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Primary Education in India: Delivery and Outcome

– A district level analysis based on DISE data

Atanu Sengupta*
Naibedya Prasun Pal*

Abstract

Primary education is a key to the economic development of a country. Most of the studies emphasize the final output (such as literacy, enrolment etc) rather than the delivery of the entire primary education system. In this paper, we study the primary education system of India, using the district level DISE statistics. We used several indicators to capture the multi-dimensional aspect of primary education system in India. Our analysis reveals serious discrepancies in deprivation, social and policy indicators that greatly infringe upon the efficiency of the system. Western districts show the worst while Eastern districts show the best picture.

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Introduction

The principle institutional mechanism for developing human skills and knowledge is the formal educational system. Most developing nations have been led to believe or have wanted to believe that it is the rapid quantitative expansion of educational opportunities which holds the basic key to national development. The more education, the more rapid is the anticipated development. Education is one of the most important services provided by governments in almost every country. Bertrand Russell said “.... the educational system we must aim at producing in the future is one which gives to every boy and girl an opportunity for the best that exists.” This is something very agreeable to most of us, and yet such a scenario seldom meets our eye when it comes to the state of education in India. The Indian constitution enshrines in the directive principle of state policy compulsory primary education to all citizens. However, inadequate attention is paid to the delivery mechanism of the primary education. This remains a basic Achilles’ heel in the development process in India. In fact this inadequacy has added to injustice and inequality while stunting the prospect of development.

Mere assurance of physical access to education cannot guarantee quality education (Ramchandran, 2004; Sengupta, Sengupta and Ghosh, 2004). Although several attempts have been made in the past to assess the accessibility, enrolment and learners’ achievement, little information is available on the internal efficiency of primary schools in the country. Very few studies have attempted to look into all the indicators of internal efficiency of primary education system from a comparative perspective, covering all states and UTs. Recently Arun C. Mehta (Mehta, 2005) has constructed the internal efficiency indicator of primary education system in his paper ‘Student Flow at Primary Level: An Analysis Based on DISE Data’. The indicator emphasized on the completion of at least two years in the primary school by a child. However, this indicator is inadequate because its inability to capture social and gender issue.

Again Sengupta and Pal (2008) used the DISE data set to generate a host of indicators directly related with educational performance. However, their analysis was based on the state level data set. This was undoubtedly prompted by the inadequacy of comparable district level data sets for all the time periods they covered. Notwithstanding this logic, a district level analysis will shed much light on the performance of primary educational units at a more disaggregated level.

In this paper, we aim to provide a region-wise panoramic view of the primary education system in India at the district level with its frailties and inequalities that require immediate policy action. The publications of all India DISE data for three consecutive years have facilitated this type of analysis. However, consistent district level analysis is available only for the year 2005-06.

Our paper is divided as follows. In section 2 we discuss the data and methodology used. The next four sections discuss the aspects of the delivery system in primary education viz., the lack of resources, policy indicators, social stigma and efficiency of the system. In section 7, we try to find out some relation between these four aspects and the effect they have on the broader social phenomenon. Section 8 concludes the study. In the Appendix, we have presented zone-wise name of the districts in a table format (604 districts that we have covered in our study).

Data and Methodology

Data Description and Variables Used

In this study we have used data from secondary sources. It has been collected from “DISE Statistics (Elementary Education)” for the year 2005-06, which is based on DISE District raw data. Development of a sound information system is critical for a school monitoring and implementation of any programme, particularly in social sectors. Therefore, design of a school information system was accorded priority from the very beginning of the District Primary Education Programme (DPEP) in 1994, as a result of which National University of Educational Planning and Administration (NUEPA) developed the District Information System for Education (DISE). The DISE data gives various district-specific key indicators (pupil-teacher ratio, student-classroom ratio, GER, NER, school with boy’s toilet, school with girl’s toilet, proportion of female teachers, drop-out rate, retention rate, etc) for good quality primary education.

Based on the DISE data, the Flash Report attempts to develop an Educational Development Index (EDI) in deciding future course of investment on elementary education in the country. As argued by Sengupta and Pal (2008), EDI was basically flawed because of an invalid aggregation of input and output indicators.

However, the spirit of EDI is very novel. It tries to broaden educational performance from its emphasis on a few outcome indicators (literacy rate, enrolment rate etc.) to a broad spectrum of social, infrastructural and efficiency indicators that essentially constitute the multifaceted picture of education.

Following this spirit, Sengupta and Pal (2008) visualized education as a multi-dimensional entity. They identified five basic aspects of education:

- Deprivation aspect (poverty in the education system)
- Social aspects (social indicators)
- Policy aspects (policy indicators)
- Traditional performance indicators
- Farrell’s non-parametric efficiency scores

Poverty in Educational Institutions

From the economic point of view two issues are important: (i) whether the input supplied meets the minimum requirement that makes production feasible, and (ii) the efficiency of use in inputs.

The first issue is closely related to the concept of poverty used in development economics. By poverty we mean here relative deprivation from an accepted minimum level. However, the definition of poverty in the education will obviously be different from the definition of income or economic poverty. The idea may be close to the concept of human poverty as developed by Anand and Sen (1997). In this definition Anand and Sen argued that Human Poverty Index (HPI) is an essentially multi-dimensional poverty index. HPI tries to capture deprivation in three basic dimensions of human welfare (health, education and income). Since it is a multidimensional concept, it is to be weighted and aggregated in order to generate unique index. The main argument by Anand and Sen (1997) is that “while these three components of human poverty are all important, it is not unreasonable to assume,

given their dissimilarity, that the relative impact of deprivation of each would increase as the level of deprivation becomes sharper. For example, as we consider higher and higher proportions of people who may perish before the age of 40, this deprivation will become more and more intense per unit, compared to other deprivations." Anand and Sen (1995) postulated a similar argument to derive the Gender Development Index (GDI). A simple way to generate this requirement is the following formula suggested by Anand and Sen (1997):

$$P(\alpha) = \left\{ \frac{\sum w_i P_i}{\sum P_i} \right\}^{\frac{1}{\alpha}} \quad (1)$$

Where 'i' refers to the number of dimensions considered for constructing P while "Pi"s are the poverty associated with the ith dimension and "wi" s are their weights and 'α' a pre-specified parameter. In the case of equal weights, the specification of wi becomes unnecessary. However, segregating the data into various subgroups with equal intra-group weights generates unequal inter-group weights.

Anand and Sen (1995, 1997) prove that if $\alpha > 1$ then the above criterion is specified by $P(\alpha)$. We use the same formula in our exercise for calculating poverty. In our exercise, we have taken $w_i = w_j \forall i, j$ with $i \neq j$. Following the suggestion of Anand and Sen (1997), we have taken $\alpha = 1/3$.

Similarly, poverty in primary education is multi-dimensional. For example, a school without classroom is obviously suffering from some major deprivation – the access to minimum requirement of useful learning. We have estimated the proportion of such schools as a proportion of total schools. In a way this can be treated akin to the concept of headcount poverty in development economics. Similarly, we are defining poverty in other aspect also.

We have classified these poverty indicators on the following parts:

- Core poverty indicators (basic or essential deprivation)
- Input poverty indicators (deprivation in the supply and quality of inputs)
- Facility poverty indicators (deprivation in some basic facilities such as playground, toilets, drinking water, etc.)

Poverty under each category is measured as an (un-weighted) average deprivation under different heads constituting the category specified. Having derived poverty in three dimensions, we now calculate the Grand Poverty, using the Anand and Sen formula, i.e., equation (1).

Efficiency in Educational Institutions

The second issue is related to the efficiency. However, since education is a public good we cannot merely define it in terms of narrow economic efficiency. While it is true that wastage of resource is always harmful to welfare, but rationalization of resource used cannot be allowed at the cost of neglecting social dimension of the education system. Hence we have considered three additional indicators:

- Policy indicators (Pattern of government funding to schools)
- Efficiency indicators (Performance parameters)
- Social indicators (Issues relating to socially deprived sections (SC/ST/OBC) and gender issues)

These indices are constructed using UNDP formula, because it is unit free and easily comparable. After indexing, we have constructed grand indices for the various categories. These grand indices are un-weighted means of individual indices, and are constructed for only the year 2005-06. We have divided the states/UTs of India into five zones, viz., North, North-East, East, West and South, the districts in each state/UT coming under the respective zones.

However, the concept of economic efficiency cannot be totally neglected. Though economic efficiency has both a technical and cost component, we have to disregard the cost (or allocative component) due to the lack of reliable price data on various educational inputs. In the education sector, we have to deal with a multi-input; multi-output decision-making units which attempt to maximize their outputs for given inputs and technology. This is output-oriented approach. Here we measure decision-making unit's technical efficiency, that is, how well a decision-making unit converts its inputs into outputs, based on its available technology. For measuring technical efficiency, we use Data Envelopment Analysis (DEA) in which only factors under a decision-making unit's control are included as inputs in computing efficiency scores.

In this exercise, we use non-parametric DEA to estimate efficiency. Data Envelopment Analysis is a generalization of the non-parametric technique developed by Farrell (1957) to measure efficiency. Charnes, Cooper and Rhodes (1978, 1979, 1981) generalised the DEA framework to a multiple-output-multiple-input framework using the mathematical programming approach which is referred to as the Charnes, Cooper and Rhodes (CCR) model. The essential idea of the CCR model is to minimize the weighted input-output ratio subject to certain restrictions on the production technology. These are *constant returns to scale*, *strong disposability* and *convexity*. Convexity and returns to scale are obvious. Disposability generally refers "to the ability to stockpile or dispose of unwanted commodities" (Farrell *et al*, 1994). With some algebraic manipulation, this boils down to:

$$\begin{aligned} & \max_{E_f, \lambda} E_f \\ \text{subject to: } & y_f \leq Y\lambda, \\ & X\lambda \leq E_f x_f, \\ & \lambda \geq 0 \end{aligned}$$

The matrices X and Y are assumed to satisfy Karlin conditions that require strictly positive row and column sums. In the DEA, we judge the performance of a firm on the basis of its ability to increase output given the restrictions placed by the best-practiced firms. From this point of view, E_f denotes the Debreu-Farrell output efficiency measure.

The imposition of constraint on the intensity vector λ guarantees that E_f lies between zero and one. The above problem assumes Constant Returns to Scale (CRS).

Zonal Classification

India is a large country with wide variations in the socio-economic culture across its length and breadth. It is well known that education and its determinants are shaped by the socio-political culture of the respective communities. A casual look at our country will reveal various differences among the Northern and Southern, Western and Eastern parts of the

country. The North-East, with its largely tribal population, has some unique features of its own. We wish to capture the effects through zonal dummies.

In order to facilitate our analysis, we have segregated the districts into five zones: Northern districts, North-Eastern districts, Eastern districts, Western districts, Southern districts respectively. This zone-wise district segregation is incorporated into five state zones respectively. We describe the zonal classifications of the state in Table 1¹ and compare and contrast the zone-wise indicators in the following sections.

TABLE 1
Zonal Classification of the States/UTs

Zone	State/UT
Northern	Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand
North-Eastern	Arunachal Pradesh, Mizoram, Meghalaya, Nagaland, Manipur, Tripura, Sikkim
Eastern	Assam, West Bengal, Orissa, Jharkhand, Bihar
Western	Chhattisgarh, Madhya Pradesh, Gujarat, Maharashtra, Daman & Diu, Dadra & Nagar Haveli
Southern	Karnataka, Kerala, Andhra Pradesh, Tamil Nadu, Puducherry, Goa, Lakshadweep, Andaman & Nicobar Islands

Estimating Poverty in Education

If we pay attention to the scenario of primary education in India, there are many ills plaguing educational scenario in India at primary level. In our analysis we have considered mainly indicators that are quantifiable in a definite form (such as proportion of schools without building, proportional distribution of schools having no pucca building etc). Specifically we note the factors as follows:

- (i) *Core Poverty Indicators*
- proportion of schools without building²
 - proportion of schools having no pucca building
 - proportional distribution of schools without classrooms
 - proportion of single classroom schools
 - proportion of classrooms in "bad" condition
 - proportion of classrooms requiring major repair

¹ For zonal classification of the districts, see Appendix.

² The above components of core poverty reflect various layers of poverty. The first component reflects schools that can be named as destitute – they are deprived from the minimum level of a dignified existence. The other components are less severe than this. However, they together constitute a basic deprivation – existence of decent classrooms. It is highly questionable if teaching can ever prosper in a situation where even classrooms are missing.

(ii) *Input Poverty Indicator*(a) proportion of single-teacher schools³(iii) *Facility Poverty Indicators*

(a) proportion of schools no drinking water facility

(b) proportion of schools having no common toilet

(c) proportion of schools having no girl's toilet

(d) proportion of schools without blackboard

The results are given in Table 2. Certain patterns follow from our analysis. First, comparing across different poverty indices, it is evident that core poverty and facility poverty are more dominating than input poverty. In other words, this indicates that inadequacy in infrastructure network is the most serious bottleneck of our educational system. Supply of teachers is less serious than this. Thus, we may find teachers with no classrooms or blackboards to teach. Hence, their efficiency is seriously constrained by the availability of adequate support system.

TABLE 2
Mean of the Core Poverty, Input Poverty and Facility Poverty Index (2005-06)

Zone	Poverty		
	Core Poverty	Input Poverty	Facility Poverty
Northern	0.34 (0.26) N=187	0.16 (0.16)	0.24 (0.16)
North-Eastern	0.39 (0.05) N=55	0.26 (0.26)	0.50 (0.17)
Eastern	0.34 (0.04) N=132	0.17 (0.13)	0.48 (0.11)
Western	0.34 (0.08) N=127	0.21 (0.14)	0.40 (0.11)
Southern	0.78 (4.48) N=103	0.10 (0.10)	0.27 (0.13)

Note: Figures in parentheses represent standard deviation

We have constructed indices comprising these three indices following Anand-Sen formula in Table 3. This table shows that mean of grand poverty is highest in North-Eastern districts and lowest in Northern districts. On the other hand, input poverty and facility poverty are maximum in North-Eastern districts. The bleak picture of our primary education system becomes very clear by these results.

³ In the standard terminology, a school having a high pupil-teacher ratio is considered to be of low quality. Here, however, we are not concerned with quality per se, but the conditions of extreme deprivation. Hence, our focus is on the least privileged schools and not on the worse quality schools as such. In effect, we are considering only the worst among the worst in the analysis of poverty. The distinction is akin to the distinction between inequality and poverty in the development literature (Sen, 2006)

TABLE 3
Mean of Grand Poverty Index

Zone	2005-06	Number of Districts
Northern	0.28 (0.09)	187
North-Eastern	0.44 (0.11)	55
Eastern	0.38 (0.07)	132
Western	0.35 (0.08)	127
Southern	0.29 (0.05)	103

Note: Figures in parentheses represent standard deviation

Social Indicators

In our analysis, we have classified social indicators into three broad categories viz, vulnerable group, gender deprivation, and facility gap. Here under vulnerable group, we include proportion distribution of SC teachers to total teachers, proportion of ST teachers to total teachers, proportion of SC enrolment, and proportion of ST enrolment at primary level. Under gender deprivation, we also include proportion of female teachers to proportion of male teachers, proportion of girl's enrolment to proportion of boy's enrolment, proportion of trained female teachers to proportion of trained male teachers. And lastly, under facility gap we include proportion of schools having girl's toilet facility to proportion of schools having common toilet facility. These three dimensional social indicators are combined using an un-weighted mean to get the grand social indicator. After grand indexing the social indicators zone-wise, we compute mean and standard deviation of the respective zone for the year 2005-06 in Table 4.

TABLE 4
Mean of the Social Indicator Index

Zone Districts	2005-06	Number of Districts
Northern	0.17 (0.05)	187
North-Eastern	0.17 (0.08)	55
Eastern	0.25 (0.09)	132
Western	0.14 (0.06)	127
Southern	0.16 (0.06)	103

Note: Figures in parentheses represent standard deviation

From Table 4, we find a clear zonal dichotomy in the changes of social indicators. For two zones (Northern, North-Eastern) it is same. It is highest for the Eastern districts and lowest for the Western districts. For Southern districts it is very poor. This picture in social indicator is a sad commentary on our commitment to eradicating social ills within the purview of primary education.

Policy Indicators

In our analysis, policy indicators include proportion of schools that received school development grant and the proportion of schools received TLM grant, proportion of students getting free textbooks, proportion of girls receiving free textbooks to proportion of boys receiving free textbooks, proportion of students getting free stationary, proportion of girls receiving free stationary to proportion of boys receiving free stationary. After grand indexing the policy indicators zone-wise, we compute mean and standard deviation of the respective zone for the year 2005-06 only. Now we discuss mean of Policy Indicators Index from Table 5.

TABLE 5
Mean of the Policy Indicator Index

Zone Districts	2005-06	Number of Districts
Northern	0.44 (0.09)	187
North-Eastern	0.22 (0.09)	55
Eastern	0.39 (0.11)	132
Western	0.45 (0.08)	127
Southern	0.33 (0.08)	103

Note: Figures in parentheses represent standard deviation

From Table 5, it is seen that policy indicator is highest for Western districts, and Northern districts come close to Western districts. It is lowest for North-Eastern districts. For Eastern and Southern districts, it is moderate.

Efficiency Indicators and DEA Efficiency Scores

Efficiency indicators should be related to the performances of the schools. In our analysis, efficiency indicators include proportion of schools having $PTR \geq 100$, proportional distribution of schools having enrolment ≥ 50 , proportion enrolment in schools with SCR above 60. After grand indexing the efficiency indicators zone-wise, we compute mean and standard deviation of the respective zone for the year 2005-06. The efficiency indicator index is presented in Table 6.

TABLE 6
Mean of Efficiency Indicators and DEA Efficiency Scores (2005-06)

Zone Districts	Efficiency Indicators	DEA Technical Efficiency Indicators
Northern	0.39 (0.23)	0.46 (0.19)
North-Eastern	0.25 (0.16)	0.37 (0.29)
Eastern	0.44 (0.20)	0.55 (0.21)
Western	0.17 (0.11)	0.47 (0.20)
Southern	0.27 (0.16)	0.39 (0.17)

Note: Figures in parentheses represent standard deviation

From Table 6, it is clear that the mean of efficiency indicator of the Eastern district zone is highest and lowest for Western district zone, in comparison with other district zones in 2005-06. For North-Eastern and Southern districts it is moderate but mean of the efficiency indicator of Northern districts is close to Eastern districts.

We also present the DEA technical efficiency scores in this table. Here we have attempted to restrict the total number of input and output variables in the analysis to ensure some degree of discretionary power remained. The model hence involved only four inputs, viz. (i) proportion of schools having drinking water facility in school, (ii) proportion of schools having girl's toilet in school, (iii) classroom-student ratio, and (iv) teacher-pupil ratio, and one output – Gross Enrolment Ratio. It may be argued that net enrolment ratio is more appropriate. However, the relevant data is not forthcoming for all the states for all the years. The specification of output is a challenging task. Schooling of children is a factor determined by demand side as well as supply side variables. There are many situations where children have access to schooling and homogeneous supply side factors. In spite of that we come across many children remain out of school. Children's participation in schools is the outcome of household's decision-making process in the absence of any compulsory education law of the state. So we have decided to include Gross Enrolment Ratio as our output variable.

From Table 6 we also see that for all the years, technical efficiency is much higher in Eastern districts than rest of the zone districts. In case of North-Eastern districts, technical efficiency is lowest. But in case of Northern, and Western districts, technical efficiency has more or less same. Technical efficiency of Southern districts is much better than North-Eastern districts.

Our DEA efficiency scores are much higher than the standard efficiency indicator for two zones – East and West. It also gives contradictory result for the South zone (except the last year). Efficiency indicators mainly point out to the performance of teaching institutions while DEA scores measure the degree of utilization of the available resources. This discrepancy may be a reflection of the fact that these zones are seriously constrained by the dearth of resources. However, whatever resources are available have been efficiently utilized.

Determinants of Efficiency

Having traced down the various indicators associated with the primary education system, it is now necessary to link them up. For this we argue that our ultimate aim is to explain the incidence of efficiency (both efficiency indicators and DEA scores). For this we link up all the other factors with these two factors separately through regression analysis. However a standard problem of such estimation lies in the fact that efficiency indicators are truncated variables (lying between zero and one). As such Ordinary Least Squares (OLS) might not be very suitable for this purpose (Maddala, 1983). It would be better to consider certain other forms of truncated estimation procedure. We have considered three types of estimation. The first is OLS with White's correction [OLS (HETCOV)]. Next is the Jackknife resampling technique that tests the sensitivity of the OLS parameters. Finally we measured a Tobit regression. All these regression results are shown in Tables 7 and 8.

TABLE 7
Determinants of DEA Efficiency Scores (2005-06)

<i>Variables</i>	Dependent Variable: DEA Technical Efficiency		
	<i>OLS (HETCOV)</i> <i>N=604</i>	<i>Jackknife</i> <i>N=604</i>	<i>Tobit</i> <i>N=604</i>
Poverty indicator	-0.034391** (0.02127)	-0.033897 (0.021718)	-0.034802* (0.20462)
Policy indicator	-0.27470** (0.04625)	-0.27516 (0.047472)	-0.27542** (0.52062)
Social indicator	-0.073979 (0.05903)	-0.072598 (0.060563)	-0.074345 (0.61381)
Northern districts dummy	0.10285** (0.01042)	0.10287 (0.010549)	0.10288** (0.12850)
North-Eastern districts dummy	-0.073820** (0.01711)	-0.073539 (0.017526)	-0.073710** (0.18699)
Eastern districts dummy	0.092231** (0.01450)	0.092324 (0.014763)	0.092403** (0.16357)
Western districts dummy	0.13790** (0.01047)	0.13792 (0.010633)	0.13782** (0.14369)
Constant	0.43895** (0.02309)	0.43855 (0.023635)	0.43938** (0.27113)
Log-likelihood	596.607	596.607	592.67901

Note: Figures in parentheses represent standard errors.

** Indicates level of significance at 1 percent.

* Indicates level of significance at 5 percent.

It is clear from Tables 7 and 8 that DEA scores and the standard efficiency indicators both are strongly related with the other indicators and roughly in a similar fashion. As expected poverty has a greater negative effect on technical efficiency. Lack of adequate resources will tend to have sufficient negative impact on technical efficiency scores. A particularly notable feature is the insignificant relation with social indicator. Normally, it is argued that more emphasis on social good may have an adverse impact sufficiently on efficiency. In education, more emphasis on equity does not result in a deterioration of overall efficiency. However, public policy indicator does not seem to affect efficiency in an adverse way. Among the various zones, Eastern districts have a significantly high efficiency both under DEA and standard efficiency indicators. As for DEA scores, the North-Eastern districts have a significantly low value compared to Western districts under the alternative measure.

TABLE 8
Determinants of Efficiency Indicator

Variables	Dependent Variable: Efficiency Indicator		
	<i>OLS (HETCOV)</i> N=604	<i>Jackknife</i> N=604	<i>Tobit</i> N=604
Poverty indicator	-0.071544** (0.02577)	-0.07115 (0.02625)	-0.072010** (0.24231)
Policy indicator	-0.33842** (0.05414)	-0.33813 (0.05559)	-0.33958** (0.56376)
Social indicator	-0.10370 (0.05995)	-0.10209 (0.06167)	-0.10415 (0.62540)
Northern districts dummy	0.10912** (0.01101)	0.10910 (0.011158)	0.10918** (0.13161)
North-Eastern districts dummy	-0.06502** (0.01739)	-0.064773 (0.017799)	-0.06485** (0.18867)
Eastern districts dummy	0.10745** (0.01754)	0.10733 (0.01059)	0.10768** (0.17596)
Western districts dummy	0.13135** (0.01044)	0.13143 (0.010592)	0.13121** (0.14321)
Constant	0.46810** (0.02600)	0.46759 (0.02667)	0.46863** (0.30103)
Log-likelihood	600.303	600.303	596.391

Note: Figures in parentheses represent standard errors.

** Indicates level of significance at 1 percent.

* Indicates level of significance at 5 percent.

Conclusion

Our analysis of the primary education system in India reveals certain disturbing features. First, the system is seriously jolted by the lack of adequate resources that are necessary to boost up a decent standard. There appear wide zonal discrepancies in this regard. Second, discrepancies with regard to social and policy indicators are more or less uniformly distributed. However, resource-use efficiency (as measured by DEA) and standard efficiency indicators indicate wide inter-zonal differences. The results from these two approaches are broadly similar with some minor deviations. Both of them show almost similar correlation with the other variables considered by us. Poverty infringes upon efficiency in a negative way sufficiently. Social indicators are not significantly related to efficiency improvement. Among the districts, Eastern districts show the best picture. Policy indicator fails to have any significant effect on the level of efficiency. In all, the picture is alarming and requires immediate policy action.

References

- Charnes, A.; W.W. Cooper; A.Y. Lewin and L.M. Seiford (1995): *Data Envelopment Analysis - Theory, Methodology and Applications*, Kluwer.
- Elementary Education in India, Progress Towards UEE. *DISE 2005-06 - Flash Statistics*. National University of Educational Planning and Administration New Delhi.
- Fukuda Parr Sakiko; A.K. Shiva Kumar (ed.): *Readings in Human Development: Concepts, Measures, and Policies for a Development Paradigm*. Oxford University Press, Human Development Report Office, UNDP, New York. pp. 228-44,
- Gujarati, Damodar N: *Basic Econometrics*, Third Edition; McGraw-Hill Inc.
- Hanushek, Eric A. (1995): Interpreting Recent Research on Schooling in Developing Countries. *The World Bank Research Observer*, Vol. 12, No. 2. pp. 227-46.
- Kumar, Niraj (2005): Primary Education in India, Initiatives and Prospects. *Kurukshetra*, Vol.53, No.9, pp 9-14.
- Mehta, Arun C. (April 2007): *Student Flow at Primary Level an Analysis Based on DISE Data*. National University of Educational Planning and Administration, New Delhi.
- Maddala, G.S. (1983): *Limited Dependent and Qualitative Variables in Econometrics*. Cambridge University Press, New York.
- NIEPA & Government of India (2005): Elementary Education in India - Where Do We Stand? *Analytical Report*, 2004. New Delhi (forthcoming).
- Rao, D.S.; Prasad-Battese George E. Coelli; Tim, Kluwer (1998): *An Introduction to Efficiency and Productivity Analysis*. Academic Publishers, London. pp. 133-60.
- Vimala Ramachandran (2004): Backward and Forward Linkages that Strengthen Primary Education. *Kurukshetra*, Vol.52, No.11, pp 17-21.
- Sengupta A. and Pal, N.P. (2009): Poverty and Efficiency in the Primary Education System of India - An Analysis Based on DISE Data. *Journal of Educational Planning and Administration*, Vol. XXIII, No. 1. New Delhi. pp. 33-47
- Madhura Swaminathan and Vikas Rawal: Primary Education for All. *India Development Report, 1999-2000*. Oxford University Press.
- Sen A (2006): Identity and Violence - The Illusion of Destiny. Penguin Books, New Delhi.
- Sengupta, Atanu; Madhumita Sengupta; and Manas Ghosh (2004): *Economics of Learning - A Village Level Study Based on Midnapore (West) District, West Bengal*. Paper presented at a National Seminar in Vidyasagar University, West Bengal, March 30-31.

Northern Districts	North-Eastern Districts	Eastern Districts	Western Districts	Southern Districts
Kupwara	North sikkim	Kokrajhar	Koriya	Adilabad
Baramula	West sikkim	Goalpara	Surguja	Nizamabad
Srinagar	South sikkim	Bongaigaon	Jashpur	Karimnagar
Badgam	East sikkim	Barpeta	Raigarh (chhattisgarh)	Medak
Pulwama	Tawang	Kamrup	Korba	Hyderabad
Anantnag	West kameng	Nalbari	Janjgir - champa	Rangareddi
Kargil	East kameng	Darrang	Bilaspur (chhattisgarh)	Mahbubnagar
Doda	Papum pare	Marigaon	Kawardha	Nalgonda
Udhampur	Lower subansiri	Nagaon	Rajnandgaon	Warangal
Punch	Upper subansiri	Sonitpur	Durg	Srikakulam
Rajauri	West siang	Lakhimpur	Mahasamund	Vizianagaram
Jammu	East siang	Tinsukia	Dhamtari	Visakhapatnam
Kathua	Upper siang	Dibrugarh	Kanker	East Godavari
Leh (ladakh)	Dibang valley	Sibsagar	Baster	West Godavari
Chamba	Lohit	Jorhat	Dantewada	Krishna
Kangra	Changlang	Golaghat	Raipur	Guntur
Lahul & spiti	Tirap	Karbi Anglong	Sheopur	Prakasam
Kullu	Kurung kumey	North Cachar Hills	Morena	Nellore
Hamirpur (h.p.)	Lower Dibang Valley	Cachar	Bhind	Cuddapah
Una	Mon	Karimganj	Gwalior	Anantapur
Bilaspur (h.p.)	Tuensang	Hailakandi	Datia	Chittoor
Solan	Mokokchung	Dhubri	Shivpuri	Khammam
Sirmaur	Zunheboto	Dhemaji	Guna	Kurnool
Shimla	Wokha	Darjiling	Tikamgarh	Belgaum
Kinnaur	Dimapur	Jalpaiguri	Chhatarpur	Bagalkot
Mandi	Kohima	Koch bihar	Panna	Bijapur
Gurdaspur	Phek	Uttar dinajpur	Damoh	Gulbarga
Amritsar	Senapati	Dakshin dinajpur	Satna	Bidar
Kapurthala	Tamenglong	Maldah	Rewa	Raichur
Jalandhar	Churachandpur	Murshidabad	Umaria	Koppal
Nawanshahr	Bishnupur	Birbhum	Shahdol	Gadag
Ropar	Thoubal	Barddhaman	Sidhi	Dharwad
Fatehgarh Sahib	Imphal west	Nadia	Neemuch	Uttara Kannada
Ludhiana	Imphal east	North 24 Pargana	Mandsaur	Haveri
Moga	Ukhrul	Hugli	Rattlam	Bellary
Ferozepur	Chandel	Bankura	Ujjain	Davangere
Muktsar	Mamit	Puruliya	Shajapur	Shimoga
Faridkot	Kolasib	Haora	Dewas	Udupi
Bathinda	Aizawl	Kolkata	Jhabua	Chikmagalur
Mansa	Champhai	South 24 Pargana	Dhar	Tumkur
Patiala	Serchhip	Purba Medinipur	Indore	Kolar
Hoshiarpur	Lunglei	Paschim Medinipur	Khargone	Bangalore
Sangrur	Lawngtlai	Siliguri	Barwani	Bangalore Rural
Chandigarh (U.T.)	Saiha	Garhwa	Khandwa	Mandya
Uttarkashi	West	Palamu	Rajgarh	Hassan
Chamoli	South	Chatra	Vidisha	Kodagu
Rudraprayag	Dhalai	Hazaribag	Bhopal	Mysore
Tehri garhwal	North	Kodarma	Sehore	Chamrajnagar
Dehradun	East Garo Hills	Giridih	Harda	Chitradurga
Garhwal	South Garo Hills	Deoghar	Hoshangabad	Dakshina Kannada
Pithoragarh	West khasi Hills	Sahibganj	Katni	North goa
Bageshwar	Ri bhoi	Pakaur	Jabalpur	South goa
Almora	East khasi Hills	Dumka	Narsinghpur	Lakshadweep
Champawat	Jaintia Hills	Dhanbad	Dindori	Kasaragod
Udham Singh Nagar	West Garo hills	Bokaro	Mandla	Kannur

Northern Districts	North-Eastern Districts	Eastern Districts	Western Districts	Southern Districts
Hardwar		Ranchi	Chhindwara	Kozhikode
Nainital		Lohardaga	Seoni	Malappuram
Panchkula		Gumla	Balaghat	Palakkad
Ambala		Pashchimi Singhbhum	Ashok nagar	Ernakulam
Yamunanagar		Jamtara	Anup pur	Idukki
Kaithal		Saraikela-kharsawan	Burhanpur	Kottayam
Karnal		Simdega	Betul	Alappuzha
Panipat		Latehar	Sagar	Pathanamthitta
Sonipat		Godda	Raisen	Kollam
Jind		Purbi Singhbhum	Kachchh	Thiruvananthapuram
Fatehabad		Pashchim champaran	Banas Kantha	Thrissur
Sirsa		Purba champaran	Patan	Wayanad
Hisar		Sheohar	Mahesana	Chennai
Bhiwani		Sitamarhi	Sabar Kantha	Kancheepuram
Rohtak		Madhubani	Gandhinagar	Vellore
Jhajjar		Supaul	Ahmadabad	Dharmapuri
Mahendragarh		Araria	Surendranagar	Tiruvannamalai
Rewari		Kishanganj	Rajkot	Viluppuram
Gurgaon		Katihar	Jamnagar	Salem
Faridabad		Madhepura	Junagadh	Namakkal
Kurukshetra		Saharsa	Amreli	Erode
North West Delhi		Darbhanga	Bhavnagar	The nilgiris
North Delhi		Muzaffarpur	Anand	Coimbatore
North East Delhi		Gopalganj	Kheda	Dindigul
East Delhi		Siwan	Panch mahals	Karur
New Delhi		Saran	Dohad	Perambalur
Central Delhi		Samastipur	Vadodara	Cuddalore
West Delhi		Begusarai	Narmada	Nagapattinam
South Delhi		Khagaria	Bharuch	Thiruvapur
South West Delhi		Bhagalpur	Surat	Thanjavur
Ganganagar		Banka	Navsari	Pudukkottai
Hanumangarh		Munger	Valsad	Madurai
Bikaner		Lakhisarai	Porbandar	Theni
Churu		Sheikhpura	The dangs	Virudhunagar
Jhunjhunun		Nalanda	Diu	Ramanathapuram
Alwar		Patna	Daman	Thoothukkudi
Bharatpur		Bhojpur	Silvassa	Tirunelveli
Dhaulpur		Buxar	Nandurbar	Kanniyakumari
Karauli		Kaimur (bhabua)	Jalgaon	Krishanagiri
Sawai Madhopur		Rohtas	Buldana	Thiruvallur
Sikar		Aurangabad (bihar)	Akola	Tiruchirappalli
Nagaur		Gaya	Washim	Sivaganga
Jodhpur		Nawada	Amravati	Yanam
Jaisalmer		Jamui	Wardha	Puducherry (District)
Barmer		Jehanabad	Nagpur	Mahe
Jalor		Purnia	Bhandara	Karaikal
Sirohi		Vaishali	Gondiya	Andamans
Pali		Bargarh	Gadchiroli	Nicobars
Ajmer		Jharsuguda	Chandrapur	
Tonk		Sambalpur	Nanded	
Rajsamand		Deogarh	Parbhani	
Udaipur		Sundargarh	Jalna	
Dungarpur		Mayurbhanj	Aurangabad (Maharashtra)	
Banswara		Balasore	Nashik	
Chittaurgarh		Bhadrak	Thane	
Kota		Kendrapara	Mumbai (Suburban)	

Primary Education in India

Northern Districts	North-Eastern Districts	Eastern Districts	Western Districts	Southern Districts
Jaipur		Jagatsinghpur	Mumbai	
Bundi		Cuttack	Raigarh (Maharashtra)	
Baran		Jajpur	Pune	
Dausa		Dhenkanal	Ahmadnagar	
Bhilwara		Nayagarh	Bid	
Jhalawar		Khordha	Solapur	
Saharanpur		Puri	Satara	
Muzaffarnagar		Ganjam	Ratnagiri	
Bijnor		Gajapati	Sindhudurg	
Moradabad		Kandhamal	Kolhapur	
Rampur		Boudh	Sangli	
Jyotiba Phule Nagar		Sonepur	Hingoli	
Meerut		Bolangir	Latur	
Baghpat		Nuapada	Dhule	
Ghaziabad		Kalahandi	Osmanabad	
Gautam Buddha Nagar		Nawarangapur	Yavatmal	
Bulandshahr		Koraput		
Aligarh		Malkangiri		
Agra		Keonjhar		
Firozabad		Angul		
Etah		Rayagada		
Mainpuri				
Budaun				
Bareilly				
Pilibhit				
Shahjahanpur				
Kheri				
Sitapur				
Hardoi				
Unnao				
Lucknow				
Rae bareli				
Farrukhabad				
Kannauj				
Etawah				
Kanpur Dehat				
Kanpur Nagar				
Jalaun				
Jhansi				
Hamirpur				
Mahoba				
Banda				
Chitrakoot				
Fatehpur				
Pratapgarh				
Kaushambi				
Barabanki				
Faizabad				
Sultanpur				
Bahraich				
Shrawasti				
Balrampur				
Gonda				
Basti				
Sant Kabir Nagar				
Maharajganj				

Northern Districts	North-Eastern Districts	Eastern Districts	Western Districts	Southern Districts
Gorakhpur				
Deoria				
Azamgarh				
Mau				
Ballia				
Jaunpur				
Ghazipur				
Chandauli				
Varanasi				
Sonbhadra				
Bhadohi				
Mathura				
Auraiya				
Allahabad				
Siddharthnagar				
Mirzapur				
Lalitpur				
Kushinagar				
Hathras				
Ambedkar Nagar				

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Women's Education and Empowerment in Rural Areas – A Case Study of West Bengal, India

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Santiranjan Pal[€]

Abstract

Starting with the global documents on women education and empowerment, this paper makes an attempt to examine rural and urban women in West Bengal, particularly with respect to the availability of educational opportunities and empowerment. All the results were on the basis of a 10 per cent sampling of households in selected villages classified according to soil-agro-climatic zones of West Bengal.

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Introduction

Globally women comprise more than 40% of the agricultural workforce - a pattern that is found in all FAO regions and it is also expanding. The migration has pulled males out of rural occupations and rural communities to a far greater degree than rural women. Moreover, women tend to work in low productive jobs more often than men, especially those who remain in the agricultural sector (Mehra and Gammage, 1999). Women in male-headed households also generally have the prime responsibility of food production while men commonly concentrate on cash crops. Women's roles in food production frequently go beyond providing labour and encompass organizing the production process, recruiting additional labour and hiring mechanized services, as well as storing, selling and controlling the use of crops. In other words, they are "own account farmers" (Ismail Serageldin, 2000).

In spite of such services in agricultural field women have very unequal access to and control over rural land and associated resources (water, woody plants, fishery resources, etc) (Brown & Das Chowdhury, 2002). The probable reasons may be: (i) food production by itself is a long-term enterprise and requires physical and legal security for agricultural producers whether they are men or women, and (ii) effective resource use also requires fair and secure access to basic infrastructures and services that underpin effective land-use and improved agricultural technologies.

There are many new pressures affecting traditional arrangements related to women and land that need to be understood and resolved at the family, community and national levels. To summarize, some of the greatest aspects include:

- **Changing socio-economic conditions**, such as increased population, new types of employment and growing cash economy; migration to urban and peri-urban areas; incorporation and/or replacement of traditional and religious institutions and local government structures; divorce; and changes in inheritance patterns.
- **Environmental degradation and resource shortages** caused by the decreasing supply of land and other natural resources for specific purposes, in absolute and relative (person/land ratio) terms, and by the growing competition among land users. There are in reality two separate issues, which are often interlinked, but not necessarily related to cause and effect. It is a question again of the institutional arrangement controlling access to agricultural technology necessary to find sustainable land-use practices.
- **Education and economic opportunities** for women, which open up a wider range of choices and therefore a wider variety of needs, situations etc. (e.g. financing for small business).
- **Migrant labour and rural migration** changing the *de facto* status of household members remaining on the land and their family and community relationships, usually putting increased responsibility on women and the aged without increased decision-making power.

So undoubtedly, women form an increasingly important segment of the local and national economy in addition to providing primary family maintenance (ECOSOC, 1999). It has also been shown (World Food Summit, 1996) that women tend to reinvest more resources in the family unit than men and this reinvestment is the building block for nutrition, health, education and effective poverty alleviation. Indeed, in both developed and

developing countries have shown that the success rate of rural as well as urban small businesses started by women is significantly higher than for those started by men (ILO, 1999).

In rural Bengal, labour force participation of women was 10 percent according to the Labour Force Survey of 1985/86. But in 1989 when the Labour Force Survey included activities – as threshing, food processing and poultry rearing, the economic activity rate went up to 63 percent (UN, 1995).

Now education is an endowment that enables a woman to use the skill and knowledge to obtain the entitlements. Furthermore, considerable emphasis has been placed in the literature on education (Roy and Tisdell, 2000), primary education being the key to the success of women's empowerment process. To know the impact of education on women, we need to have an understanding of the position of women in the Indian setting first. Table 1 gives certain self-revealing demographic statistics of women in India.

TABLE 1
Trend in Female Population, Dependency Ratio and Literacy Rate

Year	Female Population (million)	Sex Ratio	Dependency Ratio	Literacy Rate (%)
1971	213	941	887	13.0
1981	264	930	939	18.7
1991	331	933	812	24.8
2001	407	929	NA	39.29

Source: Census of India Report 1991, 2001 and Agricultural Research Data Book, 1999.

The worldwide status of female literacy can be visualized from Table 2.

TABLE 2
Literacy Status in Nine Most Populous Countries

Country	Total Non-Literate Population 15+ Age (millions)	Literacy Rate 15+ (%)		
		Total	Male	Female
Mexico	6.52	91	92	90
Indonesia	15.10	90	94	87
Brazil	17.36	89	88	89
China	87.01	91	95	87
India	268.42	61	73	48
Egypt	14.21	71	83	59
Pakistan	48.81	50	63	36
Bangladesh	52.53	43	52	33

Source: Education for All – Global Monitoring Report – 2007.

The table shows that India has the highest not literate population of 15+ ages and percentage of women literate is distinctly lower than the males and it is only 48%.

TABLE 3
Indicators of Human Development in India and Important Asian Countries (2007-2008)

Country	Life Expectancy at Birth (years)	Infant Mortality Rate (per '000 births)	Adult Literacy Rate (%)
India	68.59	55	61.0
China	72.88	23	90.9
Korea	79.10	4.1	NA
Thailand	72.55	10.6	92.6

Source: CIA World Fact Book, 2008; UNDP Report, 2007/2008.

It is also assumed that in developing countries where the ratio of rural population to total population is higher, the percentage of illiterate rural women will be proportionately higher (FAO, 1999). Education along with food and shelter should be accorded high priority by the governments of the third world countries and subsequent expansion in education should narrow the gap considerably. Education would not only serve as a vehicle for the economic independence of the individual but would be a harbinger of social change, assuming a special role in breaking economic and caste barriers. The Directive Principles of the Indian Constitution enshrine the objective of free compulsory education for all children till the age of fourteen. There has been an improvement in the literacy rate as well as other indicators of human development over time, but in comparison with some of the other Asian economies like South Korea, Thailand and China, it fades into insignificance (Table 3). But even within India, we find wide disparity in human development profiles across states. Thus, it is important to look at the role of the state in improving the level of education. (Pradhan and Singh, 2000).

Institutional changes and a large-scale programmes of rural electrification in the 1980s and early 1990s were followed by accelerated agricultural production; the rate of growth of agricultural production in West Bengal was the highest among the 17 most populous states of India from the 1980s through the mid-1990s (Rawal et. al, 1998 & Saha et. al, 1994).

The proportion of girls enrolled both at primary and upper primary levels continue to be lower than the gross enrolment of boys. From Table 4, it is found that in West Bengal the enrolment of boys in primary level is 112.92%, while it is 111.27% in the case of girls in the year 2004-05. In India, the percentage of enrolment for boys and girls are 111.41 and 105.48%, respectively. But the picture is not at all satisfactory as we move towards the upper primary level. In India 74.84% boys and 65.76% of girls are enrolled in upper primary level, while in West Bengal these percentages are 69.43 and 63.31, respectively (Educational Statistics, Ministry of HRD, Govt. of India, 1998-99, 2004-05)).

Again Table 5 shows the proportion of literates in West Bengal has been higher than the corresponding figure for India at every post-Independence Census after 1961.

TABLE 4
Gross Enrolment Ratio in Classes I-V and VI-VIII for West Bengal and India
(1998-99 & 2004-2005)

States	Year	Primary Classes (I-V)			Upper Primary Classes (VI-VIII)		
		Boys	Girls	Total	Boys	Girls	Total
West Bengal	1998-1999	99.2	87.01	98.1	56.99	43.60	50.50
	2004-2005	112.92	111.27	112.11	69.43	63.31	66.46
India	1998-1999	96.86	82.85	94.85	65.27	49.08	57.58
	2004-2005	111.41	105.48	108.56	74.84	65.76	70.51

Source: Selected Educational Statistics, Ministry of HRD, Govt. of India (1998-99, 2004-05).

TABLE 5
Literate Persons as Percentage of All Persons in West Bengal and India
(1951-2001)

Year	Males		Females	
	West Bengal	India	West Bengal	India
1951	30.9	25.0	11.5	12.9
1961	40.3	34.3	17.0	12.9
1971	42.8	39.5	22.4	18.7
1981	50.7	46.7	30.3	24.9
1991	56.6	52.7	38.4	32.1
2001	77.58	75.96	60.22	54.28

Source: Census of India, various volumes.

Literacy rates, unequal across the sexes, also continue to be steeply unequal across castes and communities. Data in Table 6 indicate that although Dalits (Scheduled Caste persons) require improvement educationally, from 1971 onwards, literacy among Dalits in West Bengal has remained better compared to the Indian average for Dalits.

TABLE 6
Literate Dalit Persons as Percent of All Persons in West Bengal and India
(1961-2001)

Year	Males		Females	
	West Bengal	India	West Bengal	India
1961	10.4	17.0	0.6	3.3
1971	25.5	22.3	9.2	6.4
1981	34.3	30.9	13.7	10.8
1991	44.4	40.2	23.3	19.0
2001	60.5	48.5	36.9	32.0

Source: Census of India, various volumes

Adivasi (Scheduled Tribes persons) in West Bengal, however, and Adivasi women in particular, lag behind Adivasi women in other states in respect of literacy (Table 7).

TABLE 7
Literate Adivasi Persons as Percent of All Persons in West Bengal and India
(1961-2001)

Year	Males		Females	
	<i>West Bengal</i>	<i>India</i>	<i>West Bengal</i>	<i>India</i>
1961	14.4	13.8	1.8	3.2
1971	14.5	17.6	3.0	4.9
1981	21.2	24.5	5.0	8.0
1991	32.3	32.5	12.0	14.5
2001	47.4	29.6	29.2	18.2

Source: Census of India, various volumes

Thus, keeping in mind the above-mentioned worldwide as well as within country and state level information, the present study conceives the following assumptions about the importance of women education:

- i) Women education is one of the essential instruments for lower mortality at birth, higher life expectancy.
- ii) The education of women is an equally relevant factor in the country's economic growth as it has direct bearings on individual health and child nourishment.
- iii) The participation of women in decision-making process concerning their own lives can create new opportunities for social change, especially for an effective family planning.
- iv) Women education is one of the essential instruments for better population.

The Platform of Actions set up by the Fourth World Conference on Women (1995) stressed the need for enhancing women's skills, knowledge and access to such information for proper utilization of resources towards overall development of the family, a micro unit of the society. This was also stressed by the Director-General, FAO, 1999 that women's education was absolutely necessary for overall development of the society as women contributed to two-thirds of the world's work-hours, produced 50 percent of world's food supplies, account for 60 per cent of the work-force in the global market.

Female education bears one of the strongest and most consistent negative relationships to fertility. Women, who obtain secondary and higher education, marry later and increase in the age of marriage has a pronounced effect on a country's fertility rate (Birdsall, 1977). Worldwide study shows that 1/4th of the households are headed by women and in other one-third of the house-holds 50 percent of the total earnings are contributed by females (Fourth World Conference on Women, 1995). It is estimated that the money value of the invisible non-monetized contribution of women towards the family is 25 to 39 percent of the Gross National Product in developing countries (ILO, 1996) and to be around \$11 trillion or almost 50 percent more than the officially estimated figure of \$23 trillion of global output (Shiv Kumar, 1996). Despite the services rendered by women in the family and work place, they make up for nearly 70 percent of the world's poor and more than 65 percent of the illiterates (UNDP, HDR, 1995). Investigation (Jain, 1985) of three villages in West Bengal and Rajasthan, covering 127 households over 12 months, found that women in the age groups 19-34, 34-44 and 44-70 spend longer hours than men in a variety of activities. Therefore

keeping in mind the above facts, the present study incorporates the adult females i.e. females attaining 18 years of age or married.

West Bengal is one of the important eastern states of India, having population around 100 millions, ruled by the Left Front government for over the last 33 years. According to Ramachandran, Swaminathan and Rawal (2003), the leading development achievements of this government have been in the countryside, where there have been two major institutional changes: land reforms and the establishment of three tier local government. In spite of this claim for radical change in the development of the state, from Table 5 it is clear that no extraordinary changes have taken place for the state; rather it is the general picture of the country as a whole.

In West Bengal, information related to the status of women in which education is playing a vital role, is very sparse and scarce. The generational change in education level of women and its effect on influencing the family planning and development is also having lots of importance. Thus, the present study aims at critically examining the status of women education in West Bengal to get an idea about the variation of education level of women across the state. As a varied range of agro-climatic conditions, and the life, rituals, culture etc., characterize the state of West Bengal, it is worthwhile to study the state by dividing it into different agro-climatic zones.

Materials and Method

West Bengal is characterized by widely varying eco-geographical regions. It has got places like Darjeeling, Kalimpong etc. at its north at an altitude of round about 2000 metres from the mean sea level, and places like Sagardweep, Nayachar, Mousuni etc. surrounded by the Bay of Bengal. In between is the vast area, enriched by the alluvial soils of the river Ganges. A part of the state is also characterized by dry and hot weather and red and laterite soil. Thus varied climatic and agricultural conditions have resulted in the variations in socio-economic, cultural, rituals of the people of the state. As a result, the state has mainly been divided into six agro-climatic zones, namely the hill zone, the terrai zone, the coastal zone, the old alluvial zone, the new alluvial zone, and the red-laterite zone. Thus, any study relating to the people of West Bengal has to be compartmentalized into six parts so as to capture the true picture of each and every zone in detail.

The present study purposively selected two villages from each zone as guided by the above factors. For each village, details of households were collected from the respective gram panchayats (lowest level of the three tier local government). Altogether 3008 families were covered in 12 selected villages spread over the six agro-climatic zones of West Bengal. According to our sampling scheme we decided to have 300 sample units. Hence, the weightage to be given while fixing the number of households to be selected randomly from each village is $\omega = n/N = 300/3008 = 0.0997$. Households were selected following simple random sampling without replacement (SRSWOR) method. To overcome the problem of misreporting and /or non-response, the study opted for adding 10% more households from each village for the survey purpose. Kesia and Chakedabad are the two selected villages from the red-laterite zone of West Bengal which have low number of households. It was decided to go in for complete enumeration and for the same reason more than 80% households were taken up from the village Kodalia. The details of sampling are presented in Table 8.

TABLE 8
Sampling Frame

Zone	District	Village	Total Number of Households	Selected Households	No. of Females
Coastal-Saline	24 Parganas (S)	Nimpith	350	40	68
		Taldihi	300	40	42
New Alluvial	Nadia	Chandamari	400	50	68
		Shikarpur	150	20	24
		Kodalia	54	25	54
		Kanagarh	104	20	24
Red-Laterite	West Midnapur	Kesia	33	30	68
		Purulia	29	28	47
Terai	Jalpaiguri	Banarhata	240	30	52
		Matigara	198	25	52
		Darjeeling	550	65	54
Hill		Sukiapokhri	600	75	102
Total			3008	450	672

It is necessary to have an idea about the characteristics of the family related data, such as land holdings, number of family members (both adult and children), their ages, education and occupational standards, monthly income and expenditure patterns etc. The descriptive statistics (mean, median, standard error, skewness, kurtosis) on each and every parameter has been calculated based on the above mentioned parameters.

Variables taken for describing the village characteristics are:

1. Land holdings (ha)/family	11. Total monthly family income
2. No. of family members	12. Monthly food expenditure/family
3. No. of adult male/family	13. Monthly education expenditure/family
4. No. of adult female/family	14. Monthly clothing expenditure/family
5. No. of male child/family	15. Monthly medical expenditure/family
6. No. of female child/family	16. Monthly cultivation expenditure/family
7. Avg. education of adult male	17. Monthly miscellaneous expenditure / family
8. Avg. education of adult female	18. Monthly total expenditure/family
9. Avg. education of male child	19. Monthly savings/family
10. Avg. education of female child	20. Monthly income of adult female/family

As has been mentioned already, there exist wide regional variations with respect to climatic conditions, geographic terrains, occupations, livelihood and above all the people of West Bengal. The present study is based on primary information collected from two selected villages in each agro-climatic zone resulting from a random sample of 450 households. Education standard of the married women are categorized into seven groups, viz. illiterate-0, up to class IV-1, V to class X-2, XI & XII-3, graduate-4, postgraduate-5 and above post graduation-6. Similarly, depending upon the type of occupation they are categorized into six groups, viz. housekeeping-1, agriculture works-2, business-3, service-4, hired labour-5, student-6. The nature of each and every factor under consideration is described with the help of different statistical measures, like arithmetic mean, standard error, etc. Empowerment quotient (X1) for married women is worked out by considering their intensity of involvement in different decision making processes of family affairs (like family

finance, savings, selling and purchasing of farm output/input etc.), family expenses (like education, cultivation, healthcare, marriages of near relatives, etc.) etc.

Variables taken for the women empowerment study are given below:

1. Present Age (yrs)- X_2	11. Family Food Expenditure (Rs)/ Month- X_{12}
2. Education standard - X_3	12. Family education expenditure (Rs) / month- X_{13}
3. Occupation standard - X_4	13. Family clothing expenditure (Rs) / month- X_{14}
4. Female income (Rs) / month - X_5	14. Family medical expenditure (Rs) / month- X_{15}
5. Age at marriage(yrs) - X_6	15. Family cultivation expenditure (Rs) / month- X_{16}
6. First bearing age (yrs)- X_7	16. Family others expenditure (Rs) / month- X_{17}
7. Number of children - X_8	17. Total expenditure (Rs) / month- X_{18}
8. Number of birth - X_9	18. Family savings (Rs) /month - X_{19}
9. Family members - X_{10}	19. Media exposure and social involvement - X_{20} , which takes into consideration the exposure of women to print, audio, audio-visual media, involvement in socio-political and economic activities
10. Total monthly family income (Rs)- X_{11}	

As education has been taken as one of the major indicators for women empowerment, women development vis-à-vis development of society, a section is devoted to the study of variations in women education in the different agro-climatic zones of West Bengal and combining the information from all the six zones. For this purpose the correlation analysis, analysis of variance, has been used as the statistical tools. Before proceeding for the analysis, the data on the educational standard of present generation married women of has been divided under three different age groups. The first group includes women who are below 30 years of age. The second group comprises women aged between 30-45 years, and the third group comprises women aged above 45 years.

Education index is one of the important indices to compare education at different levels. This index is also one of the three indices on which the human development index has been built by UNDP. It is based on the literacy index (LI) and the combined gross enrolment index (CGEI) for primary, secondary and tertiary schools. In calculating the education index, two-third weight has been given to the literacy index and one-third weight to the school enrolment index.

If x = literacy index (LI) and y = school enrolment index (CGEI)

$$\text{Then Equation Index (EI)} = \left(x \times \frac{2}{3}\right) + \left(y \times \frac{1}{3}\right)$$

For the present study, education index has been calculated at village level for both males and females separately. A comparative study has been done on males and females with the help of analysis of variance for identifying the existence of zonal variation in this respect.

Findings and Discussion

Village Characteristics

Appendix 1 gives the descriptive statistics of the selected parameters of every village. A graphical representation has also been provided in Appendix 2.

In village Kanagarh, most of the households are those of small farmers, dominated by male income earners, with an average family size of 5 and having Madhyamik standard of education. Negative and positive skewness respectively for number of male and female

children indicate that most of the families have higher number of male children than female children. The distribution of education for female child is more positively skewed and less flattened as the value of kurtosis is nearly half of that of the male child. This implies that the spread of education among female children is better than that in the male children. The positively skewed distribution of average monthly income (Rs. 10395/-) indicates that most of the families belong to lower income group. In the selected households, only in 7 families, females are found to have some income varying between Rs. 1200.00 and Rs. 4000.00. In village Kotalia, from the old alluvial zone, the mean land holding is 2.40 hec/family with standard error of 0.53 and positively skewed. Leptokurtic shape of the land holding distribution curve tells that there are more number of landless households. The average family size is around 8 and the average education standard of adult males and male children is significantly more than their female counterparts. The adult males have around Madhyamik level of education, whereas the education standard of adult females is distributed with positive skewness and platykurtic shape in between the range of illiteracy and more than graduation. In case of children, the males have higher level education than the females as per the mean value. The average family income is Rs. 5300.00/month. In this village, among the 25 households, in 16 families, women are found to have their own income, with an average Rs.1946.15/month. The curve is platykurtic shaped and positively skewed, which implies that majority of the women population of this village have lower income. Though education level is not at all satisfactory but the economic solvency is inversely related to the education standard for the adult women.

For the village Shikarpur (from new alluvial zone) the mean land holding of this village is 2 ha. and there is variability in this distribution. The average family size is four. In case of average adult males/family, the distribution is positively skewed and of platykurtic shape. The average education standard of males, females and the male and female children is nearly Madhyamik. The distribution of education in all these four cases is positively skewed and of platykurtic shape indicating that population with lower education standard is more. The average family income of the village is Rs. 8600.00 and the curve is of positively skewed platykurtic shaped. Only 9 families among the selected 25 householders of village Shikarpur have women income earner. The average level of female monthly income is Rs. 1977.78 and positively skewed distribution reveals that women earning lower income are more. The other village from the same zone (new alluvial zone) is village Chandamari. Here the total number of interviewed households is 50. In this village, along with cultivation there are service holders, and business-oriented people. Among the 42 households, in 20 households women are having their own earnings. The interviewed households have some variability in their income and depending on this difference, the different expenditure shares have high peak in their distribution curve. The average education standard of the adult males is above the secondary standard of education. Adult females have nearly Madhyamik standard. The male child education standard is more than primary level, whereas girl child is on just primary level. The female income/month on an average is Rs. 2265.00.

From the red-laeite zone two villages i.e. Kesia and Chakedabad were selected. In village Kesia the number of households interviewed is 33. The maximum personal land holding is 1.58 hectare and the variability ranges from 0.20 ha. to 1.58 ha. On the other side, the mean total monthly income is Rs. 2313.64. The villagers are not high-income earners and the frequency of lower income earners is more compared to high income earners, whose earnings range between Rs. 900.00 (min. value) and Rs. 5100.00 (max. value). Among the 33

households, in 16 households women are engaged in income earning jobs. But there is great variability in the distribution ranging between Rs. 250.00-Rs.1300.00. In the village, family literacy as well as families having just primary standard of education were identified. The average education standard of adult male per family is better than their female counter parts. In village Chakedabad, the main occupation of the villagers is daily labour. The village, though have some cultivable land but due to lack of irrigation and other infrastructural facilities cultivation has no prominent effect on the economic status of the village. The parental generation has only the knowledge of writing their own name whereas in the second generation the male children are in relatively better position. The average family size of this village is 6 with an average family income of Rs. 1147.86. The positive value of skewness indicates that lower income families are more in number. The average female income is Rs. 340.00 and it varies from Rs.150.00 and Rs.550.00.

In the coastal zone, one of the selected villages is village Nimpith. The mean land holding of the village is 0.28 hac. The education standard of males is more than higher secondary level and the females on an average have nearly H.S. level education. The male child's education standard is nearly madhyamik level and that of female child education is primary level. The monthly average family income is Rs. 6005.00 and various heads of expenditure reveal that as the family income grows up, the expenses on education, medical, savings etc. will increase. But the consumption of food, cultivation expenditure has no such variations. The adult female's monthly income (per family) is Rs. 2420.00 and in 20 households among the 40 selected households income earner females are found and their income distribution shows high peak with positive skewness. For village Taldihi the average land holding is 2.17 hac./family. The male child's education standard (1.662) is relatively higher than the education standard of the girl child. The total average family monthly income is Rs. 7802.50 and the adult female's monthly income is Rs. 952.38. The positively skewed distribution of the curve indicates that the majority of the female earners are having almost the average level of income.

Village Kalimpong was selected from the hill zone where a total of 25 households were surveyed. The average land holding of this village is 0.20 hac./family and the distribution is positively skewed with 0.03 standard error. The village has an average of 8 members per family where the number of adult males and girls is relatively high. Average male education standard is nearly of secondary level (1.85) and positively skewed leptokurtic shape of the distribution curve indicates that a small percentage of the adult males have more education. A similar trend has been noticed for adult female's education standard (1.57). Average male child's and female child's education standard on an average is 1.52 and 1.29, respectively and the distribution is positively skewed, indicating a uniform flow though female child's education level is comparatively less than male child's. The average monthly family income of this village is Rs. 10688.04 and the expenditure patterns are positively skewed, and the education, medical and cultivation expenditure has leptokurtic shape of distribution. This implies that families with high income, which is less in number, are able to spend on these above mentioned heads of expenditure. For village Sukiapokhri, the average land holding is 1.23 hac./family. The area is purely in hilly region. The inhabitants are mainly engaged in business such as transportation, hotel, grocery, export-import business etc. There are some service holders also, mainly in military and army, forest and tourism departments. The average number of family members is about 7. The education standard of the adult male is relatively higher than the adult female but in case of male and female children, virtually

there is no significant difference. In this village more than 80% of the households have women bread earners. Family-wise, average total monthly income is Rs. 9894.46, and high peakedness of the distribution implies that the income of all the households is not showing a stable flow. In case of adult female's monthly income (family-wise), there is some unstable flow with kurtosis value of 4.19, which means there is a small number of females who have more income and the majority has lower levels of income.

In village Banarhata, the average land holding per family is 2.05 hac. The distribution of female education is negatively skewed, indicating that the majority of the female population of this village has less than average level of education. The female child's education standards like their mothers, is also negatively skewed. The average total family income is Rs. 9836.67 and the expenditures are positively skewed; and except the education and cultivation expenditure all the other heads are of leptokurtic shape. This indicates that higher income relates to higher expenditure and the percentage of families following this pattern is less. The average female income per month is Rs. 4336.00 and this income is also positively skewed and leptokurtic shaped and nearly 75% houses have female income earners. In village Matigara, the average land holding is 6.650 hac./family. Though average education standard is higher for adult males (2.17) than their female counterparts (1.90), but in the case of male children (1.50) and female children (1.55), it is of the same level (Table 9L). The total average monthly income is Rs. 9836.67 and the value of kurtosis (4.659) indicates that the family income and the family expenditure pattern have some asymmetry. Male child's and female's child average education standard is in parity i.e. they are significantly positively related with each other.

Zonal Characteristics

Reflection of the village characteristics is noticed in zonal behaviour also. If landholding be one of the indicators of socio-economic conditions of the people then there could be three zonal groups: (a) the old and new alluvial zones with more than two hectares of land per family; (b) coastal, terai and hill zones with an average land holding of one hectare or more; and (c) the red and laterite zone, with an average land holding of only 0.58 hectare per family. Highest number of family members is recorded in hill zone (7.48) compared to around 6.7 in old alluvial zone, new alluvial zone and red and laterite zone. The lowest number of family members is recorded in coastal and terai zones. As far as standard of education is concerned, the overall standard of education is not at all satisfactory, with highest education score being 2.42 in terai zone and 1.96 in coastal and saline zone for adult males and females respectively. Clearly the red and laterite zone is lagging behind the other zones (Table 10, Appendix 1). The average monthly income per family varies between Rs. 6700.00 and Rs. 10440.00, excepting the red and laterite zone, where it is only Rs. 1800.00 per month. Average monthly adult female income per family also follows the same pattern; maximum of Rs 4000.00 per family is recorded in hill zone followed by Rs. 2300.00 in terai zone. This is because of the fact that in these two zones, females are mostly engaged in tea and orange plantations. The lowest family female income recorded is for laterite zone. This income pattern is also found in family expenditure pattern. The people of red and laterite zone could spend only Rs1600.00 per month for a family size of 6.7 against 4-5 times in other zones with an appreciable difference in average family sizes. Thus, there are variations in all aspects of our consideration among the zones of West Bengal, and particularly the

people of red and laterite zone are not only socio-economically weak but also are living below the subsistence level. By and large, it is clear from the study that after 32 years of Left Front Governance, the people of West Bengal are not at all living at the satisfactory level.

Women Empowerment and Empowerment Related Factors

Table 9 gives the summary of empowerment and empowerment related factors in different zones of West Bengal. From this table it is revealed that in the coastal-saline zone the level of empowerment ($X1=35.27$) and female education standard ($X3=1.97$) are significantly higher compared to the other five zones. Whereas in the hill zone, women are having 3.33 occupations standard ($X4$), the terai zone shows higher (Rs.2136.00 per month) female income ($X5$). This may be due to the fact that the opportunity of working in the tea gardens and ancillary work against remuneration is more in the terai zone compared to other zones. It is also noteworthy that the average female age at marriage ($X6$) and at first exposure to childbirth is higher in the hilly and terai zones that have higher income and occupation opportunities for females respectively. Therefore, one can expect association between the female economic solvency and timely/delayed marriage. In the context of media exposure and social involvement ($X20$), coastal-saline, new alluvial and old alluvial zones show better values compared to other three zones. Therefore, it can be concluded that education standard ($X3$), media exposure and social involvement ($X20$) have a relationship in coastal-saline and old alluvial zones, whereas financial and demographic features are showing linkages in the hill and terai zones (Fig. 1).

FIGURE 1
Women Empowerment vis-à-vis Standard of Education in Different Zones

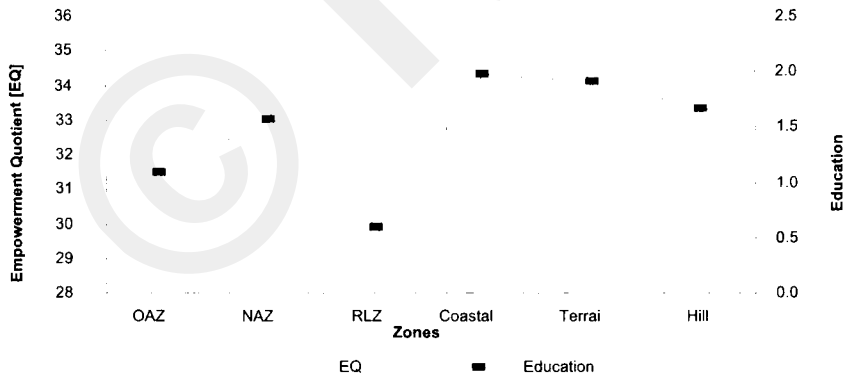


TABLE 9

Averages of the Family and Demographic Particulars of the Married Females of Present Generation in Different Zones of West Bengal

Zone	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀
Z ₁	31.31	30.62	1.09	2.06	637.18	15.91	17.51	1.68	1.96	7.90
Z ₂	34.82	32.25	1.57	2.12	810.87	17.32	18.34	1.49	1.98	6.80
Z ₃	30.77	30.16	0.59	2.24	130.87	15.90	17.50	1.37	1.77	7.44
Z ₄	35.27	32.63	1.97	2.06	786.36	18.08	19.14	1.80	2.07	5.88
Z ₅	35.06	31.02	1.91	2.31	2136.36	19.98	21.57	1.63	1.78	7.08
Z ₆	34.71	31.77	1.66	3.33	1739.81	20.03	23.24	2.10	2.34	9.06
Level of Sig.	*	*	**	*	*	**	*	*	*	**
Zone	X ₁₁	X ₁₂	X ₁₃	X ₁₄	X ₁₅	X ₁₆	X ₁₇	X ₁₈	X ₁₉	X ₂₀
Z ₁	7617.95	2794.49	964.62	458.08	702.72	1305.51	350.92	6576.33	1041.62	11.67
Z ₂	7579.35	1723.01	1144.11	630.91	675.52	1976.09	442.32	6591.96	987.39	11.07
Z ₃	1989.65	756.29	134.91	163.70	292.74	351.90	94.54	1794.07	195.58	6.93
Z ₄	7413.64	2744.21	800.92	532.88	582.90	1565.65	446.23	6672.79	740.84	11.43
Z ₅	11585.95	2859.84	1914.75	2793.37	1091.88	72.28	2520.12	11252.24	626.27	8.00
Z ₆	10787.06	2954.17	1990.59	1886.65	1411.54	1075.11	1851.29	10128.45	658.61	9.89
Level of Sig.	**	*	**	*	**	**	*	*	*	*

Note 1 Z₁= Old Alluvial Zone, Z₂=New Alluvial Zone, Z₃= Red Laterite Zone, Z₄= Coastal Zone, Z₅=Terrai Zone, Z₆=Hill Zone

Note 2 * =Significant at 5% level, ** = Significant at 1% level

Note 3 The factors X₁=Empowerment quotient, X₂=Present age (yrs), X₃=Education standard, X₄=Occupation standard, X₅=Female income (Rs)/month, X₆=Age at Marriage (yrs), X₇=Age at first birth(yrs), X₈=Number of children, X₉=Number of births, X₁₀= Number of family members, X₁₁=Total monthly family income (Rs), X₁₂=Family food expenditure (Rs)/month, X₁₃=Family education expenditure (Rs)/month, X₁₄=Family clothing expenditure (Rs)/month, X₁₅=Family medical expenditure (Rs)/month, X₁₆=Family cultivation expenditure (Rs)/month, X₁₇=Family others expenditure (Rs)/month, X₁₈=Total expenditure (Rs)/month, X₁₉=Family savings (Rs)/month, X₂₀=Media exposure and social attachment.

Association of Education with Female Demographic Features

Table 10 depicts the liner association of education with number of children and number of births for married women. The relationship between number of births and number of children was also calculated at the village, zonal and state level.

TABLE 10
Degree of Linear Association between Education, Number of Children and
Number of Births

A. Village Level

Item	Kanagarh	Kodalia	Shikarpur	Chandamari	Kesia	Chakedabad
Education x Number of Children	-0.733*	0.673*	0.854*	-0.783*	-0.018	-0.766*
Education x Number of Births	-0.848*	0.068	0.837*	-0.108	-0.063	0.264
Number of Births x Number of Children	0.872*	-0.142	0.823*	-0.007	0.725*	-0.191

Item	Nimpith	Taldih	Kalimpong	Sukiapokhri	Banarhata	Matigara
Education x Number of Children	-0.798*	-0.760	-0.730*	-0.056	-0.754*	0.474*
Education x Number of Births	-0.731*	-0.678*	-0.734*	-0.052	0.742*	-0.721*
Number of Births x Number of Children	0.912*	0.902*	0.893*	0.922*	0.694*	-0.446*

B. Zonal Level

Item	Old Alluvial Zone	New Alluvial Zone	Red - Laterite Zone	Coastal Zone	Hill Zone	Terai Zone
Education x Number of Children	0.360*	-0.403*	-0.278*	-0.718*	-0.339*	-0.052
Education x Number of Births	0.194	0.121	0.069	-0.622*	-0.354*	-0.018
Number of Births x Number of Children	0.200	0.334*	0.332*	0.927*	0.911*	0.518*

C. State Level

Item	West Bengal
Education x Number of Children	-0.897*
Education x Number of Births	-0.774*
Number of Births x Number of Children	0.897*

* Significant at $p=0.05$

The study reveals that in 7 villages out of 12 there exist negative correlations between education level and number of children. But not all these villages show the same pattern of relation between number of births and education level. Only 5 out of the 7 villages show negative pattern. In village Matigara, the negative relation between the number of births and the number of children has been observed. Here the child birth and survival rate is inversely related. In case of zonal analysis, it has been found that except old alluvial zone and terai zone all the other zones have negative correlation between the education standard and number of children. Again in the context of relationship between number of births and education attainment only coastal and hill zones are showing significant negative correlation. Combining all the villages, the educational standard and number of children per female and number of births per female are highly negatively correlated, whereas there is high positive correlation between the number of births and number of children.

Zonal Study of Variation in Education Standard of Adult Women of Present Generation at Different Age Groups

Education has been taken as one of the major indicators for women empowerment, women development vis-à-vis development of society. Here, the variation in women education over the zones and the state as a whole has been analysed with the help of ANOVA. Before proceeding for the analysis, the whole data of education standard of the married women of present generation has been divided into three different age groups. The first group comprises the women who are below 30 years of age. The second group is for the women aged between 30-45 years and the third group comprises the women aged more than 45 years of age.

If one considers the standard of education among the adult women of most recent generation (i.e. the age group of 30 years), one can find that there has been general improvement in all the zones except the other two groups. The women of red and laterite zone are poorly educated, with average standard of education being only around primary and below. Maximum of 2.07 education score is recorded in terai zone followed by 1.973 in hill zone, 1.881 in coastal and saline zone. But one thing is very clear from Table 11 that for all the groups for all the regions, the standard of education of the adult and/or married females is not at all satisfactory (Fig. 2).

FIGURE 2
Education Status of Adult Women

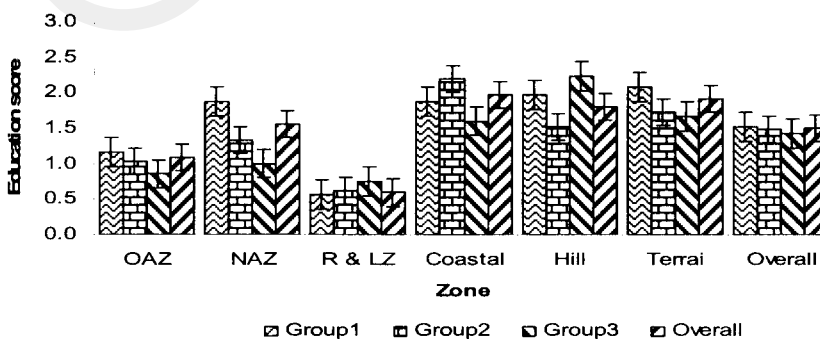


TABLE 11
Zonal Analysis of Variance of Education Standard of the
Women of Present Generation

Zone	Average Level of Education			Group Comparison ⁽²⁾		
	Gr-1: 30 yrs	Gr-2: 30-45 yrs	Gr-3: >45 yrs	Gr-1 vs Gr-2	Gr-1 vs Gr-3	Gr-2 vs Gr-3
OAZ (zone 1)	1.162 (43)	1.036 (35)	0.857 (7)	0.150 <u>0.301</u>	0.286 0.240	0.136 0.589
NAZ (zone 2)	1.869 (46)	1.333 (36)	1.000 (10)	0.539 0.000	0.787 <u>0.068</u>	0.248 <u>0.572</u>
R-L Zone (zone 3)	0.560 (75)	0.625 (30)	0.750 (8)	0.066 <u>0.583</u>	0.198 <u>0.356</u>	0.132 <u>0.560</u>
Coastal (zone 4)	1.881 (59)	2.195 (41)	1.6 (10)	0.393 <u>0.156</u>	0.161 <u>0.728</u>	0.554 <u>0.245</u>
Hill (zone 5)	1.973 (74)	1.521 (67)	2.230 (13)	0.196 <u>0.174</u>	0.515 <u>0.000</u>	0.710 <u>0.000</u>
Terai (zone 6)	2.078 (64)	1.728 (48)	1.667 (6)	0.353 <u>0.000</u>	0.414 <u>0.261</u>	0.061 <u>0.869</u>

Note: Figures in the parenthesis are the number of respondents.

Underlined figures are the respective probability levels.

(2) : values shown in the comparison are the respective mean values.

Overall Study of Variation in Educational Standard of Adult Women of Present Generation at Different Age Groups at State Level (Combining all the Villages)

The result of analysis of variance for different age groups is described in Table 12. Total 672 adult females of present generation comprised the selected sample. Among them 361 belong to the age group one (<30 years of age), 257 belong to age group two (30-45 years), and 54 women group three i.e. above 45 years of age. As per the descriptive statistics, the average education standard of these three groups is 1.526, 1.478 and 1.425 respectively. Neither of these groups reaches the secondary standard of education, nor do they have any significant difference between their educational levels. In group comparison, only group one and group two have significant difference at 0.07% level; the other two combinations such as group two & three, and group one & three have no such differences. The old alluvial zone has just above primary level of education (1.089) whereas in the new alluvial zone, the standard is slightly high i.e. 1.565, which means the level is more than primary but below secondary. In coastal-saline and terai zones the standards are almost secondary level, 1.973 and 1.909 respectively. The hill zone is placed below the terai and coastal-saline zones but higher than the old and new alluvial zone with an average of 1.679. The real matter of concern is the education level of red-laterite zone, which is not at all satisfactory (0.591), i.e. far below the primary level. From the analysis of variance a zone-wise comparison of education standards has been made. In this study, it has been found that old alluvial

significantly differs from all the other five zones. The new alluvial zone has significant differences with other zones, except the terrain zone. The red-laterite zone, i.e. 3rd zone, differs with all other zones at 0.001% level of significance. The coastal-saline zone (zone 4) has no difference with zone 6 only, and terai zone has significant difference with only new alluvial zone that has been mentioned earlier. The hill zone i.e. zone 6, significantly differs from other four zones, except the coastal-saline zone. Statistical tests (group comparison, Table 14) also reject the assumption of significant improvement in level of education among different age groups of adult females.

TABLE 12
Analysis of Variance of Education Standard of the Women of Present Generation in Different Zones, West Bengal: New ANOVA

Average Level of Education			Group Comparison ⁽²⁾		
<i>Gr-1: < 30 yrs</i>	<i>Gr-2: 30-45 yrs</i>	<i>Gr-3: > 45 yrs</i>	<i>Gr-1 vs Gr-2</i>	<i>Gr-1vs Gr-3</i>	<i>Gr-2 vs Gr-3</i>
1.526 (361)	1.478 (257)	1.425 (54)	0.146 <u>0.071</u>	0.142 <u>0.321</u>	0.003 <u>0.981</u>
Zonal Comparison					
<i>Zone-1 vs. Zone-2</i>		<i>Zone-2 vs. Zone-3</i>		<i>Zone-3 vs. Zone-5</i>	
1.496 <u>0.001</u>		0.996 <u>0.001</u>		1.114 <u>0.000</u>	
<i>Zone-1 vs. Zone-3</i>		<i>Zone-2 vs. Zone-4</i>		<i>Zone-3 vs. Zone-6</i>	
0.513 <u>0.000</u>		0.402 <u>0.000</u>		1.336 <u>0.000</u>	
<i>Zone-1 vs. Zone-4</i>		<i>Zone-2 vs. Zone-5</i>		<i>Zone-4 vs. Zone-5</i>	
0.885 <u>0.000</u>		0.118 <u>0.000</u>		0.284 <u>0.777</u>	
<i>Zone-1 vs. Zone-5</i>		<i>Zone-2 vs. Zone-6</i>		<i>Zone-4 vs. Zone-6</i>	
0.601 <u>0.000</u>		0.340 <u>0.000</u>		0.062 <u>0.000</u>	
<i>Zone-1 vs. Zone-6</i>		<i>Zone-3 vs. Zone-4</i>		<i>Zone-5 vs. Zone-6</i>	
0.823 <u>0.001</u>		1.398 <u>0.000</u>		0.222 <u>0.000</u>	

Note: Figures in the parenthesis are the number of respondents.
Underlined figures are the respective probability levels.

⁽²⁾: values shown in the comparison are the respective mean values.

Zone-1: Old Alluvial zone, Zone-2: New Alluvial zone, Zone-3: Red and Laterite zone, Zone-4: Coastal and Saline zone, Zone-5: Hill zone, Zone-6: Terai zone

A nation/country progresses with the progress of the mothers of the country. Educated and empowered mothers are the building blocks of any progressive nation but that type of picture is not at all found in the state of West Bengal, in spite of political stability.

Zonal Variations of Education Index of Males and Females

The education index, following the procedure as mentioned earlier, has been calculated for each village for males and females, separately. Exercises have also been taken up at zonal and combining all the zones, to get a picture of the male-female education indices. Two-way

analysis of variance has been conducted to examine the inter-zonal variations in education indices and the result of analysis of variance has been depicted in Table 13.

TABLE 13

Analysis of Variance of Education Index of the Males and Females at Different Zones

Zone/State	Male Education Index	Female Education Index	Gender Comparison ^(*)
Old Alluvial (Z1)	0.772	0.618	
New Alluvial (Z2)	0.792	0.636	
Red-Laterite (Z3)	0.690	0.457	
Coastal-Saline (Z4)	0.764	0.621	0.167 (*)
Terai (Z5)	0.787	0.620	
Hill (Z6)	0.765	0.634	
West Bengal	0.762	0.594	

Zonal Comparison ^(*)		
<i>Zone 1 vs. Zone 2</i>	<i>Zone 2 vs. Zone 3</i>	<i>Zone 3 vs. Zone 5</i>
0.019 (NS)	0.141 (*)	0.121 (*)
<i>Zone 1 vs. Zone 3</i>	<i>Zone 2 vs. Zone 4</i>	<i>Zone 3 vs. Zone 6</i>
0.121 (*)	0.022 (NS)	0.125 (*)
<i>Zone 1 vs. Zone 4</i>	<i>Zone 2 vs. Zone 5</i>	<i>Zone 4 vs. Zone 5</i>
0.004 (NS)	0.019 (NS)	0.002 (NS)
<i>Zone 1 vs. Zone 5</i>	<i>Zone 2 vs. Zone 6</i>	<i>Zone 4 vs. Zone 6</i>
0.000 (NS)	0.015 (NS)	0.007 (NS)
<i>Zone 1 vs. Zone 6</i>	<i>Zone 3 vs. Zone 4</i>	<i>Zone 5 vs. Zone 6</i>
0.004 (NS)	0.119 (*)	0.004 (NS)

(*) : Significant at 5% level

(NS) : Non-significant at 5% level

^z : Values shown in comparison are the respective mean differences.

The analysis reveals that there exists significant difference between the male and female education indices. Generally the male education index is higher than the female education index. Maximum male education index (0.792) has been found in the new alluvial zone followed by the terai zone (0.787). The maximum (0.636) female education index is found in the new alluvial zone, followed by the hill zone (0.634). Lowest male (0.690) and female (0.457) education indices are found in red-laterite zone. Among the different zones under consideration, red-laterite zone is found to have significantly low education index compared to any other zones of West Bengal. Over all 0.762 and 0.594 male and female education indices respectively are recorded, combining all the zones of the state of West Bengal.

Conclusion

From the overall study of women in six different zones of West Bengal, even after 60 years of independence of India, it is clear that:

1. In spite of appreciable improvement in educational level it, has failed to attain a respectable level; it is not desirable to have average level of education around Madhyamik or below.
2. There have been variations in education indices not only among the zones of West Bengal but also between males and females of the state. For a state governed by the leftist for so many years this may be due to improper formulation of policy or failure to provide equal opportunity to both males and females.
3. Education is inversely related with number of children. In a country like India, where population pressure seems to be a major problem, education should have been given top priority or educational policies should have been implemented in such a way as to have an immediate impact on population besides other fields.
4. Higher education of women is directly related with higher women empowerment which envisages higher economic independence of women also. As it is evident from the study that among the six zones, the women of the hill zone and terai zone are not only having higher education but also are having higher income by virtue of the working opportunities in tea gardens etc., compared to their counterparts in other zones. Therefore, higher education opportunities, coupled with greater job opportunities, are also needed for proper development.
5. There exists regional disparities with respect to overall development of the society as evident from the wide range of variations in socio-economic indicators like possession of wealth like land, education at all levels (males, females children), family income, female income, women empowerment indicators etc. In a state which has been politically stable for so many years, it was expected that the regional development should have taken place at equal pace all through the state. Most probably, region specific policy decision and its implementation, utilizing the local resources with active participation of local people, are required to be geared up still.
6. The study of all the socio-economic and other indicators indicate that red and laterite zone is lagging behind all other zones. The people of this zone are educationally poor, they have low income, low land holding etc. As a result, a family of around seven members is to manage with mere Rs 1600.00 for whole month to survive. If we look into the zone, one can see that this is the most disturbed zone of the state at present, may be improper development of the people is one of the reasons for such disturbances. Thus, the right policy followed by effective implementation strategy and with better empowered women providing a significant force for the development, better West Bengal could have been realized.

References

- Anonymous (1991, 2001): *Census Reports of India*. Govt. of India.
- Anonymous (1993): *World Education Report*. UNESCO
- Anonymous (1995): *Women's Education and Fertility Behavior*. Department of Economics and Social Information and Policy Analysis, Population Division. United Nations, New York.
- Anonymous (1996): *Statistics and Gender - Agricultural Censuses: Orientations for a Revision of Concepts and Methodology*. FAO, Rome.
- Anonymous (1996): UNDP Human Development Report, 1996.
- Anonymous (1996): *World of Work*, International Labour Organization.
- Anonymous (1998-99): *Selected Educational Statistics*. Ministry of HRD, Govt. of India.
- Anonymous (1999): *Economic Imbalance - Poverty and Abundance*, *Economic and Social Council*, 1999. Department of Public Information / Media Division UN.
- Anonymous (1999): *Filling the Data Gap - Gender-sensitive Statistics for Agricultural Development*. Economic and Social Development Department, FAO Corporate Document Repository. <http://www.fao.org/docrep/x2785e/X2785e08.htm>
- Anonymous (1999): *Innovations in Labor Statistics*. *International Labors Review*, ILO, 138 (1).
- Anonymous (2004-05): *Selected Educational Statistics*. Ministry of HRD, Govt. of India.
- Anonymous (2007): *Education for All - Global Monitoring Report - 2007*
- Anonymous (2008): *United Nations Development Programme Report, 2007/2008*. UNDP
- Anonymous (1995): *Fourth World Conference on Women. Action for Equality, Development and Peace*. Beijing, 4-15 September. *Country Report*, Department of Child and Women, Government of India.
- Birdsall Nancy (1977): *Analytical Approaches to the Relationship of Population Growth and Development*. *Population and Development Review*, Vol. 3, No. 1/2 Mar; Jun., 1977), pp. 63-102.
- Brown Jennifer and Das Choudhury, Sujata (2002): *Women's Land Rights in West Bengal: A Field Study*. Rural Development Institute. ISSN 1071-7099.
- CIA World Fact Book (2008): URL:http://en.wikipedia.org/wiki/CIA_World_Factbook.
- Ismail Serageldin (2000): *Food Security - Daunting Research Tasks*. *The Hindu*. Survey of Indian Agriculture.
- Jain Devaki (1985): *Tyranny of the Household: Investigative Essays on Women's Work (Women in Poverty)*. Amazon Books.
- Mehra, R. and S. Gammage (1999): *Trends, Countertrends and gaps in women's employment*. *World Development Report*, 27 (3): 533-50.
- Pradhan, K Basant and Singh, Shalabh Kumar (2000): *Policy Reforms and Financing of Elementary Education in India*. A Study of the Quality of Service and Outcome. National Council of Applied Economic Research. New Delhi.
- Ramachandran V.K., Madhura Swaminathan, Vikas Rawal (2003): *Barriers To Expansion of Mass Literacy and Primary Schooling in West Bengal. A Study Based on Primary Data from Selected Villages*. *Working Paper No. 345*. This paper is part of a larger study on primary education in West Bengal by UNICEF. (URL: <http://www.cds.edu>).
- Rawal, Vikas and Madhura Swaminathan (1998): *Changing Trajectories - Agricultural Growth in West Bengal, 1950 to 1996*, *Economic and Political Weekly*, 33(40); Oct 3-9; pp. 2595-2602.
- Roy, K. C. and C.A. Tisdell (2000): *Institutional Impediments Entitlement Exchange and Women's Empowerment in Rural India - The Case of Access to Education, Social Economies, Policy and Development*. *Working Paper No. 5*. Brisbane School of Economics, The University of Queensland.
- Saha, Anamitra and Madhura Swaminathan (1994): *Agricultural Growth in West Bengal in the 1980s: A Disaggregation by Districts and Crops*. *Economic and Political Weekly*; 29 (13); Mar 26. pp: A2-A11.
- Shiva Kumar, A K. (1996): *UNDP's Gender-Related Development Index - A Computation for Indian States*. *Economic & Political Weekly*; 31 (14); pp. 887-95.

Descriptive Statistics of Variables

A. Village Kanagarh in Old Alluvial Zone

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	3.32	5.20	1.15	1.20	1.65	1.20	1.88	1.93	1.64	1.60	10395.00	2038.95	2214.06	1344.00	1448.93	1819.58	520.28	9385.79	1009.22	2271.43
Std Error	0.68	0.30	0.08	0.09	0.20	0.19	0.13	0.12	0.18	0.17	1376.22	278.73	297.58	247.41	199.51	245.85	72.19	1240.51	141.05	359.04
Median	2.08	5.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.25	7500.00	1537.50	1635.00	1050.00	1044.25	1247.00	379.25	6847.50	734.25	2000.00
Kurtosis	-0.04	-0.63	2.78	0.70	-0.34	-0.36	0.58	0.00	-1.36	-0.68	-0.64	0.00	-0.46	3.27	0.24	0.03	0.33	-0.65	0.31	0.84
Skewness	1.14	0.35	2.12	1.62	-0.25	0.19	0.05	0.05	0.55	0.82	1.00	1.16	1.11	1.84	1.24	1.22	1.25	1.05	1.29	1.04

B. Village Kotalia in Old Alluvial Zone

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	2.40	7.96	2.68	2.04	1.40	1.00	1.47	0.72	1.20	0.88	5300.00	2688.00	318.00	276.00	238.00	662.00	218.00	4400.00	900.00	1946.15
Std Error	0.53	0.68	0.21	0.20	0.22	0.26	0.26	0.21	0.16	0.12	694.53	283.69	47.51	33.68	28.33	188.09	29.56	546.24	273.85	535.37
Median	2.50	7.00	3.00	2.00	1.00	2.00	1.00	0.00	1.00	1.00	3900.00	2500.00	250.00	250.00	200.00	0.00	150.00	3400.00	500.00	1200.00
Kurtosis	-1.17	-0.35	-0.37	-0.44	-0.27	0.13	5.82	5.37	0.08	-0.25	0.68	0.69	1.96	1.67	-0.40	0.14	0.98	1.27	17.73	3.19
Skewness	0.54	0.60	0.04	0.17	0.66	0.63	2.13	2.04	0.24	-0.15	1.12	0.81	1.45	1.33	0.90	1.17	1.34	1.14	3.97	1.80

C. Village Shikarpur in New Alluvial Zone

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	2.00	4.04	1.08	1.12	0.96	0.88	1.86	1.88	1.71	1.86	8600.00	1821.01	1072.78	1170.44	925.46	2478.96	521.52	7990.18	609.82	1977.78
Std Error	0.32	0.16	0.06	0.07	0.14	0.15	0.14	0.15	0.13	0.15	809.73	168.23	103.25	110.88	89.01	235.45	61.29	758.17	68.20	180.11
Median	1.32	4.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	8500.00	1853.00	1037.00	1147.50	892.50	2465.00	425.00	7820.00	576.00	2000.00
Kurtosis	-0.16	-1.35	9.64	4.56	-0.61	1.90	-0.90	-1.12	-0.42	-0.42	0.33	-0.01	0.72	0.43	0.67	0.70	2.77	0.46	1.24	1.93
Skewness	0.97	-0.07	3.30	2.49	0.05	0.90	0.15	0.20	0.21	0.01	0.76	0.64	0.90	0.80	0.88	0.79	1.59	0.80	0.96	0.06

D. Village Chandamari in New Alluvial Zone

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	0.93	7.02	2.44	2.12	1.28	1.58	2.15	1.66	1.37	0.96	6173.81	1917.36	698.64	841.07	322.55	1531.19	341.40	5573.02	600.79	2265.00
Std Error	0.07	0.53	0.19	0.16	0.16	0.21	0.25	0.23	0.14	0.09	687.37	208.38	90.58	101.01	36.76	169.12	34.96	615.13	87.29	439.27
Median	0.86	6.50	3.00	2.00	1.00	1.00	1.67	1.00	1.00	1.00	5550.00	1560.00	496.00	695.00	280.00	1387.50	300.00	4884.00	484.00	1550.00
Kurtosis	0.11	0.11	-0.54	-0.79	-0.01	0.05	-0.74	-0.95	-0.10	0.44	9.40	4.34	6.50	11.94	6.88	10.30	7.32	8.37	9.49	5.74
Skewness	0.91	0.91	0.15	0.57	0.71	0.79	0.53	0.60	0.21	-0.27	2.55	1.96	2.18	2.93	2.28	2.68	2.22	2.42	2.52	2.12

E. Village Kesia

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	0.52	7.24	2.85	2.06	1.24	1.09	0.96	0.70	0.93	0.85	2313.64	897.77	153.29	267.36	373.15	425.42	115.33	2232.33	81.31	706.25
Std Error	0.06	0.41	0.25	0.18	0.20	0.13	0.09	0.09	0.09	0.07	172.17	64.22	11.67	33.24	31.41	34.65	12.36	165.23	7.37	81.76
Median	0.40	7.00	3.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2100.00	870.00	130.00	230.00	342.00	400.00	96.00	2026.50	73.50	700.00
Kurtosis	1.44	4.02	0.08	0.72	2.19	0.36	1.12	-0.59	2.72	2.33	2.53	1.49	1.38	6.69	2.11	2.20	8.41	2.54	1.71	-0.99
Skewness	1.46	1.92	0.48	1.05	1.21	0.39	-0.52	-0.21	-0.64	-2.04	1.53	1.01	1.15	2.23	1.41	1.45	2.56	1.52	1.32	0.28

F. Village Chakedabad

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	1.91	6.14	2.36	1.68	1.18	0.96	0.83	0.54	1.11	0.81	1147.86	409.88	138.11	40.00	59.07	161.75	75.99	884.80	263.06	340.00
Std Error	0.21	0.48	0.21	0.12	0.18	0.17	0.11	0.10	0.06	0.10	115.10	39.35	13.87	3.75	5.58	12.38	8.92	77.19	41.19	47.61
Median	1.91	6.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1115.00	390.25	133.80	36.75	58.00	143.50	78.05	848.50	296.50	275.00
Kurtosis	-1.20	4.29	2.68	-0.53	2.23	0.22	-0.50	-2.14	5.68	0.32	0.11	0.23	0.14	-0.19	0.28	-0.96	-0.31	0.33	-0.73	-1.19
Skewness	0.00	1.36	1.21	0.29	1.32	0.77	-0.12	-0.15	2.53	-1.40	0.77	0.75	0.71	0.77	0.72	0.32	0.53	0.72	0.49	0.73

G. Village Nimpith

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	0.28	5.58	2.21	1.65	0.95	1.08	3.10	2.51	1.46	1.08	6005.00	3005.00	296.25	340.00	286.75	902.50	276.25	5106.75	898.25	2420.00
Std Error	0.05	0.44	0.20	0.15	0.14	0.19	0.23	0.24	0.14	0.10	485.44	184.74	35.60	26.38	25.32	136.23	34.67	369.19	180.79	422.62
Median	0.26	5.00	2.00	1.00	1.00	1.00	3.58	3.00	1.33	1.00	5550.00	3000.00	200.00	325.00	250.00	1000.00	225.00	4875.00	500.00	1550.00
Kurtosis	-0.43	2.68	-0.62	0.72	0.30	2.57	-0.69	-1.16	0.16	0.91	4.40	-0.22	7.01	5.07	3.71	0.05	25.91	1.25	9.22	6.17
Skewness	0.78	1.60	0.64	0.95	0.82	1.60	-0.55	-0.19	0.24	0.02	1.66	0.37	2.44	1.42	1.71	0.76	4.68	1.08	2.57	2.15

H. Village Taldihi

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	2.17	4.65	1.08	1.05	1.65	0.90	1.69	1.51	1.66	1.43	7802.50	1599.51	1388.85	741.24	951.91	2106.68	639.81	7427.98	374.52	1952.38
Std Error	0.27	0.15	0.07	0.03	0.13	0.12	0.10	0.08	0.10	0.12	619.91	127.08	110.34	58.89	75.63	167.38	50.83	590.15	29.76	141.69
Median	1.60	4.50	1.00	1.00	2.00	1.00	2.00	1.75	1.50	1.00	6550.00	1342.75	1165.90	622.25	799.10	1768.50	537.10	6235.60	314.40	2000.00
Kurtosis	0.72	-0.32	13.14	17.29	0.70	-0.12	3.82	-2.08	-0.08	0.35	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	-1.47
Skewness	1.24	0.40	2.78	4.29	0.74	0.52	1.02	-0.05	0.91	0.29	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	0.21

I. Village Kalimpong

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	0.20	8.28	2.68	2.16	1.54	1.96	1.85	1.57	1.52	1.29	10688.04	3098.92	2107.24	1447.24	1672.16	1646.80	1599.28	9972.36	715.68	3975.00
Std Error	0.03	0.69	0.21	0.19	0.22	0.25	0.25	0.19	0.14	0.09	1100.55	277.31	240.85	164.85	221.70	171.08	152.69	1034.01	75.15	579.82
Median	0.26	7.00	3.00	2.00	1.00	2.00	1.59	1.50	1.00	1.00	10401.00	3150.00	2060.00	1545.00	1404.00	1650.00	1545.00	9765.00	686.00	3100.00
Kurtosis	-0.80	-0.56	-0.37	-0.77	-0.21	0.22	5.79	3.10	-0.38	1.36	2.76	-0.01	4.19	0.81	5.86	3.81	1.00	2.86	0.14	0.64
Skewness	0.23	0.65	0.04	0.30	0.59	0.65	2.33	1.12	0.85	1.45	1.28	0.50	1.58	0.91	2.21	1.41	1.04	1.31	0.77	1.07

J. Village Sukiapokhri

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	1.23	6.85	2.11	1.89	1.46	1.75	2.18	1.76	1.35	1.33	9894.46	2638.07	1747.43	1886.94	1169.80	713.16	1829.70	9304.10	590.36	4031.82
Std Error	0.17	0.42	0.14	0.11	0.14	0.15	0.15	0.10	0.09	0.07	674.94	181.87	122.78	160.95	97.84	115.20	139.63	642.99	56.39	379.34
Median	0.53	6.50	2.00	2.00	1.00	1.50	2.00	2.00	1.00	1.00	9650.00	2519.00	1597.50	1708.00	1050.00	131.00	1650.00	9080.50	449.75	3500.00
Kurtosis	-0.77	0.22	-0.16	-0.59	3.85	1.02	2.15	3.10	0.35	0.01	3.93	2.18	0.46	6.86	2.51	-0.70	8.12	4.53	1.90	4.19
Skewness	0.82	0.93	0.59	0.44	1.63	1.00	1.31	0.50	0.96	0.42	1.36	1.09	0.79	1.96	1.52	0.88	2.16	1.47	1.38	1.77

K. Village Banarhata

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	2.05	5.93	1.70	1.73	1.44	1.63	2.44	1.92	1.24	1.39	9836.67	2366.37	1594.67	2311.80	898.83	60.68	2082.07	9314.42	522.25	4336.00
Std Error	0.21	0.49	0.14	0.13	0.17	0.18	0.15	0.08	0.12	0.12	1010.88	252.46	165.64	241.30	101.85	7.19	219.32	970.90	85.55	553.71
Median	2.05	5.00	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	8750.00	2187.50	1395.00	2100.00	806.00	48.75	1925.00	8443.75	367.50	3500.00
Kurtosis	-1.20	1.45	-0.96	-0.77	11.72	0.87	-0.30	0.94	1.25	-0.42	5.20	5.81	2.41	5.68	6.31	0.65	6.26	5.63	3.43	4.82
Skewness	0.00	1.25	0.57	0.41	3.09	1.28	0.48	-0.31	1.09	-0.18	1.76	1.90	1.32	1.86	2.05	1.18	1.97	1.85	1.93	2.05

L. Village Matigara

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean	6.65	5.93	1.70	1.73	1.44	1.63	2.17	1.90	1.50	1.55	9836.67	2384.32	1589.22	2322.80	911.50	62.58	2099.40	9369.82	466.85	1806.67
Std. Error	0.43	0.34	0.10	0.09	0.12	0.13	0.14	0.13	0.13	0.10	708.71	180.52	115.21	171.57	73.44	5.70	157.44	696.51	73.02	219.00
Median	5.50	5.00	2.00	2.00	1.00	1.00	2.00	2.00	1.00	2.00	8750.00	2125.00	1325.00	2100.00	785.00	52.50	1880.00	8202.50	387.00	1900.00
Kurtosis	0.14	1.22	-0.98	-0.81	10.41	0.65	-0.20	0.71	-0.24	-0.16	4.66	4.56	2.29	4.66	4.67	1.22	4.82	4.37	2.29	-1.65
Skewness	0.94	1.22	0.55	0.40	2.99	1.24	-0.12	-0.10	0.78	0.11	1.72	1.73	1.35	1.74	1.80	1.35	1.78	1.70	1.50	0.09

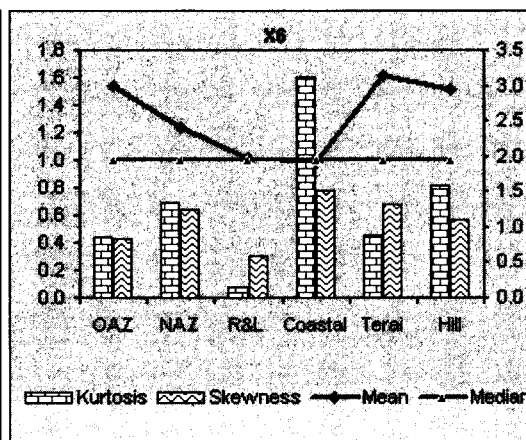
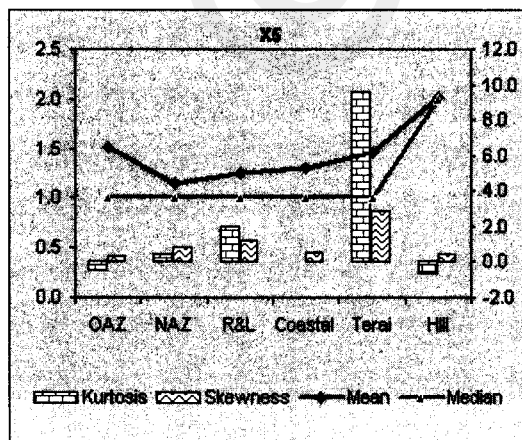
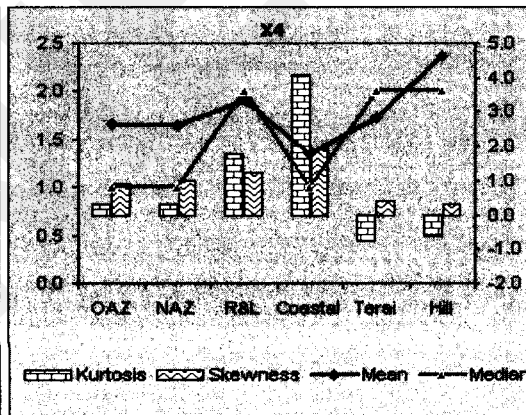
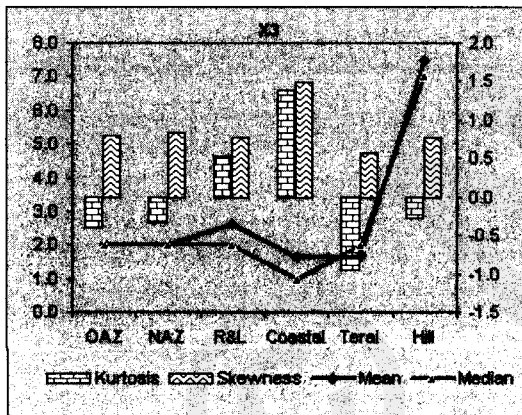
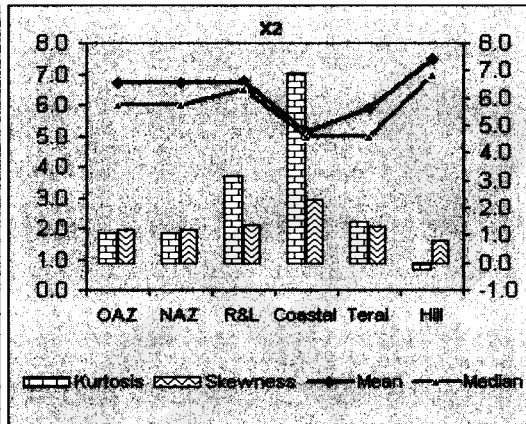
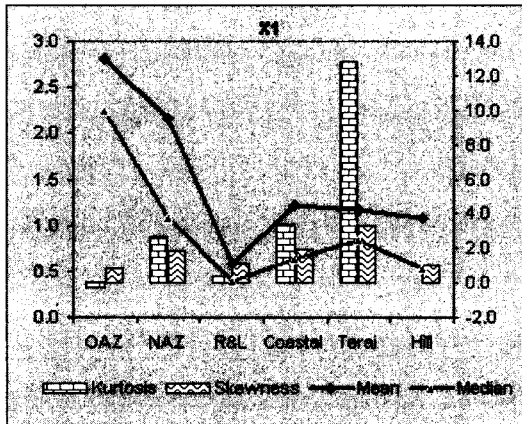
M. Summary of the Family Particular for Different Zones

QAZ	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
Mean	2.81	6.73	2.00	1.67	1.51	1.53	1.65	1.26	1.39	1.19	7564.44	23993.3	1160.69	750.67	776.19	1176.48	352.34	6615.90	948.54	2060.00
SE	0.42	0.45	0.17	0.13	0.15	0.17	0.16	0.16	0.12	0.11	809.53	204.11	194.56	135.99	126.93	172.74	42.16	724.74	163.13	364.94
Median	2.24	6.00	2.00	1.00	1.00	1.00	1.67	1.25	1.00	1.00	6000.00	2000.00	700.00	450.00	500.00	1110.00	280.00	5490.00	667.50	1750.00
Kurtosis	-0.24	1.10	-0.39	0.31	-0.48	0.86	6.26	0.34	-0.32	0.54	1.36	0.34	2.07	7.92	2.81	0.35	2.76	1.74	21.41	3.34
Skewness	0.87	1.21	0.80	0.92	0.31	0.83	1.78	0.50	0.27	0.52	1.42	0.92	1.68	2.65	1.81	0.96	1.72	1.53	4.09	1.66
Mean	2.16	6.73	2.00	1.64	1.15	1.24	2.19	1.83	1.37	1.16	6710.00	15222.50	1003.30	580.56	606.19	1759.11	388.84	5860.50	849.50	840.00
SE	0.28	0.45	0.14	0.11	0.12	0.14	0.16	0.14	0.10	0.07	540.38	130.10	86.00	66.77	53.55	148.07	34.15	496.29	69.63	138.14
Median	1.09	6.00	2.00	1.00	1.00	1.00	2.00	2.00	1.33	1.00	5800.00	1304.00	898.00	372.00	480.00	1470.00	317.50	4966.00	720.00	0.00
Kurtosis	2.68	1.10	-0.33	0.29	0.45	1.35	0.01	-0.46	-0.26	0.48	4.36	7.25	9.63	2.37	2.41	3.17	3.42	3.85	3.23	0.95
Skewness	1.80	1.21	0.84	0.99	0.82	1.23	0.68	0.53	-0.10	0.05	1.72	2.11	2.42	1.67	1.55	1.60	1.71	1.69	1.64	1.30
Mean	0.58	6.78	2.62	1.91	1.24	1.02	0.93	0.62	1.01	0.83	1801.90	670.70	147.17	164.51	230.83	295.07	101.57	1609.85	192.04	311.36
SE	0.05	0.34	0.18	0.12	0.14	0.11	0.08	0.07	0.05	0.06	133.39	51.73	8.87	24.42	27.74	28.35	8.09	136.05	20.95	56.24
Median	0.40	6.50	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1550.00	567.00	130.30	90.00	171.00	248.25	91.00	1485.75	126.00	250.00
Kurtosis	0.37	3.15	0.52	1.80	1.99	0.16	-0.40	-1.17	7.24	1.51	2.60	1.44	0.59	7.11	1.35	2.07	10.09	2.21	1.23	0.35
Skewness	1.13	1.36	0.78	1.21	1.21	0.59	-0.05	-0.13	-0.02	-0.86	1.33	1.10	0.85	2.26	1.23	1.34	2.51	1.32	1.36	1.14
Mean	1.23	5.11	1.63	1.35	1.30	0.99	2.38	1.96	1.55	1.24	6903.75	2302.26	842.55	540.62	619.33	1504.59	458.03	6267.37	636.39	1774.60
SE	0.17	0.24	0.12	0.09	0.10	0.11	0.14	0.14	0.08	0.08	404.04	136.61	84.24	39.21	54.50	126.82	36.78	369.68	95.68	126.03
Median	0.64	5.00	1.00	1.00	1.00	1.00	2.00	2.00	1.50	1.00	6000.00	2000.00	800.50	451.25	524.50	1363.50	373.10	5413.20	340.80	1550.00
Kurtosis	3.39	6.93	1.39	4.08	0.07	3.12	-0.73	-0.31	0.53	0.44	3.27	-0.09	2.55	4.04	3.23	1.83	3.53	3.78	19.37	-0.22
Skewness	1.93	2.28	1.48	1.92	0.52	1.51	0.57	0.59	0.53	0.31	1.66	0.80	1.50	1.79	1.65	1.03	1.82	1.72	3.76	0.23
Mean	1.17	5.91	1.69	1.73	1.47	1.61	2.42	1.92	1.24	1.37	9854.55	2362.40	1608.18	2311.64	892.91	61.82	2078.55	9315.49	539.05	2327.27
SE	0.16	0.36	0.10	0.09	0.13	0.13	0.11	0.07	0.10	0.09	754.22	188.36	123.95	179.99	75.97	5.41	163.51	724.25	64.72	239.01
Median	0.84	5.00	2.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	8500.00	2125.00	1350.00	2040.00	762.00	45.00	1870.00	8202.50	367.50	3500.00
Kurtosis	12.79	1.46	-0.95	-0.78	9.57	0.88	-0.39	0.40	2.29	-0.20	4.76	5.38	2.02	5.24	5.93	0.26	5.83	5.19	2.53	-1.42
Skewness	3.28	1.30	0.57	0.40	2.90	1.31	0.39	-0.17	1.39	0.25	1.79	1.94	1.31	1.89	2.10	1.10	2.01	1.88	1.78	-0.40
Mean	1.08	7.48	2.36	2.02	1.52	1.85	2.02	1.63	1.42	1.31	10441.45	2860.25	1931.27	1765.06	1408.79	1096.86	1783.87	9791.14	650.31	4044.44
SE	0.09	0.28	0.09	0.07	0.09	0.10	0.09	0.07	0.06	0.04	456.26	119.20	92.08	93.80	82.78	84.33	82.16	432.44	34.48	242.84
Median	0.53	7.00	2.00	1.00	1.00	1.00	2.00	1.88	1.00	1.00	10400.00	2725.00	1746.50	1650.00	1193.00	900.00	1650.00	9660.00	525.00	3500.00
Kurtosis	0.04	-0.27	-0.62	-0.69	1.58	0.27	3.36	2.44	-0.24	0.26	2.96	0.94	3.33	7.22	5.94	0.91	7.67	3.26	0.72	2.39
Skewness	1.06	0.77	0.29	0.41	1.10	0.68	1.67	0.60	0.87	0.89	1.41	0.92	1.46	2.00	2.17	0.87	2.11	1.48	1.05	1.50

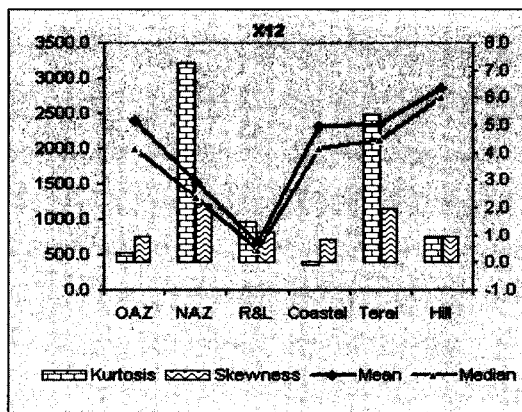
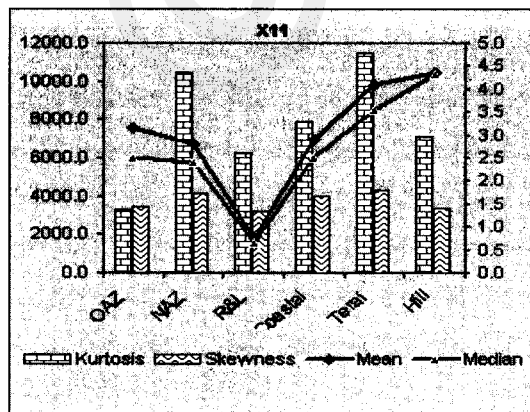
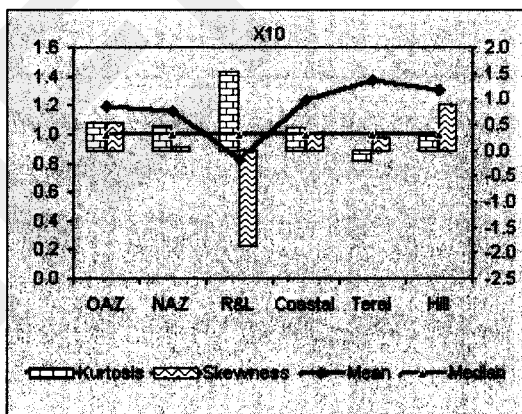
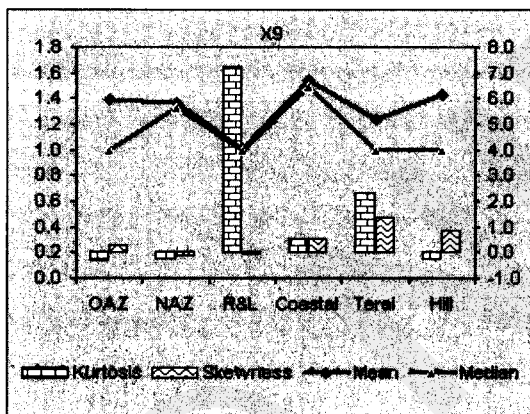
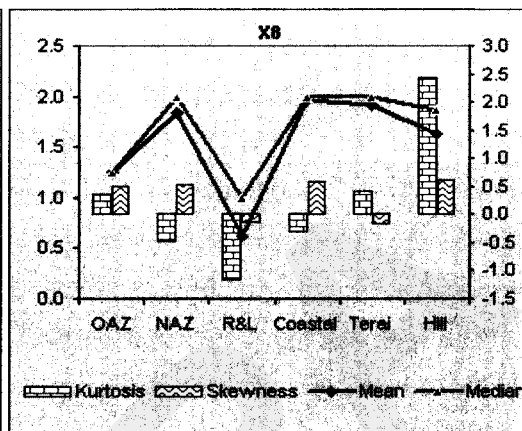
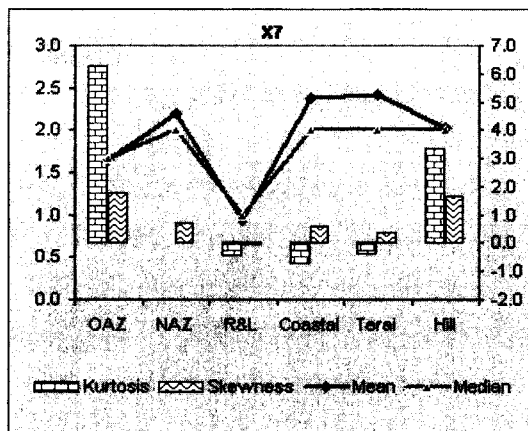
Appendix 2

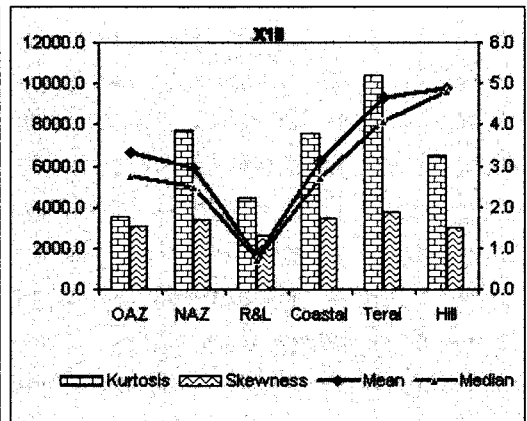
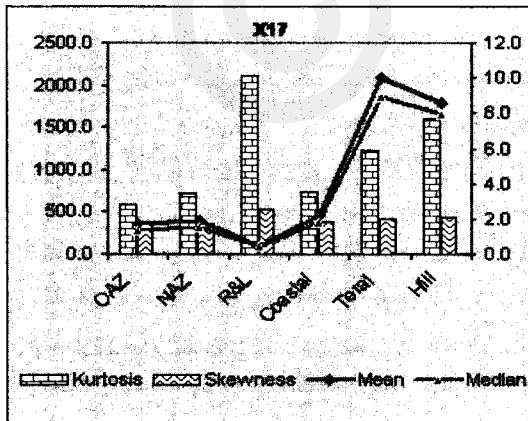
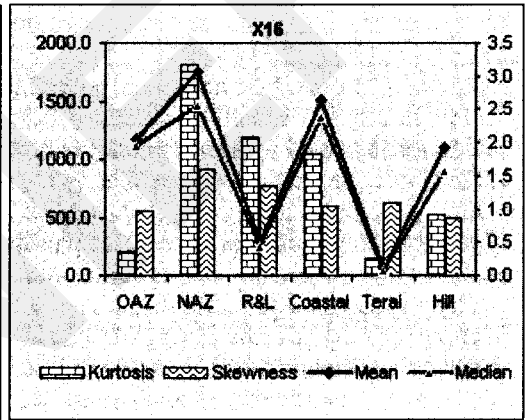
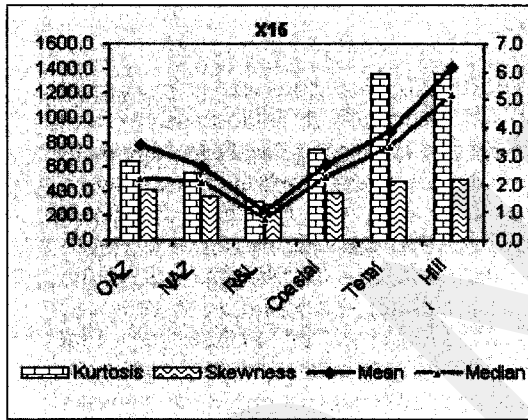
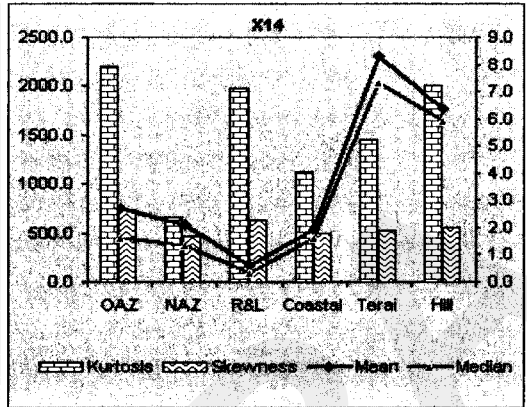
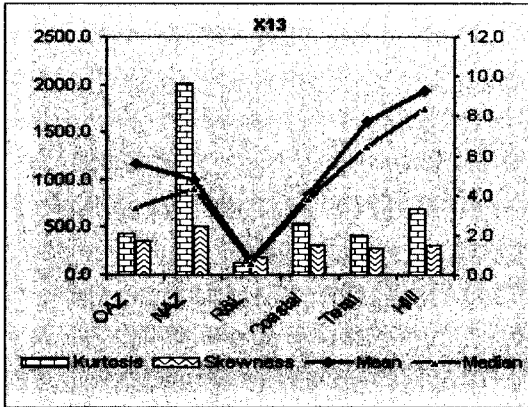
Descriptive Statistics and Selected Variables on Women's Employment

Figures: X 1 – X 20

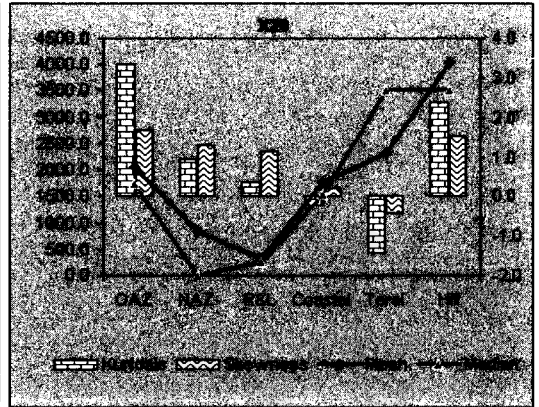
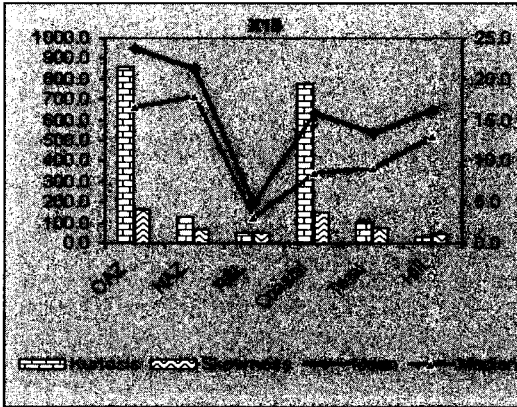


Women's Education and Empowerment in Rural Areas





Women's Education and Empowerment in Rural Areas



Education for Sustainable Development in Nigeria

– Bridging Reform Gaps and Strengthening University- Development Linkage

Joel Babalola*
Morayo Atinmo#

Abstract

In spite of the recent remarkable efforts at linking education with social, economic and environmental development in Nigeria, available indicators of sustainable development show that such efforts have yielded minimal results. To this effect, this paper examined the missing gaps at the policy and practice levels in education. Firstly, it identified the gaps between documented global best practices and Nigeria's recent educational reforms regarding provision of learning opportunities, enhancing capabilities and providing second chances for the next generation. Secondly, it examined the missing roles of university in creating knowledge, skills and competences for sustaining the country's development. Lastly, the paper discussed how to bridge the policy gaps and strengthen the developmental link between the Nigerian university system and its immediate environment.

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Introduction

Development is concerned with the transformation of the individuals, households, communities, private as well as public institutions through human beings, who will in turn ensure that available resources are properly managed and directed towards societal improvement. According to Stiglitz (1998):

Development represents a transformation of society, a movement from traditional relations, traditional ways of thinking, traditional ways of dealing with health and education, traditional methods of production, to more “modern” ways....The changes that are associated with development provide individuals and societies with more control over their own destiny....enriches the lives of individuals...

Sustainable development connotes the ability to keep going and keeping up the progress made in various segments of the society. In the words of the Brundtland Commission (World Bank, 2003:14), development is sustainable if it “meets the needs of the present without compromising the ability of future generations to meet their own needs.” To Soubbptona (2004: 8), for development to continue indefinitely, it should balance the interests of different groups of people, within the same generation and among generations, and do so simultaneously in the economic, social and the environmental dimensions of life.

The “SEE Model” (Fig. 1) depicting the consonance among Social, Economic and Environmental dimensions of development, shows some specific areas of human life that must be taken into consideration for development to be sustainable. Thus, sustainable development is not only concerned with economic growth, but also with equitable distribution of the national wealth through provision of employment, security, education and health. It also involves the provision of an environment that is conducive for productive life, rational use of renewable resources, conservation of the non-renewable ones, fair and free participation as well as the recognition that the prosperity of individual persons is in the wealth of the nation (Table 1).

FIGURE 1
Soubbptona’s “SEE Model” of Sustainable Development

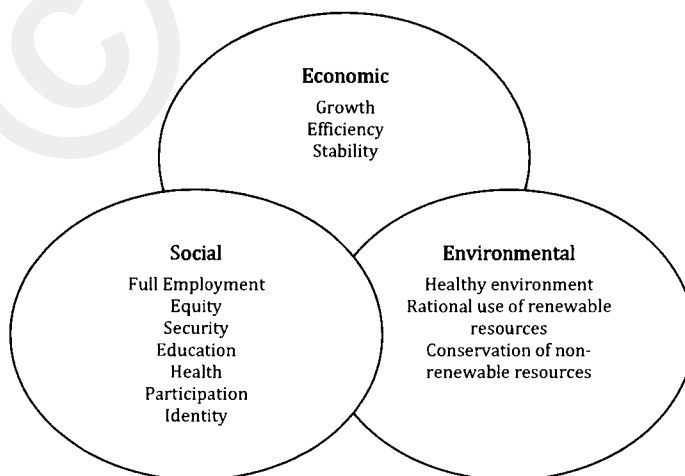


TABLE 1
Trend in the Rate of Economic Growth in Nigeria between 2000 and 2007

	2000	2005	2006	2007
GDP (current US\$) (billions)	31,949.18	45,053.89	48,626.70	54,347.04
GDP growth (annual %)	4.1	3.5	3.9	3.8
Inflation, GDP deflator (annual %)	4.7	5.7	5.4	4.3
Agriculture, value added (% of GDP)	4	3	..	..
Industry, value added (% of GDP)	29	28	..	..
Services, etc., value added (% of GDP)	67	69	..	..
Exports of goods and services (% of GDP)	25	27	..	..
Imports of goods and services (% of GDP)	25	27	..	..
Gross capital formation (% of GDP)	22	22	..	..
Revenue, excluding grants (% of GDP)	..	25.4	26.9	..
Cash surplus/deficit (% of GDP)	..	-1.7	-1.1	..

Source: World Bank, 2007.

The issue of distributional, social and environmental equity aside, the concept of sustainable development, as described by Pezzey (World Bank, 2003), further implies “the moral obligation of the current generation to ensure that future generations enjoy *at least* as good a quality of life as the current generation has now.” This issue of intergenerational equity is critical and strategic to sustainability because “there is a high risk that long-term interests of our children and grandchildren end up unaccounted for, because future generations cannot vote for themselves” (Soubbptona, 2004:10).

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Therefore, for development to be sustainable, a country needs to meet the following requirements: Firstly, the economy (GDP) must continue to grow at an annual rate of at least 4% for at least 10 years at a stretch (World Bank, 2008). Secondly, there must be a balance of interests in at least three areas, that is, (a) present versus future needs of people; (b) economic, social and environmental objectives (Soubbptona, 2004); and (c) needs of individuals, family, community (local and international), public and private sectors (Stiglitz, 1998). Thirdly, there must be a move towards service-led economy with emphasis on transparency, accountability and social skills (World Bank, 2008). Lastly, the economy must be knowledge-driven with emphasis on Information and Communication Technology (ICT), intellectualism and innovation. Considering all these sustainability conditions, one question that readily arises is: Is there any evidence, at least, that Nigeria’s economic development is sustainable? This question forms the basis for the next section of this paper.

Downturn in Nigeria’s Economic Growth

Table 1 reveals that Nigeria’s economy which grew at the rate of 4.1 percent per annum in 2000, grew at a decreased rate of 3.5 percent in 2005, and 3.8 percent per annum in 2007.

The values added to the economy by both agricultural and industrial sectors dropped by one percent each between 2000 and 2007 respectively. However, it seems that the 2 percent loss on account of agriculture and industry was made up by the service sector which added 2 percent to the economy during that period.

Upturn in Nigeria's Human Development

Paradoxically, the downturn in economic growth coincides with a period when Nigeria experienced an impressive improvement in human development indicators. Table 2 indicates that Nigeria experienced an improvement in human development between 2000 and 2007. As far as educational development is concerned, between 2000 and 2006, the rate of primary completion increased by 3 percent and the ratio of girls to boys in both primary and secondary education, increased by 2 percent.

TABLE 2
Human Development in Nigeria between 2000 and 2007

Indicator	00	05	06	07
Life expectancy at birth, total (years)	67	68	68	..
Fertility rate, total (births per woman)	2.7	2.6	2.5	..
Adolescent fertility rate (births per 1,000 women aged 15-19 years)	60	53	53	..
Contraceptive prevalence (% of women aged 15-49 years)	..	..	60	..
Births attended by skilled health staff (% of total)	..	..	65	..
Mortality rate, under 5 (per 1,000)	84	74	72	..
Malnutrition prevalence, weight for age (% of children under 5 yrs)	..	..	24	..
Immunization, measles (% of children aged 12-23 months)	73	78	80	..
Primary completion rate, total (% of relevant aged group)	83	86	86	..
Ratio of girls to boys in primary and secondary education (%)	93	95	95	..
Prevalence of HIV, total (% of population aged 15-49 years)	..	..	3.2	0.8

<http://go.worldbank.org/HREMVJ8T90>

Note: Ratio of girls to boys in primary and secondary education (%) seems to have been over estimated since according to UNESCO GMR calculation for 2005 it is 86% instead of 95% as shown in Table 2.

One reason that can be adduced for the upturn in human development in Nigeria is the strong faith that the country has in education as an instrument for development and particularly in higher education as a tool for the development of highly skilled human capital that would engineer and sustain socio-economic improvements. This belief is clearly entrenched in the National Policy on Education (all editions), the National Economic Empowerment and Development Strategy (NEEDS) of President Obasanjo, and the Seven Point Agenda of President Yar-Adua. Education in Nigeria has always been seen as a vehicle for growth and development as well as a means to free individuals from ignorance, disease and poverty. This explains why governments have often come up with programmes, policies and actions to address the challenges confronting the sector. Some of the recent programmes and initiatives are discussed in the next section.

Recent Educational Reforms in Nigeria

In an attempt to know what is missing, this paper has made efforts to identify and analyze recent initiatives and reforms in Nigeria and to know if the problem has to do with deficiency in picking up proven practices as policy options in education. Table 3 reveals that Nigeria has recently initiated many modern educational ideas at primary, secondary and tertiary levels for its education system. A close look at these initiatives and reforms shows that Nigeria apparently focused mainly on increasing access and quality of basic education rather than on learning for work and life at post-basic levels. To expatiate on this, there is need to discuss some of the pertinent post-2000 educational initiatives and policies, beginning from the most fundamental structural adjustment in the system.

TABLE 3
Recent Educational Initiatives and Reforms in Nigeria

Post-2000 Initiatives	Post-2000 Reforms
<ul style="list-style-type: none"> • Open University System • Post-JAMB Screening • National Gender Education and School Health Policies • Gender Education Project (GEP) • School Based Management Committees (SBMCs) • Special Teacher Upgrading Programmes (STUP) • Federal Teacher Scheme (FTS) • Benchmarks for Monitoring Education Programmes in Teacher Training Institutions • Mandatory Integrity Training for Teachers and Examiners to curb malpractices • The Presidential Teachers and Schools Excellence Award 	<ul style="list-style-type: none"> • 5-9-3-4 System of Education • Basic Education Law • Child Right Act • Operation Reach All Secondary Schools (ORASS) • Tracking Assets for Progress (TAP) • Adopt-A-Public-School • Community Accountability and Transparency Initiative (CATI) • Public Private Partnership (Triple P) • Read to be Educated, Advanced & Developed (READ) • Examination Ethics & Campus Safety (EE&CS) • Vocational Enterprises Institutions (VEI) • Innovative Enterprise Institutions (IEIS)

Sources: FME, ESA, 2007; Omolewa, 2007.

One of the fundamental changes in the Nigerian education system concerns structural reforms. For about a decade after Nigeria's independence in 1960, the country continued to use the inherited 6-5-2-3 structure of education. This structure comprised six years of primary, five years of secondary, two years of higher secondary school known as the Higher School Certificate (HSC), and three years of university education. In the early 1970s, however, there was a nation-wide agitation for reforms in Nigeria's education system that eventually led to the adoption of 6-3-3-4 education system. In this case, a child is expected to spend six years at the primary level followed by three years at the junior secondary, three years at the senior secondary and four years at the tertiary levels. The critics of the former system were of the view that 6-5-2-3 was not relevant to the political, economic, social and cultural needs of the Nigerians. They therefore, concluded that such a system could not meet

the national need for self-reliance and sustenance in a growing agricultural country like Nigeria. Consequently, the 6-3-3-4 system aimed at acquisition of skills, appreciation of the dignity of labour, solving the country's problems of illiteracy, manpower shortage and promoting scientific and technological advancement. The system started in 1981/82 session and graduated the first set of secondary school graduates in 1987/88.

Nonetheless, events during the two decades of the implementation of the 6-3-3-4 indicate that there were unfulfilled expectations. Some of the major challenges that confronted the 6-3-3-4 included financial problems, insufficient public enlightenment and inadequate statistics. Eventually, and in line with the global trends in education, the 6-3-3-4 was replaced by the 9-3-4 education system, representing a nine-year basic education, followed by a three-year senior secondary education and a four-year university education.

The Basic Education Act 2004 serves as an enabling law for the 9-3-4 structural reform in Nigeria's education system. The Act however, defines basic education as embracing the early childhood care and education (ECCE) as well as nine years of formal schooling (including primary and junior secondary schools). Universal basic education is defined as ECCE, primary and junior secondary schooling, as also adult literacy and non-formal education, skills acquisition programmes and the education of special groups such as nomads, migrant children and women, Almajiri (street children and disabled groups).

As part of the strategies for effective implementation of the 9-3-4 system of education, Nigeria adopted the Public Private Partnership (Triple P) to encourage private participation and active involvement in the country's huge investment in education. Noting that public and private sectors are complementary, and that effective public-private partnership is only possible through mutually designed, analysed and accepted instruments of cooperation and collaboration in educational system, Nigeria's overall objectives include the mobilization of private investment for infrastructural development, socio-economic growth and poverty elimination. The Gender Education Project (GEP) is one viable example of the triple P. GEP was a three-year Department for International Development (DFID) funded project to support education of girls through increased enrolment, retention and completion. The project in Nigeria (2004-2007) is the largest DFID funded/UNICEF Managed Girls Education Project in the world with \$26 million of DFID funding over three years. It covered 20 schools in six Local Government Areas (LGAs) in six northern states of Nigeria. According to the Federal Government of Nigeria, in 2003, there were 7 million Nigerian children of primary school age who were not enrolled in primary school. About 4.3 million (62%) of them affected were girls with a net gender gap in enrolment ratio of 18 percentage points. The overall Net Attendance Ratio (NAR) in the northern part of Nigeria was about 43% (FME, 2004). This serious problem led to the introduction of Gender Education Project (Onyilo, Onabolu, Mohammed and Giege, 2008).

To ensure the smooth transition of the products of basic education to quality secondary schools in Nigeria, the government initiated the Operation Reach All Secondary Schools (ORASS) a programme which is one of the key initiatives designed to root out some of the revolving problems, such as poor quality teachers, inadequate facilities, lack of instructional materials, negative values of students, poor organization and management of schools and inadequate supervision, to mention a few. Some of the objectives of ORASS were to diagnose the causes of the crises in the nation's education system, to establish and document the state of infrastructure in the schools, to take stock of the curriculum contents, instructional materials, teachers qualifications and quality of curricula delivery in schools in terms of

academic achievement in line with the minimum standards set out in the National Policy on Education (NPE). (www.fme.gov.ng 4/4/09).

The Federal Teachers Scheme (FTS) is closely associated with ORASS in the sense that FTS is meant to improve the basic education delivery through the recruitment and deployment of unemployed holders of the Nigerian Certificate in Education (NCE) to primary schools nationwide. The scheme, which commenced in 2006, was aimed at injecting fresh professional teachers to enhance teaching and learning in public primary schools. All the states in Nigeria including the Federal Capital Territory (FCT) had, at least, 1,000 participants each in their schools (www.allAfrica.com 7/04/09). Other important teacher development initiatives include the Benchmarks for Monitoring Education Programmes in Teacher Training Institutions, Mandatory Integrity Training (MIT) for teachers and examiners to curb malpractices and the Presidential Teachers and Schools Excellence Award (PTSEA).

One significant reform at the tertiary level that must be discussed is the establishment of the National Open University (NOU) on 22nd July 1983 as a springboard for open and distance learning in Nigeria. It was suspended by the government on 25th April 1984. However, its tremendous and unassailable role in tackling the country's educational problems, including access, equity and education for all became so evident that it was revived on 12th of April 2001. The NOU of Nigeria dedicates itself to preparing professionals in various disciplines through the distance learning mode. It offers a choice of qualifications from Certificates, Diplomas to Post Graduate Diploma and Degrees. The NOU employs a range of delivery methods to take education to the people and make learning an enjoyable activity. These methods include printed instructional materials, audio, video tapes and C-D ROMs. (<http://www.nov.edu.na/nounorganisation.jsp> 01/07/09).

Having documented some of the recent educational initiatives and reforms at enhancing synergy between education and national development in Nigeria, the next section of this paper dwells on the analysis of the documented good and best educational activities that have been found effective in enhancing sustainable development. The aim is to identify those activities that Nigeria have not adopted and therefore, highlight them as possible policy options for policymakers in the country.

Reform Gaps between Documented Practices and Nigeria's Programmes

From the summary of proven and promising practices documented by the World Bank (2007), it is found that educational policies emphasizing learning for sustainable development have focused on three dimensions: namely, provision of educational opportunities; enhancement of capabilities of learners to capture available opportunities; and provision of second chances for those who are left out. Each of these policy thrusts has three focal dimensions. As far as learning opportunities are concerned, each country is expected to concentrate efforts on provision of basic skills at the universal junior secondary school level, diversify post-basic education in a flexible manner, and improve quality and relevance of education for work and life. Regarding enhancement of capabilities of the next generation, each country is expected to focus on activities that would boost learners' motivation to learn, provide learners with information that will help them in taking

decisions and provide financial incentives to alleviate constraints to better choices. Lastly, each country is expected to provide second chances to those who are left out, through remedial education, equivalency programmes and vocational training. The details are discussed below.

Providing Learning Opportunities to Next Generation

Sustainable development implies meeting the learning needs of the present without compromising the capability of the future generation to meet their own learning needs. To achieve this, the learning opportunities should be well balanced by ensuring the provision of basic skills at the universal junior secondary school level, initiating flexible diversification of post-basic education, and improving quality and relevance of education for work and life.

Table 4 shows that Nigeria complies exactly with the global expectations regarding the provision of basic skills at the universal junior secondary education level. This it does by implementing the compulsory schooling laws as well as by introducing the vocational track at the upper secondary level. Regarding diversification of post-basic education, Nigeria nearly complies with all the three proven successful initiatives for catering for the education of the next generation of Nigerians. Nigeria has introduced the private-public partnership. The country has also initiated the process of a nation-wide quality assurance and information mechanism as stated in the Education Strategic Plan. However, the idea of fostering competition through autonomy and performance-based funding is yet to become acceptable to most Nigerians who seem to be resisting any framework that might introduce undue competition in a country where the significant proportion of the wealth is in the hands of a few.

As for the quality and relevance of education, Nigeria is yet to initiate two out of the three globally proven strategies for balancing educational opportunities between today's children and future generations. The country appears to have adopted initiatives that are meant to improve teaching quality but has only partially tried its hands on the continuous need-based teacher training with follow up. The Universal Basic Education Commission (UBEC) has been empowered to finance and administer in-service training programmes for teachers and caregivers who are expected to provide personnel for the first nine years of schooling in Nigeria. To this end, Nigeria earmarked a significant proportion of its national income to teacher development at the basic level. However, the consultancy mode of organizing these training programmes in Nigeria differs a bit from the continuous need-based approach that has been globally proven to be highly effective. Moreover, Nigeria is yet to adopt a well-designed performance-related pay for teachers. Although there are few examples around the world "to adopt performance-related pay for teachers" at the basic education level, this practice has been proven to be effective in enhancing teachers' performance across the world. In Nigeria, on the average, teachers in the public schools earn higher salaries than their counterparts with similar qualifications and experience in private schools. Yet, teachers in Nigerian public schools have the reputation of being less committed to duty than their counterparts in the private schools. This shows that higher pay might not translate to higher job performance among teachers in the public schools in Nigeria. It thus implies that if teachers were rewarded based on proven evidence of job performance, then higher productivity would mean higher pay.

TABLE 4
Policy Gap between Nigeria and Global Practices on
Learning Opportunities for the Next Generation

Focus of Reform	Proven Successful	Promising but Unproven
a) Universal Jr. secondary to provide basic skills	1. Compulsory schooling laws (Nigeria)	1. Vocational track at upper secondary (Nigeria)
b) Diversification with flexibility of post-basic education	1. Private-public partnership (Nigeria) 2. Providing quality assurance and information (Nigeria's strategic plan) 3. Fostering competition through autonomy, performance-based funding (Missing)	2.No terminal vocational track (South Africa; Missing) 3.Transferable credit-based courses (Thailand; Missing) 4.Part-time schooling (Argentina; Missing)
c) Improving quality and relevance of education for work and life	1. Teaching quality 2. Continuous need-based teacher training with follow up (Partially) 3. Well-designed and negotiated performance-based pay (Chile; (Missing)	5. Making curriculum relevant (NERDC) 6. Practical, thinking and behavioural skills (South Africa; Missing) 7. Blending vocational with general curricula (Chile; Missing) 8. University-local economy linkages (US Career Academies; Germany dual system; Missing) 9. School Accountability (CATI in Nigeria) 10. Disseminating information on school performance (China; Missing)

Source: World Bank (2007).

World Bank Development Report 2007, p.92

At the best level, it appears that Nigeria has not implemented many of the globally recognized good practices regarding quality and relevance of education. Table 4 (column 3, row 3) shows that apart from the country's efforts at making curriculum relevant at the basic levels, Nigeria, unlike South Africa, has not done much to enhance a synergy among practical, thinking and behavioural skills, especially at the university level. Unlike in Chile, where vocational and general curricula were blended, Nigeria still operates stand-alone vocational curriculum (specially designed for the polytechnics) alongside another stand-alone general curriculum in the universities. Furthermore, the university-local economy linkages that have become a successful practice in the US Career Academies and the German dual system, are still missing in Nigeria. Although Nigeria announced the School Accountability Initiative (CATI) sometimes in 2007, there has been no sign of policy continuity after the Minister of Education that introduced it left the system. Disseminating information on school performance, as done in China, has been found potentially good for

promoting right choice among consumers of education. Nigeria is yet to embrace this practice in education.

Enhancing Capabilities to Seize Educational Opportunities

Balancing opportunities aside, sustainable development also requires that children, youth and adults be empowered to avail of learning opportunities to sustain development. This is normally done through motivational strategies, information sharing and financial incentives to learners. Globally, mentoring, school-family connectedness and merit-based scholarship have been sufficiently proven to be effective in enhancing the developmental capabilities of learners. Apart from the School-Based Management Committee (SBMC), which is supposed to empower students managerially by involving them in the policymaking process, Nigeria has not adopted any of the proven motivational strategies of empowering the next generation for developmental sustainability. In a similar vein, Nigeria has neither provided information on educational opportunities that have been found to be a proven successful approach to enhance developmental capabilities nor fully made available the school-based guidance and counselling services that have been found to be a promising initiative. Furthermore, Nigeria is yet to embrace some of the students' financial assistance strategies, such as conditional cash transfer, vouchers, income-contingent loans and individual learning account (Table 5).

TABLE 5
Policy Gap between Nigeria and Global Practices on
Enhancing Capabilities of the Next Generation

Focus of Reform	Proven Successful	Promising but Unproven
a) Motivating students	<ol style="list-style-type: none"> 1. Developing behavioural skills through school-based mentoring (US Big Brothers and Big Sisters; Missing) 2. Improving school connectedness with students (USA; Missing) 3. Improving incentives to exert effort (Merit-based scholarships for girls in Kenya; Missing) 	<ol style="list-style-type: none"> 1. Including students in school policy decision making (School-based Management Committee in Nigeria) 2. Young persons-based conditional cash transfers (Bangladesh stipends for girls; Missing)
b) Providing better information	<ol style="list-style-type: none"> 4. Information on education opportunities (UK Aim Higher; Missing) 	<ol style="list-style-type: none"> 3. School-based career guidance services (Partially in Nigeria)
c) Financial incentives to alleviate constraints to better choices	<ol style="list-style-type: none"> 5. Conditional cash transfer (Mexico Oportunidades; Missing) 6. Vouchers (Beneficiaries in Colombia; Missing) 	<ol style="list-style-type: none"> 4. Income-contingent loan (Australia and Thailand; Missing) 5. Individual learning accounts (Mexico; Missing)

Source: World Bank (2007). World Bank Development Report 2007, p.92

Providing Second Chances

The provision of second chances to out-of-learning people could be in the form of remedial education, equivalency programmes and vocational training. Both remedial education and vocational training, and combination of these strategies have been sufficiently proven to be effective in providing a second chance to out-of-learning people. These two strategies are popular in Nigeria. However, Nigeria is yet to adopt the combination of remedial education and other services, such as financial incentives, mentoring, and information sharing as it is done in the "US Upward Bound Program". In similar vein, Nigeria is yet to implement the combination of vocational training with life skills as stated in the country's National Education Strategic Plan 2007.

The equivalency programme has been found to be promising (though not yet proven) in providing second chances for the out-of-learning people. The three popular activities making up the equivalency programme are: (a) group classes with flexible schedules; (b) simplified and practical curriculum with emphasis on life skills; and (c) transition mechanisms within school, between schools and between school and work (Table 6).

TABLE 6
Policy Gap between Nigeria and Global Practices on Providing
Second Chances for the Next Generation

Focus of Reform	Proven Successful	Promising but Unproven
a) Remedial education	<ol style="list-style-type: none"> 1. Testing to determine eligibility (Israel; Not systematically organized in Nigeria) 2. Combining remedial with other services such as financial incentives, mentoring, and information (U.S. Upward Bound Programme; Missing) 	
b) Equivalency programmes		<ol style="list-style-type: none"> 1. Group classes with flexible schedules (Colombia; Missing) 2. Simplified and practical curriculum with emphasis on life skills (Mexico; Strategic Plan in Nigeria) 3. Mechanisms to smooth transition to formal education or work (Bangladesh-the ECCE and SEWES/Industrial Training Scheme in Nigeria)
c) Vocational training	<ol style="list-style-type: none"> 1. Combining vocational training with life skills (Jovenes and Entra 21 in Latin America; Strategic Plan in Nigeria) 	

Source: World Bank (2007). World Bank Development Report 2007, p.92

Nigeria has long embraced the transition mechanisms. For example, Nigeria has the National Youth Service Corps (NYSC), the National Directorate of Employment (NDE), and the Industrial Attachment Programme (IAP) as transition mechanisms between school and work. The country has also integrated the pre-primary schooling into public schooling to enhance smooth transition from home to school. Moreover, the issue of simplified and practical curriculum with emphasis on life skills is being considered very seriously. In fact, it is one of the key issues addressed by the country's current strategic plan. Nigeria is known to be very good at policymaking but still needs to do better in the area of implementation.

The strategic plan has perfectly addressed the policy aspect of curriculum revision without much on the practical aspects involving curriculum review or infusion at the institutional level. The next section of this paper will, therefore, focus on some of the developmental needs that should be incorporated into a practical university curriculum at a time when sustainable development has become a global issue to be addressed by the education sector.

Consequential Role Dissonance among Nigerian Universities

Undoubtedly, all the educational initiatives adopted for implementation in Nigeria were laudable to provide a strong foundation for the education system. Yet, the post-basic university education has been left to experience a dissonant role at a time when most countries of the world vigorously seek for accumulation of knowledge for sustainable development. Nigeria focused on improving the quality of access to basic education while it apparently ignored the developmental relevance of knowledge, skills and competences being created at the university level. Consequently, a gap (hereby referred to as a role dissonance) has been created between what the universities in Nigeria were (or even are still) doing and what they were socially expected to do judging from global practices in a modern society. In other words, the relatively insufficient focus on post-basic reforms in Nigeria between 1999 and 2007, when Obasanjo was the President, resulted in a disagreement between the actual roles universities were playing and those the society was expecting them to perform, especially at a time when rapid changes in the social, economic and environmental spheres made it expedient for universities to perform new additional roles. For a better understanding of the role dissonance at the university level in Nigeria, there is the need to discuss the real as different from the expected roles of a university with the view to highlighting the dissonance and also proposing ways of resolving the difference.

Roles that Nigerian Universities are Actually Playing

Nigerian universities are set up to educate the youth for work, carry out research and provide services to both national and international communities. Universities in Nigeria are doing this job religiously without any formal announcement that the society expects them to play some new roles in this new global environment where the concept of nature study gradually became environmental education and later changed to sustainable development and environmental justice. Consequently, there is apparently a cultural lag between what the universities are transmitting and what they are supposed to transmit in terms of the knowledge, research and skills required for sustainable development. This has thus created a gap between what stakeholders are expecting the universities to do and what they are actually doing. In practice, the public is expected to kick off a debate discussing the

discrepancy between the “real” roles and the “ideal” or the “expected” roles of the universities as the society experiences changes in expectations. In this regard, a series of national debates were organized by the National Universities Commission (NUC) as well as the universities in Nigeria to mark the Decade of Sustainable Development. One of the subject matters of such debates was “the roles that universities are expected to play in sustainable development”. The next section of this paper summarizes the general outcome of some of such debates.

Roles that Nigerian Universities are Struggling to Play

The waves of globalization, digital and knowledge revolution, as well as the service-led economy, have widened roles of the universities beyond the traditional one of performing business as usual (i.e., teaching, research and community services). Today's universities are expected to perform other non-traditional roles including the *modern*, the *critical*, and the *proactive* roles. In this regard, Nigerian universities are definitely going through a transitional period when it sounds as if they need to play additional roles to maintain their social and economic relevance in this modern world.

Firstly, the modern roles of a university require doing business in an unusual manner. The university is expected to incorporate the openness, border- and boundary-breaking and bridge-building approaches of globalization into teaching, research and community services. This implies team-teaching, collaborative-research and synergetic relationship between gown and town. Furthermore, the university is expected to integrate in its activities (teaching, research and service delivery), the ICT speed and connectivity in digital revolution, the information and innovation in knowledge revolution as well as the emotional quotient and networking attributes in social capital. To achieve this, the university needs to lay emphasis on capacity building for teachers, students and administrators.

Secondly, today's universities are expected to perform, more than ever before, some critical roles in the society. These critical roles are closely related to those modern functions which are driven by changes in the external environment of the university. These critical roles are driven by intrinsic characteristics of a university which include (a) pursuit of truth and justice in teaching, research and public debates and services, (b) exercising ethical and scientific rigour in learning, teaching, research and consultancy services, (c) emphasizing quality assurance in teaching, research and consultancy services, and (d) ensuring due process in university administration. The general guiding principle behind the critical roles is the university-wide recognition that “business is business.” In this case, university teachers are expected to teach as professional teachers, researchers to conduct scientific research as professional scholars or scientists, and service providers to consult as experts or professionals. In this case, every person in the university (student and staff) navigates from the three pillars of professionalism which are: (a) competence, (b) ethics, and (c) standards. These critical roles have logical implications for quality assurance, monitoring mechanisms and performance reward system in all facets of university work.

Thirdly, the globally competitive, service-led economy and the rapidly-changing environment within which today's universities are to perform their duties, calls for some proactive roles to enhance sustainable development. The universities are being censored internally and externally. Nigerian universities are being compared with other institutions across the globe. Every university in the world is competing for a scholarly space on the

global map of world-class institutions. The response of Nigerian universities to the global and internal censorship should not be reactive but positive, practical and down to business in nature. Each university and its sub-systems are expected to quickly fashion out practical strategies to empower their people to move the institution towards becoming a world-class university. The world-class university is characterised by having a world view of teaching, research and consultancy services. It is expected to explore windows of opportunities, nurture learning and research culture, have drive towards collegiality and aspiration to housing lead scholars, teachers and students through the use of face-to-face, open and distance modes (Table 7).

TABLE 7
Features of a World-Class University

Code	Critical Features	Description
W	World view	Based on the belief that to be inward looking is to stifle academic and intellectual growth, it is imperative for a world-class university to progressively and vigorously keep abreast with the developments in the world to boost self-image of such institutions.
O	Opportunity	In this connection, a world-class university seeks and explores every opportunity to forge networks with other universities and research institutions of the world. The close collaborations in terms of research and teaching will certainly bring about a win-win situation; it is synergistic in nature.
R	Research culture	Doing cutting edge basic and applied research is a norm in a world-class university. Excellence in terms of publications, patents and citations is the hallmark of a world-class university.
L	Learning culture	All world-class universities have traditionally a pervasive learning culture among their campus communities. In such environment, learning is venerated and knowledge reigns supreme.
D	Drive (Ambition)	A world-class university constantly pushes itself to scale greater heights, such as increasing the number of Nobel Laureates among its rank of professors.
C	Collegiality and cohesiveness	Synergy among university communities gives it a sense of shared mission and destiny. Research needs concerted effort from the top professors to the technicians. Anecdotal reports of resentment, estrangement and bickering could be present but such type of cases should be isolated. Collegiality, including faculty participation in the university affairs, especially in the admission of students, curricula, degree requirements, and faculty appointments and promotions.
L	Lead scholars	These are the life-blood of a world-class university. They provide vital academic leadership. World-class universities have a coterie of prominent scholars who are also recipients of prestigious awards, such as the coveted Nobel Prizes and Field Medals.
A	Aspiration	This is another hallmark of a world-class university. High aspiration will propel an institution to achieve greater success. The high aspiration is often reflected in the mission and vision statements of a university.
S	Size (Mega University)	This is another important aspect of a world-class university, in terms of students' enrolment, staff (academic and non-academic) strength and available infrastructural facilities.
S	Service delivery	This has to do with the impact of the university on the immediate society and the world at large, in terms of contributions to economic and all round development

Source: Extracted from Oni, A. A. and Alade, I. A. (2008), Wasser, (2001) and Cabal (1993).

Bridging the Reform Gaps and Strengthening University-Development Linkage

Having discussed the reform gaps in the Nigerian education system and the consequential role dissonance at the university level, this section focuses on the strategies for bridging the reform gaps and for resolving the role dissonance through infusion of sustainable development education into university curricula in the country. The successful experience of how this was done in the United States of America would provide a description of how to go about to infuse the culture of sustainability into the school system in Nigeria. In the United States of America, the view about nature and its resources recently experienced a strategic shift from conservation to their rational management. This is probably because of the increasing experience of global natural disasters, rising depletion of the ozone layer, enormous air pollutions, escalating environmental degradation, disastrous hurricanes and widespread international conflicts.

As contained in one of the latest works of Huey-li (2006), institutions of learning in modern societies often have been called upon to solve various social problems. According to him, as far back as 1921, proponents of conservation education made concerted efforts to infuse the idea and practices of conservation into the elementary and secondary school settings in America. Above all, concerned educators made efforts to integrate conservation education and citizenship education in order to produce “a citizenry that is knowledgeable about the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solutions.” At the tertiary level, the conservation movement continued to shape the subsequent development of environmental educational programs, such as Environmental Management Education, Resources Use Education, and Environmental Quality Education, during the 1960s, which aimed at promoting rational management of natural resources and assumed responsibilities for training environmental professionals.

The advocacy for infusing environmental education into the curriculum took different dimensions, including conceptualization, networking, conferencing, policy dialogues and policy and practical mainstreaming. To this end, Huey-li (2006) refers to the Tbilisi Intergovernmental Conference on Environmental Education held in 1977. Following this conference, firstly, there was a consensus among educators that environmental education should “consider the environment in its totality (economic, political, technological, cultural-historical, moral, and aesthetic).” Secondly, government of America passed the National Environmental Education Act of 1990 that represents an undiminished effort to encourage post-secondary students to pursue careers related to managing the environment. Furthermore, Huey-li (2006) argued that because rational management of environmental resources can no longer be confined within national or regional boundaries in the age of globalization, planetary management has emerged as a popular agenda of the contemporary environmental movement. What can Nigerian universities and governments learn from this? The lessons can be summarized in what this paper terms to be “information advocacy on curriculum for sustainable development”

Summary and Conclusion


This paper has been able to briefly describe some of the recent educational reforms initiated in Nigeria to enhance sustainable development. It has also summarized proven and promising educational initiatives that could enhance sustainable development as contained in the World Bank Development Report of 2007. The analysis revealed that Nigeria has largely implemented some of the proven World Bank's educational reforms, especially at the lower levels of education in the country. The analysis further revealed that Nigeria could further enhance its development by implementing identified proven and promising educational initiatives, particularly at the tertiary level of its education. It has been argued in this paper that Nigeria needs to infuse sustainable development into the curriculum of its tertiary education system to train the youth to sustain the national heritage for the future. To demonstrate the importance of synergy among educational experts, the development experts and policymakers in down streaming initiatives aimed at enhancing sustainable development to the university level, this paper has also drawn some lessons from the United States of America.

From the experience of the United States of America, information advocacy geared towards infusing sustainable development into Nigeria's education system requires that: (1) Nigerian educationists should organize themselves in order to drive the infusion of sustainable development into the university curriculum in Nigeria, (2) Nigerian educationists should organize a series of intergovernmental conferences on sustainable development involving, among significant others, the federal, state and local governments (represented by their ministries and boards) as well as the National Universities Commission, the institutions, educationists, students, development partners and experts in both education and sustainable development, and (3) Nigerian educationists should form vibrant and motivated groups to network those who are significant in translating the ideas into policies, laws and best practices.

References

- Adirije U.A. (2009): Public-Private Partnership and Nigeria's Development. <http://www.phishare.org/03/04/09>.
- Aleyideino S.C. (1989): National Policy on Education – Formulation and Implementation. In Tamuno T.N. and Atanda J.A. (eds.): *Nigeria Science Independence – The First 25 Years*. Lagos: Heinemann Books (Nigeria); p. 65-82.
- Cabal, A.B. (1993): *The University as an Institution Today – Topics for Reflection*. Ottawa: International Development Research Centre.
- FME (2006, 2007, 2008): Education Sector Analysis Reports (ESA, several years)
- FRN (2007): *Strategic Plan*
- Huey-li, L. (2006): Rethinking Terrestrial Pedagogy – Nature, Cultures, and Ethics. *Teachers College Record*; Volume 108(12); p. 2450-73.
- Husain, T. (1998): Setting the Agenda. *Proceedings of the Fifth Annual World Bank Conference on Environmentally and Socially Sustainable Development*. Washington, D. C.: IBRD/The World Bank.
- Omolewa, M. (2007): Educational Reform for What? *Keynote Address, Meeting of Committee of Deans of Education of Nigerian Universities*, University of Lagos, Lagos, Nigeria.
- Oni, A. A. & Alade, I. A. (2008): The Future of Higher Education in Nigeria – Global Challenges and Opportunities. In Joel B. Babalola, Labode Popoola, Adams Onuka, Soji Oni, Wole Olatokun and

- Rosemary Agbonlahor (eds.): *Towards Quality in African Higher Education*. Ibadan: HERPNET and The Postgraduate School, University of Ibadan, Ibadan, p. 300-18.
- Onyilo O, Onabolu, B. Mohammed, F and Geye A (2008): The Nigerian Girls Education Project – Giving the Girl Child a Voice. A paper presented at 33rd WEDC International Conference, Accra, Ghana 2008.
- Osokoya I.O. (1999): *History and Policy of Nigerian Education in World Perspective*. Ibadan Wemilo. re Press (Nig). Ltd.
- Soubbotina, T. P. (2004): *Beyond Economic Growth – Meeting the Challenges of Global Development*. Washington, D. C.: The World Bank.
- Soubbotina, T. P. (2008): *Beyond Economic Growth – An Introduction to Sustainable Development*. Washington, D. C.: The World Bank.
- Stiglitz, J. (1998): *Towards a New Paradigm for Development Strategies, Policies, and Processes*. Geneva: 1998 Prebisch Lecture at UNCTAD.
<http://www.worldbank.org/html/extdr/extme/jssp101998.htm>
- Taiwo, C.O. (1980): *The Nigerian Educational System – Past, Present and Future*. Thomas Nelson (Nig).
- Wasser, H. (2001): The Twenty-First Century University: Some Reservations. *Higher Education Review*, (33) 3, 47-55.
- World Bank (2003): *Sustainable Development in a Dynamic World – Transforming Institutions, Growth, and Quality of Life*. Washington, D.C.: The World Bank.
- ____ (2007): *World Development Report 2007 – Development and the Next Generation*. Washington, D.C.: IBRD/ The World Bank.
- ____ (2008): *Spreading and Sustaining Growth in Africa – Africa Development Indicators 2007*. Washington, D. C.: IBRD/The World Bank.

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The Strange Case of Digital Divide

R. P. Singh*

Contemporary education has witnessed far greater changes in both the curricula and delivery of instruction in the last couple of decades compared to past couple of centuries put together. Not only we have larger numbers of peripatetic teachers, but also we have tremendous variety of institutional mobility. The tools of instruction also appear to have changed in very many ways. In a way all this constitutes globalization. Globalization *per se* as a concept and practice is not new to an Indian. Indian literature, both ancient and modern, is replete with references to the world being a single large unit and most of the time we also practice the idea literally, which holds that “the entire human race is but one family”. What greater proof for this practice could one offer than to point out the presence of millions of Indians living abroad? Indian religions too have unhesitatingly been unanimous about endorsing this view. Since this concept is embedded naturally in the Indian psyche, we seldom face problems on that score. We could easily cite numerous hymns and verses from our literature, ancient as well as modern, to endorse the statements made here.

The theme implies that if material conditions remain unchanged in the process of globalization, the world would continue to remain homogeneous and basically equal. The fact is that thus far we have neither the knowledge nor the experience of any society that could ever qualify to be called either equal or homogeneous. To me it looks as though the divine intention itself was not to create a world that would ever be so boring as to be either equal or homogeneous. What perhaps is possible is to offer an infrastructure that makes equity an achievable object. There are several philosophical systems that decry equality but support equality of opportunity. In brief, they are all for equity. The tragedy with this almost universal desire is that it is a mere formulation of a concept and not a roadmap for an action plan.

It would be advisable not to overlook the fact that equality is an unachievable goal. In reality, it is a virtual impossibility to succeed in this direction. It is both sensible and relevant to say that it is also an undesirable value because no society could ever function with that kind of an impossible reality. All of us are aware that there are two types of constructs—the real and the ideal. An ideal is what inspires one to work hard and compete and the real is wherein one shall always fall short of the ideal. Life acquires meaning by our efforts to bridge the distance between the real and the ideal. What the ancient Indians were talking of (*vasudaiva kutumbkam*) will forever remain an ‘ideal’ construct even if our dream to have

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equity in today's world becomes a 'virtual' reality. This diversion was intentional lest we overlooked the main issues involved here. The main issue for debate in my opinion is whether or not globalization would lead to digital divide. My contention in this regard is that globalization will have its impact in several other ways rather than create inequality. No society was ever equal and neither it is likely to ever become so. Inequality is embedded in the nature of society itself.

The other points relate to poverty and co-existence of numerous hierarchical layers of social and economic existence and progress. At no point of time in Indian history have we been free from the misery of poverty. Indeed, the very progress of our society has been totally unrelated to the reality of prosperity. Certain classes or castes in India have traditionally been rich at the expense of others. One needs to consult the history of our society to get an idea why prosperity has been praised by so many. *Praise is invariably reserved for the rare and the exclusive.* We take for granted what is readily available. Riches or fortunes are destined to be in the hands of a few. We must also acknowledge the reality that Indian society is inherently and basically unequal. It is not merely the caste that divides us all, but the political system that has grown overtime too has acquired a vested interest in poverty. For instance, what would happen to the Left parties if for some reason India came out of its vice-like grip of poverty? Not only will they become irrelevant because they will then lose the constituency they have thus far cultivated, they will also be forced to look for some other ideology to survive. Without going into a diversionary mode, let me state that it is not true that we have waited for countless centuries to see that as a society, we should get divided digitally. *We have been and are a remorselessly divided society with or without any innovation or scientific advancement.* Therefore, what happens now will in no way be worse than what the existing reality is. In other words, the so-called digital divide is likely to do us some good instead of something unimaginably worse.

I refuse to decry the absence of equality in our society. The gadgetry involved in modern-day information technology and its mastery by a few to command on those means of transmission compares well with the inventions of gunpowder or paper or the wheel etc. Every time something new emerges, it takes time to percolate down to deliver its benefits universally. The ones who are fortunate or intelligent enough to receive it first, constitute the vanguard elements of prosperity. In the process they are likely to accumulate unprecedented power either of expertise or the riches. This is some kind of a universal law. Nothing new is likely to happen even now. The very concept of 'digital' divide is contextually misplaced and ill conceived.

What we must note at this juncture are a few important facts about India's new class structures. We already know that India is caste-ridden and is afflicted with regional biases with plenty of tribal dominated areas. Still, in order to describe this social reality, we might as well use the well-known terms Lord C.P. Snow used some five decades back to describe the British society. India lives on in numerous concentric circles of parallel societies with minimum number of communication channels open for any kind of dialogue. The English speaking/knowing urban elite knows nothing or very little about the majority of non-English speaking / knowing Indians. Thanks to oil boom, the non-English knowing India's unskilled workers suddenly hit the jackpot. They have built big mansions out of their earnings abroad in remote villages and are even willing to invest in education for children. The classical example of this trend can be witnessed both in Kerala and Bihar. The results of their monetary investments have not been universally beneficial.

India's traditional urban elites continue to have a vested interest in the preservation of the once discredited 'British heritage.' Therefore, they read, speak and think in English and attend the same clubs as their erstwhile rulers did. They have their exclusive schools, which charge heavy fees just 'to maintain standards.' Their children go to Missionary colleges and join All-India services or the multinationals. They marry within their class, and should the caste also match, they then have the best of both the worlds.

India has accepted the West as a model for modernization. In the process, Indians have ceased to be prejudiced against the use of English language, which during India's struggle for freedom symbolized foreign domination. Indeed, after independence, the mastery of this language has been instrumental in creating a class of rulers who are imposing Western ideas and institutions on the non-English knowing people. If this has led to a social division of Indian people, it is helping a few to attain a good deal of prosperity at the cost of others. More so now that India has joined the WTO regime, the information technology has come to rule the roost. The implications are there for all to witness. There was a time when the Tatas and the Birlas were the richest Indian business families. Today they stand outclassed by Ambani brothers, Premji & Co and several others.

The majority of the non-elites join government run/grants-in-aid/charity/ municipal schools. These schools may teach the same curriculum as the elites do, but here the teaching is transacted in Hindi or some regional language. And from then onwards starts the discriminatory process that eventually leads these children to become second-grade future citizens. Couple of decades back there was a possibility that a few of the non-elites will cross over the dividing line and join the mainstream elites. This is going to become unlikely now.

Educationally, the great urban-rural divide has become glaring in most parts of the country. The villages do have their schools – a vast majority of them being single-teacher schools. The re-affirmation of faith in the *Sarva Shiksha Abhiyan* by the UPA government, notwithstanding the village school retains, by and large, its 'community center character' where all varieties of social functions, including political meetings and *gram panchayat* sessions are held. During summer and winter breaks, the school buildings serve as *barat ghar* (wedding-hall) or when the teacher is away, which is fairly frequent, the students indulge in free-for-all games. The seriousness with which the government issues fiats for running these schools is truly a mockery of commitment where even the barest minimum facilities and environ for teaching happen to be non-existent. Expecting such schools to bring up rural / tribal children ready to face a highly competitive world is surely a cruel joke on an unsuspecting crowd.

All Indian cities are facing an explosion in population, a large chunk of which consists of migrants and unskilled labor, adding a shanty township each month. Since they serve as vote-banks for the ruling party before every municipal or parliamentary election, these shanties are regularized. The inhuman conditions in which these people live are seasonally improved and gradually municipal schools start appearing as pleasant surprises in otherwise bleak surroundings. However, what is shocking is that villages are gradually becoming slums, where the landless labourer and the old cobbler or blacksmith find it difficult to survive. With the arrival of technology in Indian farming and the formation of co-operatives in states like Maharashtra, Gujarat, etc. rural life has become quite comfortable for the land owners even when their landholdings are not very large. With television

covering most of the country's population and pocket radios available almost universally, the complexion of social life is gradually getting urbanized even in remote corners of the country. While the banking services have now become available in majority of rural pockets, hoards of urban entrepreneurs have landed in rural areas in search of cheap labor and land for their industries. The mushroom growth of plantation societies has more or less established that Indians can smell economic benefits from miles away. What I am trying to say is that even without much efforts Indians seem to be happy with their socially divided existence and highly discriminating school system. If one may add the presence of antiquated religious schools to this list, the divisions already in existence arguably cannot be described as dependent on any digital phenomenon.

Human progress since primitive times could be defined in terms of its march towards providing basic necessities of life to all. This progress should be seen as an effort to create conditions under which one could claim to have some dignity attached to human life. Recent meet on global warming endorses my point. These efforts are definable in terms of one's ability to earn one's livelihood and to live in reasonable safety. One should also see that even this modest goal has remained elusive in majority of the cases. The enlightened people are interested to see that human past does not extend beyond the pages of history. Probably this seems to explain the choice of the present sub-theme.

Let me now take up seriatim the problems of globalization vis-à-vis India as they cover areas beyond the territorial boundaries defined in terms of nation-states. However, most of the problems arise when one talks in terms of nation-states. Several thinkers believe that since all humans belong to the same race, the world must be treated as a common habitat. The political process that led to the formation of nation-states has now to be put into the reverse gear. To that end, we have several world organizations trying to iron out political and other varieties of rivalries. Besides, it makes economic sense to fight jointly when faced with a common yet strong enemy. Modern technology, innovations, and research are expensive business. The EU experiment, therefore, should be seen against that background. This holds out a hope that something like EU may have to be evolved in the Asian region too. The SAARC strikes immediately as our response to the EU model.

We can see that Europe has gradually overcome the concept of nation-states and is becoming socially and economically a cohesive, competitive society. Others who have thus far not refused to be part of it are queuing up to join in. A typically Christian Europe is being wooed by a dominantly Islamic country like Turkey to become a part of it. The very concept of Europe trying to unite is the result of an American threat to dominate and weaken it. Besides being a question of survival and acquiring the ability to stand up to American challenge, the economic reasons have far out-weighed other considerations. Educational system is getting defined to become an instrument of the latest warfare. Research is getting due weightage and the mobility of scholars is being deliberately promoted and encouraged. Without going into details, let us accept that EU is emerging as a model of future trans-border arrangement to meet challenges of WTO and the IPR etc. The march of globalization is largely livelihood-driven. An eminent economist of Indian origin, Jagdish Bhagwati, is responsible for the establishment of World Migration Organisation and editorially *The Times of India* (Dec.18, 2002) desired India to opt for *Akhand* pluralism and the Indian National Congress of Sonia Gandhi has endorsed it. This is one reason why India has started looking invitingly toward the East. Recent moves to get gas via Bangladesh or the trading co-operation with China are all examples of our acknowledgement of the changing reality.

The world has somehow been unsuccessful in retaining sacrosanctity of the existing political arrangement called the nation-states, and its boundaries. Even the national languages are gradually losing out to the dominant world language. We have today numerous world organizations promoting socio-economic unity and almost all governments are party to their running. Even in India, the dominant languages that help one to migrate from one state to another are either English or Hindi. Therefore, one must acknowledge the reality of local and regional languages losing out to politically dominant and economically helpful languages. DTH might prove to be a great help in retaining and even enriching regional and local languages, but one is unsure about their bright future.

India is unfortunately facing tremendous internal ethnic and religious problems. These biases and disagreements are preventing it to become a Nation. The tribes, castes and regions, besides multiplicity of languages, are preventing it to put up a combined fight on any front. Consequently, it is the 'minority groups' among Indians that are reaping all the benefits, but as a nation we are losing out on almost all fronts. We not only lack imaginative leadership but the irresponsible behavior of the majority of our legislators gives us no hope for a better future.

Microsoft entry defines "globalization as a concept that encapsulates the growth of connections between people on a planetary scale." Globalization involves the reduction of barriers to trans-world contacts. Many believe that through it people become more able—physically, legally, culturally, and psychologically—to engage with each other in "one world".

The same write-up continues to say:

"Global connections take many forms. For instance, jet aeroplanes transport passengers and cargo across any distance on the planet within a day. Telephone and computer networks effect near-instantaneous interpersonal communication between points all over the Earth. Electronic mass media broadcast messages to world audiences. Countless goods and services (such as Nissan cars and Club Med holidays) are supplied to consumers in global markets. Moreover, some articles (including clothing and electronics) are manufactured through trans-world processes, where different stages of production are located at widely dispersed locations on the Earth. The US dollar and the Euro are examples of currencies that have global circulation. In global finance, various types of savings and credits (for example, offshore bank deposits and Eurobonds) flow in the world as a single space. Many firms (for example, Exxon), voluntary associations (for instance, Amnesty International), and regulatory agencies (such as the World Trade Organization) operate across the globe. Climate change (global warming) and stratospheric ozone depletion are instances of anthropogenic (that is, human-induced) ecological developments that unfold on a planetary scale. Finally, people experience global consciousness, in as much as we define the realm of our lives, in trans-world, planetary terms."

With globalization the world as a whole has also become a social space in its own right. Thus global connections entail a different kind of geography. Whereas other social contexts are delimited, global relations transcend territorial distances and territorial borders to unfold on planet Earth as a single social space. In this sense globalization might be characterized as the rise of "supra-territoriality". Whatever it may mean to others, for an Indian it is not easy to eliminate the significance of localities, countries, and regions. Nor

does the spread of trans-world connections abolish territorial governments or dissolve territorial identities. The global context coexists and interrelates with the local, the national, the regional and other dimensions of geography.

Globalization has also not encompassed all of humanity to the same extent. In terms of territorial location, for example, global networks have involved the populations of North America, Western Europe, and East Asia much more than other parts of the world. In terms of class, global finance has been a domain of the wealthy far more than the poor. In terms of gender, men have linked up to global computer networks to a much more extent than women. This kind of gender bias was somehow only to be expected.

Needless to say, this unevenness of globalization has important implications for social power relations. One could easily witness the impact of power relations. People having connections with supra-territorial spaces have access to important resources and influences that are denied to those who are left aside. In this regard, some commentators have 'deplored "global apartheid", as manifested in the so-called "digital divide" and other inequalities. Others have objected to a "cultural imperialism" of Hollywood and McDonald's in contemporary globalization. Since the mid-1990s, such discontents have provoked a so-called "anti-globalization movement" marked by regular mass protests against global companies, the International Monetary Fund, and other prominent agents of trans-world dimensions.'

Conceptually, globalization may be easy to define but its operation remains both unclear and indistinct. Semantically or even contextually too, it fails to be distinct. Perhaps it has its origin mainly in business and operationally it borrows its attributes and the definition of its characteristics from the models offered by the MNCs. Politically, it has its bases in the power equations. Each country is today defined in terms of political power it has or does not have. It would appear that the USA has the monopoly of defining who will do what and how. Deviations from that definition are not permitted. Those that defy her authority to do so face armed intervention. When applied to education, it would mean IPR and world rating of institutions. By implication it means that standards of educational attainments will have to be defined in the international context. The analogy is available in the world of drug patents or industrial products. The copyrights and patents give certain privileges to their original creators/ innovators and others. From now on, the formerly shared intellectual privileges would stand withdrawn from common use without meeting the conditions imposed by the bodies where they are either patented or given copyrights. As of today richer countries are educationally advanced as well. Globalization, both as a concept and practice is intended to retain that monopoly. The G-8 countries can today decide about non-G-8 countries. They have every power to dictate in other areas as well. The present day concept of globalization is but an extension of the same power configuration. Education is just one of the several areas that will get stifled by the few that have the power which unfortunately others do not have. And in this area, India has much to worry about. With 3.5 crore children still remaining outside the schooling system, we may have to think of some other plan than the present one in operation i.e., *Sarva Shiksha Abhiyan*.

'Imagine there's no Country' by Dr. Surjit Bhalla is of a recent publication inspired by John Lennon's song. The context of the book is globalization. In the midst of all kinds of depressing debates about the impact of globalization on poorer countries, his findings suggest that in the two decades from 1980 to 2000, the proportion of poor people in the world has decreased from 40% to 13%. In these two decades poorer countries have grown

twice as fast as rich ones. The respective ratios are 3.1% to 1.6%. According to Dr. Bhalla, one-third of the global population resides in China and India. In the above two decades these two countries have witnessed record income growth. In a way, these figures persuade us to believe that globalization is not too bad after all. There are numerous other forms of globalization, just as there is a variety in the reactions to the hegemony of American power. If European Union has been formed to meet that kind of challenge, SAARC is the other alternative model on the anvil. WTO and IPR are the byproducts of the same process. The eventual goal may remain full integration of all nations or may be total dissolution of the concept of division of people on whatever grounds but today we are nowhere near realizing this kind of goal.

I am not competent to discuss either the political or the economic impact of globalization. I could, however, go into its impact on Indian culture, languages and education. I share the commonly held view that an already fractured and divided society will get further subdivided and the technological revolution may sound the death knell to many languages, multiple cultures and create unbridgeable gaps between the 'digital haves' and the 'non-haves'.

The premise on which I am discussing the question of 'digital divide' is that we are well past that stage when we were being consulted whether or not we have any wish to join the bandwagon. Today there are no choices. Either join the mainstream or become extinct like dinosaurs or dodo. Having joined willy-nilly the rat race, as it were, there is no point in looking back. We are in the center-stage. We must take stock of what lies ahead of us and whether or not there is any possibility that we might still retrieve part of the lost ground. Each of these points has to be considered separately and contextually. We could react euphorically and say that a fraction of our population has done well both here and abroad. Hence, we are not likely to suffer too much as compared to X or Y. We may also stand up to say that the present scenario is too grim to describe, therefore all that lies ahead of us is a grim reality and the chances are that we may do very poorly. I hold the view that neither of the two is a certainty provided we know what we want and are willing to act rationally and in good faith, determination and foresight. But first we should wake up to the impending reality.

The fact of the matter is that even in the USA, the government has come to realize that their society has been impacted very badly by the digital divide. In a paper written by Beverly P. Lynch titled *"The Digital Divide or the Digital Connection: A US Perspective"*, the multi-dimensionality of the concept as framed by Pippa Norris has been classified into three distinct aspects:

1. Global divide – divergence of Internet access between industrialized and developing countries;
2. Social divide – gap between information rich and information poor in each nation; and,
3. Democratic divide- difference between those who do and those who do not use the new technologies to further political participation.

The above-cited paper emphasized the digital divide in its social aspects in the US and paid particular attention to the role of the library in furthering equity of access to information. How much of this discussion will be valid for us in India could be imagined by the simple fact that majority of even urban population in India has only limited access to the

Internet and few schools have libraries and the books and journals are mostly dated or tattered, if they have any. For the sake of discussion, I am citing some figures from the most powerful and perhaps the richest country in the world.

In 1994, as the US policy makers measured telephone penetration in the country, they realized that telecommunication policy would be influenced by the growing importance of computer and modem availability in households, and created a database. In 1995 the first report on "Falling through the Net: A Survey of the 'Have-Nots' in Rural and Urban America" was issued. Following its earlier formats of gathering data by household, the survey gathered household data on the availability of computers and modems and analyzed the data by income, race, age, educational attainment, and geographic region (rural, urban, central city). The report came up with interesting data that provided a benchmark against which subsequent studies have been compared, showing the phenomenal growth in computing availability and Internet access during 1994-2001. In 1997, the telephone penetration was 94%. Computer penetration was 36.6% and PC growth by household was 42.1% up from 24.1% in 1994. The assumption was that PC penetration would be less than urban areas. In 2000 the PC penetration had climbed to 51.1%. During 2002, it was found that then two million new Internet users were being added each month. Children and teenagers used computers more than others. In the lowest income groups too, the growth was around 25% annually. The use of the Internet among the richest and the poorest was 77% and 35%, respectively. Efforts are on to bridge the gap between those who have access to Internet and others who do not have such facility.

Now let us have figures given by Mumbai-based Strategic Foresight Group for India. The *Times of India* in its issue of December 1, 2002, reported that, "with different segments of the population and different regions of the country moving in various directions, India may formally remain united (note the word 'may'), but in every other respect, it will go to pieces within the lifetime of an Indian who has just stepped into adulthood." The report asserts that the disparities engendered by India's current development model have given rise to three broad kinds of economies. The business class economy, which affords access to luxuries, constitutes a bare 2% of the population. The business class is the one about which we talk the most. Then we have the Bike economy comprising 15% of the population—its consumption includes television, telephone, radio, motorbike, gas and water connections. The remaining 85% belong to the bullock cart economy. While 50% of this class has access to the barely minimum consumer comfort, the rest, however, are just about surviving.

The status in this regard appears to have slightly improved. With the coming in of the broadband and wireless telephony, the above-cited figures are bound to undergo a sea-change.

Now to think of being able to compete with nations like China or any other country in Asia, the report has its serious doubts. The report would like us to have proper policies if the nation has to survive let alone compete and compete successfully, failing which, we are likely to break up. The minimum we could expect from the government is to reduce corruption and increase governing efficiency. An ORG-Marg survey reports that Indians pay ₹26,728 crores in bribe in a single year (*Times of India*, December 18, 2002). In the year 2005, the data as reported in the *Times of India* (14th March) endorses the statement made by an Indian Prime Minister almost a decade back that the subsidized food-grain intended for the poor does not reach the target groups because of the immense corruption in the system. Surprising as it might appear, the teaching profession (something least expected) figures

among the three most corrupt categories. This issue needs to be addressed by the apex body of the teachers called the NCTE.

In a country like India, governance is simply unknown and the rule of law is restricted to those that are poor and politically unconnected. If there is one country in the world where legislatures function overtime to make laws but no one is worried about their observance. The rich and mighty are, as a rule, above law and if one is also politically well connected then he/she commands more power than even the best paid executive from any walk in life. Now, this reality is not dependent on Information Technology or computers. The Indian lawmakers have ceased to be role models long back. In the year 2005, the situation was much worse than it ever was. The Indian lawmakers had outsmarted the underworld in many ways (refer to the record of newly created states in India and newspaper reports on their politics and functioning).

With more than a billion people, we remain a zoo – with tremendous variety of human existence and a museum where all historical periods continue to co-exist in chronological frames almost simultaneously. Few nations could boast of this singular achievement. When we can take pride in our cultural, religious and economic diversities, and suffer social, regional (cow-belt and the non cow-belt areas), and geographical imbalances without demur, what else then can bother us? Under the circumstances, *I think the idea of 'digital divide' is in reality no more than a mosquito bite or a minor irritant that will be taken care of in the process itself.* However, if we are of the worrying type, then we shall have to think of millions that are likely to die of hunger, unemployment and a whole lot of diseases, without any medical aid. Depending on the type of category one belongs to, 'the digital divide' will have its meaning and perception. By itself this term defines an idea and ideas have the unfortunate tendency of being interpreted according to the interest groups.

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Job Profile and Professional Growth of the Principals of Government Senior Secondary Schools, Haryana

S. Kumar*

Abstract

A sample of 50.57% of the principals of government senior secondary schools from the responding districts in Haryana reveals that most of the principals are above the age of 40. They are academically post-graduates but are largely equipped with professional knowledge which is mandatory to become a teacher of a secondary school. Most of the schools in which they are working are co-educational, majority of them located in rural areas. A large number of schools are deficient in building, infrastructure and other basic necessities like safe drinking water and toilets. Many of these schools do not have rooms exclusively for library, dispensary, sports, staff, etc.

The respondents overwhelmingly desire to be equipped with knowledge in theory and practice of educational administration. They intensely express for induction courses and in-service training. It may involve some changes in recruitment rules. Their joining as principals is not motivated by monetary and security considerations but they love to have challenges in life. They are largely satisfied with the incentives and priorities as determined by the government but would like these to be enhanced largely where no financial implications are involved. Effective decision making is their top priority in administration. They are willing to assume more responsibilities, provided some of the constraints, like outside interference, insignificant administrative and financial powers, distrust, etc. are removed making them stronger. Provision of infrastructure, improving work culture and discipline are the most critical areas for reforms. Their vision of an ideal school is a school equipped with full infrastructure and devoted to quality education with emphasis on vocational courses. The government should make arrangements for them to acquire knowledge of educational administration in theory and practice. It should also accord due consideration to the views of the principals regarding various facets of school administration.

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Introduction

A study about the heads of educational institutions in various manifestations is quite fascinating and rewarding when it comes to strengthening the educational administration at the grass root level. "It is the duty of the head", says the Haryana Education Code, "to exercise general control of the school". This makes him the chief executive of the school. Such an expression, however, wears the bureaucratic guise and seems to be the legacy of the colonial rule; whereas a principal means something more.

Much of the initiative and skill required for day-to-day administration as well as dynamism and foresight, necessary for planning and appraisal of activities, must come from the principal. The head, therefore, has to be an able organizer, effective facilitator, efficient administrator, professionally competent and an accepted leader of the team. He has to be a guide and counselor to the teachers and should be in a position to provide them necessary expertise in regard to teaching learning dynamics. He should also nurture healthy relations not only with the functionaries of the department but also the community for the benefit of which the institution exists. He has to strike a balance, coordination and understanding among different agencies concerned with the institution so that it blossoms into a hub of knowledge and such activities as focus on the welfare of the students and teachers.

A head does not work in a vacuum. A responsive academic environment should be facilitated in schools to enable him to serve the cause of education better. It also appears necessary to understand the competencies and capabilities of a principal and comprehend the environment in which he functions which will ultimately prognosticate the role of a principal.

It is against this backdrop that an effort has been made to study the ground realities relating to the job profile and professional preparedness of the 'leader' of the school in order to understand the quantum of the strength, motivation, responsibilities and vision that a principal is expected to be equipped with to perform effectively in the context of the societal needs and aspirations of the youth.

Objectives

The main objective of this study is to ascertain the strengths and weaknesses of the principals of government senior secondary schools of Haryana, and to understand the environment in which they function. Thus the main objectives are:

- i. To understand in right perspective the status position of pre-service training, induction programme and in-service training of the principals pertaining to their professional growth;
- ii. To comprehend the perceptions of the principals with regard to motivational factors, incentives, priorities and responsibilities;
- iii. To ascertain the role of the principals with regard to reforms and their sensitization towards educational administration;
- iv. To highlight the difference, if any, between the perceptions of male principals and female principals in different areas of educational administration; and

- v. To see if the policy objectives, as enshrined in the State Educational Policy 2000, relating to educational administration at the grass root level, have been implemented.

Background and Need

The post of the principal of a senior secondary school is about two decades old. It came into existence with the implementation of +2 system of education in Haryana with effect from the academic session 1985-86. Surprisingly, many of the issues pertaining to subject combinations, qualifications and competencies of teachers, infrastructure in a school, etc. that were mentioned when the +2 system was introduced, do not find a place in the relevant document. The qualifications and competencies of the principal of the then prevalent higher secondary school were considered sufficient for the new +2 system of education. Instances are not uncommon, therefore, to find principals with graduate qualifications, whereas a lecturer as to be a post-graduate in the relevant subject. During the first National Survey of Educational Administration conducted in 1973, the qualifications of a principal of a higher secondary school in Haryana were found to be as follows:

TABLE 1
Academic and Professional Qualifications of the Respondent Principal - 1973

Academic Qualifications	Professional Qualifications	Desirable Experience	Remarks
M.A., M.Sc.	B.T./B.Ed.	Three years as head of a High School	For direct recruitment
B.A./B.Sc.	B.T./B.Ed.	-do-	For departmental promotion

When the second survey of educational administration of Haryana took place in 1991 it was found that all the principals (on the basis of a sample survey of 65 principals) were post-graduates in academic disciplines. No such survey has been conducted since then.

As for now, the qualifications prescribed for the post of principal are as below:

- i. M.A., M.Sc./M.Com. Second Division;
- ii. B.T./B.Ed. or equivalent Second Division;
- iii. Eight years' teaching experience after B.T./B.Ed. out of which two years experience should be in administrative capacity as head of a high/middle school; and
- iv. Knowledge of Hindi up to matric.

It is evident from the above that some enhancement in academic qualifications for a principal has been made, but mere B.T./B.Ed., with some weightage for administrative experience, though considered sufficient despite certain flaccid complexities pervading in education, give birth to a testing time to a principal, as revealed in this study.

The State Education Policy, 2000 expresses its determination to decentralize educational administration substantially. Para 4.2 of the policy states:

'Attempts to strengthen school as an institution would be accompanied by parallel changes in the existing district and sub-district level administrative structure. Appropriate changes would therefore be made at the district and sub-district level

so as to reorient the present administrative system to be responsive to the needs of the school, have respect for the autonomy of the school, and play a supportive rather than punitive role.'

It was also asserted that the best institution would get due recognition. It was also expressed in Para 4.23 that "a detailed Programme of Action (POA) shall be prepared for the departments of Primary, Secondary and Higher Education to implement the policy objectives enlisted in the Education Policy for the State of Haryana, 2000 within the overall frame work of NEP, 1986 (as amended in 1992)." The present study makes an effort to see if the objectives of the State Education Policy, 2000, to the extent of 'making the administrative responsive to the needs of the school', 'asserting respect to the school autonomy' and 'play a supportive rather than punitive role', have been implemented in letter and spirit.

Administration of Questionnaire

Efforts were made through the Commissioner-cum-Director General of School Education, Haryana, to administer the questionnaire to the principals of all the senior secondary schools of the state. But only 12 districts out of 20 responded, making a total of 349 responses (261 males and 88 females) out of a total of 690 government senior secondary schools of the responding districts, thus the response being 50.57%. This response has been considered as a representative sample for whole of the state.

Limitations

The study is limited to certain select parameters which have been split into four parts of the questionnaire for the sake of analysis and discussion. Part I contains basic identifying data of the principals relating to their qualifications and experience, and major basic infrastructure and nature of the schools in which the principals have to function; Part II relates to the data pertaining to pre-service and in-service training of the principals; Part III indicates the level of motivation, priorities and responsibilities of the respondents; and Part IV discusses the issues regarding sensitization and role of a principal.

Methodology

The present study is mainly based on the questionnaire, and is supplemented by unstructured interviews. The interviews better be called free interaction, were held not only with respondents but also with other principals who had worked as such at any point of time and who could not respond to the questionnaire due to one reason or the other. The main aim of the interviews was to judge the comprehensiveness of the questionnaire and to elicit their views about the desirability of pre-service, in-service training, and also induction programme in covering of theory and practice of educational administration and management.

The interviews found that all the principals were of the view that the department should arrange induction programme, of practical nature, for them for a considerable duration to make them more effective in school situation. Matter pertaining to Part III and Part IV of the questionnaire also formed a part of interviews. The principals were of the opinion that they

should be given more administrative and financial powers in the interest of running the school more effectively. In fact, they wanted to have a voice in running the affairs of the school. Accountability with delegation of power found favour with them. It was felt that they have a vision but are sometimes handicapped with interference from different quarters. Lack of work culture was found to be the major bottleneck in the functioning of the school. By and large the interviewees supported the views of the respondents of the questionnaire.

After going through the contents of relevant literature on educational administration, coupled with knowledge emanating from interviews, a format was prepared covering many aspects of school administration besides the personal basic data of the principals and the schools. The questionnaire was administered to some of the local principals of district Panchkula. Consultations were also held with some experts in the field. After viewing all considerations regarding the contents and the clarity of the language, necessary amendments were made in some of the items, especially those falling in Part III and Part IV of the questionnaire. It was, in fact, because of the views of some of the principals during try out that the questionnaire was divided into four parts for enabling the respondents to respond candidly and systematically. Finding that there were varied ideas on a particular issue, an open-ended item: 'Any other' was added to each issue enabling the respondents to add any item, not mentioned under a particular issue. This feature was helpful in the final analysis of the data as was evident from later discussions under the sub-head 'analysis of data'. This try-out technique, it may be mentioned, was very helpful in simplifying and adding some items thereby making them intelligible to the respondents. Finally, the questionnaire had four parts consisting of background identifying information; pre-service and in-service training; motivation, priorities and responsibilities; and sensitization and role of the principal. It may be that most of the optional responses have been rated at three-point scale.

Analysis of Data

Personal background of the respondent and general environment of the school formed component of Part I of the questionnaire. The tabulation of the data was made on the basis of district and sex. All the responses were then accumulated for whole of the state. The data reveals that as many as 48.2% of the respondents fall in the age group of 41-50 and 49.01% in the age group of above 50. There are only 10 principals below 40 years of age. Interestingly, female principals are younger than their male counterparts. Whole of this group of respondents is mature and largely devoid of young and fresh blood. It is worth consideration if the school principals, in the higher age group, should be made competent to face so many behavioural and pedagogical complexities.

The data also makes it clear that most of the responding principals (94.7%) are post-graduates in academic subjects but professionally the number of post-graduates is only 29.1%. It may be mentioned that professional graduate degree (B.T./B.Ed.) is the basic professional qualification for a teacher in a secondary school. It is found that about 5% of the respondents are only graduates academically; whereas the minimum prescribed qualification is post-graduate. Interestingly, as many as 75.1% of the male and 59% of the female principals are professionally qualified. Post-graduation (M.Ed.) may or may not be with specialization in educational administration. There is no provision of higher professional qualification in the rules.

Experience as a teacher or as head of a primary, middle and high school is a positive point for a principal of a senior secondary school. The data reveals that there are a few male principals who have experience as teacher or as head of a primary, middle or a high school for a period less than 5 years. At the same time most of them (87.1%) are working as principals of senior secondary schools for a period of less than 5 years. However, most of the female principals do possess experience as head of a primary/ middle school. Most of the male principals (82.4%) have administrative experience of 5-10 years in a high school and 44.4% of them possess such experience of a primary school. This data unfolds two facts: one, that most of the principals have inadequate administrative experience of a senior secondary school; and two, they possess more of teaching experience rather than administrative one of lower level school. It may further be viewed in the context of low knowledge in theory and practice of educational administration. It is a matter for the administrators to ponder over this situation and to take corrective steps to strengthen the principals as administrators and managers. It is also seen that only 10.8% of the principals have come through direct quota and the rest of them have availed promotion quota. The data reveals that the number of direct quota female principals (13.6%) is more than the number of 9.7% of male principals. It is found that most of the teachers increase their qualifications keeping promotion chances in view. In case the professional qualifications for a principal are enhanced, to the level of post-graduate diploma or post-graduate degree in educational administration, the teachers will try to raise their qualifications accordingly. The administration may like to amend the rules for the post of principal so as to strengthen a principal to work with more of confidence.

As regards the placement of the principals and the environment in which they have to work, it is revealed that 94.5% of the male principals and 70.5% of the female principals work in rural area schools. In other words a large number of government schools are located in rural areas; whereas the private schools dominate the urban areas. As most of the principals have to commute from residences located in urban areas, the respondents feel that provision of suitable residences in rural areas can be helpful in overcoming this problem. Residence of the principals and teachers at the place of service can go a long way in making them more effective. It is also found that 70.7% of senior secondary schools are co-educational schools, 11.1% are boys only schools and 18.2% are purely for girls. As many as 82.3% male principals are posted in co-educational schools and 3% of the male principals are found to be working in girls' schools. Most of the female principals (64.7%) are placed in co-educational schools and 5.8% are also working in boys' schools.

The data also reveals that not more than 61.2% of schools have more than 500 students each. Only 4.8% of these schools have an enrolment of 1001-2000 in each school. As many as 38.8% schools are found to have insufficient accommodation. More than 40% of schools are deficient in number of classrooms. It is found that male principals exert more efforts in providing adequate number of classrooms than their counterparts. In case of staff rooms, the position cannot be termed as satisfactory. Only 37.46% of the schools are equipped with staff rooms, 25.8% are having libraries, 15.2% possess multi-media rooms. Sports rooms are available only in 10% of the schools and 7.9% are equipped with Art and Crafts and 3.58% have dispensary rooms.

TABLE 2
Responses about Pre-Service and In-Service Training Programme
(Figures in Percentages)

S. No.	Subject	Male Responses		Female Responses		Total Responses	
		Yes	No	Yes	No	Yes	No
1	Principals with Diploma/Degree (other than B.T./ B.Ed.) in Educational Administration	12.55	87.45	18.82	81.18	14.15	85.85
2	Suitability as Principal with Diploma/Degree in Educational Administration	73.30	26.70	78.48	21.52	74.55	25.45
3	Need for Induction Programme to be an Effective Principal	73.55	26.45	83.91	16.09	75.92	24.08

The senior secondary schools do not appear to be placed on satisfactory footings in relation to basic facilities like drinking water and toilets. Only 52.6% schools are having sufficient supply of drinking water and 48.77% schools provide toilets. It is found that female principals are more alive to the needs of drinking water and toilets. As regards manpower, it is learnt that sufficiency of teachers is reported only in 41.44% of the schools, whereas 48.1% of schools are sufficient in having non-teaching staff. It can be discerned from the above that the principals have to work under difficult situations in so far as building and infrastructure are concerned.

In regard to pre-service and in-service training (Part II of the questionnaire), Table 2 indicates the general scenario.

It is not difficult to find from the above table that majority of the respondents feel that knowledge in theory and practice of educational administration is a closely related to the effectiveness of the principal. This factor, sadly enough, has not attracted the attention of the educational planners and administrators. The incorporation of minimum qualification in recruitment rules would be enough to motivate the would-be principals to acquire that qualification. The universities and other organizations can develop relevant diploma/degree courses. The respondents also feel the need for induction programmes, preferably of 3 months' duration. Considering the strength of the school heads, it may be desirable if the department of school education starts its own academy of educational planning, administration and management, in collaboration with NUEPA, New Delhi, to impart the knowledge in theory and practice of educational administration. This academy can also look after the need of in-service training programmes for the principals besides conducting research, etc. It may be added that a large number of respondents prefer training to be imparted in accounting matters, social/moral values, professional ethics, information technology, and information management. These views can be taken care of while formulating a scheme of training.

The responses pertaining to motivation, priorities and responsibilities give an interesting information. 'I can have better interaction with teachers and others in school improvement efforts' is the most important motivational factor for working as a principal, as per 73.95% of the responses. The other motivational factors in order of priority are: 'I love

challenges in life'; 'I want to provide effective leadership'; and 'it enables me to do more for the institution'. Male principals and female principals do not differ much in their perceptions of motivation, except in one case, i.e. 'I love challenges in life' where males dominate with 75.10% responses against 67.44% females responses. Most of the principals (80.70%) express their satisfaction with motivation and incentives offered by the government. However, the respondents who are not satisfied with the incentives, need consideration as also pointed in the NEP 1986 and the Education Commission (1964-66) report. It is the candid opinion of the responding principals that 'annual competitions among schools'; 'more avenues of promotion'; 'awards on the basis of performance' are some of the motivational factors that accentuate the principals to take more interest in their job.

The respondents have taken a lively interest in regard to priorities in educational administration with 'utilisation of new technology' getting the highest priority. The other priorities as indicated by the respondents are: 'creating the environment for students to imbibe social and moral values'; 'showing good results in examinations'; and 'improving work culture in the institution'. 'creating tensionless atmosphere for teachers and students'; 'improving discipline'; 'optimum utilisation of resources'.

In the area of responsibilities the item 'good judgment and effective decision making' gets the highest score as 91.24% of the respondent term it as 'very important' responsibility. To 'effectively monitor and supervise teaching and learning'; 'motivate and empower teachers and students'; and 'effective distribution of work load' are other areas in order of priority in so far as prime responsibilities of the principal are concerned.

Responses about 'sensitisation and role of the principal' are open-ended responses and are dealt with in Part IV of the questionnaire. As many as 82.15% of the responding principals (female respondents account for 97.46%) want to remain as principals for the rest of their career, but for different reasons. Many of the respondents, obviously, can't aspire for a change in their career since they are nearing retirement. Some respondents give a conditional 'yes' because they would like to avail of their promotions as and when the same fall due. Only 17.84 % respondents want a career change to higher avenues to avoid stagnation. As regards most critical issues in school reforms in the state, it has been found that deficiency in infrastructure, including building and other basic facilities for developing teaching and environmental dynamics appear to be the most important critical issues. Non-availability of teaching staff, political interference in educational institutions, use of technology, are the other critical areas in order of priority. Provision of infrastructure, educational and cultural environment in schools, supply of hard working teachers, discipline and more administrative and financial powers are some of the major tasks, in order of priority, that require reform in schools. When the respondents were confronted with the role of the principals in the activities pertaining to reforms in schools, a very large number of principals (310) were quite alive and conscious about the role of a principal in these matters. Regarding the vision of an ideal school in the 21st century, the responding principals gave many ideas, like 'an ideal school with buildings and infrastructure carrying aesthetic sense', 'quality education', dominance of vocational education', 'preparing future leadership' etc. The principals do have a vision of an ideal school devoid mostly of the existing ills and frills.

It is interesting to note that 68.96% of the respondents opt for the necessity of having complete and comprehensive programme in educational administration at the university level. Such a programme, according to them, will enhance confidence leading to efficient and

effective management. The respondents (31.03%) who are not in favour of such a programme opine that commitment and experience are more important. Some are of the opinion that 'training by their seniors' might be enough.

The above discussion indicates that assertions like rejuvenation of school administration, in the State Education Policy, 2000 have not met with success. It is, perhaps, due to the absence of any state level body to look after the implementation of the commitments made in the said policy. Apparently, the State Education Policy, 2000 has hardly been monitored so far as its implementation is concerned and it is now a forgotten chapter in the history of education in the state.

Conclusions and Suggestions

Most of the relevant parameters relating to functioning of the principal of a senior secondary school have been discussed above. The principal's own background, mainly in terms of qualification and experience, location of the school, and infrastructure including basic facilities that can be congenial and supportive to the performance of a principal, have been discussed as per responses in Part I of the questionnaire. Part II of the questionnaire is quite exhaustive and unfolding in terms of pre-service and in-service training. Motivation for joining the post of principal, incentives and motivational factors that accentuate his performance, views on priorities and responsibilities in school administration, have been discussed as revealed by responses in Part III of the questionnaire. Opinions about sensitization and role of the principals, as found in responses to Part IV of the questionnaire, have also been discussed above.

It is discernible that the principals are mostly post-graduates in academic discipline, but are largely simple graduates in professional qualification, that too with no specialised knowledge. Educational administration has never been their domain as an independent subject. The professional qualifications are essential for being a teacher. The study reveals that a principal has to face many interventions and interpositions in a state of flux. The irony is that the incumbent to the post of a principal is largely not provided the input of in-service training, much less induction programme worth the name, before and after one joins as principal. The administration has failed to take cognizance of this lacunae in the proper functioning of a principal who is considered as 'an axle in the school wheel' and a 'pivot' round which the whole school revolves. It is also noted that a teacher is generally posted as a principal after a long span of career as a teacher and with some administrative experience. A Teacher at an age of about 50 perhaps, loses all initiative and zeal. The authorities should think of enhancing the professional qualifications before one is considered for promotion or direct recruitment.

Self-learning, self-confidence and self-strengthening are the main requisites for the success of a principal. This fact has to be realized by the educational administrators and planners. Interestingly, the respondents have themselves overwhelmingly expressed the need of pre-service course in educational administration, induction programme before they assume the responsibilities of a principal, and updating programmes in in-service training. Some respondents have expressed the need of inter-state exchange programmes, including their deputation abroad so that they are better equipped with theory and practice of educational administration. MoU with bodies like IIMs, NUEPA or establishment of an academy at the state level can be some options for making the principals effective and

efficient. It may also be considered that the prospective principals and senior lecturers working in DIETs/SCERT are also considered for inducting them in some administrative exercises. There appears to be a need to enhance the basic professional qualifications of a person to be the head of a school. Assistance of universities or some professional bodies can be taken to frame the curriculum for such professional courses. Distance courses in educational administration can be arranged for teachers, who are in service, thereby helping them in enhancing their professional qualifications. It will involve certain changes in the rules for recruiting the heads. The school building, infrastructure and other basic facilities are very important factors in strengthening the teaching learning environment. The study makes it clear that the situation in this regard cannot be termed as satisfactory. More than 50% schools being without special rooms for library, arts and crafts, sports, staff etc., and non-availability of safe drinking water and toilets, are some of the important bottlenecks affecting the efficient working of many senior secondary schools of the state. There appears to be a dire need of recasting a check list on norms relating to infrastructure and other basic facilities in senior secondary schools, especially when the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) has been started under 11th Plan. It may be helpful to constitute an agency that can equip the schools with all the infrastructure and facilities with aesthetic sense and at reasonable expense with a provision of Annual Maintenance Contract (AMC). A well meaning survey should be undertaken immediately throughout the state. It has also to be ensured that water supplied in the schools is tested from time to time. There is hardly any school with purified drinking water. A WHO report that 4000 people die daily for want of safe drinking water is quite alarming. There is also a need to undertake a fresh exercise in school mapping to chalk out the strategies about cost effectiveness and feasibility of having a school in a particular habitation. This can help reach the target as envisaged under RMSA.

The respondents have given very valuable suggestions about strengthening in-service training programme which is in a dormant state now. A strategy should be chalked out that every principal undergoes a comprehensive training programme of 20 days every three years in an institute with faculty of experts in educational administration, management and planning. SCERT, it is feared, may not be able to cope with this provision since it is busy with other jobs and also ill-equipped to meet the situation. As stated earlier, a dialogue with NUEPA or some IIM may be useful at the first instance before embarking upon constituting an academy for the principals at the state level. It also merits consideration that the principals are given training in management skills, like communication, leadership, team building, time management etc, of course, as related to education. The ultimate objective is to equip the principals with sound knowledge in theory and practice of educational administration. A committee can be formed to formulate a scheme on the subject.

The discussion reveals that the principals are not so much motivated by monetary or security considerations as by challenges they are exposed to while working as principals. It appears that the respondents are a matured lot and they have responded with passion and fervor. They have an intense desire to serve the cause of education provided some deficiencies like outside interference, weak administrative shelter, unacquainted with depth in educational administration etc. are mitigated. It is satisfying that most of the principals feel content with motivation and incentives offered by the government from time to time. However, it may be a rewarding exercise if some positive thought is accorded to what the NEP, 1986 and the Education Commission (1964-66) report contain in this regard. The aim should be to strengthen the heads and make them self-confident in administrative

capabilities. Their voice and views should carry weight in all administrative matters. It will raise the image of the school in the eyes of the public which the principals pine for.

The respondents have given their candid opinions about various priorities in administration. Use of technological advances should be given due priority. The government, undoubtedly, is doing much in this direction but it has to be appropriately monitored and evaluated from time to time. The factors, such as nature of the school, area of the school etc. should be taken into consideration while exposing an institution to new technological programmes.

Again, the responding principals have shown the maturity of thought while viewing the responsibilities of the principals. Responsibilities like 'good judgment and effective decision making', 'effective monitoring and supervision', 'motivating and empowering teachers and students' etc. can be made more workable if the principals are equipped with sound knowledge of educational administration. It is suggested that a journal of educational administration is regularly brought out with a provision of free distribution among the principals. Suggestions given above regarding structuring of in-service training programmes may also be considered.

The principals are quite clear in their expressions about their roles. A system should be developed whereby the post of the heads is infused with young but qualified persons. As described earlier, most of the principals head a senior secondary school after a long period of service and almost at the end of their career. The procedure of promotion in teaching and administrative side should be so drawn that teachers with teaching aptitude are allowed to remain as teachers without foregoing their chances of losing pay scales of a principal as and when the same is due to them. Aptitude for administrative capabilities should be the main consideration for promotion as principals. If need be, the rules may be changed to suit both the teachers and principals.

The respondents have highlighted certain critical areas pertaining to school reforms in the state and their particular school. Their suggestions can lend valuable assistance in the process of school mapping. All these issues have been discussed. These should be considered as ground realities and should be dealt with accordingly. As stated earlier, a principal does not work in a vacuum. He is influenced not only by multitude of interventions but by many other factors. It is necessary, therefore, that a holistic view is taken for strengthening a principal. All other factors, such as community participation through local bodies, recruitment and transfer of teachers, parents' cooperation etc., should be taken into consideration while improving upon educational administration at grassroot level. Constitutional amendments 73 and 74 should be fully utilized to involve local bodies in local educational supervision and administration.

There is a need to design a new paradigm of educational administration to enable the principals to face new challenges in education so that they become immediate facilitators in energizing teaching learning dynamics in schools. Haryana is passing through implementation of many educational innovations. The Haryana Administrative Reforms Commission is also dealing with reforms in educational administration and other areas. Hopefully, the major contours of the study will be suitably taken into account by the administrative authorities that matter.

References

- Aggarwal, J.C. (1990): *Educational Reforms in India*. Delhi, Doaba House.
- Chaudhry, D.R. (2007): *Haryana at Crossroads*. New Delhi, National Book Trust, India.
- Haryana Government: *Haryana Education Code*. Chandigarh: Department of Education.
- Indian Management Academy: *Applied Management for Government Departments*. (Vol. I). Lucknow: Indian Management Academy.
- Mahajan, Baldev; R.S. Tyagi; Sarwan Kumar (1994): *Educational Administration in Haryana* (NIEPA), New Delhi, Vikas Publishing House, Pvt. Ltd.
- Marmar Mukhopadhyay and R.S. Tyagi (eds.), *Governance of School Education in India*. New Delhi, National Institute of Educational Planning and Administration, p.315.
- Ministry of Education, Government of India (1966): *Report of the Education Commission, 1964-66*. Education and National Development.
- Ministry of Human Resource Development (Department of Education), Government of India (1986): *National Policy on Education*, para 10.3, p.27.
- Ministry of Human Resource Development (Department of Education), Government of India (1992): *Programme of Action* (Draft).
- Ramchandran, Padma (Mrs.), Vasantha Ramkumar (2007): *Education in India*. New Delhi: National Book Trust India.
- Sarwan Kumar (1972): *A Study of Educational Administration in India with Special Reference to Punjab*. Unpublished Ph. D. Thesis, Kurukshetra: Kurukshetra University.

Book Reviews

Felipe BARRERA-OSORIO et al (2009): Decentralized Decision-Making in Schools: The Theory and Evidence on School Based Management. Washington; World Bank; ISBN 978-0-8213-7969-1; Pages: 124.

In almost all countries of the world, developing or developed, effective and efficient management of education is a challenge. It is so because, as far the size is concerned, education happens to be the biggest sector of economy. Undoubtedly, the overall development of a country can be possible only by ensuring proper and faster development of education sector. Having such a big sector to be managed, the decentralization in planning and management of education seems to be not only desirable but even unavoidable. This is the reality in most of the countries of the world. However, the degree of decentralization may vary from country to country, depending upon the size and the administrative system in a specific country. But a general view is that decentralization in the field of education means making the educational institutions as the operational units of planning and management. Thus, school based management (SBM) has been recommended as a means to achieve the goals of education and this is perhaps the reason that SBM has been prescribed and operationalized in many countries of the world.

The book under review presents country experiences in school based management in more than 20 countries in Latin America, the Caribbean, Africa, Asia, the Middle-East and North Africa, as also the developed countries such as Australia, the Netherlands, New Zealand, the United Kingdom, and the United States. For each of these countries, the book gives a brief description of the SBM reform and any evidence regarding its impact on a variety of indicators, such as student test scores, dropout and repetition rates, and parent's and teacher's perceptions of the reforms benefits.

School based management means the decentralization of authority from the government to the school level and devolving responsibility for decision-making and running the school over to the local community, which may be a body consisting of principals, teachers, parents, sometimes students, and other school community stakeholders. Authors are of the view that SBM programs lie along a continuum in the degree to which decision-making is devolved to the school. In general, SBM programs transfer authority over one or more of the following activities: budget allocation, personnel management, pedagogy, maintenance and infrastructure and monitoring and evaluation.

With regard to school based management, authors' talk of "weak" and "strong" SBM reforms which refer to the degree of autonomy given to the schools. 'Weak' SBM reforms are those in which schools have limited autonomy usually over issues concerning instructional methods or planning for school improvement. A 'strong' SBM is characterized by school councils that receive funds directly from central or other relevant level of government and have been granted the responsibility for hiring and firing of teachers and principals and/or for setting curricula.

While describing the impact of SBM on the basis of rigorous analysis, the authors write that some studies found that SBM policies actually changed the dynamics of the school either because parents got more involved or because teachers' actions changed. Several studies evidenced that SBM has a reducing impact on repetition rates, failure rates, and to a lesser degree, dropout rates and it is further stated that the studies that had access to standardized test scores yielded mixed evidence. According to authors, SBM needs approximately five years to bring about fundamental changes at the school level and about eight years to produce changes in difficult-to-modify indicators such as test scores.

By going through the experiences in various countries, the authors found that in some countries the main idea behind SBM is that those who work in a school building should have greater management control of what goes in the building. In other countries (mostly developed ones), the idea behind SBM is less ambitious, focusing mainly on involving community members and parents in the school decision-making process rather than putting them entirely in control. In both the cases, however, the central government always plays some important role in education, and the precise definition of this role determines how SBM activities are conceived and implemented.

While discussing the autonomy participation nexus with respect to SBM, authors are of the view that there are four models that sufficiently define who is invested with what decision-making power in any SBM reform: Administrative-Control SBM, Professional-Control SBM, Community-Control SBM and Balanced-Control SBM. In this regard they opine that by virtue of its nature, SBM has the potential to hold school level decision makers accountable for their actions. But in many countries it may be necessary to build the capacity of community members, teachers, and principals to create or augment a culture of accountability.

The book presents in details the SBM reforms around the world, particularly in four regions, namely Latin America and the Caribbean, Africa, Asia, and the Middle East and North Africa, besides several countries in other parts of the world. It describes the type of SBM programs implemented in these countries and effects of SBM reforms. These effects are grouped into five main categories: (i) effects on access (coverage), (ii) effects on student's test scores, (iii) effects on internal efficiency indicators (dropout, failure, and repetition rates), (iv) effects on parental and community involvement, and (v) effects on other indicators.

A review of the features of various evaluation methods that enable researchers to assess the impact of SBM programs has been presented in the book. It mentions three important steps which an effective evaluation should include and these are: clearly define the intervention, describe how the intervention is expected to achieve the final desired outcomes, and define the identification strategy. These steps are particularly challenging in the case of SBM programs. Defining the intervention is very difficult because of the complexity of SBM concept. Likewise, how the intervention is likely to achieve the desired results will depend upon the complexity of the specific intervention. Finally, it is difficult to identify casual effects because of three sources of bias: the selection of school by authorities in which the program is implemented, school self selection into the program, and the process by which students are enrolled in the SBM schools. These challenges have been discussed in the book in great detail.

The book offers a few specific ideas about designing of the SBM projects, based on a large number of programmes that presently exist around the world. Authors are of the view

that, before policy-makers undertake an SBM initiative; they need to be clear about certain key issues. These issues are: (i) specify what is meant by SBM, (ii) take account of capacity issues; (iii) clearly state what is to be achieved as well as how and in what time frame; (iv) establish goals, including short term process goals, intermediate output goals and longer term outcome goals; (v) spell out what will have to happen at different stages for the reform to reach its goals; and (vi) base interventions on whatever evidence is available and include a strong impact evaluation component that is appropriate to the program, its duration and its timeframe.

Authors conclude that the conception and design of SBM programs are extremely important, perhaps more so than for any other kind of education intervention. Different types of SBM reforms may be successful under different circumstances, but no general lessons are available at this time.

According to authors, as the knowledge base on SBM literature grows, researchers need to pay more attention to the specific outcomes that are produced by different forms of SBM. There are still some unanswered questions which the authors have listed and this seems to be a very valuable contribution of the present book. These questions are: (a) Do administrative-control SBMs work better than, say, professional-control ones, and in what situations? (b) Does more autonomy devolved to the school level improve intermediate and long term outcomes? (c) What sort of accountability arrangements work best and under what conditions? (d) What roles do parents play in practice and do they need to be active participants in school management? (e) What about the role of larger community and its degree of participation? (f) Is there a difference by countries' level of development? (g) Does it matter if the form of SBM is strong or weak? (h) Do the number and type of functions devolved to the school managers make a difference to the outcomes? (i) Does it matter which group is given the decision-making authority and over what functions? These questions indicate the extent of interest the researchers have in studying the various aspects of school based management in their own area.

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Premi, M.K. (2009): India's Changing Population Profile. New Delhi: National Book Trust; ISBN: 978-81-237-5510-6; Pages: 244 (Paperback); Price Rs. 65.

This is a text style book by M. K. Premi, who is well-known to demographers in India. The book provides an updated profile of India's population, structured in seven chapters dealing with a basic description of India's population size; distribution and characteristics; fertility; mortality; migration and urbanization; and demographic transition in India. In accordance with its title, the book presents a useful compilation of large array of demographic data on the past trends and current situation, including comparisons among Indian states and across selected developed and developing countries.

The first two chapters describe basic demographic aspects of India's population viz. population growth, size, distribution and characteristics, including urbanization. The

presentation deals with past trends and emerging population scenario. The numerous tables of this chapter that provide long-term trends in population size and growth with comparison of states and metro cities are particularly informative.

Chapter 3 is titled as "Dynamics of Population Change: Fertility, Mortality and Migration" is largely devoted to a discussion of various sources of fertility, mortality and migration data, their usefulness, strengths and weaknesses. The appendices of this chapter on birth and death registration forms used for data collection in vital registration system could have been neatly shifted to the end of the book.

The next three chapters (4-6) present trends, changes and differentials in major components of population change, such as fertility, mortality and migration. A better sequence of these chapters could have been mortality, fertility and migration, as mortality is the precursor component of the process of demographic transition. Chapter 4 and 5 provide a useful account of trends, differentials and state variations in fertility and mortality, respectively. The comparative discussion of fertility and mortality statistics for selected developed and developing countries adds value to these chapters. Though the discussion in these two chapters refers to data from all the three rounds (NFHS-1, NFHS-2 and NFHS-3), but NFHS-3 data is not used in some of the tables, even though the data was released in 2007. The contents of chapter 6 on migration reflect the author's considerable expertise in this area.

Chapter 7 on demographic transition in India contains a welcome addition of sprucely summed write-up on demographic transition for the country as a whole and for major states. The tables that present more than three-decade long time-trend data on birth, death and natural growth rates, are very helpful reference material for readers. However, the stage and state-wise discussion of demographic transition is limited to a short description where readers would expect a more detailed exploration to explain the causes and consequences of the process of demographic transition.

The technical appendix on basic demographic measures is kept in user-friendly non-technical form, but ideally this should have been placed as part of chapter 3. Given the nature of the book, the measures ought to be part of the main text rather to be relegated to the appendix pages.

The structure, presentation and contents of the book suggest that it is well suited to undergraduate and masters students of social science and related streams who opt for a paper on population studies/demography and general audience. Besides, it is useful as an introductory reference book for researchers who have an interest in the discipline of demography/population studies and issues concerning India's population. The shortcoming of the book is that it is not aimed at students majoring a degree in demography/population studies or professionally trained population scientists because the core of the book neither deals with theoretical insights in demography nor unravels any new insights on India's population. Over all, this is an appreciable effort by the author.

WORLD BANK (2009): Abolishing School Fees in Africa: Lessons from Ethiopia, Ghana, Kenya, Malawi, and Mozambique. Development Practices in Education. Washington DC: World Bank, in collaboration with UNICEF, ISBN: 978-0-8213-7540-2, Pages: 237 + Index (Paperback).

Abolishing fees attracts children to school, but it can also create other challenges. How can countries in Africa ensure and maintain positive effects of the fee abolition? These are main concerns of this book under review, which compiles results of the studies jointly launched by UNICEF and the World Bank and presents lessons from experiences.

It has been over sixty years since nations of the world collectively adopted: *Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages* (Article 26, Universal Declaration of Human Rights, 1946). We regard education, especially at the basic cycle, as one of fundamental human rights. In 2000, at the World Education Forum in Dakar, reaffirmed the commitment to ensure “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” as the second goal of EFA Dakar Framework for Action.

Today, however, according to UNESCO, there are still over 72 million children in 2007 not attending primary school, most of them being among the poorest and the disadvantaged (UNESCO's forthcoming *EFA Global Monitoring Report 2010*). Even if they are enrolled, the likelihood of their completing primary schooling is alarmingly low in many developing countries.

This persistent gap is a major source of social, economic and political concerns of developing countries and motivates the government into abolishing school fees to achieve equitable access. Indeed, many countries made education free soon after independence, but had to admit that, even for education that is publicly provided, various costs, official and unofficial, direct and indirect, need to be borne by parents and guardians – ranging from costs of textbooks, notebooks, stationary, uniform, transport, PTA fees, sports fees and examination fees, as well as opportunity costs.

The first chapter compiles a synthesis of findings from case studies on 5 African countries, building on experiences of other African and low-income countries. The chapter asks critical questions of how fee abolition can be financially sustainable, how its benefits reach the most vulnerable, and how it maintains and even improves education quality. In Ghana, Kenya, Tanzania and Zambia, economic crisis during the 1980s and 1990s, coupled with declining public finance for education and re-introduction of school fees brought about loss of gains from the previous round of fee abolition. But the author argues that the recent wave of fee abolition efforts are more likely to be successful, as it is better planned, incorporated in the sector-wide and poverty reduction programs, and implemented under intensified support by development partners within more favorable economic environment. Success hinges on the focus being given on poor and disadvantaged children, addressing both supply and demand sides, adequate attention being paid to education quality including direct financial support to school in lieu of resources from fees, and transparent and working capacity to manage resources at schools. Although these conditions for success are noteworthy, the underlying assumption that the healthy economic performance will persist, needs to be taken more cautiously, since the global economy has already plunged into

recession, and is likely to stagnate for a long term, which in turn is certainly having gradual negative effects on most developing countries and likely to contract revenues.

Chapters that follow are dedicated to country case studies that describe the process of implementation and aftermath of fee abolition in more detail. In all countries under the study, enrolment surged immediately upon the fee abolition, by the extent ranging from 12% in Mozambique to 51% in Malawi. Key questions one should ask include: How did the countries respond to the pressure posed by increased enrolment? How was the quality of education maintained? Did any new unanticipated problems emerge after the abolition?

Schools reacted by accommodating more children per classroom (giving less learning space per pupil) with increased pupil-teacher ratio. In some cases, multiple shifts were practiced (Ghana, Malawi, Mozambique), unqualified teachers were employed, and temporary classrooms were used to mitigate the pressure on the school system. Financial burden on the government mounted for providing textbooks, training teachers and building more classrooms.

When fees are abolished, resources that are required at school had to be borne by parties other than parents. In all the cases, this role was taken over by the government, in a form of grant to school (Ethiopia, Ghana, Kenya and Mozambique) or by the direct provision of inputs by the government. The size of the school grant was varied by grade (in Ethiopia and Mozambique) or was uniform (in Ghana and Kenya). All case study countries made recourse to technical and financial assistance from donors. In all cases, the fee abolition was introduced as a part of a broader package of education reforms and a broader agenda for promoting decentralization and poverty reduction. The fee abolition was implemented nation-wide at one shot in Ethiopia, Kenya, and in Malawi, after a pilot phase (of just one year) in Ghana, and in more gradual phases in Mozambique.

These experiences present important lessons to be learnt and issues for further consideration. First, the fee abolition is not just a matter of a political decision. In anticipation of the immediate increase in enrolment, it needs a plan to secure teachers, textbooks and learning materials, and learning space, which requires adequate allocation of additional budget as a long-term commitment. Second, the fee abolition in the recent wave is usually introduced in a decentralized system of education management. When a grant is directly provided to school to compensate for the loss of resources, the principal, teachers, parents and community members are expected to play new roles of planning and management of resources at the school level. This poses a significant challenge on them and requires capacity building. It is noteworthy that the fee abolition changes roles and responsibility of parents from those of sharing costs to participating in decision-making and thus being responsible for schooling outcomes.

For the school fee abolition to be successful in achieving universal basic education in a sustainable fashion, a comprehensive package of measures should be taken in a wider framework of education reform. It is a critical case that has to do with translating the national commitment on Education for All into improved schooling on the ground. Readers will find it interesting that the book is a joint product between one organization that is experienced in advancing the policy reform and another that promotes welfare of children.

Lewin, K. M. (2008): Strategies for Sustainable Financing of Secondary Education in Sub-Saharan Africa. World Bank Working Paper No. 136, Washington, D. C: World Bank. ISBN: 13:978-0-8213-7115-2 (Hardbound); Pages: 170.

Strategies for Sustainable Financing of Secondary Education in Sub-Saharan Africa is an empirical report and part of the World Bank Working Paper series intended to disseminate research findings that will stimulate public discussion. It is a book that challenges policy makers on the need to find sustainable strategies to expand access to and reform secondary education in Sub-Saharan Africa (SSA). The book explores how best access to secondary education in low enrolment African countries can be increased through adaptation of various options that are relative to specific country circumstances.

Strategies for Sustainable Financing of Secondary Education in Sub-Saharan Africa is presented in six chapters. The book opens with an executive summary both in English and French. The intention of course, is to provide policy makers and other stakeholders with English or French orientation to have a clear abstraction of the treatise. The summary sufficiently provides a grasp of the whole subject matter of *Strategies for Sustainable Financing of Secondary Education in Sub-Saharan Africa*.

The first chapter titled "Why Secondary Education?" advances, with lucid explanations, six reasons why investment in education needs revisiting today. Rapid increase in the number of pupils, achieving the Millennium Development Goals, containing the spread of HIV/AIDS, increasing equity and social mobility, promoting economic growth and creating human capital, and improving curricula, are among the reasons put forward for revisiting investment policy for secondary education. The chapter also raises key issues on costs and finance to support growth and enrolment in secondary education. The need for efficiency gains, which if exploited, could greatly reduce the cost per pupil relative to country's GDP and allow greater access to schooling, is one of the key issues highlighted. The author argues that efficiency gains could be achieved 'through a combination of more-efficient deployment of teachers, realignment of teacher salaries, reduction in non-teaching costs, and changes in structure and curricula' (p. 67).

The second chapter titled "The Status of Secondary Schooling," explores variations in secondary schooling across the Sub-Saharan Africa. The author uses current data from self and co-authored researches as well as from UIS (UNESCO Institute of Statistics) to substantiate his views on various areas of disparity in secondary schooling in SSA. The variables examined include enrolment patterns between SSA and across developing regions in the world, educational structure, participation by gender, wealth and location, secondary school repetition, teachers and teacher education, private provision of education, technical and vocational education, and expenditure and costs of educational delivery. Furthermore, the author analytically highlights eight key issues that shape the challenges of expanding access to secondary education, thus justifying the need for evolving strategies for sustainable financing of secondary education in SSA. The third chapter titled "The Challenge of Expanding Secondary Enrolment," analyses, using demographic data, the contention that 'Secondary school enrolments in SSA will grow at rates determined by policy commitments, resource availability and affordability. The author examines the rapid growth of secondary

school enrolment and classifies SSA countries according to the patterns of likely demand and predicts for each country group possible policy options.

In the fourth chapter the author raises a question in order to develop a framework for policy options for expanding secondary schooling. The question which bears the title of the chapter, asks: *“How much secondary expansion is affordable with and without reform?”* The author attempts to answer the question using two different approaches. The first approach is modeled on five different scenarios ‘using typical data for low enrolment countries to illustrate various reform options at the system level’. The second and, of course, more elaborate one, uses country data to estimate costs of expanding secondary schooling. The method uses ‘figures on enrolment rates; public expenditure by level as a percentage of per capita GDP, recurrent costs per pupil as a percentage of GDP, and the proportion of school-age children at different levels as a percentage of the total population’. From the results of these two analyses, and in addition to projecting the rate of increase in number of secondary school teachers needed to achieve the desired GER by country, the author develops the main framework for policy options for expanding secondary education in SSA.

The fifth chapter titled “Options for Affordable Expansion of Secondary Schooling,” presents in detail the policy options evolved in chapter four. Eleven policy options were suggested and justified by the author. The options include expanding national resources, changing the structure of schooling, containing recurrent cost, improving the flow of students, improving teacher deployment and utilization, improving school management, reforming curricular and pedagogy, reforming teacher education, expanding building and facilities, increasing cost recovery, and supporting nongovernmental providers. Each of these options is supported with corresponding strategies and the likely impact on affordable expansion. For instance, on the policy option number two (p. 130) that stipulates ‘changing the structure of the schooling’, has as one of its strategy as: *shorten the length of the education cycle to 12 years where it is longer; consider 6:3:3 or 6:4:2 system and a corresponding impact on affordable expansion: Reducing the total length of the education system by a year would save 8 percent or more on cost. Secondary systems with a 4:2 distribution are likely to be more cost-effective than 3:3 or 2:4 systems.*

Finally, the sixth chapter titled, “Ways Forward” provides a concise summary of key issues for policy makers to note in expanding secondary education. The chapter opens with recommendations on the possible starting points of the reform to expanded access to secondary education at affordable costs. To realise this, Lewin draws conclusions from the classification of SSA countries according to challenges posed for expansion as outlined in chapter three. One of the four conclusions offered postulates that *balance progress on universalizing access and completion in primary school with the need to increase lower-secondary enrolment* (p. 150). The chapter also suggests possible financial estimate options for achieving realistic enrolments across primary, lower and upper secondary levels between 2001 and 2015. The chapter substantiates the eleven policy challenges evolved in chapter five. The author further suggests and justifies the need for developing a country roadmap for expanding secondary education as well as framework for action. All these are to be adapted according to specific country circumstances. Finally, Lewin ends the chapter by drawing vital conclusions that have far reaching implications for expanding secondary education taking in to consideration the financial realities. The author at this juncture reaffirms his contention that secondary education will grow and contribute to achieving the MDGs and Dakar goals only if the growth is financed and managed in more equitable and

efficient ways. Such ways must 'recognize the nonfinancial constraints on enrolment growth, and other realities relative to particular SSA country. Lewin's last print of the book summarizes his perspective:

Expansion at the secondary level without attention to financial realities will jeopardize quality and achievement, generate disillusion with the costs and benefits, and miss opportunities to close the gap between SSA and other regions of the world in the knowledge and skills of the next generation. The sustainability of greater access will depend on consistent economic growth. This is much more likely with the strategic development of secondary schooling than without it (p. 161).

Of course, this book is a wake-up call for a new critical agenda for schooling in SSA at the Millennium Development era. It is a wake-up for policy makers, the politicians, the parents, the academics, the traditional leaders and those who have stake in Africa's Basic Education delivery for the attainment of the Millennium Development Goals. The book is very rich in hard facts and full of options for varying systems, in fact handful and useful analytical tool to researchers in the area of education policy. It is a useful reference, with no drawback, to students of Educational Administration in Africa's and perhaps Asia's higher institutions of learning who are interested in comparative education. No doubt *Strategies for Sustainable Financing of Secondary Education in Sub-Saharan Africa* is a handbook for sustaining basic education in Africa south of the Sahara!

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Thomas KELLAGHAN, Vincent GREANEY, and T. Scott MURRAY (2009): Using the Results of a National Assessment of Educational Achievement. Washington DC: World Bank; ISBN: 978-0-8213-7929-5; Pages 168.

The present publication is very relevant for all policy makers in the world and especially for a nation like ours, where field data and policy making hardly ever match. There are numerous government bodies that are given assignments to show results vis-a-vis investments both monetary and human but they hardly know how to convert field data to policy making. This is happening currently when we are about to implement several schemes without the support of any field data. Across the world, polices are seriously impacted by political considerations but in the advanced nations, they do have the data to support their policies. It is important to read the last chapter of the present book where the authors deal with the problem of Optimizing the use and value of national assessments. The authors are informed that the findings of national assessments have provided empirical evidence about the extent to which education systems have been successful in doing what they have been designed to do: foster the development of all students and provide the foundation knowledge and skills that they will require in their future educational careers and beyond. By describing how achievement is distributed in the educational system,

national assessments have also raised issues about the extent to which fundamental principles related to access, quality, efficiency and equity govern the operation of the system.

Being what this book is all about, it offers suggestions that, to optimize findings, ministry of education policy makers should pay close attention to the following tasks: *(a) Mission* : Provide from the outset clarity on the purpose of a national assessment – which is to obtain information on the outcomes of the education system as represented by student achievements with a view to Informing policy and practice; Improving the quality of student learning with a focus on the development of higher level cognitive skills, taking account of the needs of an information-based and globally competitive economy; and Identifying problems in the current system of educational provision and ways to address them. *(b) Context for Use* : Develop institutional capacity to absorb and use the information provided by national assessment; Integrate national assessments into existing structure, policy and decision-making processes, and channels of resources allocation; and Create awareness that national assessments provide information that can be used to improve student learning. *(c) Execution of a National Assessment* : Involve policy and decision makers and other stakeholders in the design of a national assessment to ensure that it addresses their concerns; Ensure that those involved in the assessment possess competencies related to the instrument development, sampling, analysis and report writing; and Ensure the entire exercise follows the correct procedure. *(d) Description of Findings* : Describe student achievement in sufficient detail to meet the needs of political users with a focus on diagnosing problems in the educational system; and Identify factors responsible for high or low achievement. *(e) Communication of Findings* : Provide information about student achievement to politicians, policy makers, and education managers in a timely manner and in a form that is intelligible to them; Provide separate reports of a national assessment that are tailored to the needs and requirements of say curriculum developers, supervisors and teacher trainers etc; and Provide information to the media and the public. *(f) Formulation of Policy and Programs or Interventions* : Involve stakeholders in the study of assessment findings, in setting priorities for policy and program formulation with a focus on student learning and to devise strategies to reflect that policy; and in the formulation of policy take into account values, pressures and constraints imposed by vested interests. *(g) Implementation of policy and Programs and Interventions* : Provide criteria for the selection of schools or population groups; and Take account of the ‘best practice’ in devising interventions.

The present book is an invaluable addition to the existing knowledge of National Assessments we have. For instance, lack of co-ordination between policy makers and the field staffs and insufficient involvement of the stakeholders can prove harmful to the goals set for such an assessment. The present book can function as a guide to all those parties involved in this important exercise.

This book needs to be made a compulsory reading for all researchers and policy makers. It is worth reading closely on all matters that concern National Assessments.

Mulkeen, AIDAN (2010): Teachers in Anglophone Africa: Issue in Teachers Supply, Training, and Management. Development Practice in Education. Washington DC: World Bank; ISBN: 978-0-8213-8053-6 (Paperback); Pages: 199; Price: not mentioned.

Aidan Mulkeen has done a number of research studies on issues affecting education in Sub-Saharan Africa. The present book is a timely addition to the collection of researches on teaching, teachers, and educational policies in Africa. The book, an eleven-chapter five-part research publication based on country-specific studies of a broad spectrum of teacher issues, examines policies and issues relating to the training and management of teachers in eight Anglophone countries in the Sub-Saharan Africa, specifically addressing teacher supply, deployment, management and finance issues. It asserts that most countries face challenges in the area of teacher supply and that the present policies on teacher supply are either ineffective or grossly inadequate. It reveals that there is often a dearth of teacher supply and/or deployment in mathematics and the sciences and pins this down in most cases to the poor output of suitably qualified school leavers in the case-study countries. Problems such as ineffective teacher deployment system, under-utilization of the available teachers, weaknesses in teacher management, and inefficient support systems were also identified as factors that inhibit the effectiveness of teachers. The author thus opines that since the challenges faced by the case-study countries were 'in reality...interlinked, (any) intervention intended to solve problems in one...frequently have unanticipated impacts in another area of teacher provision'. This accords for Aidan's assertion of the needs to take a holistic view of issues and the need to develop 'an appropriate balanced set of policies' to address the problems.

In the light of the above, the author identifies the problems first and concretises the same with copious data collated in the book. In the overview, the reader is given a bird's eye view of the various issues that affect teacher effectiveness in the case-study countries – issues ranging from teacher supply, deployment and utilization, impact of HIV, teacher training, management, and finance. Others include the teacher career structure, teacher issues as an interconnected system and promising practices, which is a compilation of the author's suggested way out.

Chapter one is an introduction of the issues that necessitated the research work, while also looking at the issues in the context of the case-study countries, backing claims with data collated. This set a base for the first part of the work, amply titled, 'Teacher Provision' and span issues like teacher supply, teacher deployment and teacher utilization. After having set a basis for the research, the author went into the first part of his research lay-out: Teacher provision. This part spanned issues such as teacher supply, teacher deployment, and teacher utilization; the data provided showed significant imbalance in the requirement of teachers and "the current output of newly qualified teachers'. This imbalance in the words of the author, had resulted in teacher shortages so acute in some cases, notably, Eritrea and the Gambia, that expatriate teacher were contracted for some subjects to cushion the lack of domestic secondary teacher supply. The imbalance in supply was blamed, as proven by data collected, on the limited number of school leavers with the required entry qualifications. The vicious cycle of limited supply of subject teachers results in poor teaching of the subjects both in primary and secondary schools.

The study also showed a very significant inequity in the pupil teacher ratio. In most cases, the best qualified teachers were even more unevenly distributed and over-concentrated in urban areas. And in spite of attempts by most of the countries to adopt a planned system of deployment, factors such as poor targeting, unwillingness of teachers to take up posting into hardship areas notwithstanding the financial incentives attached to such unfavourable selection process of interested candidates into government significantly limited such laudable attempts. Teacher utilization varied, with primary teachers being the most utilized and secondary teachers of optional subjects having less workload. In practice, utilization was often lower than the official expectation.

Part two is titled Teacher Training and spans chapters five and six, focusing both on pre-service and in-service teacher training. These chapters look at the under-preparedness of teachers for the teaching profession right from the colleges of education and provision of in-service teacher training for unqualified teachers, on the one hand, and in-service upgrading for qualified teachers, in addition to continuous professional development courses made available for teachers, on the other hand. The first noted problem was with the pre-service teacher training entrance qualification which was noted as being quite low and fast declining. The teacher training curriculum was not deemed to be in line with the realities and needs of the classroom, as "training in pedagogical methods was often theoretical", "teaching of content knowledge was often not closely aligned to the school curriculum" and these were made more difficult by "students" poor proficiency in the language of instruction owing to the teachers' trainers being ill-equipped 'to deliver training in a practical and relevant manner. While the author asserts that provision of in-service programmes by the countries increase the quality of teachers, he conceded that these were comparable with teachers who had received pre-service training though no clear evidence of these could be provided.

Part three examined teachers as professionals. It spans chapters seven to nine and provides insights into issues of management of teachers, teacher absenteeism and teaching as a career. Management of schools by head teachers and of head teacher is asserted by Aidan as being weak. He also opined that supervision and inspection of schools and teachers was slack and their focus was on trivialities or what he termed "mechanical issues". Poor supervision and unprofessionalism on the part of teachers were seen as prominent factors of absenteeism. The absence of proper disciplinary system also accounts for the slackness of teachers in their duties. Measures to curb this, notably in the Gambia, Lesotho, Uganda and Zambia, gave rise to yet another problem – that of "responsiveness to teacher absence or movement to other schools". It was also ascertained that teaching as a career from the perspective of the civil service structure has no recognition because of its unresponsiveness to individual teacher's excellence in the classroom due to its fixed pay progression, permanent appointments etc. "None of the countries had any system for performance-based increases". The fact that teaching is viewed by many as a "stepping stone to other professions" made retention of the more qualified teachers very difficult as according to Aidan, they avail themselves of the full time paid study leave after just a few years in service.

Part four deals with financing teachers and spans just chapter 10. It examines the constraints of available resources, teacher remuneration and the international benchmarks. Teaching when compared to other jobs in the civil service, is "seen as having a slower pay progression", fit only to absorb those who had tried and failed at getting other jobs or having just the minimum qualification. Gender issues and HIV were also noted by Aidan as being

responsible for the slow expansion of education in the case study countries. The studies noted that teachers' pay just places them slightly above the poverty line.

Part five, which coincides with the last chapter, chapter 11, summarizes all of challenges and trends uncovered in the process of research, and looks at all of issues affecting the teacher as a four interrelated dimensions of supply, distribution, quality and cost. It then proffers policy options to improve each dimension. For supply to improve, Aidan opines that issues like teacher remuneration, entry standard into teacher training courses and offering of additional incentives to teachers of mathematics and the sciences need be considered in the policy. In the case of deployment, he was of the opinion that policy changes be made to include hardship allowances, provision of housing and as in the case of Lesotho, recruitment of teachers by schools locally might be options, but ones with some consequence. In order to improve quality, issues like better management, reduction in absenteeism and efficient running of schools need addressing. While it was noted that any policy change to improve any of the above issues might increase cost, it is noteworthy that cost reduction, in remuneration, housing expenses incurred through supervision, might lower efficiency. To counter these loopholes, Aidan proffers a series of promising practices, which include planning for teacher supply; offering of a second path into teaching through quality in-service training for unqualified teachers; location-specific teacher recruitment measures to advertise teaching position; adoption of specific interventions (booster courses) for mathematics and sciences, among others.

As a study report backed by detailed investigation, the book is replete with useful data, presented in tables, figures, graphics and in some cases, pictures which prove very helpful and create for the reader a more concrete and valid representation of realities on ground. The language of the work is quite accessible to scholars and non-scholars alike. The graphic representation of collated data and the actual quotes of respondents interviewed was also helpful in making the language and the experiences described more accessible. In addition, while there is a resemblance to an earlier book on the same subject, partly authored by Aidan in 2008, its greater strength is seen in synthesizing the experiences of the case study countries thereby allowing the readers a holistic perception of issues relating to teacher education and education, in general, across Africa.

As a weakness, chapter nine perhaps should have been used as the introductory chapter as it highlights and, to some detail, explicates the teaching profession. The opportunities and problems of teaching as a career were also examined to some degree. This observation may serve as a suggestion for improvement.

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Nancy BIRDSALL and William D. SAVEDOFF with Ayah MAHGOUB and Katherine VYBORNY (2010): Cash on Delivery: A New Approach to Foreign Aid with an Application to Primary Schooling. Washington DC: Center for Global Development; ISBN: 978-193328636-5; Pages: 118+ index, (Paperback)

Foreign aid has been a hot issue in international cooperation and development. Aid in case of education, particularly primary education, has been an important issue that received serious attention of all, especially since the launch of the Education For All in 1990 that set targets for developing countries to achieve goals in basic education and set targets for developed countries to make commitments on aid for education. Setting of the Millennium Development Goals also enhanced the importance of aid for development, in general and education, in particular. Total foreign aid increased from insignificant amounts in early 1960s to above US\$ 125 billion in 2007. Aid for education has also increased considerably between 1990 and the recent years.

Developing countries view external aid either as help or as a hindrance. Developed countries treat aid as either charity or as business. International financial institutions like the World Bank regard aid mainly as a business activity. In the recent years, there has been criticism of aid amongst all – developing countries, advanced countries and international organizations – for a variety of reasons – ideological, social, political, economic and developmental and also for technical reasons relating to efficiency and effectiveness of the aid mechanisms.

To improve the effectiveness of aid, several reforms in aid business are also attempted by the aid organisations in the recent past – shifting from project-based funding to programme-based funding, to sector-wide approaches, and even to national budget financing, etc. Poverty Reduction Strategy Papers can also be seen as a measure intended to improve the effectiveness of aid. A few innovative schemes like the Fast Track Initiative and the Catalytic Fund, besides debt-swaps are also introduced. Given the increasing criticism of the tax-payers in the advanced countries on the effectiveness of aiding the developing countries, on the one side, and on the other, of the critics in the developing countries on the accountability of the governments of the recipient countries to the aid organisations rather than to their citizens, further reforms in the aid business are found necessary. While the developing countries found the conditions and the procedures associated with aid as cumbersome and as an avoidable intervention into the domestic policy business, the aid organisations/countries also noted the non-ownership of the externally funded projects by the governments in developing countries and their lack of accountability to aid organisations as some of the major weaknesses.

In this background, Nancy Birdsall who worked at a high level of policy making in the World Bank for a long time, and as the Executive Vice-President of the Inter-American Development Bank and who has been the founding President of the Centre for Global Development, a Washington-based development think-tank, along with her colleague at the Centre, Owen Barder, who was also Director of Global Development Effectiveness at the Department for International Development of the UK government, first came up with an idea of changing the whole process of aid. Both have vast experience with aid operations and based on huge experience. Birdsall highlighted in an earlier study, 'seven deadly sins'

committed by the donors, or 'failings' of donors, including impatience with institution building, collusion and coordination failures, failure to evaluate the results of their support, and financing that is volatile and unpredictable. Thus, the present proposal that emerges out of vast experience requires serious attention and a critical look.

Described as a 'hands-off' approach to foreign aid the proposal meant making a payment to the developing country for the progress it makes. 'Payments for progress,' as it is originally called, was conceived as one that would relate additional aid to progress achieved on the ground. It is argued that such a method would give flexibility and autonomy to local governments, providing an opportunity for experimentation and innovations, while, at the same time, it ensures that aid flows only for real and measurable achievements. The refined form of the proposal took the shape of the present book by Birdsall and William Savedoff and the new kind of aid payment is christened as 'cash on delivery'. Cash on delivery is a contract between the aid organisations and the developing countries on the payment to be received as aid for the progress it made. According to the new method, the aid organisations/countries would promise to pay a specific amount to the developing country for clear evidence of progress made against one or more agreed goals, say, relating to primary education – increase in enrolment rates, reduction in drop-out rates, or increase in completion rates, or increase in levels of learning. In other words, the aid would be determined as a function of the outcomes; it is a payment for the outcomes not for inputs. More importantly, it is not linked to the implementation of any particular policies – one of the most important criticisms that actors of both sides in the aid business are accused with. Developing countries can pursue their own policies and adopt their own strategies under the new method. The auditing of the progress accomplished by the recipient country is also to be made by an independent party. Thirdly, aid also would not get "tied" to purchases from particular suppliers or countries, as has been the case with respect to normal aid programmes. Fourthly, such a method is expected to ensure ownership of the programme by the developing countries; in fact, the programme, its strategies and their implementation – all are self-determined by the countries themselves; the aid givers do not interfere with any aspect of the programmes. Fifthly, it is also hoped to increase accountability of the recipient governments to their people on development efforts. This is also expected to improve overall efficiency in the use of financial resources; because in the first instance, the countries use their own or other aid resources, and secondly, there is no guarantee of receipt of this particular aid, unless measurable progress is made. Thus, it is expected that foreign aid does not get wasted. Further, it would make countries more responsible for their programmes, encourage innovations and experimentation and increase accountability. In all, it might even change the relationships between the aid givers and recipient countries. In short, Birdsall and Savedoff propose 'cash on delivery' as a solution to many problems that aid is associated with for a long time. The proposal is neatly described and the arguments are convincingly made in the book. But many of the claims made might look like unrealisable claims, and the drawbacks – both conceptual and practical – cannot be overlooked.

The small book provides valuable details about the new proposal and how it can work. The first three chapters that constitute part I briefly describe the method and its rationale, and the five chapters in part II discuss and describe in detail how to apply and implement the new method of external aid to primary education. Some of the practical details given include formulae for calculating the payments and illustrations of payments over a period.

Together with 'term sheets for COD aid contracts', given in the Appendix, the book serves as a primer, as a valuable practical tool both to the aid organisations and developing countries. Rich with references and technical paraphernalia like the index, besides with brief narration of experiences of many countries on several education and health projects, it would attract the attention of researchers as well.

The architects of the proposal are aware of some of the risks involved in cash on delivery. While there can be several practical problems relating to measurement of educational outcomes, independent auditing, avoiding of cheating by either side, etc., three problems could be severe. First, problems relating to measuring educational outcomes are indeed serious. As Marline Lockheed observed, existing national learning assessments in developing countries are poorly suited to measuring annual educational progress both for technical and administrative reasons. She also notes that existing international and regional assessments, while generally technically superior to national assessments, take place only periodically and, therefore, are also unsuitable for measuring annual progress in this context. Second, the aid in the form of cash on delivery is received only after the progress is achieved. But implementation of the programmes requires money; so the countries that could not make progress due to paucity of funds will not be able to benefit from such a method. On the other hand, it will benefit only those who have their own resources or have access to other external and private sources. Cash on delivery is a reward for progress but not a method of financing progress. Thirdly, progress in social sectors like education and health takes time unlike progress in terms of construction of roads or buildings. For example, short or medium term progress in improvement in completion rates and improvement in levels of learning may not be tangible and even if measured may not be significant to qualify for sizeable payments in terms of cash on delivery. Hence, such a method of aid has to be seen as a complement to the normal aid programmes. But the method as a complement is a double-edged one: even though cash on delivery is to be seen as a complement to other aid programmes, if the amount involved is a big one, there is a risk that eventually it would displace other aid programmes, if it works very well. Alternatively, planned as a complement – as an incentive, as a reward for the achievements, it may have to be small in quantum, compared to the main aid packages. But if it is a small supplement, the main weaknesses of the general aid programmes cannot be remedied by this small programme of a little aid amount.

To conclude, foreign aid is no more an activity of philanthropy and generosity of the rich towards the poor countries. It is widely accepted as a business. Cash on delivery looks like a good proposal for efficient business.

[Thanks to Elizabeth King for gifting a copy of the book to the reviewer.]

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