination of existing social and political institutions?

- Should employability meet criteria of meaningfulness or enjoyability?

Descriptive Model of High Quality Education

For purposes of contributing to ongoing definition, evaluation and fostering implementation in educational quality a descriptive, qualitative model of the characteristics of high quality schools may be crucial (see Box 6). A profile of quality schooling may be seen as a necessary prerequisite, for example, to any attempt to specify acceptable curriculum, teaching methods, and management roles. The development of a localized profile of quality schooling could be an integral part of a broadly conceived, continuing community and school level dialogue on educational improvement. Again, however, the complexity of the task should not be underestimated. For example: Are the only purposes of such a "model" to initiate and extend discourse? Does educational science warrant reliance on such a 'profile' for purposes of setting targets and allocating resources? Can priorities be established between these conditions and processes? Can costs be determined for each characteristic? Does experience suggest which are the most cost/effective? Does the sequence in which the elements of content, process and management are achieved matter?

Box 6. Integrated Profile of Quality Schooling

Content and Process

- Classroom culture recognizing gender, class and ethnic differences and the individuality of each student
- Availability of textbooks and supplementary reading materials
- Systematic and logical sequences in teaching
- An orderly, safe, healthy, environment
- Clear instructional objectives
- Maximization of time on task
- Regular homework
- Training in problem solving and higher order reasoning skills
- High achievement expectations clearly communicated
- Use of interactive radio instruction and other low cost technologies when necessary
- Classroom climate emphasizing active learning
- Regular monitoring of learning, and feedback on all practice
- Emphasis on independent learning

School Management

- Knowledge of education quality research
- Commitment to educational quality
- Commitment to development of school climate which emphasizes achievement and encourages high expectations
- Commitment to provision of adequate facilities
- Assistance in the evaluation and professional growth of teachers
- Effective interaction with educational bureaucracy
- Commitment to implementing change as well as maintaining stability
- Commitment to both accountability and capacity building
- Acceptance of role as instructional leader
- Recognition of the unique styles and needs of teachers
- Provision of regular local in-service training for teachers
- Expectation of, and competence to cope with unintended consequences
- Development of cooperative school-community relations

Indicators of Educational Quality

Establishing educational objectives and identifying characteristics of quality programs and schools are important if not unavoidable activities in the operationalization of, and planning for change in educational quality. Additionally, and equally unavoidable in monitoring, evaluating and effecting change, are collective judgments, sets of measurable indicators or checklists of educational conditions or accomplishments. Analysis of educational indicator systems is well beyond the scope of this paper; however, a few observations can be offered.

If educational efficiency, equity and quality are distinct concepts and each has input, process and output components then a neat 3 x 3 classification would allow for meaningful identification and comparisons of distinct measures. Such does not appear to be possible. More promising are efforts to develop sets of indicators of either the notions of educational inputs, process and outputs or of educational efficiency, equity and quality in educational practice. Yet any attempt at such operational distinctions is constrained since quality may subsume dimensions of equity and efficiency. That is, objectives and targets of equity and efficiency may be integral to measures of quality. Most proposed sets of indicators focussed on educational quality exhibit severe limitations. The creative work of Horn[13], for example, useful as it can be for some planning purposes, points up many of the potential pitfalls. Horn argues the need for, and provides a prototype of, a checklist designed "to assess whether a school is providing the fundamental prerequisites for student learning to take place." The particular criteria for an assessment of what he refers to as the Fundamental Quality Level (FQL) should be developed in each country. However, Horn provides illustrative examples:

Example Criteria for Defining FQL:

Quality-Related Process

a) Reports prepared by school inspectors or circuit officials indicate that classroom teachers report to school daily, and that head teachers or their deputies visit and observe in every classroom at least once per day;

b) District reports indicate that a district or higher-level inspector observes in the school at least twice each year.

Quality-Related Outcomes

a) Over 75% of primary 1 entrants complete primary 6;

b) At least 80% of primary 6 students attain specific performance standards

in the areas of literacy and numeracy as measured by a criterion referenced assessment.

Pedagogic-Related Inputs

a) There should be between 30 to 45 students per classroom and per teacher;

b) At least one complete set of "approved" language and mathematics textbooks books is available for the use of every three students (distributed to the pupils).

Source: These example criteria are taken from a more extensive list in Robin Horn, (1992). *The Fundamental Quality Level Indicator System for Primary Schools.* (Draft Memorandum) USAID, Washington.

Limitations of the FQL

It may well be possible through checklists and easily quantifiable indicators to provide guidance to administrators, teachers and communities on some of the basic requisites for schooling, e.g., adequate facilities, and useful instructional materials. Such efforts are generally better seen, however, as providing initial and ongoing information more useful for informing a process of discussion and debate than constituting an exercise of formal assessment.

In summary, a cursory examination of the FQL and similar attempts suggests the following limitations:

- Indicators to be part of valid decisions must evolve from an acceptable theoretical framework.

- Neither the FQL nor the profile of Educational Quality (Box 6) recognize the potentially important role of politics in choosing and rejecting indicators.

- National indicators or definitions of quality are unlikely to be adequate for planning at the sub-national levels.

- Consensus among educators on cut-off levels of indicators is unlikely.

- As a bureaucratic tool such indicators may be used uncritically for assessment and subsequent "reward" or "punishment."

- Highly specific targets risk limiting achievement to those standards.

Many of the same criticisms could extend to any attempt to associate measures with the illustrative objectives of educational quality in Box 5. Measures of the achievement of any of the objectives have technical limitations and are subject to political and professional controversy. Probably no set of quantitative or qualitative measures captures the full range of objectives of citizens, teachers and students. Thus, the questions "who develops the technology of measurement?" and, "for whom is a given measure satisfactory?" may become issues of intense debate.

In principle, and if available research tools were sophisticated enough, it would be possible to construct, for each educational setting at any particular time, a matrix pairing actors (teacher, parent, student, administrator, policy maker, etc.) with one or more definitions of quality. Further, one could associate each definition with one or more quantitative or qualitative measures. The measures, in turn, could be linked in a three fold classification of normative, criterion, and "connoisseurship" standards. But, of course, even if these efforts were possible the uncertainties inevitably associated with multiple interpretations of data and meaning throughout such a process could not be avoided.

Any given definition of quality may be subject to criticism and possible rejection by those who have different expectations or understanding of the purposes and capabilities of educational institutions. The use of such concepts as inputs, outputs, and outcomes, although convenient and useful up to a point, is far from being fully satisfactory. If such rhetoric suggests high quality education can be described merely by a compilation of discrete conditions and results it is surely inadequate to capture either the organizational complexity of schools or the potential dynamism of their interaction with the community and larger social environment. Manipulation of certain identifiable and fixed skills and behavior of students and teachers may well increase certain output measures. However, should a community's definition of quality imply, for example, the learning of democratic practices or performing critical analyses or organizing for popular action then merely increasing the resources, extending the school year or even making more instructional materials available will not achieve the desired results. Nor, for that matter are the desired results likely to be discovered by scores on standardized tests.

SUMMARY

The ongoing international attention to educational quality has shifted the focus of educational debates and reforms away from educational growth to discovery of those combinations of inputs, processes, and outputs which are assumed to define or cohere to improved types of

education. This refocus has raised many questions and has also heightened awareness of the complexities and uncertainties surrounding schooling and its interchanges with its environment. By acknowledging the difficulties in defining educational quality while insisting on the need for educational improvements, citizens and governments have created new challenges for educators.

This paper has attempted to clarify the concept of educational quality, provide an illustrative range of definitions and suggest some of the difficulties in operationalizing the notion of quality for purposes of assessment and planning. The complexity and dynamic characteristics of educational quality, and its changing contextual characteristics have been emphasized. Defining quality ultimately becomes linked to the diversity, conflicts and power divisions within society. Full consensus on the specifics of educational quality are unlikely to ever be reached in heterogenous societies, but such agreement is not necessary for initiating change and improvement. What may be a more crucial task for educators, parents and citizens is the development in schools and in communities of a growing capacity for and commitment to ongoing definition, redefinition and improvement of quality.

ENDNOTES

1. This paper was prepared for the Improving Educational Quality (IEQ) Project, Institute for International Research, USAID. Appreciation is expressed for the helpful comments from Mark Ginsburg, Leo Klopfer, Jane Schubert, Steve Anzalone, and Ray Chesterfield.

2. Windham, D. (1987). *Indicators of Educational Effectiveness and Efficiency* (p. 10). Tallahassee, FL, IEES Project. Also see: B. Fuller, "Defining School Quality." In J. Hannenay & M. Lockheed, *The Contribution of the Social Sciences to Educational Policy and Practice 1965-1985* (pp. 23-27). Berkeley, CA: McCutchan. Organization for Economic Co-operation and Development. (1989). *Schools and Quality: An International Report.* Paris: OECD. Lockheed, M. & Verspoor, A. (1990). *Improving Primary Education in Developing Countries: A Review of Policy Options.* Washington, DC: The World Bank. Ross, K. & Mahlck, L. (Eds.). (1990). *Planning the Quality of Education: The Collection and Use of Data for Informed Decision-Making.* Paris: IIEP/UNESCO with Pergamon Press. Hawes, H. & Stephens, D. (1990). *Questions of Quality: Primary Education and Development.* London: Longman. Bender, L. (1983). *Differences and Implications of Legislator and Educator Perceptions of Quality Education.* Paper presented at the 54th Annual Convention of California Association of Community Colleges. Sacramento, CA, November 18-20, 1983. Hansen, K. (1979). *Defining Quality Education: An Analysis of State Educational Policy Options.* Prepared for chief state school officers of the Northwest and Pacific. Kwak, B. (1991, November). *Quality Education What Art Thou?* A paper presented at the Third SEAMEO INNOTECH International Conference. Manila, Philippines.

3. Burchfield, S. (1991, Winter). *Planning and Implementing Educational Management* (p. 9). Tallahassee, FL: IEES Bulletin, Florida State University.

4. Lockheed, M. & Hannushek, E. (1988). *Improving Educational Efficiency in Developing Countries: What Do We Know.* (Compare Vol. 18[1]), (pp. 21-37).

5. Windham, D. & Chapman, D. (1990). *The Evaluation of Educational Efficiency.* JAI Press.

6. Op. Cit., Burchfield, p. 9. Also see Cobbe, S. (1990). *Education Indicators for Policy Purpose in Indonesia Jakarta.* Ministry of Education and Culture.

7. Ibid.

8. Ibid.

9. Pirsig, R. (1974). *Zen and the Art of Motorcycle Maintenance.* New York: Morrow. Although this confusion of meaning appears to extend to fields other than

education, use of the term in the world of business seems incrementally less problematic. A publication of the American Management Association, concludes: "Customers aren't interested in our specs. They're interested in if the answer is yes, then it's a quality product. If the answer is no, then it isn't. . . . Quality is conformance to requirements." (AMA. *A modern fable about quality* (p. 9). San Francisco: Jossey Bass). This is clearly a rejection of input definitions of quality in favor of an emphasis on outcomes. Even so, one wonders if any organization can be constrained only by views of "customers" in defining quality.

10. Astin, A.W. (1983). Educational Excellence: Aspirations and Realities. In the proceedings, *Middle States Association of College and Schools.* Philadelphia. See also Bogus, E. (1992). *The Evidence for Quality: Strengthening the Tests of Academic and Administrative Effectiveness.* San Francisco: Jossey Bass. Richardson, R. C. & Skinner, E. F. (1991). *Achieving Quality and Diversity.* New York: Macmillan.

11. WCEFA. (1990). *Meeting Basic Learning Needs: A Vision for the 1990's.* New York: UNICEF.

12. The most common approach to assessing educational quality involves some measure of student achievement (at the primary school level often in the area of "basic skills"). Although many teachers and other educators would probably find reliance only on a measure of cognitive skills or familiarity with a particular body of information an inadequate way to judge quality, researchers have found achievement test scores convenient for purposes of comparison of programs, schools and school systems.

    Restricting the definition of quality of student achievement and the increasing use of standardized tests internationally -- a trend frequently encouraged by national and international agencies -- warrants scrutiny and critique not possible here. Suffice to say that this trend is not without its critics. Because of the conditions sometimes accompanying national testing, (e.g., the narrowing of educational interests, the potential for socioeconomic, racial or gender bias, the inevitable association of quality with the characteristics of entering students, the intrusion of bureaucratic agencies), many educators fear that any national movement to assess student achievement will be detrimental to the achievement of many valued educational objectives.

13. Horn, R. (1992). *The Fundamental Quality Level Indicator System for Primary Schools* (Draft Memorandum). United States Agency for International Development, Bureau for Africa. Also see Samah, A.A. (1991). *Effective Indicators of Quality Education.* SEAMEO INNOTECH International Conference. Manila, Philippines. OECD. (1991). *OECD International Education Indicators: Outcomes of Education.* Paris. Finn, C.E. Jr. (1989). *What Good are International Indicators Anyway?* Paper prepared for the Indicators Panel Study Group, Washington, DC: NCES. Oakes, J. (1990). *Education Indicators: A Guide for Policymakers.* Santa Monica: RAND Corporation, CPRE.