

Disparities in Educational Development[‡]

Universal primary education assumes that all children irrespective of the caste, creed or location would complete primary education of comparable quality within the stipulated time frame. Therefore, all children should have equal opportunities to participate and succeed in primary education. It is also assumed that while moving towards the attainment of these objectives, special care should be taken to ensure that existing disparities do not accentuate. Therefore more focused attention would be required to provide access and facilitate the retention of girls and children belonging to the deprived and first generation learners' category. Generally, separate goals are specified for the deprived groups which include girls, ethnic minorities, working children, children living under difficult circumstances, children with special needs and those whose continued participation in education is at risk. The present paper examines various dimensions of disparities, their measurement and implications for policy and program interventions.

Objectives:

More specifically, the main objectives of the module on disparities in educational development are:

- a) to *identify the various types of disparities* in educational inputs, process, output and outcomes in the context of EFA initiatives;
- b) to *examine methods and techniques* of measurement and presentation of disparities as identified at (a) above; and
- c) to *interpret the empirical evidence* and develop policy and program interventions to reduce disparities in a time bound manner;

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Part I: Identification of various types of disparities

For many decades, 'growth with equity and social justice' has remained on the development agenda of developing countries. This was particularly so as the temporal stability of illiteracy and other factors of socio-economic deprivations have resulted in the perpetuation of disparities in social and economic development. Historically, education was used as a potent instrument for exclusion of certain population groups and regions from participation in the development process. The development planners in the latter half of the twentieth century realized that all types of disparities have to be reduced to the minimum in the shortest possible time frame. Therefore, international conventions came out with agreements among governments which prohibit discrimination in access to educational and other social services.

By now, most of the countries have enacted anti discrimination laws to ensure that any type of discrimination in access to education and other opportunities does not take place due the social, economic, religious, ethnic character, language group or geographical location. It is in this context that The Convention on the Rights of the Child (CRC) affirms the right of *all* children to relevant and good quality education. It reaffirms that there is a social contract and moral commitment on the part of States to ensure the equity and well-being of all citizens. The obvious corollary of the EFA approach is that the universal primary/elementary education can not be achieved without elimination of disparities. It was also reiterated in the Jomtien (1990), E-9 (1993) and Dakar (2000) meetings that any type of basic education will not do but it must be such that it enhances the potential of children and young people to respect themselves and others, participate in the decisions of their society, live in peace and dignity, and earn a living commensurate with their abilities. The framework for Dakar declaration is given at Annex I and Annex II provides the list of 18 core indicators used for Year 2000 EFA assessment.

It is often argued that growth and equity are contradictory. However, it must be recognized that there is no contradiction between the demand for 'equity' and 'growth'. Equity without growth is a stagnant cesspool wherein only misery, ignorance and obscurantism can be equitably distributed. Growth without equity leads to the accentuation of structural disequilibria that constrains growth itself. The social concern for the two can be handled together, sustaining and sustained by each other (Raza and Aggarwal, 1982).

The experience of development planning also shows that growth does not necessarily lead to more equitable distribution of resources. Similarly, increase in participation rates may result in perpetuation or even widening of disparities between various social and economic groups. A closer analysis of the

development trajectory would reveal that there are many routes to achieving EFA. Some possible approaches are listed below.

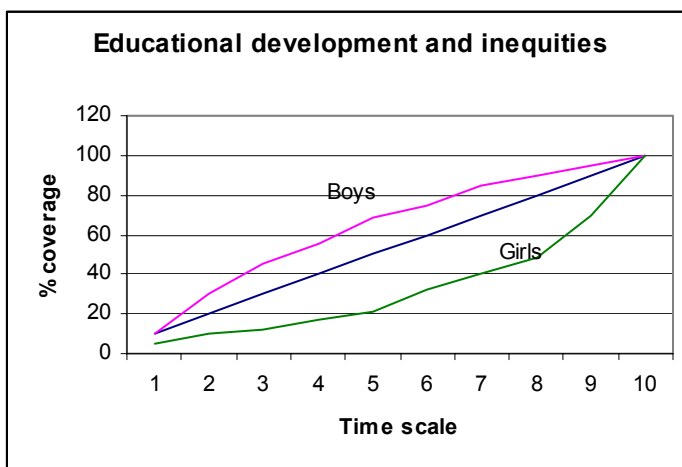
Equity concerns?

Approach	Outcome	Equity concerns
Let all male be educated first and then all females should be educated.	Accentuation of inequities till female education picks up	Easy to identify. The approach would not be acceptable. Easy solutions available.
Let the urban children be brought first to schools and later on rural children can be provided access	Accentuation of disparities till the rural children start improving their share in the total school going population.	Easy to identify. The approach would not be acceptable. Easy solutions available.
In traditional societies there is a preference for boys' education. What if it continues?	The girls' education may suffer.	Relatively more difficult to identify. Consistent efforts are required to overcome the problem.
Let the rich people send their children to elite schools and poor should send their children to poor quality government schools.	Emergence of dual system with wide differences in quality of learning.	Easy to identify. Difficult to overcome. Very difficult to remedy.
The problems of working children would be addressed after all other children have been brought to the school.	Discrimination against a section of children.	Not desirable. Alternative solutions required.
Let more experienced teachers be posted in urban areas as rural children can manage with less qualified and inexperienced teachers.	Discrimination in provision of inputs which can adversely affect the learning outcomes.	Not desirable. Difficult to detect and administrative solutions possible.

The above is only illustrative list of approaches which can have serious consequences as far as equity is concerned. Further examples could be developed in the case of other forms of disparities in access, retention and achievement levels. There would many other forms of discrimination which deny equal opportunities to school going age group children. Many forms of discriminations are related to historically evolved social ethos and cultural factors influencing the various population groups and the schools can do little to address these concerns.

A perusal of educational and allied statistics would reveal that millions of children are excluded from basic access education, largely because their families could not gain from the development initiatives of the bygone era. Children who do not go to school are the children of the families living in conditions of poverty, socio-cultural marginalization, geographic isolation and families suffering from racial and/or gender bias. They are children of families fighting with disease and disability, sexual exploitation, or forced involvement in exploitative and unorganized labor who works under difficult circumstances and at far off places. Their exclusion from education is not a matter of their choice but that of a forced compulsion. These and many other forms of realities are nothing else but the manifestation of the perpetuation of social and economic inequities. Since education is both the cause and effect of underdevelopment, one does not know how to break the vicious circle of underdevelopment, poverty, ignorance and illiteracy. There is a growing evidence that education can become a powerful tool in overcoming socio-economic disparities.

Let us consider the following trajectory.



In order to achieve the goal of universal elementary education in the next ten years, two different routes are proposed for boys and girls education. If implemented, the disparities between boys and girls would accentuate for the first few years and then converge to meet the objective of UPE. Is it a right strategy? Definitely not? Therefore, the strategies have to be such that while progressing towards the goals, the existing disparities do not increase. It is in this context that reduction in gender and other forms of disparities is always mentioned as a goal alongwith universal primary education.

Four dimensions within which the disparities in educational development can be examined are as follows:

- a) Gender (male-female; within and between females and male population groups) [M1]
- b) Regional (rural-urban, less developed and more developed regions, within and between regions) [M2]
- c) Social (minority and majority communities, haves and have nots, intra and inter-caste groups) [M3]
- d) Ethnic (ethnic versus other groups; within and between ethnic minorities). [M4]

Generally, the administrative levels are considered for identification and measurements of disparities. The advantage with this approach is that with administrative monitoring, the decisions regarding the nature of interventions and allocation of resources become easy. The flip side of the approach is that within the administrative boundaries, the units of observation may be internally heterogeneous. In such situations, the averages would hide more and reveal less. To what extent the gender disparity index of Uttar Pradesh would be a realistic representation of gender disparities in the state? Any intervention made on the basis of state average may become counter productive and may even result in accentuation of disparities.

Identification of the level of analysis of disparities is as important as their identification. All the four dimensions of disparities can be further elaborated by the level of analysis. The levels of analysis for identification of disparities can follow the following schema:

- a) one to one [L1]
- b) one to many [L2]
- c) many to many [L3]

The final choice of the level of analysis and the type of disparities that need to be elaborated would depend upon the main objectives of the educational development program. For example, in the context of EFA, all four dimension and three levels of analysis discussed above would be relevant.

From the perspective of policy and programming, the educational system is viewed as follows:

- a) Inputs (provisions and learners). [R1]
- b) Processes (transformation activities and teaching learning processes) [R2]

- c) Output (the products of the educational system; learning/attainment levels) [R3].
- d) Outcome (The impact of the educational processes) [R4].

The inputs and provision for primary education are learners, teachers, buildings, instructional materials, working days the school functions and the specified time on task. Teacher preparedness in terms inservice and preservice training ensures that the right type of inputs are provided to facilitate the schools to meet their objectives effectively and efficiently. In addition, the access to educational network to various people in terms of access based on the distance or population size are important factors influencing the size and structure of educational facility and related inputs. The availability of a school may not necessarily mean participation by all. In many places the social distance is a stronger barrier than the physical distance.

The educational processes have considerable influence on the way the inputs are transformed into output. The attention by teachers to learning needs of various groups of children is an important aspect of educational processes. Similarly, the motivation and leadership provided by the head teacher to other teachers in the school is a part of the process variables. The indicators of internal efficiency also measure the effect of educational processes. The completion rate of children in the prescribed period is another set of indicator related to educational processes.

There are various methods of measuring output. Many times, indicators of internal efficiency and school effectiveness are also used as measures of output. Input output ratio is the most commonly used indicator to determine the internal efficiency of the school system. The average years required to complete primary education cycle for boys and girls is another important indicator used to measure educational efficiency and effectiveness. For example, the differences in completion rates of boys and girls indicate the effect of educational processes but at the same time reflect on the nature and type of output obtained. Similarly, the differences in learning achievement can be used to measure disparities in learning outcomes.

The measurement of outcome and the associated disparities is a more complex process. The outcome indicators have to be distinguished from output indicators. For example, the earning differentials between males and females after having graduated from the same school would relate to the impact of educational attainment on two groups of persons, namely, the males and females. Similarly, literacy and numeracy skills acquired by the perspective workers are expected to influence the workers' productivity. Therefore, the differences in the productivity of literate and illiterate workers may be taken as a proxy variable

for the differential impact of literacy and numeracy skills on the two groups of population.

In order to develop a broader understanding of the disparities and their correlates, the application of behaviouristic models becomes necessary. Such an understanding is necessary to examine various policy implications and to identify the intervention strategies. Generally, the indices of disparities are correlated with social and economic development indicators to understand the dynamics of development process in the given country. For example, why do more girls dropout before completing primary education is a question in which educational planners would be keenly interested in.

Considering the above classification and for the sake of simplicity, the matrix of disparities takes the following shape:

	L1				L2				L3			
	M1	M2	M3	M4	M1	M2	M3	M4	M1	M2	M3	M4
R1												
R2												
R3												
R4												

The above table gives us a total domain of 48 cells which can represent different dimension of disparities. The scope of the above matrix can now be expanded to identify the critical components which are applicable to a specific country/regional situation. Not all the cells of the above matrix would be relevant for all countries/regions. In fact the table can be further refined based on country specific situation. What is important is to identify one or more indicators that can be fitted into each cell. These indicators would determine the universe of possible indicators that can be used to identify various dimensions of disparities.

While fixing the variables for monitoring of EFA, care should be taken not to select too many variables. The larger is the number of variables, the greater would the data requirements. It is also pertinent to mention that not all indicators are valid at all decision making levels. Some indicators which may be highly relevant at the grassroots may have little significance at the national level and *vice-versa*. The frequency of reporting of monitoring indicators is not discussed in this module but is an important factor having bearing on the monitoring of EFA.

Notwithstanding the above, the most commonly used indicators of disparities for EFA was 'gender parity index'. The EFA guidelines also stated that the male-female and regional dimension of other core indicators should also be examined. Many countries either failed to articulate various dimension or could not present the situational analysis due to the lack of adequate data.

A perusal of the set of 18 indicators used for measuring progress towards EFA indicators raises a number of concerns for measuring disparities. Did these indicators measure adequately various dimensions of disparities which are relevant for the countries participating in the workshop? Perhaps not and that is one of the reason that fresh debate on the adequacy of core indicators was initiated even during the Dakar conference.

The Dakar framework of action mentions reduction of gender disparities as a key concern of EFA activities in the coming years. However, the identification of indicators measuring the progress towards EFA goals is yet to be given a final shape.

Assignment 1:

- 1.1 Did the 18 core performance indicators measure various types of disparities in your country? Critically examine the gaps and areas where the core indicators were inadequate to project disparities at the national level?*
- 1.2 In the light of the above discussion, prepare a matrix of disparity indicators for your country.*

Part II: Methods and techniques of measuring disparities

Measurement of disparities is as important as their identification. Many countries have started collecting data on census as well as one sample basis which is useful for measuring disparities. The techniques for measuring disparities can be classified as follows:

- a) General statistical methods which can be used for measuring disparities between two or more groups (like male-female, rural-urban, ethnic -non ethnic groups).
- b) Special measures which are applicable for measurement of disparities in education.

The measurement of disparities between 'have' and 'have nots' has remained at the centre stage of equity concerns. For example, the differentials between boys and girls, between rural and urban areas, between one caste and the remaining caste groups, between one religious group and the remaining, between the rich and the poor, between the literate and illiterate and between the single teacher schools and multiple teacher schools are most commonly talked about disparities. There could be many other such situations where the measurement of disparities between two groups or categories becomes relevant.

General statistical methods for measuring disparities between two groups

The following methods are used for measurement of disparities

- a) *Range (Maximum - minimum)*: It finds many applications and is most commonly used for measuring disparities between haves and have nots. The range can be calculated for a large number of variables and indicators encountered in education. For example, disparities in literacy rates of male and female are often shown by the range. Similarly, the rural urban differences in average years of educational attainment are shown by the range value. A major problem with the use of range as a measure of disparity is that it does not distinguish between the levels of achievement. For example, the range between the literacy rate of 30 and 40 would be the same as between 90 and 100. Since, the two situations are entirely different, the use of range may not appropriately convey the exact disparity. However, the range remains a valid measure of disparity when aggregated data is available and the access to disaggregated data is limited.
- b) *Mean and Median*: These are based on all units of measurements for two or more groups. For example, a comparison of the mean achievement score for boys and girls would indicate the differences in achievement

between the two groups comprising boys and girls within the same region. When the students are ranked, then the median score provides a better approximation of the central tendency. The main advantage of mean is that it is based on all observations but median is more useful when there are large variations within the units of a group. In the case of open ended distributions, mean may not remain representative but the median may reflect the representative value.

- c) *Standard deviation and coefficient of variation*: Many variables are expected to follow normal distribution. In such cases, standard deviation and coefficient of variation provide useful insight into the distributive aspects of a particular variable. Both the measures are based on all observation within the same group. For example, the standard deviation in the mean achievement score among boys is a measure of dispersion of achievement score obtained by a set of students and hence measures the disparities in achievement scores among the boys. Similar could be the situation with girls' achievement scores.

A more accurate indicator of disparities is the coefficient of variation as it takes into account all the observations and is free from the units of measurement. The comparisons are therefore possible between different variables even when their values are recorded in different units of measurement. The coefficient of variation is calculated as follows:

$$\text{Coefficient of variation (CV)} = \text{Standard deviation/Mean}$$

The higher the value of coefficient of variation, the greater is the dispersion within the group. The minimum value of Coefficient of variation is zero which shows the perfect equity i.e. all the units have the same value for the variable under consideration.

- d) *Growth rates (simple and compound)*: Often, percentage change is used to compare the progress over a period of time. The percentage change for different groups provides a basic idea about the progress towards bridging the disparities. More refined methods use simple and compound growth rates. The enrolment disparities are usually analyzed in terms of growth rates. The compound growth rate is very often used in economic analysis. Similar applications of growth rates are possible in the analysis of enrolment trends for boys and girls or for rural and urban areas or for one group as compared to others. The comparisons of growth rates become difficult when the number of groups increases beyond a point. For example, the analysis of growth

rates of male and female enrolment for different states in India would pose a challenge of interpretation of a large number of growth rates.

- e) *Index numbers*: The index numbers are useful when the progress over a period of time is to be compared with respect to the base level situation. Index numbers are easy to develop for the time series data but the choice of the base year is very crucial. If the base year is not selected properly, the emerging trends could be misleading.

The index numbers can be used to examine the trends in disparities by comparing their values for two or more groups of population. For example, index numbers for the boys and girls enrolment will unravel the differences in their growth profile. Similarly, the index numbers for enrolment of general population with those of other groups like ethnic minorities, rural and urban areas can be compared.

- f) *Ginni coefficient*: This a special category of common purpose tool to find distribution related disparities. It is most commonly used in the analysis of income and related socio-economic disparities. The minimum value of Ginni coefficient is zero indicating complete absence of disparities. The higher the value of the Ginni coefficient, the greater is the extent of skewed distribution. It is also useful to compare the values of Ginni coefficient over time to examine the direction of change of distributive aspects. The higher the value of Ginni coefficient, the greater is the extent of disparity.
- g) *Ratio methods*: Very often ratio methods are used to measure disparities. For example, if the disparities between male and female literacy are to be computed, the ratio of female to male literacy is calculated as a measure of disparity in literacy rates. This method is valid for any two groups for the same type of variable/indicator. For example, the ratio of male to female attainment level could be another measure of disparity in achievement levels. In the case of perfect equity, the ratio of indicator corresponding to any two groups would be the same. The ratio methods are better than range in many ways. The Gender Parity Index for measuring GER and NER disparities used by the UNESCO for EFA assessment essentially belongs to the group of ratio methods. A major limitation of the ratio methods is that more than two groups can not be handled together for comparative analysis of disparities. In such cases, depending upon the nature of variables, some hybrid methods can be applied.

To measure the gender and social disparities in DPEP districts, the following indices based on the ratio scale are used (Aggarwal, 2000):

Index of gender equity (IGE): The IGE is calculated as share of girls' enrolment in relation to sex ratio for each district. A value of 100 for the index reflects a complete absence of gender inequities. A value of less than 100 shows less than proportionate representation of girls in enrolment and the opposite if the calculated value of the index is more than 100.

$$\text{Index of Gender Equity (IGE)} = 100 \times \frac{\text{Share of girls in enrolment}}{\text{Share of girls in population}}$$

The share of SC and ST students to total enrolment in a region does not convey much except when it is compared with their corresponding share in the population. Similarly, the GER, which is often used as a measure of access and participation, does not reflect on the inequities between SC and other groups of population. Therefore, in order to overcome these problems, an Index of Social Equity was calculated in the following manner:

$$\text{Index of Social Equity (ISE)} = 100 \times \frac{\text{Share of SC enrolment in total enrolment}}{\text{Share of SC population in total population}}$$

- h) *Modified Sopher's index of disparity*: The review of literature reveals that both the absolute and relative methods of measuring disparities suffer from many limitations (Raza and Aggarwal, 1982). Sopher, an eminent geographer examined the issues related to measurement of disparities and suggested a measure of disparity, which is known by his name. Further analysis indicated that Sopher's formulation did not satisfy all the conditions required for an ideal inequity measure. The modified Sopher's formula was used by the author for a study of disparities in literacy rates (Raza and Aggarwal, 1982). The modified formula essentially belongs to the category of ratio methods and takes the following form:

$$W = \text{Log} (L_2/L_1) + \text{log}((100+I_1)/(100+I_2))$$

Where $L_2 > L_1$ and L_1 and $L_2 > 0$

Where L_2 and L_1 represent literacy rates of two binomial elements and I_1 and I_2 represents the corresponding illiteracy rates.

The higher the disparity between two binomial elements, the greater would be the value of W . Due to complex calculations; the index did not find wider acceptability. The researches have developed many other types of formulations based on the ratio scale but these have not been addressed here due to their limited acceptability.

Special statistical measures for measuring disparities

The statistical and mathematical functions which are specifically relevant for the analysis of disparities in education are discussed below. The identification of the level of disparity analysis is important and may vary from one country to another. In the following illustration, we have selected commonly used educational performance indicators.

TABLE: Selected indicators and their level of disparity analysis

Indicator	Level of disparity analysis				
	School	Regional	National	Community	Gender
Intake rates	X	X	X	X	X
GER and NER.		X	X		X
Input output ratio.	X	X	X	X	X
Completion rates.	X	X	X	X	X
Promotion rate	X	X	X	X	X
Attendance rates	X	X	X	X	X
Dropout rates	X	X	X	X	X
Repetition rates	X	X	X	X	X
Student classroom ratio	X	X	X		
Pupil Teacher Ratio	X	X	X		
IGE		X	X		
Mean achievement score	X	X	X	X	X

The above list of indicators is not exhaustive but indicative so as to demonstrate the basic approach. More indicators can be added depending upon the nature of disparities identified in different countries.

The methods of calculation of the indicators presented in the above table will not be discussed in this paper. However, the relevance of each of the selected

indicators should be examined before establishing a monitoring system. This point would be illustrated with the help of two most commonly indicators, namely the GER and NER. The following discussion would highlight issues involved in the use of these two indicators in the Indian context. Similar caveats apply to other indicators.

Limitations of GER and NER for disparities analysis¹

While the GER and NER are most commonly used indicators of participation in education of different communities and groups of population, these suffer from many inadequacies and need to be interpreted with caution. The following discussion will clarify important issues involved in the construction and interpretation of GER and NER indicators in general and for disparities analysis in particular.

First, for these indicators to fully reflect the reality, it should include enrolment from all type of schools and educational institutions including government and non-government schools offering instructions in a particular level of education. In the Indian context, the official GER is calculated based on the enrolment data collected from recognised schools only.

Second, confusion about the exact age of entry can distort the indicator. For example, the official age of entry in many states is five years. It is only in some rural or urban areas that a child is allowed to enter school at the age of five years. In other parts, the children are generally enrolled after attaining the age of six years. In all probability, even if underage children are shown as enrolled, the age is recorded as five or six years. This creates problems with the calculation of GER/NER corresponding to the official age group of 6-11 years. Which denominator should be used in such situations: 5-9 or 6-10 year age group?

Third, the age at entry to a school is generally recorded by the head teacher and is based on some evidence of the date of birth. In socially and economically backward areas, where birth records are not properly maintained, the admission is given on the basis of an undertaking by the parents. Large-scale variations between the undertaking and the actual age may lead to erroneous results, especially in the calculation of NER.

Fourth, the estimates for age specific population are generally not available in a consistent manner and small variations in the growth rates can have pronounced effect on GER and NER. This is particularly true of various population groups comprising ethnic minorities, deprived children in slums and children with disabilities. Therefore, the calculation of GER/NER for various population groups may have larger bias due to limited data availability.

¹ Extracted from: Aggarwal, Yash (2000) pg. 57.

Fifth, the districts being geographic entities are reorganised from time to time for administrative reasons. After the reorganisation, it takes a long time to estimate various indicators of educational development, particularly the population of the district and its distribution by different age groups. Population estimates obtained from different sources continue to differ widely.

The above issues have been highlighted with a view to reiterate that while GER and NER are useful measures of access and participation and are used universally, these suffer from many limitations and inadequacies which may acquire serious proportions when the disaggregated estimates are generated to examine within and between group disparities.

Similar concerns prevail with other indicators shown in the above table. These may relate to methodological considerations, estimation procedures and availability of data. It is therefore suggested that countries may examine their data collection systems and identify the necessary modifications/changes that may be inevitable in order to monitor the progress towards EFA goals in general and that of measurement of disparities in particular.

Assignment 2

2.1 Review the availability of educational statistics to undertake a comprehensive analysis of disparities in your countries.

2.2 prepare a matrix of indicators and their level of analysis in the context of your country specific situation. Also identify the cells where the measurement of disparities is critical.

Part III: Interpreting the empirical evidence and drawing policy and program interventions

The identification of inequities and their magnitude is a first important step in planning for reduction of disparities. Having identified the disparities the development planners have to develop specific interventions so that the broad objective of overcoming disparities is achieved in a time bound manner.

a) To overcome disparities iniquitous allocation of resources is required

Disparities are often the outcome of distortions in the provision or the low quality of educational facilities and associated resources. It is often seen that interior schools are most deprived in terms of teacher preparedness, buildings, instructional materials and onsite academic support. These schools also face the consequence of isolation and good teachers particularly the women teachers are not willing to work in remotely schools.

It is also imperative that low performing schools are provided with high quality inputs rather than neglecting them and leaving everything to community resources. Therefore, the first lesson for reducing disparities is to allocate more financial resources for the deprived schools. How many countries have adopted this approach to overcome disparities and to what extent these approaches have succeeded in overcoming disparities? This question could be examined in the context of each country/region. In India, some special provisions were made to remove the imbalances in the availability of school infrastructure and teachers.

b) Protective discrimination

Some of social and economic disparities are rooted in historical processes of social and economic development in general and that of education in particular. How to ensure that discrimination does not take place in school and outside school? Based on the gravity of imbalances, many countries have enacted laws which protect the rights of minorities and ethnic groups to participate in educational. Reservation of seats proportionate to the representation of these ethnic and caste groups is often followed. For example, reservations in institutions of higher education and also in the public sector jobs fall in this category. However, reservations and enactment of laws would not be sufficient to remove disparities. These have to be translated into reality and hence more proactive policies to encourage participation have to be pursued.

The policies pertaining to protective discrimination will have to be short term in nature. These provisions should not be thought of as a permanent provision. If it is so, the policies lose its relevance and may even become counter productive. Therefore, it is not difficult to find that in some countries, the fruits are exclusively cornered by the well to do groups within the groups for whom

reservations are meant and their fellow citizens have failed to benefit from the legal provisions. The mechanisms of protective discrimination should be reviewed periodically and refocused to exclude those who have already benefited from such provisions.

c) Offsetting the direct and indirect costs of education

The root cause of many type of disparities in educational development relate to poverty and lack of financial resources to ensure continued participation of children in schools. Quick estimates would indicate that a large number of children belong to families living below poverty line for whom the day to day survival is the key concern. If such families are not supported for the education of their children, the consequences may be serious and the vicious circle of underdevelopment may continue forever. Therefore, in order to break this vicious circle of underdevelopment, the governments, NGOs and other organizations working for social upliftment of the poor have come forward to support education of children belonging to such families. The governments in many countries provide various types of incentives to offset the direct and indirect cost of education, especially at the primary stage. The incentives include: scholarships, noon meals program, remedial coaching, free provision of textbooks and teaching learning materials, free transport, attendance scholarships etc. A review of these measures is also required to ensure that only deserving students get it.

d) Absence of inequities does not mean the attainment of objectives

It may also be noted that the absence of inequities does not mean that the participation and achievement rates for girl or any other groups of students have reached the desired level. In fact there may be certain situations where the participation rates for both boys and girls may be very low. In such cases too, the gender or other forms of inequity may be nearly absent. In reality, the overall situation is far from satisfactory. Therefore, the indices of gender and social equity should be seen in association with the overall situation in respect of development indicators.

e) Need for flexible models of educational planning

Planning for provision of mass education has to be different from the planning models for meeting the educational needs of the deprived and left outs. Although these constitute small proportions of population in many countries but meeting their educational needs is as important at that of those who have enrolled in schools. The profiles of children outside schools are often incomplete and one of the ways to reduce disparities is to address their educational needs. The regional countries have already identified the target groups.

In view of the diverse nature of the target groups, a common model of educational planning would not work. Therefore, more flexible and innovative approaches have to be designed for their education. The experience shows that often the alternatives are thought to be cheap substitutes of formal education. This is a misconception. The marginal cost of reducing disparities and bringing the deprived to mainstream would be much more than the average cost. Therefore any alternative cheap models would not be able to fulfill all objectives of reducing disparities and providing education of a comparable quality. The flexible and alternative models should not only address the concerns for access and bringing the child to school but also focus on retention and achievement aspects.

f) Need for wider curriculum reforms

What is taught in formal or alternative schools is either decided nationally or at best at the regional level. The schools do not have much choice in deciding what should be taught to the students. The philosophy of having a common curriculum is based on the perceived needs of students and is assumed that all of them can be served with the same menu. To what extent is this valid when the countries are reaching near universal primary education?

The disparities in access have continued to persist despite the availability of schools within reasonable distance from many children. Why? besides, social and economic factors, there is a growing feeling that children do not learn much in schools. What is taught in schools is of no immediate relevance to the children or their families and what is relevant for them is not being taught in schools. Therefore an important question that development planners face today relates to the relevance of common curriculum for the left out children. This become more relevant as primary education may remain the terminal stage for many of them.

f) Strengthening participatory processes of decision making

For too long the decision making was centralized. Some attempts have been made in the recent years to decentralize educational planning. Does decentralization of educational planning automatically leads to decentralized decision making? The answer is perhaps no. Therefore, not undermining the success of decentralization, the reduction of disparities would take place when the decisions are made at the grassroots. Such decisions would be more relevant for each school than the general decision taken at the national or the state level.

g) Strengthening the educational data reporting and analysis systems

Many countries of the region have a long history of the collection of educational statistics. Traditionally, the educational statistics were collected for administrative control and financial management of the schools and other

institutions of learning supported by the governments. Due to increased complexity of decision making and the need for implementing decentralized modes of planning and monitoring processes, the data requirements have changed considerably over a period of time. The educational management systems have failed to respond to these challenges in many countries of this region. What has been attempted in the name of modernization is mere computerization and not much attention has been given to validation and use of educational statistics for planning and monitoring. The data on many critical variables associated with the measurement of disparities is not even collected. Therefore, a thorough revision of EMIS of various countries is required so that the needed information for monitoring the performance indicators is collected and used.

The above issues are illustrative and many more aspects of inequities having bearing on EFA program can be identified. However, what is important is a clear articulation and choice of appropriate indicators to reflect the changing profiles of various types of inequities.

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Annex I

Dakar Framework for Action for Education for All

The participating countries made the commitment to achieve the following goals by 2015.

- i) *Early childhood care and education*: expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children;
- ii) *Free and compulsory primary education by 2015*: ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality;
- iii) *Life skills for adolescents and youth*: ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes;
- iv) *Improvements in adult literacy by 50 percent*: achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for woman, and equitable access to basic and continuing education for all adults;
- v) *Eliminate gender disparities*: eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality;
- vi) *Enhance educational quality*: improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

Annex II**Core EFA Indicators**

- Indicator 1 :** Gross enrolment in early childhood development programmes, including public, private and community programmes, expressed as a percentage of the official age-group concerned, if any, otherwise the age-group 3 to 5.
- Indicator 2 :** Percentage of new entrants to primary grade I who have attended some form of organized early childhood development programme.
- Indicator 3 :** Apparent (gross) intake rate: New entrants in primary grade I as a percentage of the population of official entry age.
- Indicator 4 :** Net intake rate: New entrants in primary grade I who are of the official primary school entrance age as a percentage of the corresponding population.
- Indicator 5 :** Gross enrolment ratio (GER).
- Indicator 6 :** Net enrolment ratio (NER).
- Indicator 7 :** Public current expenditure on primary education (a) as a percentage of GNP and (b) per pupil, as a percentage of GNP per capita.
- Indicator 8 :** Public expenditure on primary education as a percentage of total public expenditure on education.
- Indicator 9 :** Percentage of primary school teachers having the required academic qualifications.
- Indicator 10 :** Percentage of primary school teachers who are certified to teach according to national standards.
- Indicator 11 :** Pupil-teacher ratio (PTR)
- Indicator 12 :** Repetition rates by grade.
- Indicator 13 :** Survival rate to grade 5 (percentage of a pupil cohort actually reaching grade 5)
- Indicator 14 :** Coefficient of efficiency (ideal number of pupil years needed for a pupil cohort to complete the primary cycle, expressed as a percentage of the actual number of pupil-years.
- Indicator 15 :** Percentage of pupils having reached at least grade 4 of primary schooling who master a set of nationally defined basic learning competencies.
- Indicator 16 :** Literacy rate of 15-24 years olds.
- Indicator 17 :** Adult literacy rate : percentage of the population aged 15+ that is literate.

Indicator 18 : Literacy gender parity index : ratio of female to male literacy rates.

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