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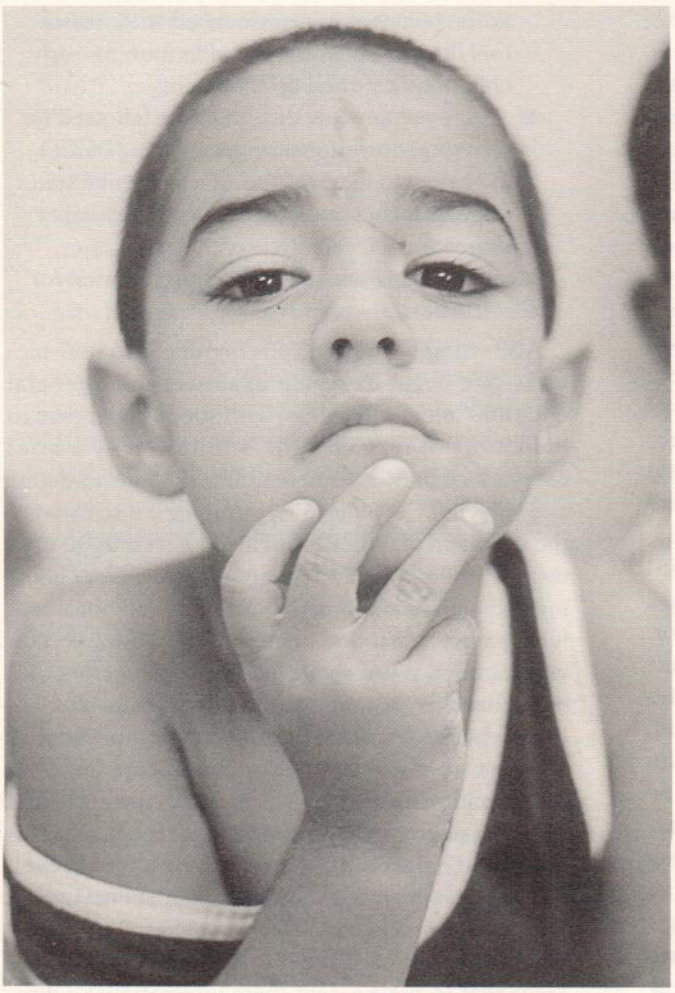

Pueblito/Diane Alexopoulos

The welfare of children during their early years says a great deal about the general welfare of a nation or population

In Search of Early Childhood Indicators

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The creation and use of indicators to monitor social change continues to be in vogue.[2] Most reports of international organisations include, usually at the end, a set of tidy tables presenting neatly arrayed numbers purporting to represent the status of countries along a variety of demographic, economic, social, and sometimes political dimensions. These numbers will usually be drawn upon in the body of the report as a means to compare countries, to comment on trends, to describe progress, gaps, and lags, and to suggest policy and programme directions. National planning offices, chief executives, health ministers, evaluation units, and others call for and use diverse social indicators, often as much to justify or sell programmes as to monitor them. Most project evaluation schemes explicitly include the creation of indicators against which progress may be defined.

The particular dimensions of economic or social welfare addressed in any report will depend on the mandate and the interests of the reporting organisation. The area that most interests the CG is the welfare of children during their early years, an area that says a great deal about the general welfare of a nation or population. In this article, we will focus on the creation and use of indicators of early childhood care and development (ECCD) seen in terms of: 1) the general status of children during the early years of life (birth to six); 2) the extension and quality of programme initiatives intended to improve that status;

[1] The article draws on work that being carried on in many parts, but it particularly focuses on several projects that have been carried out by the Consultative Group on Early Childhood Care and Development. These projects have been financed by UNICEF, the Bernard van Leer Foundation, and the International Development Research Centre.

[2] Social indicators have been with us for a long time. During approximately the last two decades, however, the creation and use of social indicators have become much more widespread.

and more generally, 3) the quality of the contexts that affect child development.

One of the main motivations for taking up the topic of ECCD indicators at this time in the *Coordinators' Notebook* derives from our dissatisfaction with the ECCD indicators defined in and used as part of the Year 2000 Assessment of Education for All. Many readers will know that in March of 1990 the World Conference on Education for All, held in Jomtien, Thailand, approved a Declaration that included the following statement: "Learning begins at birth. This calls for early childhood care and initial education. These can be provided through arrangements involving families, communities, or institutional programmes, as appropriate" (Article 5). The Framework for Action also set the following as one of the targets to be considered in national plans of action for the 1990s: "Expansion of early childhood care and development activities, including family and community interventions, especially for poor, disadvantaged and disabled children" (Article 5, paragraph 8).[3]

At the World Conference in 1990 no specific indicators were fixed to guide the international community in monitoring progress toward this target. Nor were specific ECCD indicators assigned when this target was incorporated into the deliberations and outcomes of the World Summit on Children, held in September 1990. One of the summit's goals was to achieve agreement among world leaders about how to proceed with activities which would realise the provisions of the Convention on the Rights of the Child. Nevertheless, at the end of the decade and as an input into discussions at the ten-year follow-up meeting of the World Forum held in Dakar in April 2000, countries were asked to assess their progress toward the goal, along with progress toward other goals agreed upon in Jomtien.

As will be evident from the discussion that follows, that exercise, while representing an advance in that it put ECCD firmly on the agenda, was also limited and flawed. Reading the country reports which were produced as part of the assessment has led us to question both the particular indicators used and the way in which they are used internationally. The exercise showed both the potential value of ECCD indicators and the need for much more concerted attention to developing and incorporating such indicators into standard reporting systems. It has led us to ask how we might do better in creating and using indicators for monitoring at both international and (especially) national levels.

As we reflect on the process of developing and using ECCD indicators, our specific purposes in this article are to:

- Help clarify what indicators are (or could be) and how they are (or might be) used as a contribution to improving how they are selected and used for ECCD programmers and practitioners, particularly at national levels;
- alert readers to some of the pitfalls of, as well as the potential value associated with, indicators that are commonly used to monitor early childhood care and development;
- outline one process that might be followed for selecting, operationalising, and using ECCD indicators to monitor the developmental status of programmes and of children at national or sub-national levels; and
- suggest some possible indicators as a basis for discussion.

Accordingly, the article is divided into four sections. We begin by trying to answer some general questions about indicators, with special reference to indicators of ECCD. This is followed by a brief overview of previous and ongoing attempts to define and apply ECCD indicators, including a discussion of the treatment of indicators in the EFA Year 2000 evaluation. Section three will suggest a process for choosing and operationalising indicators that are meaningful in particular national contexts. The closing section will set out a set of sixteen possible indicators that might be taken as a starting point for discussion.

One final point of clarification in this introduction: although we have taken international reports and indicators (and particularly the Year 2000 Assessment) as a starting point for discussion, our real focus is on creating and using indicators at the national level. Indeed, we will argue that, while international indicators are potentially useful at a very general level, they can also be misused and misleading. We will also argue that to some extent these international indicators subvert or distract efforts to arrive at more useful indicators that might have greater significance for national policy and programming than those presently favoured.

Some Questions about Indicators

■ What is an indicator?

The definition that guides the process of establishing and using indicators can vary widely. Consider the following possible definitions:

- According to Webster's Dictionary, an indicator is, "A person or thing that indicates." To "indicate" means, variously, "to point out, to direct attention to, to be given a sign or token, to signify, to show the need for."
- "Indicators are qualitative descriptions of social conditions intended to inform public opinion and national policy making. These delineate social states, define social problems and trace social trends which, by social engineering, may

[3] See also Appendix 1: What Constitutes an ECCD Programme

hopefully be guided towards social goals, formulated by social planning." (Duncan 1974, quoted in M.S. Swaminathan Foundation, 1)

- "In simple language, an indicator could be termed an evidence that something has happened, or that an objective has been achieved." (M.S. Swaminathan Foundation 2000, 6)
- "An indicator characterises some important feature of a system or activity that can be used to monitor or evaluate "progress" or "success." Thus, an indicator serves an evaluative purpose. This contrasts with a descriptive purpose served by a statistic. Statistics are converted into indicators when they are related to goals or to some explicit definition of progress or success. Because indicators are inherently evaluative, standards or value judgements about what is right and good need to be agreed upon and made explicit in order for the indicators to have meaning." (Consultative Group 1999, 5)
- "An indicator is a specific behaviour or result that one can use as a marker to point out how ell objectives are being achieved." (Evans et al. 2000, 278)

The variation in definitions makes it clear that establishing the particular purpose(s) indicators are supposed to serve, and that making explicit the definitions of standards or values or objectives that are to be applied when creating and interpreting an indicator, must be at the heart of the discussion of indicators. This brings us to our next question, why do we want to point something out, show need, or give significance?

■ What purposes do indicators serve?

"The process of monitoring remains important for informing policy and allocating available resources efficiently. Similarly, comparisons between nations remain useful—both to show what can be achieved through the pursuit of different policies and priorities, and to act as a spur to national pride and performance." (Adamson 1996)

From this general statement, at least three purposes can be identified that affect the kind of indicator(s) to be chosen.

Advocacy One purpose of indicators is to mobilise social and political support for action—to provide a "spur to national pride and performance" (Adamson 1996). Using indicators to describe gaps or lags, relative to other countries or to some absolute standard, helps advocates to build a case for action and, hopefully, helps to spur national pride leading to action.

Policy Analysis Indicators serving a policy purpose may appear at international, national, or subnational levels. At all levels, disaggregation of the indicators helps to identify levels of success or gaps in relation to the characteristics of programmes (e.g., geographical or administrative distribution, gender, economic conditions, ethnic groupings, etc.) that have implications for policy. This use of indicators, while permitting analysis at a level that "informs policy," and perhaps also guiding the efficient allocation of available resources, stops short of seeking explanations. The ECCD indicators which serve policy purposes might pertain to children's development or might serve to characterise their environments.

When determining what indicators we would use for monitoring early childhood development, we usually do not start from a research perspective that tries to explain why agreed-upon standards have or have not been met. This said, however, there is no reason that the same indicators chosen to monitor "success" for various groups or other sub-divisions of a population cannot be applied within an evaluation or research framework to try and find out why the level of success varies for different groups; this double usage would lead to obvious implications for policy.

Administrative assessment and monitoring In this case, the purpose of indicators is to help administrators see if a particular system, programme, or institution functions in the way it is expected to function—if it is operating as planned and achieving set goals. These indicators, often set out as part of a "Management Information System," are more specifically tuned to assure the efficient allocation of available resources within programmes or projects; they provide an alert system in terms of criteria that are specific to the system. Typically, such indicators focus on inputs and processes and are less likely to be concerned with outputs and impacts. Again, indicators used for administrative purposes normally do not provide an answer to why a system may be functioning well or poorly; they simply alert us to the fact that this is happening.

Although there may be overlaps in the indicators used for these three purposes, it is also evident that different purposes and contexts will also require different indicators. For instance, while it may be useful at an international level and for policy purposes to compare enrolment ratios, this may not be sufficient for policy analysis in a particular national setting. National enrolment ratios may be at or near 100 percent, in which case the problem at the national policy level may be more qualitative than quantitative, requiring other indicators. Or, whereas an advocate may want to know whether a certain level of funding has been allocated to early childhood development programmes, an administrator will be more concerned with indicators that show whether funds have been spent for the purposes designated, independently of the amount of total resources assigned.

The emphasis in this article is primarily on indicators related to advocacy and policy rather than on administrative monitoring.

Gorno-Badakhshan, Tajikistan: Aga Khan Foundation/0124-055/Pierre Claquin

Indicators of "Effects," including the actual developmental status of children, are virtually absent from national and international monitoring and assessment of ECCD

■ Within what sort of framework should we consider indicators?

ECCD is being pursued within a variety of social and theoretical frameworks, each with a different focus and each suggesting different priorities to be taken into consideration when searching for the most appropriate indicators. For instance, an approach to ECCD within a framework of children's rights and in relation to the Convention on the Rights of the Child will probably yield a different set of indicators than an approach to ECCD set within, let us say, a poverty reduction framework or a framework of preparing children better for school. A child rights advocate may be concerned with whether or not a child's right to a name is being honoured, whereas a framework which focuses on preparation for school might rely on an indicator of cognitive development at the point of entry into school. In contrast, a broad human development approach might incorporate indicators of the values a child is developing. From a theoretical perspective, an ecological framework for examining early childhood development which considers the environments in which the child develops that are thought to be crucial to development, will, in all probability, yield different indicators from a framework that focuses more exclusively on the evolving psychological and social condition of a child. In brief, there is no "right" framework.

■ What should ECCD indicators tell us?

One way of classifying what indicators should tell us has been provided by Windham (1992) in a document produced for UNICEF,[4] who suggests that, in general, we would like indicators to tell us something about changes in the following:

- Context (e.g., Gross Domestic Product, income distribution, population size, availability of health services, communications media, longevity, general educational attainment of the population).
- Financial capacity and will to support programmes (social expenditures, percentage of budgets devoted to various sectors and programmes).
- Effort put forth (enrolment ratios and growth, indicators of quality such as adult/child ratios, certification levels).
- Efficiency (cost per participant or graduate, graduates as percentage of those who began, etc.).
- Effects (developmental indicators, "achievement," values, and attitudes).
- Social well-being (mortality rates, literacy rates, delinquency levels).

For the most part, contextual indicators have been established and are included in a wide range of existing international and national reports. Changes in these contextual variables should bring about changes in early childhood development that result from the interaction of the young child with his or her environment. Most of the contextual indicators used are very broad and sweeping, rarely looking at the quality of

[4] This set of categories is adapted from Windham, 1992, p.30.

the particular learning environments of children and rarely looking at differences in contexts within a national context.

Indicators of the financial capacity and will to support social programmes are less frequently found. When the indicators are linked to budgets rather than to expenditures, they are essentially statements of political will expressed in the formulation of budgets. Often figures for programmes directed to young children are either very dispersed (among health, family welfare, education, etc.) or they are folded into larger categories (for example, pre-primary is often reported together with primary), making it difficult to see what support is being provided, and where.

Most indicators concentrate on what Windham calls effort, as represented by indicators of the coverage and quality of programmes. Indicators of ECCD programme effects are not commonly found in either international or national reports.

Efficiency indicators such as "cost per child" are not commonly included among ECCD indicators and when included they are often extremely rough measures. Indicators of social well-being are common, however their connections to the programmes it is assumed they help is weak. An indicator such as the mortality rate is presumably both an indicator of programme effects and of social well-being. If an indicator of the developmental status of children were to be accepted as part of a general monitoring scheme, it could also fall in both categories.

Another way of classifying what indicators should tell us could be thought of as: 1) the general conditions of the environments that affect both the status of children and the potential effectiveness of programmes (knowledge and practices in families and communities, sanitation, the availability of food, access to services, etc.); 2) the status of programmes to improve the situation of children (coverage and quality); and 3) the condition of children (health, nutritional status and psychosocial development, education, employment in later life).

The status of environments in which a child develops This category of indicators includes the kinds of indicators mentioned by Windham. However, it can also include indicators of conditions within families, such the knowledge a family has about child development and childrearing practices. Indicators may also be created for such environmental conditions as sanitation or the availability of food or access to services.

The status of projects and programmes Indicators of the access to programmes and of the way in which they function can be framed in terms of monitoring the inputs to the process (are the inputs we think are essential to operating the programme in place?), the processes being used (are we doing a good job of providing children with what is deemed essential to their overall development?), and the results expected (has the system expanded as we expected, and are we having the effect that we think we should have on, for example, attitudes, competencies, and behaviours of those operating the system or the condition of participants in the programme?). Too often "results" are indicated simply by some measure of expanding the coverage of programmes. This does not tell us anything about the quality of the programme or, more importantly, about whether children's conditions are improving as a result of the programme.

The condition of children The present indicators used to describe the condition of children tend to focus on death rates and/or on a child's physical state; the indicators that are most widely used are the Infant Mortality Rate (IMR) and the Child Mortality Rate (CMR). Other widely accepted and reported indicators include Low Birth Weight (LBW) and several nutritional indicators (combinations of height, weight and age, arm circumference, various measures of vitamin and mineral deficiencies). These are mainly applied to children under three years of age. These indicators have functioned effectively to describe the physical and survival problems faced by young children to select groups for interventions, and to evaluate programme outcomes.

When we move beyond considering survival and physical growth to considering early childhood development in all of its dimensions, we do not find the widespread acceptance and use of indicators that we do for survival and physical growth. Indicators of the mental, social, and emotional development of children are seldom agreed upon, are rarely used to describe a population, and are seldom considered by programme people when making educational (or other) decisions affecting young children. This state of affairs is not due to a lack of tests or measures. On the contrary, there are hundreds of early childhood tests or measures, which address different dimensions of development. However, these measures have not been adequately assessed to see which are properly adapted to local circumstances and which are reliable, valid, and normed. We will return to this theme later on.

■ Should indicators be set at an international, national, or sub-national level?

This question is related to the above discussion of purposes. Is the main purpose of an indicator to provide international comparison or is it to be used nationally to assess policy? A problem with the use of indicators that must meet the test of international comparison is that internationally comparative indicators are extremely rough. Their highly aggregated nature may hide more than they reveal. Because they apply to different contexts and to different systems they must be extremely general.

There are, it seems, general indicators that have meaning and can be compared internationally. For instance, a general indicator of context, such as

income distribution represented by the percentage of the wealth of a country controlled by the upper ten or twenty percent of the population, can be meaningful if this is tracked over time. Infant mortality is another such indicator: death is death wherever it occurs.[5] However an indicator such as a preschool enrolment ratio may have to be interpreted with caution and supplemented (see below) because it is often constructed from data pertaining to very different kinds of educational systems.

■ How should indicators be interpreted?

Should indicators be interpreted against a fixed and absolute standard or should the interpretation be relative and focus on improvements? In order to answer this question it is useful to consider some lessons from the field of nutrition. One widely accepted international indicator for nutrition is Weight for Age. When the growth charts based on Weight for Age were first introduced as a means of monitoring the nutritional status of children, they were divided into red, yellow, and green sections, according to an international nutritional norm. The interpretation of "success" was made in terms of the number of children found in the green area of the chart, with "normality" set according to international norms. Later, national norms were created in many places, affecting the percentage of children reported as "malnourished" and creating problems for international comparison because national standards varied.

Another adjustment made in interpreting the charts was at the level of measuring the status of individual children. The focus shifted from classifying a child according to the absolute level of the indicator at one moment in time and according to some absolute standard (whether in the green or yellow, or whether at a certain weight for age) to classifying a child in terms of whether or not improvement or loss had occurred in the indicator between weighing periods. This kind of indicator (of improvement) has not been elevated to national levels, and although *The Progress of Nations*, published by UNICEF, has made an effort in this direction, change over time is seldom used as an international standard. Finally, another sort of adjustment was made in the nutrition field by adding indicators of micro-nutrients to the mix, moving beyond the earlier concentration on protein-energy malnutrition.

Recalling the experience with nutritional indicators is useful for several reasons as we consider indicators for early childhood development. First, the nutritional indicators applied are indicators of the status of children, not of coverage or of participation in a particular programme. Second, agreement to use certain indicators was achieved in spite of real and continuing differences. Third, adjustments have been made over time that have moved the indicators toward national rather than international norms. Fourth, multiple indicators are being applied. Finally, the idea of stressing "improvement" rather than taking a fixed standard has been introduced.

■ How does one deal with multiple goals and purposes?

An indicator usually presents information about one aspect of a system or activity related to some particular goal. However, systems and activities typically have multiple goals. This means that a set of indicators is needed to effectively monitor the progress of most activities. If we are to monitor early childhood care and development programmes, several goals come into play. And, if ECCD is to be viewed in an integral way, something more is needed than individual indicators for components of ECCD. This considerably complicates the search for ECCD indicators. One possible way of accommodating this when searching for indicators of the status of children is to think in terms of a profile which would describe children at the age of entry into primary school and represent a result of all that has influenced a child' s development before entering school. This profile can also serve as a baseline for monitoring progress and performance in primary school.

Experiences with Defining and Applying ECCD Indicators

Since the Jomtien Conference, many efforts have been made to define and/or present statistics and indicators that should guide the monitoring and assessment process for early childhood. Examining several of these efforts that have taken place with assistance from different international organisations will help us provide some insights into the difficulties involved in framing such indicators. Additional information about some of these initiatives and about others will be included in other sections of the *Notebook*.

UNICEF

■ A framework, manual and plan for EFA indicators (Windham 1992)

This framework, produced by Windham, has been discussed above. To date, this framework has not been applied to monitoring ECCD. Parts of the framework were appropriated for the Year 2000 Assessment of EFA.

[5] Even in this case, some caution needs to be exercised because the degree of under-reporting of births varies markedly from country to country. But this is a matter of the accuracy of the data, not a problem inherent in the definition of the indicator.

■ Monitoring System

UNICEF has developed and applied a system to be used to monitor the status of children. This system, however, lacks indicators related to the psychosocial development of young children.

■ Multiple Indicator Cluster Survey

In 1998, UNICEF embarked on a process of helping countries assess progress for children at end-decade in relation to the World Summit for Children goals (New York, 1990). The list of global indicators being used to assess progress at end-decade was developed through extensive consultation, both within UNICEF, and with WHO; UNESCO and the ILO (see website, www.childinfo.org for a link to this information).

There are numerous sources of data for measuring progress at country levels, but many either do not function well enough to give current and quality data, or they do not provide the data required for assessing progress. Household surveys are capable of filling many of these data gaps.

The mid-decade assessment led to the collection of data by 100 countries using the Multiple Indicator Cluster Survey (MICS), household surveys developed to obtain specific mid-decade data or via MICS questionnaire modules carried by other surveys. By 1996, 60 developing countries had carried out stand-alone MICS, and another 40 had incorporated some of the MICS modules into other surveys. The mid-decade questionnaire and manual, a list of the countries where a stand-alone MICS was implemented, and a selection of country reports are available on the website.

The end-decade MICS questionnaire and manual have been developed specifically to obtain the data for 63 of the 75 end-decade indicators in over 50 countries where statistics are generally weak. These draw heavily on experiences with the mid-decade MICS and subsequent MICS evaluation and are also available on the website.

In terms of childcare and early education, there are three questions asked: one on preschool enrolment of 5-year-olds, a second on whether or not 3- and 4-year-olds attend some sort of organised programme of care or education outside the home, and the third, directed toward the cases in which the family has 3- and 4-year-olds in some programme, asks the number of hours during the week they were in the programme. The CGECCD is hoping to analyse this data, pull together information in the reports and databases, and perform some further analyses. It will then compare results with the statistics provided as part of the EFA 2000 Evaluation in order to come to some conclusions about what the data says as well as about what might be useful in future MICs, and, finally, to recommend additional indicators.

For more information, including manuals, questionnaires, and a background article, see: www.childinfo.org

UNESCO

■ World Survey of Education and World Education Report

UNESCO publishes periodic enrolment statistics describing "pre-primary education" in the World Survey of Education (1971). These become "indicators" of the progress of specific countries when it is assumed that 100% coverage is the ideal or when coverage of one country is compared with that of others. (This indicator can be found at the back of the World Education Report issued approximately every two years.) UNESCO is in the process of redefining their process of collecting pre-primary information which, at the moment, is limited to formally organised programmes and to the three-five age group. (See discussion of enrolment indicators below in relation to the Year 2000 Assessment.)

■ Early Childhood Care and Education: Basic Indicators on Young Children (1995)

In this UNESCO document, the indicators presented were divided into four categories, as follows:

CATEGORY	BASIC INDICATORS
The young child	*Children under 5 (absolute number)* *Under 5 mortality rate* *Malnourished children under 5 (%)*
The family	*Literacy rate for men (%)* *Literacy rate for women (%)* *Total fertility rate (per woman)*
Community	*GNP per capita (US$)* *Access to health care services (%)* *Access to safe water (%)*
Pre-primary education	*Pre-primary age group* *Pre-primary gross enrolment ratio (%)*

In the first category, the indicators listed in relation to the status of the young child are population, survival, and growth; a developmental indicator is not included. The pre-primary education category has two parts, the first of which is not really an indicator but is, rather, a specification of the age range for which the gross enrolment ratios are reported.

In this internationally presented set of indicators there is no "effects" indicator for child care and education, nor are there financial indicators. There are several contextual or environmental indicators (categories 3 and 4). We will discuss below why the "effort" indicator used—the gross enrolment ratio—should not be used as currently presented for comparisons across countries.

UNESCO's Pilot Programme on Early Childhood Indicators

At UNESCO's 30th General Conference in 1999, a resolution was approved to bring about an improvement in early childhood indicators. To implement the resolution, the Early Childhood and Family Education Section is initiating a mid-term pilot programme on early childhood indicators, in collaboration with the UNESCO Institute for Statistics. The pilot programme aims to improve and develop policy-related and cross-nationally comparable early childhood indicators. More specifically, it is concerned with the improvement of data on non-pre-primary early childhood programmes.[6] This orientation stems from the following observation:

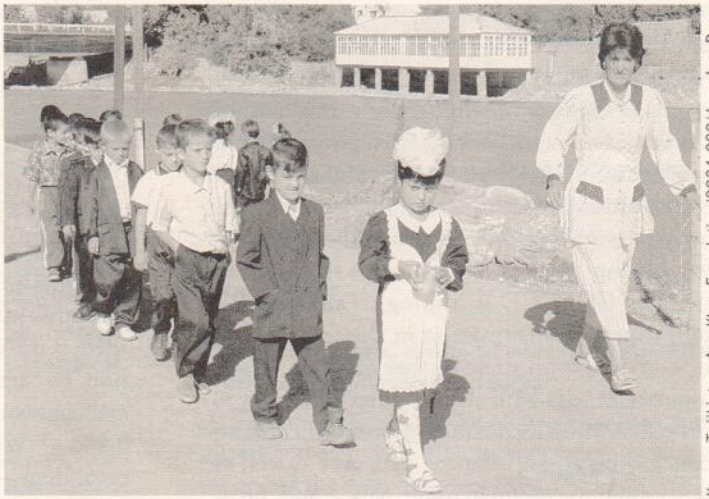
> *Early childhood data collected by the countries' education ministries are mostly focused on what has been defined by the International Standard Classification of Education, or ISCED, as pre-primary education (ISCED Level 0). But pre-primary education constitutes only a fraction of early childhood programmes, and the definition shows considerable conceptual gaps relative to early childhood programmes as understood by the professional community and implemented and practiced in the field.*

For instance, ISCED-0 focuses on educationally-oriented programmes, while most early childhood programmes in developing countries contain, either exclusively or inclusively, care components for the child's physical growth and nutritional well-being. Secondly, while pre-primary education refers to programmes organised and provided in school or centre settings, a large volume of early childhood programmes are delivered in non-formal or informal modes. Third, pre-primary education, in principle, is to be provided by teaching staff with pedagogical qualifications, whereas in child development, parents play equal if not more important roles than teachers. Fourth, pre-primary education is characterised by its educational aims, but the benefits of early childhood programmes are more diverse, including not only enhanced educational efficiency, but also greater social justice and economic productivity. And finally, the minimum age for pre-primary education is set to be at least three years, except where children aged two are accepted, even though the Jomtien Declaration of Education for All states that learning begins at birth.

The gaps are considerable, but they should not be blamed on ISCED-0, which is not defined to cover the gamut of early childhood programmes. Therefore, the lack of non-pre-primary data should not be viewed in light of the strength or weakness of ISCED-0 per se. The gaps exist simply because of a lack of operational guidelines to direct the collection of reliable and meaningful data on non-pre-primary programmes. And it is this excluded component of early childhood programmes that requires the most urgent conceptual and operational improvements.

The UNESCO pilot programme on early childhood indicators proposes to address this defect by recognising both education and care activities for the child's holistic, integrated learning and development process, starting from birth and encompassing more than pre-primary education. Most important, if the expanded view of basic education is to be respected and realised at all, both formal and non-formal data must be included in governmental education data. The challenge is to conceptualise the excluded component of early childhood programmes. Clearly, this endeavour should be undertaken at the national level, with varying situations and needs specific to individual countries taken into account.

As for immediate objectives, the pilot programme does not intend to search for new categories of early childhood indicators or judge the validity or feasibility of various existing indicators. The indicators covered by the pilot countries will constitute the baseline corpus and efforts will be concentrated on expanding the data coverage for these existing indicators. And, if possible in terms of national capacity, and necessary in terms of national needs, an additional effort will be



Korog, Tajikistan: Aga Khan Foundation/0264-002/Jean-Luc Ray

School children collect a water sample as part of a local health project

made to develop new indicators. With regard to data collection channels and methodologies, the pilot programme will respect existing practices in the pilot countries, and a new survey or data collection template would be introduced only if the existing data collection mechanism does not collect the type of data required. What is implied is that the programme does not attempt, at least in this pilot stage, to change or alter the technical framework or the administrative infrastructure for collecting early childhood data. This orientation reflects a conviction that the urgent development of an operational definition of early childhood programmes encompassing both pre-primary and non-pre-primary components is necessary prior to a launching of technical and administrative efforts to improve early childhood indicators.

The programme is aimed at producing operational guidelines to include the following elements:

- Definition and conceptual clarification of early childhood programmes;
- Identification of key early childhood policy indicators;
- Specification of the data required to produce the identified early childhood indicators; and
- Technical instruction on the collection, analysis, interpretation, dissemination and utilisation of early childhood data.

The key result will be a prototype operational definition of early childhood programmes covering both pre-primary and non-pre-primary components. It will be based on conceptual as well as operational common denominators extracted from varying definitions and programmes inventoried in the pilot countries. The definition is expected to enable cross-national comparison of data collected according to the guidelines, at least among the participating pilot countries. If the initial result proves encouraging, the guidelines will be applied to more countries in the next phase before proceeding to testing on a regional and eventually global scale.

The work plan of the programme is being finalized[7] and implementation will begin this autumn in five pilot countries selected from the Asia-Pacific region. An advisory group of experts will oversee the core conceptualisation process at the global level. Efforts will be made to muster inter-agency cooperation with colleagues from the Consultative Group on Early Childhood Care and Development, the OECD, UNICEF, and the World Bank, who have met to discuss the issue this year in Washington, DC and Paris, as well as with those from other agencies.

[6] These refer to the programmes that are excluded from the current definition of ISCED-0, and they are mostly non-formal programmes. But as the current definition of ISCED-0 does not explicitly exclude non-formal programmes, the excluded components are not referred to as non-formal early childhood programmes. Instead, as ISCED-0 is defined as pre-primary education, the rest are referred to as non-pre-primary programmes until a more exhaustively defined terminology is found.

[7] When finalised, the document can be obtained from UNESCO Early Childhood and Family Education Section (b.combes@unesco.org).

UNICEF-UNESCO

Results of a UNESCO-UNICEF technical workshop on effective monitoring of EFA assessment (1997). In October 1997, at a technical workshop on effective monitoring of Education For All, a set of indicators to be used when monitoring the early childhood education component of EFA was put forward. The six ECCD dimensions and the indicators proposed at the UNICEF-UNESCO meeting are:

Demography	*Children under 6 as % of total population.*
Participation	*Percentage enroled in structured programmes.*
Policy	*Presence of an early childhood national policy and/or curriculum.*
Training	*Percentage of teachers (including Grade 1 teachers), caregivers, and parents/families trained in early childhood matters.*
Funding	*Percentage of (national) budget devoted to early childhood care and education.*
School readiness	*Health/nutritional status (height/age) and percentage of first graders who have had some form of an early childhood programme.*

A brief look at each of these helps to illustrate how difficult it is to come up with adequate indicators, while providing a base for considering alternatives.

■ Children under six as a percentage of total population (demography)

This proposed population context indicator takes "under six" as a starting point, as contrasted with the "under five" indicator used in the previous example, and is expressed in terms of a percentage of total population rather than as an absolute figure. Presumably, the interpretation that converts this population statistic into an indicator is that a country will be better able to attend to its children under six if it has relatively less of them to attend to. The absolute number of children under six from which the indicator is created helps to define the potential demand for early childhood programmes and sets a base for calculating

another indicator—the enrolment (participation) ratio. Although the general conception may make sense that relatively fewer children under six is better than more children under six, it is difficult to imagine the particular goal against which this indicator should be interpreted. Clearly the goal is not to eliminate all children under age six. Is there an "optimum" percentage of under-six children that we seek? Is there some point at which having fewer children under six becomes a disadvantage instead of an advantage?

■ Percentage of enrolment in structured programmes (participation)

This is the most common indicator used for monitoring ECCD. The recommendation from the UNICEF-UNESCO technical committee is that this indicator includes enrolment in both formal and non-formal early childhood programmes.

This indicator may be interpreted in at least two ways. One is against a goal of a certain percentage (usually 100 percent) enrolment that is taken as the measure of successfully satisfying all demand (or providing access to all children). The second way of interpreting this indicator is by comparing the level of enrolment for different countries, sometimes using a set of Minority World countries as the standard, and sometimes looking at the enrolment ratio in relation to the relative economic wealth of the country. Pitfalls of this indicator will be discussed below.

■ Presence of an early childhood national policy and/or curriculum

This indicator is an indicator of political will. The assumption behind this indicator is that creating a national policy and/or curriculum is good. However, it is not clear that the presence of a national policy is necessarily a meaningful indicator, and linking this to a national curriculum is questionable. In fact, the presence of a national policy and a national curriculum may be a handicap because instead of promoting ECCD in a holistic, culturally-sensitive way, the existence of nation-wide policy and methodology often promote conformity to a single mould. They may not allow for recognised, validated, and successful variants. For instance, Montessori and other respected curricula are not officially recognised in Mexico as valid because the Ministry of Education has developed its own curriculum that is supposed to be applied nationally.

How would one define the presence of an early childhood national policy? In Latin America, plans that are directed toward the fulfilment of the provisions of the Convention on the Rights of the Child (Article 28, Nov. 20, 1989) exist in almost all countries. These plans are usually taken as an indication that a country has a national childhood policy. Such plans usually concentrate on health and nutrition in the early years because at the Summit on Children in September 1990 the decade goals were set out almost exclusively in terms of health and nutrition indicators. While the plans always include attention to education, it is usually at the level of primary school and above, with perhaps a nod to formal preschool education. This is not surprising in light of the fact that the section of the Convention that deals with education posits that education and learning begin with entrance into primary school (United Nations General Assembly 1989). Early childhood care and development is dispersed among other sections of the Convention and is often linked more to welfare and working parents than to education. Should we consider a national plan that is keyed to the Convention, as interpreted through the Summit on Children, as indicative of an early childhood national policy? The answer is not clear. In brief, if this indictor is used it needs to be carefully defined, and it should probably not be linked to national plans based on "decade" indicators set out by the Summit in 1990.

■ The percentage of teachers (including grade one teachers), caregivers, and parents/families trained in early childhood matters

With the inclusion of this indicator in the set, a useful attempt is being made by the UNICEF-UNESCO group to add a qualitative dimension to the indicators of effort. This indicator has been applied usefully in the 1995 review of European programmes, showing that caregivers (in programmes of structured caregiving) who care for children birth-three (often in day-care home arrangements) are the least trained (European Commission 1996). So this indicator my indeed have value, however, we need to look a bit further before we can agree to any steadfast determinations.

First, it seems logical to separate out teachers and caregivers from parents and families when creating an indicator. Programmes aimed at parental or family education are simply not the same as those that are provided for teachers and caregivers working in settings outside the home (or caring for children in groups in a home). Often, parental education programmes are provided through the mass media. Should we count these? Or the programmes are formally organised, but limited in scope. China, for example, used to give a "diploma" to parents for attending eight lectures during a period of one year. Mexico has a forty-week, one-year programme of initial education that involves parents or others responsible for children at home. But the programme is not anywhere near what is required for preschool teachers or caregivers in formal centres. Are these systems of training equivalent?

When establishing this indicator, how should training be measured? Should it be on a year-by-year basis or is it cumulative? Should it be linked to participation

in some kind of formal course?[8] For example, how does one treat the training of teachers that occurs outside the system? In Mexico, we find a large number of informal courses being offered for early childhood teachers and caregivers that are not sanctioned by the system. These range from courses offered by large book companies using their own materials, to courses offered by non-governmental and social organisations, which are often higher quality courses than some of the official courses offered in standard schools.

■ The percentage of (national) budget devoted to early childhood care and education (funding)

This indicator suggests both national capacity or will to support ECCD and is an expression of the effort being made to do so. The goal against which this statistic should be judged is not clear, however. Is there a specific percentage figure toward which all countries should work? Is a higher percentage always better?

Before such an indicator can be used, it will need to be defined much more specifically. For instance, are we talking about funding for nutrition and child health programmes as well as funding for childcare programmes and for early childhood programmes within the education system? Or just education and child care? If the latter, would the relevant comparison be to the combined budgets of education and social security (or welfare), or rather than to the national budget? What if the bulk of early childhood programmes are within a women's programme (as in China, or as was true at one time in Indonesia, or is the case for the under-three programmes of Peru)? How does one define this indicator so that it will be comparable across nations?

Should the comparison be with the "national budget"? If so, how does one take into account the differences in debt commitments among countries that reduce the amount available for current programmes?

It may be useful to focus on the percent of the education budget devoted to early childhood programmes, and to relate this percentage to the percentage of children enroled in an early education programme taken as a percentage of all children (or people) enroled in all programmes funded through the education sector. It is common to find that the percentage of early education students to total students is much higher than the percentage of budget allotted to preprimary education. Of course this depends on whether there are other kinds of budgetary allotments covering this group. Supporting this indicator is the notion that early childhood education programmes should receive a proportion of the education budget that is at least up to the level of the percentage of early education children in the system, however this indicator has the disadvantage of being limited to education and departs from an integrated view of ECCD, leaving out health and welfare programmes.

■ Health/nutritional status (height/age) and percentage of first graders who have had some form of early childhood programme ("school readiness")

Labeling this indicator set as "school readiness" suggests that this is an attempt to create an indicator measuring the effects of ECCD programmes. But the specific indicators proposed do not move us beyond the assumption that if a child has participated in some kind of early childhood programme, he/she will exhibit improved development (and readiness for school); they also do not give us an indicator of early childhood development.

The two indicators combined here are quite different from one another. The health and nutritional indictor says something about the actual status of children. But the percentage of children with some form of an early childhood programme does not tell us anything about the status of children or their "readiness" for school; it simply tells us that they participated in a programme. For that reason, this indicator might be grouped with the coverage/enrolment/ participation indicator and would not be included it here as a measure or indicator of school readiness. Again, it is patently clear that we lack an agreed-upon measure for the developmental status of young children.

OECD

■ Education at a Glance: OECD Indicators

In this periodic publication, OECD presents information concerning participation in pre-primary education in OECD countries. In addition to presenting a gross enrolment ratio, with subdivisions into public and private and full-time vs. part-time, the publication indicates starting and ending ages for the figures given. The indicator can produce such strange results as a gross enrolment ratio of 208.5% for Norway (Organisation for Economic Co-operation and Development 1992, 71).

[8] Suppose that 5 percent of all parents of young children are offered some kind of formal parental education course during year 1. The next year, another 5 percent are offered training. But some of these parents are the same ones that participated the year before, let us say 1 percent. Is our indicator for year two based on enrolment in year 2 (5 percent) or enrolment of new parents in year 2 (4 percent, or the sum of the enrolment in courses during years 1 and 2 (10 percent) or the total number of parents who have participated during the 2 years (9 percent)? Normally, systems of statistics for parental education report the parents educated in a specific year. They do not report the accumulation of parental education in the population. Although we have statistics for the number or percentage of teachers in a system who are "certified" or qualified by some standard, we do not have an equivalent for "certification" of parents that would be a cumulative figure.

Organisation for Economic Co-operation and Development (OECD): Thematic Review of Early Childhood Education and Care Policy

Rationale

Early childhood education and care (ECEC) is receiving increased policy attention in OECD countries. Not only is the provision of care and education for young children a necessary condition for ensuring the equal access of women to the labour market but increasingly, early development is seen as the foundation of lifelong learning. In addition, when sustained by effective fiscal, social, and employment measures in support of parents and communities, early childhood programming can help to provide a fair start in life for all children and contribute to social integration.

Developments to Date

In spring 1998, a new *Thematic Review of Early Childhood Education and Care Policy* was launched under the auspices of the Education Committee of the OECD. Twelve countries volunteered to participate in the review between autumn 1998 and summer 2000: Australia, Belgium, Czech Republic, Denmark, Finland, Italy, the Netherlands, Norway, Portugal, Sweden, the United Kingdom and the United States. These countries have reached agreement concerning the framework, scope and process of the review and have identified the major policy issues for investigation. In addition, a schedule of country visits by OECD review teams has been planned. Information about these visits can be viewed on the OECD/ECEC website: www.oecd.org/els/ecec.

Review Objectives

The goal of the review is to provide cross-national information to improve policy-making and planning in early childhood education and care in all OECD countries. With the aid of ministries and the major actors in ECEC in each country, the review seeks to:

- Distinguish and investigate the ECEC contexts, major policy concerns, and policy responses to address these concerns in participating countries;
- Explore the roles of national government, decentralised authorities, NGOs and other social partners, and the institutional resources devoted to planning and implementation at each level;
- Identify feasible policy options suited to different contexts;
- Evaluate the impact, coherence and effectiveness of different approaches;
- Highlight particularly innovative policies and practices; and
- Contribute to the INES (Indicators of Education Systems) project by identifying the types of data and instruments to be developed in support of ECEC information collection, policy-making, research, monitoring and evaluation.

Scope of the Review and Major Issues for Investigation

In order to examine thoroughly what children experience in the first years of life, the review adopts a broad, holistic approach. It studies policy, programmes and provision for children from birth to compulsory school age, including the transition period from ECEC to primary schooling. Consideration is given to the roles of families, communities and other environmental influences on children's early learning and development. In particular, the review investigates concerns about quality, access and equity with an emphasis on policy development in the following areas: regulations, staffing, programme content and implementation, family engagement and support, funding and financing.

Organisation of the Review Process

The review process has four main elements:

- Guided by a common framework, each participating country drafts a *Background Report* that provides a concise overview of the country context, major issues and concerns, distinctive ECEC policies and provision, innovative approaches, and available evaluation data.
- A multinational team of reviewers with diverse policy and analytical backgrounds then studies the *Background Report* and other relevant materials, prior to conducting an intensive case study visit of the country in question.
- Following the *Review Visit*, a short *Country Note* is prepared by the OECD Secretariat, which draws upon information provided in the *Background Report*, the *Review Team* assessment and other relevant sources. The *Note* provides insights into current ECEC policy, the major challenges encountered, the means adopted to meet national goals, and it explores feasible policy options to ensure quality, access, and equity.
- The review will be completed by a *Comparative Report* drafted by the OECD Secretariat. The report will provide a comparative review and analysis of ECEC policy in all twelve participating countries. Focusing on key policy issues and responses in the ECEC field, its interim drafts will benefit from the contributions of national representatives and experts at future meetings.

The OECD Secretariat held a meeting of national representatives and invited experts in Paris on 28–29 September 2000 to discuss a draft *Comparative Report* which will be published in Spring 2001.

With approval from country authorities, *Background Reports*, *Country Notes*, and other review findings will be shared with all interested policymakers, researchers, programme developers, and practitioners.

The following OECD Secretariat staff working on the Thematic Review of ECEC Policy Education and Training Division can be reached at this address or via e-mail or phone: 2 rue André-Pascal, 75775 Paris Cedex 16, FRANCE, www.oecd.org/els/ecec. Fax: (33-1) 45-24-90-98

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■ The ECEC Project

This project is designed to open up systems of data collection and monitoring. Based on twelve country case studies, the OECD will recommend new indicators and forms of data collection and reporting.

WORLD FORUM

EFA Mid-decade review: Working Document and Statistical Document (1996)

In 1996, in the mid-decade review of EFA prepared for the EFA Forum meeting in Jordan, a working document was prepared which included a section on early childhood development. The indicators used at that time to show progress in expansion were the changes in developing countries since 1990 in: 1) the number of children in the three-six age group enroled in pre-primary institutions (both the total and the percentage of girls), 2) the number of pre-primary institutions, and 3) the number of caregivers employed in the field. These indicators are presented in the text of the working document in general terms, but they are not included in the accompanying statistical document that presented information at the country level. The mid-term EFA review also suggested several general qualitative trends in ECD but made no reference to specific indicators.

The source which is used to draw the conclusions about ECD enrolments and trends is not mentioned, but it is most likely the result of the periodic surveys of education carried out by UNESCO, from which data are taken for the World Survey of Education and for the World Education Report.

EFA Year 2000 Assessment

As indicated earlier, one motivation for addressing this topic comes from the treatment of ECCD indicators in the EFA Year 2000 Evaluation. In the technical guidelines provided by the EFA Forum, two ECCD indicators are presented for which information should be collected and presented in country reports. These are:

1. A Gross Enrolment Ratio in early childhood development programmes, and
2. The percentage of new entrants to Grade One who have attended some form of organised early

Shugnan District, Tajikistan: Aga Khan Foundation/0264-064/Jean-Luc Ray

A priority and challenge for the field of ECCD is to create indicators for use in policy and programming at a national level

childhood development programme during at least one year (or for one enrolment period).

The two indicators selected are both enrolment indicators, one of current enrolment and one of past enrolment. They do not allow for assessment of the quality of the inputs to early childhood programmes, the efficiency of the programmes, the programme effects on children, nor the financial contributions made by nations to this part of the educational system. When the number and breadth of indicators of ECCD progress included in the EFA technical guidelines is compared with the thirteen indicators provided in the same document to assess primary schooling, it is even more evident that the treatment of ECCD is very limited and given a low priority.

■ Gross Enrolment

The definition of this indicator, as set out in the EFA Technical Guidelines, is as follows:

"Total number of children enrolled in early childhood development programmes, regardless of age, expressed as a percentage of the population in the relevant official age-group, otherwise the age-group 3 to 5. This indicator measures the general level of participation of young children in early childhood development programmes. It also indicates a country's capacity to prepare young children for primary education." (EFA Forum, Technical Guidelines 2000, 8)

A number of cautions are in order when trying to interpret what this indicator tells us about ECCD based on the information actually collected as part of the EFA evaluation.

First, direct comparisons of enrolment levels and percentages among countries should not be made because there are significant differences from country to country in:

- The definition of the age group that is considered as part of ECCD and for whom data is presented.[9]
- The baseline year and the year for which the latest enrolment data are presented.[10]
- The definition of what constitutes an early childhood programme.[11]
- The days and hours that programmes are in session differ widely from country to country.[12]
- The degree to which centres providing early childhood attention are allowed to operate outside the official system, in an irregular manner, and therefore outside the official statistics, creating an underestimate of enrolment.
- The reliability of the figures.

Second, when looking at increases in enrolment it is important to take into account the baseline from which the increases are being made.[13]

Third, and often overlooked: enrolment data tend to be collected at the outset of each year and are based on registrations rather than actual participation in a programme. Such information does not take into account cases of children who never arrive at school even though they are registered nor changes in enrolment that occur during the year, including cases of children who decide not to continue after a few days or weeks. The stability of the enrolment of children in programmes varies from country to country. Moreover, some children are on the attendance rolls all year long but rarely attend school. An alternative sometimes proposed is to collect statistics on "actively enroled" students.

Fourth, some children attend more than one programme, leading to double counting and overestimation.

Fifth, gross enrolment ratios (GER) are used. This does not make much of a difference for most countries because the incidence of children who are over or under the age range for which percentages are calculated is minimal. However, in other cases ECCD programmes include a significant proportion of children outside the age range chosen (e.g., Brazil, where more than ninety percent of the more than one million children enroled in a pre-school literacy programme were six years of age or older and about forty percent were seven or older).

Sixth, in some reports, the age range was not made clear. In others, there were inconsistencies in the data presented at different points of the report (usually minor, but nevertheless inconsistent).

Seventh, in a significant number of country reports, the requested data were not presented, sometimes because the enrolment statistics were lacking or

9 The age group taken as the reference point varied widely, some using the period from birth to age five, others focusing only on ages five–six, and still others using the suggested age range from three–five.

10 Many countries did not have data for 1990, so they used an alternative baseline, in some cases as recently as 1996. In some cases, countries presented data for 1999, but others used information from 1998 or 1997.

11 In some countries, statistics pertain only to formal programmes or to those in the education sector (leaving out, for instance, those run by a family welfare or social security organisation). Very few countries include parental education in their total statistics. An exception is Cuba, which includes such figures and where parental education accounts for 70% of the total enrolment.

12 In most countries, programmes are based on half-day sessions running throughout the school year, but in some countries early education includes cram sessions of two months just before entrance into primary school, and in others the standard is a day-long programme. Or, a particular country may have various programmes that differ widely in terms of times of operation, however all will be included on an equal basis in their totals.

13 It is possible to have increased enrolment by, for instance, 500% over ten years, but still cover less than 5% of the age group. And, as full enrolment is approached, it is more difficult, statistically and in terms of involving more students, to show an increase.

because census or other population data for the relevant age group was lacking.

Eighth, there is a questionable assumption behind this indicator; it is tacitly assumed that gross enrolment should be 100% and that this is good. As one moves down the age spectrum toward birth, this assumption becomes less and less viable. It is not clear that having forty percent of all children aged two in some kind of organised childcare programme is necessarily better than having five percent in such programmes. The judgement attached to the indicator will depend on how highly a society values caring for children at home and on whether alternative programmes are providing support to parents in the lower percentage country that are not available to parents in the higher percentage country.

In brief, even such a seemingly simple indicator as enrolment must be treated sceptically when used at an international level to make comparisons.

■ New Entrants with Early Childhood Programme Experience

The definition of this indicator as set out in the EFA Technical Guidelines is as follows:

"Number of new entrants to primary grade 1 who have attended some form of organised early childhood development programme equivalent to at least 200 hours, expressed as a percentage of total number of new entrants to primary grade 1. This indicator helps to assess the proportion of new entrants to grade 1 who presumably have received some preparation for primary schooling through ECD programmes." (International Consultative Forum)

In application, the number of new entrants was not presented for many countries because this information is not normally collected. This led to some innovative ways of estimating the percentage. The indicator did not, however, add significantly to the current enrolment information gathered.

Some General Conclusions

Although the above listing by no means exhausts the activities and publications dealing with ECCD measures and indicators, an examination of these various activities does allow several general conclusions:

1. At an international level, there is a lack of agreement about satisfactory indicators to monitor progress with respect to early childhood care and development (ECCD).
2. Monitoring of ECCD programmes tends to be very limited, mainly focused on "effort" defined by coverage (enrolment or enrolment ratios). Occasionally, attention is given to quality, usually by assessing inputs (e.g., expenditures or the formal qualifications of personnel). Indicators of "effects", including the actual developmental status of children, are virtually absent from national and international monitoring and assessment of ECCD.
3. Indicators are seldom disaggregated so they can be related to poverty, disadvantage, or disability (as specified in the EFA framework).
4. There are several new initiatives that offer promise for improving the creation and use of ECCD indicators.

A Process for Arriving at a Set of Indicators

■ Establish an inter-sectoral and interdisciplinary ECCD group to discuss and determine what indicators can/should be utilised to monitor the status of young children, the environments affecting their development, and the programmes intended to improve their development.

Ideally such a group should include people who have responsibilities for planning and monitoring programmes in the areas of health, nutrition, education, welfare, and other areas within which early childhood may be situated conceptually and bureaucratically within a country. It would include the potential users of information as well as the information gatherers and the people technically competent in measurement within the converging fields. If the group could function within the framework of a national commission on ECCD or a national committee to monitor children's rights, or an equivalent framework that makes sense locally, this would help give legitimacy and visibility to its recommendations. It may be advisable to locate the responsibility for coordinating efforts outside a particular sector, perhaps in a national planning office, or perhaps even with a prominent NGO working on ECCD matters.

A first meeting of such a group may require a general discussion of early childhood care and development, seen from the different perspectives present, and of ECCD in the larger national social and economic development picture. Any discussion of indicators will need to depart from mutual understandings of what ECCD is and why it is important.

■ Review existing systems of monitoring and data collection that contain information relevant to ECCD.

This review might be commissioned prior to the first meeting of the ECCD reference group, as input into its initial discussions, or it might be an outcome of a first meeting in which all present contribute to identifying and suggesting where to look for such information.

As part of the review it would be useful, for each source of information, to be able to answer such questions as:

- What dimensions of child welfare and development are covered by the particular information

Non-traditional sources of information such as household surveys of employment and/or family welfare often produce information from which ECCD indicators can be created, such as who cares for children during the day

being collected? What are the specific indicators created from the information?

- Does the information say something about the status of children, about the circumstances affecting their development, the reach, quality, efficiency, and financing of various services?
- Why is the information collected? What is its purpose? Can the information be appropriated for other purposes as well?
- What instruments are used to collect the information? Are they reliable, valid, appropriate?
- Who is responsible for collecting the information, both administratively and at the point of collection? Are those who actually provide/collect the information adequately trained?
- At what point (age or stage of development) in the life of a young child, or in the life of a programme, is the information collected?
- From whom, or about whom, is the information collected? Is it based on a sample or collected for all children and programmes? Are both informal and formal modalities of care and education included?
- How often is the information collected?
- How is the information processed, analysed and disseminated? To whom?
- What is the cost of collecting and making available the information?

Sources The review should include sources of information that are sometimes not considered when thinking about children and programmes for children. For instance, household surveys of employment or family welfare, often produce information from which ECCD indicators can be created. For instance, in some household studies, a question has been included about whether a child is being cared for during the day in a centre outside the home. This information may provide a more accurate tally of the use of child-care services because it may pick up unofficial and unregistered services. This source has potential for going beyond simple indicators to explore reasons why particular families do or do not use services as related to family characteristics. The surveys may also provide information about "risk factors" affecting early childhood care and development.

Other possible sources for creating indicators might be census data; national or sectoral budgets; national plans; educational or welfare enrolment statistics; records of health check-ups or use of services at various points from pregnancy through a child's entrance into school; health and nutrition monitoring cards; programme or project monitoring systems; evaluations carried out at the point of entrance into primary school; project evaluations; special surveys; and research projects. Readers will undoubtedly think of other possible sources.

Such a review may produce a wealth of data or very little, depending on the particular setting. However, even in settings with little tradition of monitoring programmes and with undeveloped or informal systems of collecting information, it may be possible to identify existing sources that have not been well used and which, with relatively little effort, might be improved and upgraded. For instance, many programmes collect information for internal bureaucratic purposes (for


Chitral, Pakistan: Aga Khan Foundation/0321-063/Jean-Luc Ray

instance, about the number of children and staff) that is sent to headquarters, but, after an internal look, gets filed away or stored in a back room, without considering how it might be used for other broader purposes.

■ Choose indicators: with information in hand and with clarity of purpose, the ECCD group needs to decide what ECCD indicators are desired.

Achieving clarity of purpose while working with many different interests is likely to be a difficult process requiring compromises. It can lead easily to recommending a broad set of indicators intended to serve many purposes and/or conciliate diverse interests, but every attempt should be made to limit the indicators, both because the cost of collecting information may make the proposed monitoring scheme impossible to implement and because a limited number of well-chosen indicators is more likely to be recognised and acted upon than a vast array of indicators.

In choosing indicators, a number of questions should be considered:

- Do the indicators allow monitoring of specific ECCD goals and programmes?
- Are they clear and comprehensible?
- Can they be disaggregated along such dimensions as gender, urban-rural, public-private, economic or social strata, administrative divisions?
- Can they be applied over time?
- Do they cover different ECCD dimensions and different ages?
- Can the indicators be operationalised?

■ Determine what needs to be done to operationalise the proposed set of indicators.

This step involves comparing what already exists with what is desired. It involves revisiting several of the questions set out for the review of existing sources, with an eye to how existing systems can be improved in terms of their instrumentation and their systems of collecting, processing, and presenting information (including the training of information providers), and at what cost.

Decisions will need to be made about the age(s) of children on whom information will be collected. At birth? At age three? At the point of entry into school? Decisions about the age for which indicators are created will be affected by the identified purposes and by the way in which services and programmes for young children are organised. For example, an argument has been made for collecting information at the point of entrance into primary school. At this important moment of transition for many children, an indicator can reflect all that has occurred to affect development prior to that point in time and can serve as a baseline for assessing how children do subsequently in primary school.

With respect to programmes, decisions may need to be taken concerning what constitutes an ECCD programme. A brief discussion of this issue can be found in the appendix to this article.

For some indicators, it may be advisable to consider working with a sample of children rather than with the entire population. A well-chosen sample allows conclusions for the population as a whole while reducing costs of collection. Sampling may be made relatively easy by the presence of sampling frames created for other purposes such as employment or income surveys (see the case of Jamaica on page 54). Or, a sample might be taken of children at the point of entrance into primary school, taking advantage of the data collected for the entire population at that time, while at the same time collecting additional information for a smaller group of randomly chosen children.

Working with a sample may allow assessments of children to be conducted by more highly trained people so that the results will be rigorous and reliable, something that would not be as easy to do if information is gathered from all children. In addition, collecting information from a sample of children helps to avoid the "labeling" issue, i.e., characterising specific children as delayed. Indeed, with this issue in mind, the National Educational Goals Panel in the United States suggests that it may even be possible to utilise a technique called matrix sampling whereby individual children provide responses to only one part of a test or protocol, but then all the collected information is then pooled for analysis.

For some ECCD dimensions, instrumentation may not be a problem. For instance, in most settings, there is not only agreement about what health and nutrition indicators should used to monitor the status of young children but also about the particular instruments to be used to do achieve that end. However, the psychosocial dimensions of early development are not so easily agreed upon or operationalised. Indeed, a great deal of effort may need to be made to arrive at agreement on how to collect information that will yield indicators of a child's developmental progress with respect to, for example, cognitive development, language development, and social development as seen in relation to a broad view of human development or more narrowly in relation to readiness for primary school. In other parts of this *Notebook* we review sources that may be helpful in trying to arrive at agreement about what instruments and measures to use to monitor psychosocial development (see reviews of Grigorenko and Sternberg and Shepard, Kagan, and Wurtz).

If the above appears somewhat daunting, it may be useful to keep in mind the conclusions of a study conducted by Childwatch, which looked at the possibility of creating indicators for use in monitoring the Convention on the Rights of the Child and

which concluded that, in most settings, the following hold true:

- It will be possible to modify collection of data at modest costs.
- A great deal of information exists and the basic problem is one of assembling and reconciling.
- It will be possible to utilise existing data collection points such as schools, clinics, and sentinel sites.

For more information, see the project website www.childwatch.uio.no/cwi/projects/indicators/index.html

In addition, we can take heart from the example of Nepal (see p.66) where an ECCD group found little information available but decided to create its own instruments and test them out for later use at a national level.

An additional step in this process may be to write up a proposal that can be presented to the pertinent participating groups and/or to national and international sources of funds so that the process of establishing the desired system of indicators can be put in place. Some piloting of instruments and measures may be needed as well.

A Set of Possible Indicators

With some reservations, a set of sixteen indicators is presented below that might be considered when discussing indicators to be used for monitoring ECCD at a national level and with advocacy and planning purposes in mind. These are not intended as recommended indicators to be put into immediate use, but rather are intended to stimulate discussion that could lead to the identification of an appropriate set of indicators for each individual setting. Reservations stem from past experience in using this set as a starting point for discussion when working on the indicators project of The Consultative Group. (See A Note on the Work of The Consultative Group, p.32) where the presentation of indicators seemed to introduce a bias into the conversation and limited the search for alternatives

The sixteen possible indicators are organised in the following categories:

- Coverage, access, use
- Programme quality
- Political will: policy and financing
- Costs and expenditures
- Status of or effects on children and parents

Coverage, Access, and Use

1. Gross Enrolment: Gross enrolment in early childhood programmes, expressed as a percentage of the relevant age group in a given year.

Why create this indicator?

In earlier parts of this article, we have criticised the way in which this indicator is presently being used internationally. Nevertheless, the indicator has value because it shows the degree to which a society is providing ECCD services of some sort for its young children. The assumption is that involvement in ECCD programmes will provide children with an enjoyable experience that will also help to prepare them better for school and life. In theory, then, the closer coverage is to 100%, the better. This interpretation must be qualified because not all children at all ages will necessarily need or profit from an ECCD programme. Also, some ECCD programmes will be of such poor quality that they may even be harmful to the children in them. It is imperative, therefore, that this quantitative indicator be supplemented by indicators of quality.

It is likely that the distribution of ECCD services will be uneven in a society, typically favouring urban areas, dominant social groups, and richer families. Use of services may also be gender biased. By disaggregating data and looking at indicators for sub-populations it should be possible to uncover these biases, thereby supporting advocacy efforts as well as generating a search for proposed actions to help to balance the distribution.

If the coverage indicator is followed over time (particularly for sub-populations disaggregated by age and perhaps by other characteristics), it is possible to determine where society is putting its greatest effort, into what kinds of ECCD programmes, and directed to whom.

If data can be disaggregated by age, indicators can be compared across countries. When such enrolment indicators are related to contextual indicators such as GDP/capita, it is possible to see if a particular country is making an effort to provide services at the level that might be expected of it given its resource base.

What information is needed to calculate this indicator?

1. A count of the total number of children of different ages (up to the age of primary school entrance) who are in ECCD programmes that meet the age and organisational criteria which define a programme.
2. An updated population count that shows how many children there are in each of the relevant age categories—0, 1, 2, 3, etc.

Sources Enrolment figures may be provided by various government ministries responsible for ECCD programmes. Population figures will come from census data or recent national surveys. It may also be possible to obtain the enrolment data from household surveys, in which case a household survey would have to ask questions such as, "Is your child being cared for or educated by someone outside the home (on a regular basis? Or, for a period of three hours or more

per day?)," and, "If so, by whom (with a list of the most logical alternatives to choose from). With these two questions one could include childcare arrangements outside the formal system, as well as enrolment in the formal system in different kinds of options. It would be possible also to calculate a usage indicator for each age period and to disaggregate by economic and social characteristics of families as well.

This indicator has been dealt with in some detail because it is the indicator most often used for ECCD. At the same time, it is seldom calculated accurately and is usually not disaggregated by age. It is hoped that we can improve upon the calculation.

2. Parental Education. The number of young children whose parents participate in ECCD education programmes, expressed as a percentage of the relevant population group.

Why create this indicator?

Parental education programmes complement services that attend directly to children and can be very effective in improving child development and learning. For policy, planning, and advocacy, it is instructive to see how a society prioritises in terms of parental education or service delivery, and how these different strategies evolve over time. There is currently a tendency in some countries to expand parental education rapidly, allowing government to take credit for ECCD actions over a broad front while at the same time neglecting service delivery. For instance, in Mexico, coverage for parental education programmes, directed to children under four years of age, has expanded ninety-five percent during the last five years vs. an expansion of twelve percent for centre-based programmes.

What information is needed to calculate this indicator?

1. The number of children (from birth to entrance into primary school) whose parents or caregivers are enroled in parental education programmes.

In each country, a decision will need to be made about what parameters to apply when defining which parental education programmes should be included in this count (for example, the number of hours or frequency of meetings or certification according to some predetermined system). Within the category of parental education programmes it may make sense to include programmes that allow the educator and the caregiver(s) to meet frequently (every week or every two weeks), and that extend over a period of, let us say, at least twenty sessions of at least an hour each. Twenty hours of parental education is clearly not much and perhaps the limit should be set higher. It is not clear that the following kind of programmes, sometimes labeled "parental education," should be included; our inclination would be to leave them aside.

- *The audience of parents that views TV spots about ECCD*
- *The audience that views TV series about ECCD (unless that is linked to some sort of discussion process bringing people together periodically to discuss the content of the programmes and unless the series extends over at least 20 sessions)*
- *Pre-marriage parental counselling*
- *Informal counselling by health personnel*
- *Organised talks at health centres that focus only on immunisation, diarrhoea, and other matters related to disease. However, if these are part of a systematic and integrated set of periodic talks or discussions that span at least twenty hours then they would be included.*

The reader should note that the indicator is expressed in terms of the number of children whose parents or caregivers are enroled in a programme rather than in terms of the number of parents or caregivers enroled in a programme. This takes the indicator out of the realm of adult education and puts it in the early childhood area.

In order to arrive at the number of young children potentially affected by parental education, it will probably be necessary to estimate (or to determine from census data) the number of children who are indirectly covered by taking the number of adults enroled in the programme and multiplying by the average number of children under age six in a family. A typical family with young children, for instance, might have one or two young children. Example: If a programme has 400,000 parents and caregivers enroled and the average number of young children in a family is 1.3, the total number of children would be 520,000.

2. The population of children in the relevant age group.

Another reason for emphasising children rather than adults in this indicator is that deciding how to define the "relevant population group" for adults is not straightforward. For instance, parental education may be directed to teenagers who do not yet have children (but may have childcare responsibilities or who will have such responsibilities in the future). Programmes may also include grandparents or other family members who do not now have young children but who are responsible for the care and education of young children in the extended family.

If we focus on children and assume that each person in a parental education programme has a childcare responsibility, then we can take the total number of young children in the population as our base, just as was done for the first indicator.

However, parental education programmes are often "targeted" and the expectation is not that all children in society would be affected by such programmes; rather, the expectation is that children and families in a certain category (rural or poor or other) are the target. In this case, for policy relevance, the relevant

ELEMENTS OF QUALITY IN EARLY EDUCATION PROGRAMMES

Elements that define quality and have been associated with effectiveness in early education programmes include the following:

AIMS AND OBJECTIVES Clear aims and objectives set and shared by teachers and parents, understood by children, and subject to modification through a process involving all interested parties. The process for agreeing on the aims and objectives may be more important than the outcomes.

EDUCATION AGENTS The continuous presence of sensitive, healthy, committed, loving, and responsible adults who, as a result of experience and training, are knowledgeable about how children develop and who interact with children in a consistent, respectful, supportive, and unthreatening way.

CURRICULUM A proven curriculum that takes a holistic view of a child's development; provides a variety of relevant, stimulating, and enjoyable learning experiences for both setting roots and learning to fly; encourages children to play, explore, and initiate their own learning activities; and that respects and attends to individual differences. A quality curriculum integrates education and care, attending to children's physical, social, and emotional needs, as well as to their cognitive and intellectual needs. And it fosters sound relationships of the child with self, with others, and with the environment.

PHYSICAL ENVIRONMENT A clean, ventilated, stimulating, secure, and healthy environment providing enough space for children to play.

EVALUATION Use of systematic and validated evaluation methods by education agents and parents to adjust teaching to children's needs.

RATIO OF CHILDREN TO ADULTS A ratio low enough to permit frequent interaction and personal attention when needed.

TRAINING AND SUPERVISION Meaningful training on the job and supervisory support fostering continued professional and personal growth.

PROGRAMME LEADERSHIP Strong leadership that devotes much time to coordinating and managing, yet stays close to the daily process of educating and socialising children.

PARENTAL AND COMMUNITY PARTICIPATION Real involvement and participation of families and communities as partners in the programme, helping the programme to set appropriate standards, to function well, and to adjust to local conditions and needs at the same time that they learn to improve their attention to young children.

RESOURCES A consistent and permanent financial and material resource base sufficient to support working in an appropriate way with children and to sustain educational activities so that education agents need not be distracted from their immediate task of educating children.

Source: Ball 1994; Moss and Pence 1995; Schweinhart 1995; NAEYC 1986; Basili 1994.

population would seem to be the particular set of children in families with those characteristics.

Sources The main source of information for this indicator will come from periodic surveys of parental programmes carried out by the responsible administrative entities.

Quality

"Quality" is an elusive concept. In the box below, several elements that have been identified as defining quality in effective early education programmes are presented. Each of these could be developed into an indicator.

Participants in any process to create ECCD indicators are strongly encouraged to consider other indicators that might be fashioned with existing data and/or that they feel are more appropriate to their particular context than those set out below. For instance, a UNESCO publication recently suggested the following possible dimensions of a quality process in education:

- *Regular, punctual teacher attendance*
- *High levels of children's attendance*
- *Teacher maintains good records about all children*
- *Teacher knows each child's name and background*
- *Time spent engaged in high academic activities*
- *Relevant/interesting activities/materials*
- *Participatory learning strategies*
- *Matching instruction to child's readiness and interest abilities*
- *Structured and planned use of time*
- *Comfortable working environment (temperature, lighting)*
- *Attractive learning environment*
- *Access to mass media (radio)*
- *Regular marking and feedback of pupil's work*
- *Thorough preparation for all class sessions*
- *Effective school leadership*
- *Regular professional support/supervision*
- *Mutual respect (teacher-pupil, pupil-pupil, pupil-teacher)*
- *Enrichment/remedial activities/materials*
- *Regular monitoring of essential learning competencies*
- *Coherent theory of how children learn*

These dimensions were set forth more with the primary school period rather than the preschool period in mind, and they imply application of an observation instrument, but they may serve to key people to the kinds of indicators they would like to have in order to make policy and programming decisions.

It is common to hear that the people who participate in giving care and education constitute the most important component of the quality of a programme. The ability of the teacher or caregiver is however conditioned to some extent by the number of children for whom she must be responsible. This leads to a first possible indicator of quality that is frequently calculated.

3. Number of children per teacher/caregiver

Why create this indicator?

Most countries establish norms for the number of children it is thought can be reasonably attended to by teachers and caregivers. Usually these norms differ according to age group. It is assumed that fewer children per teacher/caregiver is usually preferred because it allows the adult to pay more individual attention to the child, which, in turn, is assumed to promote better learning and development. A very large number of children per teacher tends to restrict one-on-one activities by requiring much more attention to group control and management instead of promoting learning through exploration and attention to individual needs.

Warning: This indicator may work well for evaluating specific programmes, but in order for it to be meaningful at a system level there is a need to be able to disaggregate by the age of children being attended to and/or by the type of programme because norms vary by age, ranging from one adult for every four or five one-year-olds, to one adult for every twenty-five five-year-olds. If all ages are lumped together and are then related to the number of adults, the resulting average figure is difficult to interpret. This will less often be the case if the number of students can be classified according to type of programme, while distinguishing preschool programmes that are directed to children ages four to five, from programmes directed primarily to children who are under four.

What information is needed to create the indicator?

1. The number of children being attended to in ECCD programmes.

Ideally, the number of children should be classified by age. This will probably be difficult to do in a way that the resulting number can be related directly and in a meaningful way to the number of adults with responsibility for those particular children. However, in some locations where periodic surveys of individual centres are carried out, it may be possible to generate this information by going to original data. An alternative may be to classify children by type of programme, attempting to distinguish preschool programmes catering to children in the immediate pre-school years (usually ages four and five) from children in programmes which emphasise attention to younger children.

2. The number of teachers/caregivers attending children within each age group.

Taking from the EFA Technical Guidelines: "Teachers are persons who, in their professional capacity, guide and direct pupils' learning experiences in gaining the knowledge, attitudes and skills that are stipulated in a defined curriculum programme." If this definition is applied, all teachers who do not have professional qualifications would be excluded and all centres that do not follow a defined curriculum programme would be excluded. It is not clear whether teacher's aides would be included. These decisions need to be made in order to arrive at the total number of teachers/caregivers. Presumably, custodial and administrative personnel would not be included (unless they also serve a dual role as teacher).

Our position is that all adults who attend directly to children should be counted when calculating this indicator because many systems rely heavily on uncertified adults who are nevertheless capable of providing a great deal of loving attention and fostering of learning that helps children to develop. Certification will be covered by another indicator.

Sources The main source of information for this indicator will come from periodic surveys of ECCD centres carried out by the responsible administrative entities.

4. Teacher qualification. The percentage of teachers/caregivers who are "qualified".

Why create this indicator?

It is commonly assumed that more highly qualified teachers or caregivers will provide better attention to young children. Systems typically pride themselves on having a high percentage of qualified teachers. This indicator is suggested as one way of taking a reading on how qualified the staff of programmes is, with

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The process of reviewing, developing and field-testing indicators helps to provide a platform for cross-sectoral discussion involving health, education and social welfare

implications for what sort of additional preparation may be needed.

Warning Often "better qualified" is defined in terms of a paper qualification, usually referring to a degree that indicates the completion of a particular set of early education courses or the achievement of a certificate indicating that a set of criteria have been met. Although this may be true at a very general level, we know that formal qualifications do not necessarily make a good teacher; lack of experience, poor motivation, discontent related to low remuneration, and lack of self confidence, among others, can prevent paper qualifications from being converted into sound practice. In addition, we know that many uncertified teachers and caregivers throughout the world bring basic knowledge, experience, and motivation to ECCD, having a greater impact on the lives of children than many certified or titled teachers. Finally, it is possible to provide quality care by combining highly qualified and experienced personnel with aides or assistants who are competent but who are not formally qualified and are learning on the job.

For these reasons, using teacher qualification is at best a very rough indicator of quality and, in some settings may not be particularly valid or useful unless the definition of qualification goes well beyond formal paper qualifications to include experience and training courses that are outside the standard certification process.

What information is needed to create the indicator?

1. The number of qualified staff.

First, a definition must be arrived at of what it means to be qualified. Then information must be collected to determine how many active staff meet that qualification.

2. The total number of teachers/caregivers.

When discussing indicator three, it was suggested that a broad definition of teacher/caregiver might be applied which would include all adults that are responsible for direct attention to children in the programme.

Sources The main source of information for this indicator will come from surveys of ECCD centres carried out by the responsible administrative entities.

5. Physical environment

A specific indicator will not be suggested here, but those who would like to create such an indicator may want to try and reach agreement about an indicator of the quality of the physical environment that seems appropriate to the context. A wide variety of instruments exist for rating physical environments, based on such factors as the amount of space available per child, safety precautions taken, the presence of functional and clean sanitary facilities, availability of potable water, etc.

The IEA Preprimary Project: A Comparative Study of Early Childhood Programmes in 15 Countries

The IEA Preprimary Project[14] is a groundbreaking, three-phase comparative study of early childhood services in nations on four continents. The purpose of the study is to identify the settings in which young children of various nations spend their time, to assess the "quality of life" for children in these settings, and to determine how these settings affect children's intellectual, social, and academic development at age seven. The impetus for the study comes from the social, economic, and demographic changes occurring during the past three decades that have produced an accelerating demand for services for young children, and from the resulting need by countries for more comprehensive information to meet these emerging needs of families. Specifically, nations need information about the quality of children's experiences in currently existing early childhood settings and about the effects of those experiences on children's later development. Such information can help policymakers develop programmes to meet the fast-growing demand for early childhood services. It also can assist government agencies in their attempts to integrate early childhood programme planning with other long-term social and economic planning.

Project Strengths

A particular strength of the IEA Preprimary Project is that its participating countries[15] provide information on a number of dimensions, including form of government, population, and stage of development. In general, the participating countries are ones that do not have extremely high infant mortality rates and thus have been able to move from concerns about child survival to concerns about providing adequate education and care services for their young children.

Another strength of the study is that it is conducted with the significant cooperation and contributions of early childhood researchers in the participating countries,

including a coordinating centre usually within a university or government agency. In addition, the project is directed by a person familiar with the local provision of early childhood services, with the organisational aspects of local early childhood agencies, and with the country's major cultural/ethnicity features. A critical related strength is the involvement of the National Research Coordinators (NRC) in all stages of the development and implementation of the cross-national project, most importantly, the development of all instruments—interviews, questionnaires, observation systems and the child development status measures.

PHASE 1 (1986–1994) produced profiles of national policies on the care and education of young children (Olmsted and Weikart 1989), and used a household survey to identify and characterise the major early childhood care and education settings used by families with four-year-old children in each nation (Olmsted and Weikart 1994). *Status*: Completed.

PHASE 2 (1989–2000) uses extensive observational (see below for more information) and interview data to examine the time-use, interactive, and structural characteristics of each nation's major types of early childhood settings and to explore the effects of programme and family factors on children's developmental status at age four. Four research monographs will report the Phase 2 findings:

- Teacher and parent beliefs about important areas of development for young children (Weikart 1999)
- Structural characteristics of early childhood settings (In press 2000)
- Observation findings from early childhood settings
- Children's developmental status at age four and the relationship between developmental status and home settings characteristics

Status: The first research monograph has been published and the second one will be released in 2000. Work continues on the final two research monographs.

PHASE 3 (1993–2002) completes the project by documenting how these early experiences affect children's development at age seven, an age when all children in the participating countries will have had at least one year of formal schooling. The purpose of this final phase is to examine the relationship between early childhood experiences at age four and children's cognitive, language, social, and academic development at age seven, all of which are relevant to primary school performance and success.

Status: At present, the Phase 3 data collection has been completed.

Development of Phase 2 Instruments

For the development of the observation systems, the NRC groups worked to ensure that the observation systems would not be primarily related to the developmental stage of a country or the socioeconomic level of children attending the setting. The group also agreed that in order to make descriptive comparisons across various types of settings, the final observation systems would be designed to be equally appropriate for all types of ECCD settings (i.e., a preschool programme in urban Belgium or an informal group of children with a caregiver in rural Thailand). Consequently, the NRCs focused on the processes that occur in an ECCD setting rather than on the physical characteristics of the setting. Three areas were chosen for observation: 1) adult's management of children's time 2) children's activities and interactions with other children and adults, and 3) adult's behaviours and interactions with children. In developing the observation systems, the NRC group had two major goals: to describe what was actually happening in an ECCD setting and to assess the quality of the setting based on the processes occurring within the setting. To date, quality in ECCD settings has most often been assessed on the basis of input (static) indicators (i.e., teacher's years of experience, group size) and although these were considered important to describe a good quality programme, the group wanted to assess quality based on the actual activities and interactions occurring within the setting.

For more information, contact the High/Scope Educational Research Foundation at: 600 North River Street, Ypsilanti, MI 48198-2898. Tel: (734) 485-2000; Fax: (734) 485-0704; E-mail: info@highscope.org.

Nazeem Abad, Pakistan: Aga Khan Foundation/0614-010/Jean-Luc Ray

[14] The High/Scope Educational Research Foundation is the designated international coordinating centre and the U.S. national research centre for the IEA Preprimary Project.

[15] The 15 participating nations in Phases 2 and 3 of the IEA Preprimary Project include: Belgium, Finland, Greece, Ireland, Italy, and Spain in Western Europe; Poland, Romania, and Slovenia in eastern Europe; China (People's Republic), Hong Kong, Indonesia, and Thailand in Asia, Nigeria in Africa, and the United States in North America.

The main source of information for this indicator will probably come from periodic surveys of ECCD centres carried out by the responsible administrative entities. However, a special survey may need to be created (as has been done in Namibia, for example, see p.60).

6. Curriculum or Interaction

Probably the best indicator of the quality of ECCD programmes would be an indicator which captures the quality of interaction between adults and children in childcare and early education settings. To do this, systematic observations would be required in a sample of different programme settings. One example of a study that is providing such data is the IEA pre-primary study which has applied an observation schedule within childcare and early education settings in 15 countries (see p.24). In addition to measuring the percentage of time children are interacting with adults or with other children, the study generates information about such curricular dimensions as: 1) the variety of types of activities in which children participate and the group structure proposed by the teacher; 2) who proposes the activity in which a child is engaged (child or teacher); and 3) the percentage of observations in which teachers are listening to children's responses or comments.[16] Although such observations are somewhat costly and time consuming, they may be judged to be worth the effort.

Obviously, the above do not exhaust the possibilities for creating indicators of quality. For instance, the quality of programmes can also be judged by the effects those programmes have on children. Effects will be treated in a separate category later on.

Political Will: Policy and Financing

7. Policy. Presence of a national ECCD policy and/or plan

Why create this indicator?

In the monitoring related to the Convention on the Rights of the Child, it has become standard practice to ask if countries have an explicit policy pertaining to Child Rights and if the country has established a National Plan of Action based on that policy, with goals, activities, and expected outcomes. The assumption is that making child rights policy explicit and establishing a plan will not only provide a basis for action but also for the monitoring of those actions. The mere presence or absence of a policy and a plan becomes a basis for judging political will.

[16] The IEA Pre-primary study is being carried out by the High/Scope Educational Research Foundation.

Warning Whereas this indicator might be useful for making a crude comparison across countries, it is probably not as useful as it would be at a national level. Within national settings, it might be more useful to look within policies and plans to see whether, in some sense, such plans are integrated and whether they are intended to reach the poorest members of society as well as the middle class or the rich. Moreover, all countries follow some sort of ECCD policy, but that policy may not be explicit and may actually be one of inaction. In others, an explicit policy may exist but may be ignored. All countries have an education policy. Some countries have policies that relate childcare to women's work (or to work by family members). Some countries incorporate parental education into education and/or health plans of action. Some countries have a policy and plan related to nutrition and feeding. Rarely do these elements come together in one policy and plan applied specifically to young children. Accordingly, it may be difficult to develop a meaningful indicator that captures political will in a general way with respect to ECCD policy and plans.

Participants may want to look within existing policies to see whether or not the policy meets a number of criteria thought to be essential for a good policy, using that as an ECCD indicator of how far the country is along the road to reaching the goal of a good policy.

8. Budget allocation. The percentage of the educational budget allocated, to or spent on, ECCD programmes

Why create this indicator?

When the major part of ECCD programming is provided under the auspices of the educational sector, this indicator may be very useful; if attention is spread out over many agencies it may not be as relevant. As an example, in Jamaica (p.54), it was possible to show that only two percent of the education budget was destined for pre-primary programmes whereas the number of children enroled in pre-primary programmes accounted for almost twenty percent of the overall educational enrolment.

If this indicator is deemed appropriate and useful, it would be preferable to work with information about expenditures rather than budgets. Budgets sometimes represent more a political statement than a reality, with significant shifting occurring among budget categories during the course of a year. However, if expenditures are used, the disadvantage is that figures will probably not be as up-to-date.

Cost/Expenditure

9. Costs (or average expenditure) by government per child on ECCD

Why create this indicator?

Presumably, the higher the level of per student expenditure (taking inflation and/or purchasing power into account), the greater the government commitment to ECCD. Also, it is sometimes suggested that higher expenditures will indicate that a system is of higher quality. It is possible, however, to imagine that higher expenditures will simply reflect increased inefficiency and will not really result in improvements in quality. For that reason, it is important also to have data on the effects of spending as well as on actual expenditures.

10. Costs (or average expenditure) by government per child on ECCD programmes as a percentage of Gross National Product per inhabitant

Why create this indicator?

If the purpose is to see how well a country is doing relative to other countries, expenditures will need to be put into context before comparisons can have meaning. One way of doing that is to relate expenditures per child to GNP per inhabitant. In this way it is possible to see whether a country is putting the same relative effort into its ECCD programmes.

11. Average expenditure per child by family on ECCD for children under six as a percentage of minimum salary (or of family income)

Why create this indicator?

It is one thing to judge government financial commitment to ECCD programmes and another to determine at what level families are committing their resources to ECCD. If the philosophy of a government is to provide universal services to families at little or no cost, this indicator will have less meaning than if the philosophy of a government is to provide incentives for families to invest in their children. This indicator, if related to (disaggregated by) level of family income will also tell a great deal about inequalities with respect to ECCD.

In order to create this indicator, it will be necessary to have access to household surveys that collect information about expenditures for education and childcare.

Effects (the status of child and parent knowledge)

This dimension of indicator is extremely important and has not been properly incorporated into assessments of early childhood programming. Some idea of programme effects is needed to complement measures of coverage and of quality as measured by programme inputs or processes. More is not always better. A curriculum change may or may not bring about a change in the status of participating children.

12. Child Development

Why create this indicator?

A major purpose of ECCD programmes is or should be to have positive effects on children's development, so it is logical to turn to a measure of the developmental status of children. Optimal child development refers to the child's ability to acquire culturally relevant skills and behaviours, which allow the child to function effectively in his/her current context as well as to adapt successfully when the context changes, and/or to bring about change.

The fact that the use of an indicator of the level of a child's development is rising in a country may or may not be related to an increase in the extension or quality of ECCD programmes. Improvements may be related to changes in economic conditions or to improved levels of parental education, for instance. If the purpose is to see whether programmes have had an impact, this indicator might be created for regions in which a programme is functioning and for regions in which it is not, so a comparison can be made.

What information is needed to create the indicator and how might it be collected?

A variety of possible tests, scales, and observational information might be used to establish an indicator of child development. Each country will have to determine what it thinks is the most appropriate indicator for child development, and it must determine at what ages that information should be collected. There are literally hundreds of tests and scales that purport to measure child development. The problem in any particular national setting may be to obtain agreement on what specific measures and instruments should be used to measure development, both generally and with respect to various dimensions at different ages. The problem may be more political than technical. Among the reasons that agreement is difficult to obtain are due to the following:

- *different theoretical and ideological postures are reflected in instruments;*
- *questions about the degree to which instruments have been adjusted to the culture (for both imported instruments that have been adjusted in some way and for instruments that have been created locally);*
- *questions about the reliability and validity of the instruments;*
- *disagreement about the basic purpose that the measure and instrument should serve (for instance, some feel that it is much more beneficial to use instruments for developmental screening than to measure the general developmental status of children or to demonstrate a child's "readiness" for school); and*
- *personal squabbling among those who create different scales which are culturally appropriate, reliable, and valid.*

This is not the place to enter into a discussion about what constitutes a good measure or instrument or to try and detail the different dimensions of

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Defining and measuring school readiness should include indicators of the child's physical and emotional development in addition to cognitive status

development that might be included. This is something that has to be agreed upon locally. On the other hand, it is clear that measures and instruments should be reliable, valid, culture and language sensitive, and they should cover several dimensions of development. They should try also to be easy to apply and as inexpensive as possible.

In some countries, a degree of consensus has been reached on selecting an instrument, and although there may still be some residual disagreement on which tool is selected, that instrument is being used to measure how children are progressing in their development. From that instrument, an indicator can be fashioned. Examples follow:

- In Chile, two tests have been developed locally that measure several dimensions of development, one focusing on ages birth–two and another for ages two–six. These tests have been incorporated into the regular monitoring process of the health system, which in Chile, as contrasted with many other countries in the Majority World, is accessible to and used by a very high percentage of the population. From the Chilean test comes, for instance, an indicator of the percentage of children who are delayed in their language development at age five.
- In Jamaica, a system has been established that will allow a profile of children to be described at the point of entry into school. The system combines information obtained from a national household survey with information collected by the national system of health and by the Ministry of Education which administers tests to children at the point of entry into primary school (during the first several weeks of the school year). The system allows indicators to be provided for nutrition as well as for several dimensions of psychosocial development.
- In Bolivia, a test is being administered to a sample of all children in urban areas through the existing sample survey system. An indicator has been created of the percentage of children judged to be in an "alert" status.
- In Lebanon, a test has been created for administration in all preschool centres.

The challenge for countries where some level of agreement has not been reached about instruments and measures and where none is in common use will be to see whether such agreement can be reached and/or to select a measure that might be applied through an existing organisation that can reach a random sample of children on a national basis.

13: School readiness

Why create this indicator?

One of the rationales for establishing ECCD programmes is that children who participate in them will be better prepared for school. This will subsequently result in better progress and performance of children

in school, thereby lowering repetition and desertion rates to the benefit of both children and school systems (these might be taken as longer-term indicators of the outcomes of ECCD programmes, but the more immediate effect or outcome is a change in the status of children that prepares them to move into a primary school educational setting).

There is a tendency to define school readiness in narrow terms of cognitive developmental status, language, and sometimes in terms of the ability of children to know their alphabet and even to read before entering primary school. Accordingly, many child development experts object to the idea of measuring "school readiness". We would argue that a measure of the cognitive status of children—at the point of entry into school and perhaps at earlier ages as well—can be an extremely useful indicator for countries. However, we would also argue that a better assessment of school readiness would include indicators of the emotional and physical development of children. If this is the case, it is possible to think that a measure of school readiness would be very similar to a measure of child development. It also leads one to think in terms of a set of indicators that describe different aspects of child development or of school readiness, keeping in mind that development is holistic and integral. In that vein, the following nutritional and health indicators should be considered also as possible indicators of the effects of ECCD programmes.

14: Nutritional status

A range of indicators of nutritional status of children are being used internationally that include: weight for age, height for age, height for weight, arm circumference, and levels of various micro-nutrients. The task here is to discover what indicators are deemed useful in a particular setting and to see how these indicators move over time, if possible in relation to particular groups and areas and programmes.

15: Health status

Health indicators are usually well-established as well, and, as with nutrition, the challenge will not be to create new indicators, but rather to incorporate existing indicators into a broader system that looks at the broad developmental status (including physical development) of children.

16. Parental knowledge and expectations

Why create this indicator?

Parents are and will continue to be the people primarily responsible for the care and education of children. If parents are better informed about child development and about possible actions they can take to improve development, then the status of children should improve.

In order to establish this indicator it is necessary to define what parents "should" know. This can be a tricky business when childrearing practices of a particular culture do not correspond with the practices that "science" or another dominant culture suggests should be the norm. Nevertheless, it may be possible to agree upon some basic knowledge that all parents should have that may improve their capacity to assist their developing child.

A Concluding Note

Perhaps the greatest challenge for those who would monitor the state of children, their environments, and programmes intended to improve ECCD is to create indicators that show, with sensitivity to differences, what is happening with respect to the psychosocial development of children. It is our position that this cannot be done in a way that is comparable across countries but our hope is that this limitation will not prove to be a barrier to the search for reliable, and valid indicators of psychosocial development that are deemed appropriate to the particular settings in which they are to be used and which can help to guide policy and programming.

Appendix 1: What Constitutes an ECCD Programme?

One of the first questions that will arise when trying to establish ECCD indicators to inform and monitor policy and programming is, "What constitutes an ECCD programme?" The answer is not straightforward. For the purposes of this exercise, we suggest that two criteria be applied in order to identify an ECCD programme.

- Age: The programme should serve children who are below the age of entry into formal primary school.
- Organised system of attention that includes "education": The programme should follow some organised system of attention to young children that includes an educational component (which could be stimulation that facilitates learning rather than direct attention to learning specific facts or concepts or skills).

Each of these will be discussed in turn.

Age. Applying the criterion stated, the upper age limit depends on the age of entry into primary education which can range from age five to age seven. In some countries, kindergarten, which serves children age five, is considered part of the formal education system (e.g., Trinidad) and so is not counted in preschool statistics which include, then, only children age four or below. In other countries, children do not enter primary school until age seven so the statistics include children age six.

In the EFA Year 2000 Assessment, the potential upper age limit is set at eight years of age. This is consistent with many definitions used for "early childhood," and, although such overlap is useful when

considering the educational content and the transition between preschool programmes of various types and primary school programmes, it can easily lead to overlap, and confusion with indicators applied to assessing primary schools and schooling.

The lower age limit in this exercise is theoretically the time of birth or age zero. This follows the EFA posture that "learning begins at birth." It is not expected that newborns will be found in centre-based programmes that follow an organised system of attention including an educational component. However, parental education programmes may be directed toward parents during the pre-natal period or immediately following birth. Moreover, it is a common practice in some countries for children to enter centre-based programmes at different intervals between birth and the first year—programmes that do indeed pay systematic attention to the mental as well as physical development of the young children. In Mexico, for instance, The Integrated Child Development Centres run by Social Security begin accepting children at forty-three days.

Extending the lower limit downward in this way runs counter to the practice followed by UNESCO when preparing its "pre-primary education" statistics. In the UNESCO case, the lower age limit is placed at three years because "...programmes destined for younger children do not normally satisfy the educational criteria in ISCED" (International Standard Classification of Education). Indeed, it means that programmes that are called "childcare" programmes may be included as ECCD programmes for the purposes of creating indicators.

The EFA Year 2000 Assessment handles age limits by making reference to "the official age-group concerned, if any, otherwise the age-group three–five." This leaves open the possibility of including children over the complete age spectrum from birth to primary school entrance and beyond but tries to focus on the three–five age-group.[17]

The above discussion should make clear that:

- it will be difficult to make direct comparisons across countries with respect to indicators of early childhood programmes because there is no standard age grouping which these programmes serve, UNLESS
- information is disaggregated by age on a year-by-year basis. Accordingly, a goal should be to obtain information classified by age for the range of ECCD programmes being offered. This opens up the option of creating a set of indicators organised by age. Indicators of coverage would, for example, compare the enrolments at each age level with the number of children of that age in the relevant population. This would make possible international comparisons, age by age, or for grouped categories of age such as the three–five category suggested in the Year 2000 Assessment.

Organised system of attention that includes "education". To be considered an ECCD programme for which data would be collected, the offerings of the programme operators should include, at least in theory, conscious attention to enhancing a child's learning through early stimulation, instruction, or other developmental activities that go beyond simple provision of health, food, and security. In placing this restriction, we are attempting to make a distinction between organised custodial child care and organised early childhood care and development, a distinction that is often difficult to make.

According to this definition, integrated childcare programmes can and should be included in a count or an analysis if they provide a developmental component in their programmes, even if they are formally labeled "childcare centres" or "guarderias" or some similar denotation.

Moreover, programmes that advertise themselves as including attention to early stimulation, instruction, pre-school activities, etc. would be included even though they might not, in practice, follow the advertised path and even though the staff of the centre is not duly certified with the pedagogical qualifications deemed appropriate. This dimension of ECCD would be handled with specific indicators of quality rather than by attempting to incorporate quality directly into the definition of what constitutes an ECCD programme. It then becomes important to complement indicators of coverage with indicators of quality.

The reader will note that the definition of an ECCD programme is not linked to several other criteria that are often consciously or unconsciously applied:

Location. In this exercise, we do *not* limit the definition of an ECCD programme to one that is school- or centre-based. This puts us at odds with the International Standard Classification of Education (ISCED) definition which does take as a main criteria for pre-primary education that a programme be "school or centre based."

For example, we would argue that organised programmes of home daycare, such as that offered by women in their homes in Colombian neighbourhoods, should be included in the process of creating indicators if they meet the above two criteria. They probably would not be included in a UNESCO statistical count or analysis because they are not in a school or

[17] In the International Standard Classification of Education (ISCED) developed and followed by UNESCO, the minimum age must be at least three years of age. "This age has been chosen since programmes destined for younger children do not normally satisfy the educational criteria in ISCED (p.10).

[18] Some such arrangements may in fact be more conducive to healthy child development than more formal programmes.

centre (even though by taking in various children a home is in a sense converted into a centre). Moreover, such home-based programmes would be included even if the quality of the attention to enhancing learning in these homes is relatively poor because they are part of an organised programme that includes a stimulation and education component in its design.

Not included would be cases of childminding carried out in private homes (either the home of the child or in another home) where an informal agreement is made between a mother and a childminder who is not part of any organised programme.[18]

The question of location becomes even more difficult if programmes directed to the education of parents are included as early childhood programmes.

Auspice. Both public and private programmes should be included.

Programmes should be included if they meet the basic criteria whether or not they are under the administration of the health sector or a social security or a welfare agency or the education sector. Both public and private programmes should be included.

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REFERENCES

Adamson, Peter. 1996. "Beyond Basics." In *The Progress of Nations 1996*, edited by UNICEF. New York: UNICEF.

Ball, C. 1994. *Start Right: The Importance of Early Learning*. London: The Royal Society for the Encouragement of Arts, Manufacturers and Commerce.

Basili, F. 1994. "Criterios de Calidad de los Servicios para Niños y Niñas Menores de 6 Años," Un trabajo preparado por el II Simposio Latinoamericano, "Participación Familiar y Comunitaria para la Atención Integral del Niño Menor de Seis Años," Lima, UNICEF.

Consultative Group on Early Childhood Care and Development. 1999. "In Search of Early Childhood Care and Development (ECCD) Indicators: A Contribution to the EFA Year 2000 Assessment: Technical Guidelines for Country Studies." Toronto, Canada. (Mimeo) p.5.

Evans, Judith, with R. Myers and E. Ilfeld. 2000. *Early Childhood Counts. A Programming Guide on Early Childhood Care for Development*. Washington, D.C.:The World Bank. p.278.

International Consultative Forum on Education for All. 1999. "Education for All: The Year 2000 Assessment." Technical Guidelines. Paris: UNESCO.

M.S. Swaminathan Foundation. 2000. Taking Stock. Developing Indicators for Analysing Costs and Benefits of Early Childhood Care and Development Programmes. Proceedings no. 25. New York: The M.S. Swaminathan Foundation.

Moss, P. and A. Pence, eds. 1995. *Valuing Quality in Early Childhood Services*. London: Paul Chapman Publishing Ltd.

National Association for the Education of Young Children (NAEYC). 1986. "Position Statement on Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8." *In Young Children*, 4–29.

Olmsted, P. and D.P. Weikart. 1989. *How Nations Serve Young Children: Profiles of Child Care and Education in 14 Countries*. Ypsilanti, Michigan: High/Scope Press.

___ eds. 1994. *Families Speak: Early Childhood Care and Education in 11 Countries*. Ypsilanti, Michigan: High/Scope Press.

Organisation for Economic Co-operation and Development. Centre for Educational Research and Innovation. 1992. OECD Indicators. Paris: UNESCO.

UNESCO (1955)1971. *World Survey of Education*. London: Evans Bros.

United Nations General Assembly. 1989: Convention on the Rights of the Child, November 20.

Webster's New World Dictionary of American English, Third College Edition, 1988. New York: Simon and Shuster, Inc.

Weikart, D.P., ed. 1999. *What Should Young Children Learn? Teacher and Parent Views in 15 Countries*. Ypsilanti, Michigan: High/Scope Press.

___. In press, 2001.

Windham, D. 1992. Education for Indicators: A Proposed Framework , Manual, and Implementation Plan." A report prepared for UNICEF. Albany, N.Y.: University of New York at Albany. Mimeo.

World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs. 1990. Article 5 (March): 5–9, Jomtien, Thailand.