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Access of Poor Households to Primary Education in Rural India#

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Shreekant Iyengar*

Abstract

The Planning Commission's premise that the growth in India has bypassed the weaker sections due to their ineffective access to the basic services, like primary education, needs to be tested against the evidence. Traditionally, identified weaker sections on social criteria (SC and ST population) seem to have a similar or relatively better access to the primary education. However, there is no direct evidence available for the weaker section on the economic criteria or on population living below poverty line (BPL). The present paper attempts to provide an empirical evidence for the premise of the Planning Commission based on household survey of BPL families in five states of India, and the survey of primary schools for the same states and localities.

Our findings suggest that there is a problem of access of the poor (BPL) households to the primary education services in rural areas. Primary enrolment ratios among the children of poor households are considerably lower than the respective state averages and also the aggregate enrolment ratio of the country. Our findings also reveal that the incentives, such as mid-day meals, free textbooks and cash subsidies given by government schools to the poor children do actually reach them. The problem of insufficiently effective access of the poor to primary education still persists. It calls for a change at the policy level thinking. Qualitative aspects like school infrastructural deficiencies and functioning of teachers having a direct bearing on the quality and access of education in the rural areas, need urgent attention.

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Introduction

Primary education covering reading, writing and arithmetic is considered as a crucial aspect of quality of life. Elementary education, under the Indian constitution, is recognised as a fundamental right of individuals (Bajpai et.al, 2005). Thus it is imperative to ensure that every individual in the country is literate up to at least primary education level. The Planning Commission of India in its Approach Paper for the 11th Plan (2006) explicitly states, "Large parts of our population are still to experience a decisive improvement in their standard of living. The percentage of the population below the poverty line is declining, but only at a modest pace. Far too many people still lack access to basic services such as health, education, clean drinking water and sanitation facilities without which they cannot be empowered to claim their share in the benefits of growth" (p.1). It also states that, "The provision of good quality education is most important equalizer in society and it is time we launched a major effort in this area" (p.75).

Total literacy would be possible through a complete coverage of all children in the age group of 6-11 and compulsory enrolment in primary schooling. In India, the overall gross enrolment ratio (GER) for the primary section was 104 % in 2005-06 but the net enrolment ratio (NER) for primary education was only 85% during the same period. To attain the millennium development goals (MDG) in India would require NER in primary education to be 100%. This would require quantitative and qualitative changes in the educational infrastructure in the rural areas. The proportion of schools with single classroom was 14% and that of single teacher schools 18% in rural area during 2005-06. The average student classroom ratio for rural schools was 43, and more than 60 in 21% of the schools (State Report Card, 2005-06). However, it is not enough to provide the infrastructure and manpower in the rural areas to improve the primary education services, but its access to each and every section of the society also needs to be assured.

As mentioned earlier, the Approach Paper for the 11th Plan asserts the need to ensure access of education services to the vulnerable sections of the society. The vulnerability traditionally is linked to the social criteria and hence with the scheduled castes/tribes (SC & ST). In this context, it is quite relevant to check the enrolment ratios among SC and ST population and compare them with the overall ratio. Table 1 gives the overall enrolment ratios and percentage enrolment of the SC and ST children along with the estimated GER for the SC and ST population in the primary education for each of the states and union territories of India. The GER for SC and ST categories had to be estimated based on the percentage of their enrolment in the total and their share in the relevant age-groups in the population.

TABLE 1
Overall Enrolment Ratios in Primary Schools of Scheduled Castes and Tribes, 2005-06

State/UT	*Overall*		*% Total Enrolment*		*Estimated GER[@]*	
	GER	*NER*	*SC*	*ST*	*SC*	*ST*
Andaman & Nicobar Islands	70.83	55.37	0.04	8.9	NA	291.51
Andhra Pradesh	96.84	75.28	19.4	10.4	106.57	126.3
Arunachal Pradesh	153.94	110.58	0.98	74.2	281.41	168.48
Assam	96.65	88.84	10.2	15.6	142.08	118.08
Bihar	92.44	84.13	16.2	1.3	92.03	130.77
Chandigarh	72.55	59.31	13.4	0.08	45.1	NA
Chhattisgarh	131.48	NA	14.3	34.1	151.82	138.58
Dadra & Nagar Haveli	123.73	93.82	3.6	69.6	268.13	116.47
Daman & Div	85.7	70.11	4.1	12.1	92.99	88.7
Delhi	89.57	65.81	12.8	0.52	58.98	NA
Goa	54.12	48.17	2.7	5.6	68.77	NA
Gujarat	100.3	78.89	7.4	19.1	100.99	117.06
Haryana	57.9	38.08	33	0.36	89.42	NA
Himachal Pradesh	110.53	87.29	29.7	5.5	123.63	141
Jammu & Kashmir	94.4	75.86	9.2	14.3	118.2	111.06
Jharkhand	123.58	63.66	14.8	33.6	144.41	155.76
Karnataka	93.58	83.97	21.2	8.1	108.49	101.43
Kerala *	102.41	83.54	11.3	2.2	125.5	187.04
Lakshadweep	87.39	69.33	3.7	95	NA	84.91
Madhya Pradesh	129.76	94.22	17.5	25.3	142.57	148.68
Maharashtra	96.82	79.32	14.5	12	128.22	112.81
Manipur	132.1	102.27	3.1	41	157.41	148.35
Meghalaya	132.83	94.01	1	93.3	288.48	140.87
Mizoram **	155.76	117.66	0.47	97	NA	156.46
Nagaland **	133.13	110.38	1.9	94.7	NA	138.21
Orissa	117.38	94.05	20.4	26.3	138.52	124.67
Pondicherry	79.54	56.66	17.4	0.07	74.99	NA
Punjab	65.34	51.78	51.2	0.16	102.00	NA
Rajasthan	112.72	81.52	20.4	15.5	126.17	133.4
Sikkim	138	94.54	7.5	36.8	190.98	240.15
Tamil Nadu	118.58	93.92	24.8	2	137.73	190.37
Tripura **	133.4	121	18.5	41.5	139.30	152.3
Uttar Pradesh	107.27	97.74	27.7	0.69	135.66	NA
Uttarakhand	97	83.32	27.5	3.9	136.26	118.63
West Bengal	104.45	82.76	28.5	6.7	121.83	114.18
India	**103.77**	**84.53**	**18.95**	**9.56**	**113.16**	**110.58**

* Data not fully reported in 2005-06. Hence these pertain to 2003-04.

** Technically NER cannot exceed 100. NER above 100 may be because of the in-migration of 6-11 years from the surrounding areas.

@ Estimated on the basis of overall GER, percentage SC and ST enrolment in primary schools and the proportion of SC and ST populations in the 5-14 age-group.
Estimated GER = [(% of SC or ST enrolment) / (% of SC or ST population in relevant age-group)]
* overall GER

The estimated GER for SC and ST population in the country is considerably greater than the one for the total population in almost all major states[1]. Thus it seems that the section that is traditionally assumed to be vulnerable due to social criteria does not have the problem of lower access to the primary education services than the rest of the population. The Approach Paper, therefore, could be right in its assertion only if the vulnerable section is defined on the basis of economic criteria rather than social criteria. Tilak (2002) argues that there exists a two-way relationship between poverty and education mutually reinforcing the vicious circle. However, education of the poor is an important instrument to break the circle leading to reduction of poverty. Tilak, therefore, pleads for concentrating on educational development of the poor. His argument, however, assumes implicitly, like that of the Planning Commission, that there are serious problems of lower access of the poor to primary education. In this context, therefore, the access to primary education services has to be estimated among the poor and the poorest of the poor population, especially in the rural areas.

However, there is no direct evidence available that indicates the degree of the reach of these services to the poor/weaker section in the rural areas of the country to justify such an assertion. It becomes essential to directly verify such a hypothesis regarding the extent of these services reaching the poor. This is because it has implications on policy options and measures to achieve the MDG. A household survey of the poor section in the rural areas of selected states of India would be required. A similar sample survey of some selected states as a part of a larger study has been conducted during the last three years, covering by now 5 major states in India. The survey not only aimed at collecting quantitative information regarding the access but also at identifying the qualitative aspects responsible for lower levels of enrolments among the children of the poor households.

This paper attempts to identify the degree of the access of the vulnerable section (on economic criteria) to the primary education services. We use the information collected through the sample survey of poor households conducted in the five states of India so far providing evidence regarding the extent of primary education services reaching them. The first section of the paper being on Introduction, the next section discusses the methodology used for selection of the sample for the household survey. The third section discusses the findings of the household survey regarding enrolment of poor children in

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[1] The estimated GER turns out to be greater than 150, 200 or even 250 in some of the smaller states and UTs. This could be due to: (i) greater proportion of over-aged children among the SC and ST population being enrolled in primary classes; (ii) serious data problems regarding age-wise estimates of SC and ST population, particularly when their proportions are small; (iii) problems in age-classification of Census data in smaller geographical units; (iv) possibility of immigrations of these categories after the Census of 2001; and (v) our assumption of the same growth rate of population for SC/ST and overall population. However, considering small proportions of their population in relatively smaller geographical units we can ignore such numbers without affecting the content of the argument.

primary schools, reasons for their drop-out, and the incentives and facilities received from the government by the poor households. In the fourth section, we review the situation and discuss certain qualitative aspects of the public schools as well as private primary schools in and around the areas of the sampled households on the basis of a separate sample survey of such schools. It aims at pointing out reasons for the poor quality of education in the primary schools. The fifth and final section concludes the paper.

Methodology of Household Survey

In order to get an idea of the situation of primary education and its provision among the weaker section of the population in the rural areas, a survey of households was conducted in five states – Madhya Pradesh (MP) and Uttar Pradesh (UP) in 2005, Rajasthan in 2006, and Andhra Pradesh (AP) and Karnataka in 2007. These states were surveyed in different years as a part of a larger project[2]. These states were such that they covered a major proportion of population and geographical area of the country. Uttar Pradesh is the most populous state in the country comprising 16.4% population of India, and Rajasthan and MP are first and second largest states in terms of geographical area, having 10.9% and 9.7% of the total area of the country, respectively. Similarly, AP and Karnataka also have major proportion of population (7.4% and 5.5%) and the geographical area (8.7% and 6.1%) of India. In all, these five states form 40.1% of the total population and cover 42.8% of the total geographical area of the nation. Moreover, Rajasthan and UP are from the North India, MP from the Central India and AP and Karnataka are from the South India, thus representing the diverse geographical canvas and cultures. Finally, MP, Rajasthan and UP belong to the so-called BIMARU states, indicating their economically poor and problematic status, whereas AP is economically average and Karnataka is economically better off state.

In each state one district was selected in consultation with the state government for detailed study. However for Rajasthan, two districts were covered due to its special geographical features of desert region and tribal area. A sample survey of poor households and primary schools in each of the selected districts was conducted. It mainly aimed at getting an idea about the type of primary education service (public or private) availed by people, reasons for low enrolments in schools, coverage of various benefits provided by government, household expenditure on education, perceptions of the poor households regarding quality of the education services, etc.

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[2] The Hewlet Foundation funded project, jointly undertaken by the Earth Institute of the Columbia University, New York, and the Indian Institute of Management, Ahmedabad, on 'Scaling up Services in Rural India'.

In the second stage, we selected five villages from each district. In order to cover the geographical spread of the district, we began by selecting 5 *talukas/tehseels*[3] in each district and then selecting one village from each selected *taluka/tehseel*. The villages selected were such that they represented the condition of rural areas of the respective *taluka/tehseel* as closely as possible on various criteria, such as average size of households, percentage of SC and ST population, worker population ratio, female and overall literacy rates and sex ratio. The size of the village in terms of households and population was also considered so that it is neither too big nor too small compared to the average in the *taluka/tehseel*.

The sample for the survey was drawn from the households belonging to economically weaker section of the society. It thus became mandatory to identify the poor households in the selected villages. In MP and UP, we selected the sample from the list of households living below poverty line (BPL) as prepared by the district administration for the year 1997. However, for the rest of the states we obtained the list of households from a detailed BPL survey that was conducted during 2002-03.

It was called the BPL Census 2002 and was carried out in the entire nation[4]. The BPL Census collected information on the basis of a questionnaire covering various aspects. All the households were then given points/ranks for each question depending upon their responses. Table 2 gives the 13 questions and the pattern of awarding points for responses to each question. On the basis of the points, it was found that any household below 15 points would be the weakest on all fronts, i.e. the poorest of poor (POP). Moreover, considering the households that were not weak in all aspects but were overall poor, another cut off at 25 points was decided. Our sample mainly consisted of the POP families, but in order to fulfil the required size of our sample in each selected village, we sequentially added points to make the final cut off at 18 points. In all 1354 households were surveyed in 30 villages from the five states.

Findings of the Household Survey

On the basis of our findings from the survey, we first take a look at the socio-economic profile of our sample in the five selected states. Table 3 shows various characteristics of the poor households of our sample in the selected six districts.

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[3] The *taluka/tehseel* is an administrative unit in a district.

[4] In UP and MP, the results of this Census (2002-03) were not tabulated by the time we needed them to draw our sample. Hence, we had to use the alternative list readily available for the year 1997.

TABLE 2
Scheme of Awarding Points on Possible Responses in the BPL Survey, Rajasthan, 2005

Sr. No	*Questions*	*Points*				
		0	*1*	*2*	*3*	*4*
1	Land (in Ha.)	No land	<1 non-irrigated <0.5 irrigated	1-2 non-irrigated <0.5 irrigated	2-5 non-irrigated 1-2.5 irrigated	>5 non-irrigated >2.5 irrigated
2	House type	No house	*Kuchcha*	Partial *kuchcha*	*Pukka*	City like
3	Cloths (per person)	<2	2-3	4-5	5-9	>10
4	Meals a day	<1	One but sometimes less	Once sufficient	Two but sometimes less	Sufficient food available
5	Toilet facility	Open space	Common toilet w/o water supply	Common toilet with water supply.	Common toilet with water supply & sweeper	Personal toilet
6	Consumer durables: TV, Elec. Fan, Pressure cooker, Radio	None	Any one	Any two	Any 3 or all	All and more
7	Literacy level of most educated member of family	Illiterate	5th standard	10th standard	Diploma	Professional
8	Labour situation in the family.	Bonded labour	Women & child labour	Only adult women labour	Only adult man labour	Other
9	Source of livelihood	Agricultural labour	Farmer	Rural artisan	Salary	Other
10	Situation of children	Do not go to school & employed	Going to school and employed	Not going to school & not employed	Going to school but working	Going to school & not working
11	Type of debts	For daily use from non-institutional sources	For agriculture from non-institutional sources	For other use from non-institutional sources	Only institutional sources	No debts
12	Reason for staying away from family	Accidental work	For seasonal employment	Any other type of employment	Not staying away	Any other reason
13	Requirement of aid	For employment	For self-employment	For training and skill addition	For housing	Aid not required

Source: BPL Survey, 2002-03.

TABLE 3

Socio-economic Profile of the BPL Households of Our Sample in the Five States

Characteristics of Housedholds (HHs)	*MP*	*UP*	*Rajasthan*		*AP*	*Karnataka*
	(Raisen)	(Unnao)	(Jalore)	(Chittaurgarh)	(Nalagonda)	(Chittradurga)
Total No. Households	144	189	247	253	263	258
Total Population	902	1039	1422	1181	1176	1354
Avg. Size of HH	5.8	5.6	5.9	4.7	4.6	5.3
% Working Population	28.16	24.31	33.26	49.79	58.67	58.12
% of Children	45.45	52.36	50.77	42.68	31.72	36.48
Sex Ratio (Total)	994	824	861	845	790	881
Sex Ratio (Children)	1145	907	895	810	712	1092
% Literate Popln. (Tot)	51.94	58.40	36.15	38.36	43.88	41.21
% Literate Popln. (Fem)	47.92	45.30	24.29	25.18	30.64	32.58
Avg. Annual Family Income (Rs.) *	9777	7924	16169	15157	27973	20377
Avg. Annual Per Capita Income(Rs) *	1680	1403	2763	3254	6040	3830
Avg. No. of Literates/HH	3.2	3.3	2.0	1.7	1.9	2.0
% HH with Land	44	30	59	61	60	60
Avg. Land Holding (Ha.)	1.5	1.66	1.44	0.77	0.68	0.96
% HH with Cattle	83	79	81	78	25	45
Avg. Cattle per HH	2.7	1.9	8.2	5.0	2.4	3.7
% HH Using Personal Tap/Well water	0.0	14.9	11.4	11.4	38.0	42.6
% HH Using Public Tap/Well Water	56.9	10.1	76.0	76.0	62.0	57.4
% HH Using Other Source of Water	43.1	75.0	12.6	12.6	0.0	0.0
% HH with Electricity	59.72	3.17	17.41	18.18	34.98	54.65
% HH with Toilet Facility	0	0	0	0	0	0
% HH with Drainage and Sewerage Facility	0	0	0	0	0	0

* Indicative and not strictly reliable since only one direct question was asked about family income.

Source Household Survey 2005, 2006 and 2007

We found from our sample that the average annual income of the households was quite low, indicating that the selected households indeed belonged to the poorest of the poor population. However, we found significant differences in the average annual incomes in our samples from different states. The average annual incomes in the three BIMARU states (MP, UP and Rajasthan) were substantially lower than in the two southern states (AP and Karnataka). The literacy rates among the poor households were also considerably low. It is worth noting here that even though the overall literacy rates for these states differ marginally; they differ substantially for the poor population (see Table 4).

TABLE 4
Literacy Rates in the Selected States (Percentaage)

State	*Overall LR*	*Rural Areas LR*	*LR among POP (Our Sample)*
Madhya Pradesh	63.7	57.8	51.9
Uttar Pradesh	56.3	52.5	58.4
Rajasthan	60.4	55.3	37.3
Andhra Pradesh	60.5	54.5	43.9
Karnataka	66.6	59.3	41.2

Source: - Columns 2 and 3 from Census of India, 2001 and column 4 from Our Sample Survey.

It is interesting to see that the literacy rates in our sample of poor population are much lower in Rajasthan, AP and Karnataka than in UP and MP. The former are economically better off than the latter. Thus we find that the difference in the literacy rates among the poor and the average is considerably less in the economically less well-off states than among the economically better-off states. Better economic conditions in a state would alone not guarantee access of the poor to the primary education. In fact, it seems to be associated with lower access! This clearly suggests that the states have to make special efforts to improve access of the poor to primary education while achieving economic progress. Otherwise, growth could become non-inclusive and result in by-passing the poor in education.

Out of the children in school going age in our sample, the proportion of children attending school was 92% in MP, 83% in UP and 79% in Rajasthan. The proportion for AP is 83% and for Karnataka just 56% which is the least among all the states. Thus, the proportion of children remaining out of the primary school among the poor is only 8% in MP, 17% in UP and AP, 21% in Rajasthan and as high as 44% in Karnataka. This is a very significant indicator of the lack of effective access of the poor to the primary education in the state.

It is possible to calculate the enrolment ratios from the data collected for the poor households in our sample. Table 5 shows the GER and NER for primary classes in our sample in the five selected states. We can see that the sample GERs in MP, UP and Rajasthan are marginally lower whereas for AP and Karnataka these are significantly lower than the national average. On the other hand, the sample NERs for all the states,

except UP, are substantially less than the national average. However, comparing the GERs and NERs of the poor population with the aggregate ratios for the respective states from Table 1 above, we find significant differences in both ratios across all the states. We also find that these ratios differ for girls and boys in different states. In MP, Chittaugarh (Rajasthan) and AP, boys have relatively higher enrolments whereas, in UP, Jalore (Rajasthan) and Karnataka girls have relatively greater enrolment. In Karnataka, both GER and NER were found to be extremely low for boys in our sample which represent the children of the weaker section of society in the rural areas. The lower enrolment ratios among the poor households, compared to the average in the respective states, provide a measure of the relative degree of access of the rural poor to primary education.

TABLE 5
GER and NER for Primary Classes in the Sample

State	*Districts*	*GER*			*NER*		
		Boys	*Girls*	*Total*	*Boys*	*Girls*	*Total*
Madhya Pradesh	Raisen	98.0%	92.1%	94.9%	76.2%	74.6%	75.4%
Uttar Pradesh	Unnao	96.3%	103.9%	99.7%	83.2%	83.1%	83.2%
Rajasthan	Jalore	86.0%	97.9%	91.7%	62.4%	76.9%	69.3%
	Chittaurgarh	98.0%	89.3%	94.3%	66.3%	58.7%	63.1%
Andhra Pradesh	Nalagonda	87.4%	71.1%	80.5%	77.7%	67.1%	73.2%
Karnataka	Chittradurga	52.5%	84.5%	69.6%	46.5%	75.9%	62.2%

GER: - Gross Enrolment Ratio; NER: - Net Enrolment Ratio
Source: - Household Survey 2005, 2006 and 2007

The non-attendance or dropout from the school among the children of the poor households is due to various reasons. We collected responses from the households in our survey to specific questions seeking reasons for not attending or irregularly attending schools. Table 6 gives the distribution of the children not attending school by reasons as stated by the households. They are not inferences based on the actual activity profile of such children. It shows that this distribution varies among different states.

Among the children attending the schools, a major proportion went to the public/government schools. In MP 97.7% and in UP 87.8% children went to public schools. In the two districts of Rajasthan, 92.6% in Jalore and 95.3% children in Chittaurgarh went to public schools. For the southern states, the proportions were 93.2% and 88.5% for AP and Karnataka, respectively. The proportion of children being sent to private schools varies from about 2% in MP, 5% to 7% in Rajasthan and AP and nearly 12% in Karnataka and UP. As per our discussions with the households during the survey, we found that the people do consider private schools to be better than government schools in terms of quality of education and facilities. However, the cost of education in the private schools as compared to government schools, in terms of fees and other expenditures, is much higher. Moreover, the poor were induced to send their children to

the government schools because they received certain incentives, such as textbooks, cash subsidies, uniforms, mid-day meals, etc. Considering all such costs – direct and indirect – of sending the children to a private school, particularly for the families below poverty line, the fact that about 2 to 12% of poor families sent their children to private primary schools is an eye-opener. It indicates two things: one, the poor families do value education; and two, there is a significant difference in perceived quality of education between the public and private schools.

TABLE 6
Percentage of Children by Reason for Non-Attendance and Irregularity in Attending School

State (District)	*Gender*	*Household Activity*	*Employment*	*Sickness*	*Marriage*	*No Interest*	*Teacher Related*	*Other Reason*	*All*
MP (Raisen)	Boys	15.79	15.79	-	-	31.58	26.32	10.53	100
	Girls	18.18	18.18	-	-	54.55	9.09	-	100
	Total	16.67	16.67	-	-	40.00	20.00	6.67	100
UP (Unnao)	Boys	27.27	54.55	-	-	13.64	-	4.55	100
	Girls	60.87	17.39	-	-	8.70	-	13.04	100
	Total	44.44	35.56	-	-	11.11	-	8.89	100
Rajasthan (Jalore)	Boys	6.40	10.90	20.90	-	28.20	13.60	20.00	100
	Girls	31.70	2.40	28.00	-	18.30	2.40	17.20	100
	Total	17.20	7.30	24.00	-	24.00	8.80	18.70	100
Rajasthan (Chittaurgarh)	Boys	2.10	23.20	18.90	-	25.30	1.00	29.50	100
	Girls	32.80	12.50	10.90	-	14.10	3.10	26.60	100
	Total	14.50	18.90	15.70	-	20.80	1.80	28.30	100
AP (Nalagonda)	Boys	3.7	81.48	-	-	7.41	-	7.41	100
	Girls	18.75	75.00	-	6.25	-	-	-	100
	Total	11.86	77.97	-	3.39	3.39	-	3.39	100
Karnataka (Chittradurga)	Boys	1.39	55.56	1.39	-	11.11	-	30.55	100
	Girls	15.84	46.53	0.99	1.98	8.91	-	25.75	100
	Total	9.83	50.29	1.16	1.16	9.82	-	27.74	100

Source: Household Survey 2005, 2006 and 2007.

We enquired from these households the type of incentives their children received from the government schools. Table 7 gives the percentage distribution of children receiving the incentives in all the five states.

TABLE 7
Incentives Received by Children of Poor Households Attending Schools

Incentives	MP (Raisen)	UP (Unnao)	Rajasthan (Jalore)	Rajasthan (Chittaurgarh)	AP (Nalagonda)	Karnataka (Chittradurga)
Getting Cash Subsidy	57.1%	86.4%	0%	36.8%	4.6%	61.5%
Getting Mid-day Meals	75.5%	88.6%	77.2%	71.8%	70.4%	81.8%
Getting Textbooks	96.6%	93.0%	97.8%	102.7% *	88.5%	84.9%
Getting Uniform	45.6%	2.2%	0%	0%	1.2%	84.4%

* Due to dropout after receiving textbooks.
Source Household Survey 2005, 2006 and 2007.

We can see that the children of the weaker sections in the rural areas of all these states do receive benefits of mid-day meals and free textbooks. The mid-day meals benefit is given to students of the primary section only, whereas the figures in the table pertain to all children of the poor households attending schools. The textbooks are given such that each student receives a complete set of all the textbooks for his/her standard. It was found that the free textbooks were available to almost all eligible students in our sample. This is because the proportion of students in public schools matches with the proportion receiving the free textbooks, indicating a near complete coverage. In fact in UP and Rajasthan, the proportion of children receiving free textbooks is slightly greater than the students actually going to public schools. This means that there is a possibility that some families registered their children's name in public schools to avail benefits, but actually sent them to private schools. The incentive of cash subsidies was also given to substantial number of children in MP, UP, Rajasthan (Chittaurgarh) and Karnataka. The amount of cash subsidy differs for all the states and also for different students, depending upon their caste and gender. A significant number of children also received school uniforms (one set per child per year) but only in MP and Karnataka. Thus, the access of the poor children to various incentives in primary school is not problematic.

Apart from the incentives, our survey also reveals details regarding the access of certain school facilities to the children of the poor households. Table 8 summarizes the finding regarding the same for different states.

TABLE 8
Access to Primary School Facilities among Children of Poor Households

Facilities	MP (Raisen)	UP (Unnao)	Rajasthan (Jalore)	Rajasthan (Chittaurgarh)	AP (Nalagonda)	Karnataka (Chittradurga)
Getting School Supplies	2.3%	1.1%	0%	0%	0%	3.2%
Getting Transport Facility	0%	0%	0%	0%	0%	11.1%
Getting Library Facility	7.6%	1.9%	33.2%	43.2%	3.2%	23.5%
Getting Sports Facility	19.3%	13.3%	48.7%	43.2%	4.7%	37.3%

Source: Household Survey 2005, 2006 and 2007.

The facilities of school supplies and transport are not prevalent in any of the states. In Karnataka, it seems that the students of private schools get transport facility and the government schools do not provide any such facilities. The library and the sports facilities are available in Rajasthan and Karnataka but in other states their supply to the poor is quite low. Thus we find that the access of the poor children to these primary school facilities is quite limited.

The average annual expenditures on education by households were Rs. 421 for MP, and Rs. 473 for UP. This expenditure was significantly different in two districts of Rajasthan, it being Rs. 474 in Jalore and Rs.179 for Chittaurgarh. In AP it was Rs.798 and for Karnataka it was Rs.787. Since these figures are for different points of time and with states of different income levels, we should consider the percentage of household income spent on education. The percentages are 4.31% (MP), 5.97% (UP), 2.06% (Rajasthan – 2.93% Jalore and 1.18% Chittaurgarh), 2.85% (AP) and 3.86% (Karnataka). The expenditure per child on education had large differences in these states. It was as low as Rs. 198 in MP to a high of Rs.921 in Karnataka. In UP, Rajasthan and AP, it was Rs. 227, Rs. 300 and Rs.758, respectively.

Sample Survey of Schools and Its Findings

Along with the household survey, a detailed sample survey of primary schools was also conducted in all the five selected states. During our field visit, we decided to cover primary schools in and around the selected village for household survey. Categorising broadly, we covered mainly two types of schools – government primary schools and private primary schools. In all we covered about 155 government and 46 private primary schools in all the states. This survey was conducted to get an idea about the quantity and quality of infrastructure and manpower in government and private schools in the rural areas. We also gathered information regarding some other qualitative aspects relevant to the schools in their functioning through discussions and observations along with the formal questionnaire.

Our findings revealed that the physical infrastructure in some of the government schools was in dilapidated condition, especially in the northern states. The classrooms were not in usable condition and hence the students were made to sit in the *verandas* or sometimes even on the ground outside the school. We found one primary school in Rajasthan having no building at all. Such schools could not function regularly during the rainy season or even at times of acute hot and cold weather conditions. It was also found that most of the government schools had inadequate number of classrooms in the school building. This was either because of poor maintenance of the older classrooms rendering them not usable, or due to use of one of the classrooms as a storeroom for food grains and other material for the mid-day meal purposes. Inadequacy of the teachers was also a common problem faced by the government primary schools in all the five states. In some of the cases, we found primary schools functioning with a single teacher and also sometimes with a single classroom. The availability of supportive infrastructure, such as separate toilets for boys and girls, drinking water and electricity, was also found to be

absent in many of the government schools. These factors had a definite impact on the functioning and the quality of education in these schools.

An important aspect brought out during the school survey was that majority of the teachers of primary schools did not stay in the village where the school was located. They commuted from the nearby urban locations. This would have a direct effect on the functioning of the school since regular presence of the teacher cannot be guaranteed for various reasons in such cases. In case of a single teacher school, the school may not function at all if the teacher staying in another village/town fails to come. Hence, this has a direct impact on the quality of education in these villages. In our survey, we found that nearly 59% of government primary school teachers in MP, 54% in UP, 60% in AP and 70% in Karnataka stayed in the other village[5]. In Rajasthan, this proportion was quite different for the two districts. While in Jalore (desert area), only 35% government school teachers did not stay in the village, in Chittaurgarh (tribal district), their proportion was 75%. This proportion for private schools is significantly low. In MP all the teachers of private school were found to be staying in the same village.

Another point regarding quality of education in primary schools is that we found most of the government primary schools having the system of multiple classes being conducted simultaneously in the same room. This implies that students of more than one standard are made to sit in a combined class taken by a single teacher due to insufficient number of classrooms and/or teachers. This raises a definite question over the amount of attention that the teacher would be able to give to the students. The problem of multiple classes has a specific relevance in the case of single teacher schools and also to the absenteeism of teachers in other primary schools. We found majority of government primary schools of our sample in all the five selected states having this system. However, the situation in private schools is totally different, irrespective of the state. None of the private schools in any of the states have reported multiple class system being practised.

During our survey we found some of the primary schools located at a distance from the village. This was specifically found in the northern states. For example, one of the schools in Chittaurgarh district of Rajasthan was about 1.5 km away from the village it belonged to. This acted as a discouraging factor for students to attend schools as it was inconvenient for them to reach. Earlier in the household survey, we found students giving school distance as a reason for irregular attendance, particularly in case of the girl child. However, in the southern states, the primary schools were located in the village. In Karnataka we found that in case a village was spread over a larger area, there were multiple schools. In one of the schools in Karnataka, although the main school building was outside the village, the primary section was built separately within the village.

The teachers of the government primary schools are generally involved in a number of non-teaching activities. Through discussions we found that they had to do election

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[5] This phenomenon has a direct relation with our household survey where children do give absenteeism of teacher as a reason for irregular or non-attendance in school.

related work, such as preparation of voters' list, identity cards and election duties, demography related work such as population surveys, animal surveys, economic surveys and even medical work such as pulse polio immunization. They were also involved in many community based activities in the villages at regular intervals. This is because the school teachers are the most educated and qualified persons available at the village level. These activities are although not a part of their routine, they have to spend a day or more for the work. The school during these days, therefore, does not work regularly or perhaps not at all. Although these activities do not consume much time of the teachers, they do affect the continuity of teaching. As a result both students and teachers tend to loose interest, ultimately affecting the overall quality of education.

Another issue that we came across in the survey was about the difference in enrolment of girls in public and private schools. Apart from the large difference in the average enrolment of students in private and public schools, we found that the ratio of girls to the boys in private school was much lower than that in public schools. The number of girls per 100 boys in private schools was 83 in MP, 81 in UP, 83 in Karnataka and 78 in AP. In the two districts of Rajasthan this ratio was found to be lowest at 32 in Jalore and 53 in Chitttaurgarh. On the other hand, this ratio for government schools was 107, 95 and 83 for MP, UP and Rajasthan and, 107 and 90 for AP and Karnataka, respectively. This clearly indicated that parents preferred boys over girls for affording better quality of education in the private schools. Thus, in case of the households sending their one child to public schools and the other to private schools, the probability of the child going to private school being a boy is almost one.

Conclusion

In the paper, we have attempted direct verification of the Planning Commission's basic premise that progress in this country in social sectors bypassed weaker sections and thus it was not inclusive. The weaker sections did not have effective access to basic services like primary education. The definition of 'weaker section', however, was not clear. Traditionally, it is defined in terms of social criteria and hence it would include SC and ST population. Because of this, separate data are collected and regularly reported about these categories on various parameters, including literacy and enrolment. It appears that these categories have higher or similar access to primary education in the country from the available evidence. Thus, the 'weaker sections' referred to by the Planning Commission must be defined in economic terms and should include people living below poverty line (BPL). However, direct data collection and reporting is not yet regularly done for this category, perhaps because their exact identification, based on objective criteria, is problematic. With a massive effort in terms of BPL Census at national level conducted in 2002-03, it became possible to get some idea about different parameters for this category.

In the present paper, we applied BPL criteria for the 'weaker section' and used the results of a large sample survey of BPL families in 5 different states to directly get some evidence on the premise of the Planning Commission. Our finding is that this category

(BPL) does have a serious problem of insufficient access to primary education. In terms of literacy, we found that economic progress alone does not guarantee improved access of the poor to education. The efforts and policies need to be focused, therefore, on improvement in access of the poor population to these services. The overall enrolment ratios in primary sections, both for the states and of the nation, could be a result of the lower enrolments among the children of the poor households. This is evident from the lower enrolment figures among the children of the poor populations in our sample. However, our finding from the sample of the BPL families has shown that several incentives given by the government to induce children of poor families to attend primary schools regularly seem to be reaching the target group remarkably well. Thus the benefits like mid-day meal and free textbooks in the government schools reach almost all children in the primary schools even in the BPL households. The coverage of BPL households even for other benefits like free school uniforms, cash subsidies and free school supplies was also found to be substantial from our BPL household survey. Thus we can conclude that problem of insufficient effective access of the poor to the primary education and enrolment still persists in spite of such incentives offered by the government to the BPL families. This calls for change in the policy level thinking, addressing other aspects to alleviate the problem. In this context, it is important to note our findings from the sample survey of primary schools in the same localities regarding some problems pertaining to the facilities and quality of education in the government primary schools. The major problems we found with government primary schools in almost all states were: frequent absenteeism and irregularity of school teachers since several of them do not stay in the same village as the school; pathetic physical conditions of school buildings and classrooms; insufficient and inadequate number of classrooms per school to accommodate all the standards in different rooms and hence system prevalence of having multiple classes in the same room at the same time; prevalence of several single teacher schools; innumerable non-teaching activities thrust on school teachers that divert their attention, affect their punctuality and regularity in teaching the students; inadequate supportive infrastructure in the school, like toilet for boys and girls separately, drinking water facility and electricity. All these adversely affect the quality of education provided by the government primary schools and severely discourage pupils from attending. An important step in this regard is the estimation of the required scaling up effort in the rural areas of the country to increase provisioning of physical infrastructural facilities and ensuring adequate manpower supply and thereby improving the effective access of the poor to the primary education services, ultimately leading to achievement of the Millennium Development Goals.

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Impact of Education on Decision-Making Power Among Women

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Abstract

The decision-making power among women can be improved with increase in their educational status. The present study is undertaken to find the impact of education on women's decision-making power. A sample of 100 married women from Kashmir region were selected through multistage sampling methods, using questionnaire, interview schedule and scale constructed by Jan (2004) regarding 'Decision-Making Power among Women'. The study shows that with the increase in the educational status of women, their egalitarian and feminine decision-making power increases; while masculine and familial decision-making power in their families decreases. Significant differences are observed among qualified, literate and illiterate women, as to their decision-making power for family planning, control on unnatural abortions, health and education of children, participation in local government and choice for income generating activities.

Introduction

Education determines aspirations, technology, productivity and mobility. It also changes value perception of human beings and their contribution to the household economy (Megha, 1990). Educated women not only have influence on their own families, but also bring about a progressive change in their community. Educated and emancipated women can plan or take better decision with regard to every aspect of family life. All women are engaged in household work even though some of them are employed in other occupations (Reddy, 2003). Equality between women and men can be achieved only if both are equally in a position to participate in decision-making process at all levels. Decision-making is the process of consciously choosing courses of action from available alternatives and integrating them for the purpose of achieving the desired goal. It involves deciding on what goals are to be achieved, and what means and methods are to be adopted in reaching them. Decision-making is generally influenced by the level of knowledge of the decision maker (Ray, 1988). According to Mumtaz (1982), there are various family matters on which men generally take decisions. Women are quite often not even consulted. This is because of the feeling among men that women are incapable

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of taking plausible decisions due to illiteracy among most of them. It would mean that if women are educated, they would acquire the capacity and ability to participate in decision making. Women's representation at the highest levels of national and international decision-making has shown a slight change since 1995 (Karl, 1995). Achieving the goal of equal participation of women and men in decision-making will provide a balance that more accurately reflects the composition of society and is needed in order to strengthen democracy and promote its proper functioning. Women's equal participation in political life plays a pivotal role in the general process of the advancement of women. Women's equal participation in decision-making is not only a demand for simple justice or democracy, but a necessary requirement for women's interest and advancement of society. Without the active participation of women and the incorporation of women perspective at all levels of decision making, the goals of equality, development and peace cannot be achieved (Hirsch, 1995).

Literature Review

Lancuster (1965) conducted a study on ten married women who had not attended college. Several women expressed uncertainty in relation to their decision-making. Familial decisions were reported by them more satisfactory than unsatisfactory decisions. On the contrary, Malkit (1988) conducted a study on decision-making power among women, with special reference to the social obligations which included decisions regarding age at marriage, mate selection, dowry, expenditure on marriage and education of children. The study showed relatively average role of women in decision-making. Dowry was more or less a female domain with 78.3 percent, followed by decisions related to age at marriage of son or daughter (36.9 percent). About 21.5 percent had medium role in mate selection and 21.6 percent women had high role in mate selection.

Singh (1992) conducted a study on modernity and decision-making wherein 69.5 percent of the respondents of all categories expressed that both husband and wife should take decisions on all matter, especially on family planning. About 90.8 percent of the respondents in high level of modernity, 74.0 percent of the respondents in the medium level of modernity and only 20.3 percent of the respondents in low level of modernity considered that husband and wife both should take decisions regarding the education of the children. On the contrary, Mayan (1997) in her study found that out of 192 women, 58 were treated as slaves and had no voice in the family decisions. Rather, they obliged the decisions of husbands and had to perform all the domestic work silently. However, 86 women were consulted before taking decisions in the family, whereas the remaining 18 were heading the families, as their marital status had changed because of divorce or their having been widowed.

In his study, Roth (2001) found that wives tended to under-report their household decision-making power. In couples where both partners were educated and in couples where women worked for pay, both partners were significantly more likely to report that both of them participated in the final decisions. The case was different in couples without education or where the wife did not work for pay. Niklaus (2002) revealed women's

low status, and men's predominance in decision-making at the household and community. Women were least likely to have decision-making power on their own healthcare. None of the decision-making areas had significant association of women such as use of modern contraceptive methods, domestic decision-making, and family planning. Socio-demographic factors, such as educational level, parity, and desired number children, had significant association with ever use of modern contraceptives. Women's decision-making power was shaped by various socio-cultural factors, religion and tribe, education, employment, and marital structure. Moreover, the study showed that most of the domestic decision-making power was significantly related to family planning.

Objectives of the Study

- To assess the impact of education on women's decision-making power.
- To evaluate the status of women's decision-making power related to their empowerment, fertility and children rearing practices.

Rationale of Study

Women play a great role in overall development and progress of the nation. But their participation in different fields either directly or indirectly is still insignificant in many aspects. In most cases, women are considered inferior to men, and their life is confined within the four walls of the house. For taking any decision, women are given less participation. They have no right to take decisions regarding various items, as men have. In order to make women aware about their influence on society, nation and for attaining their respectable place within the family, they need to imparted education. They have to be empowered to make decisions regarding various aspects in the family and society. Thus, the present study was undertaken to highlight the importance of educating women for their development and empowerment.

Methodology

The study was conducted on 100 married women in Srinagar District of Jammu & Kashmir, India. Among these women, 52 were illiterate, who could not read, write or calculate; 24 literate, who could read, write and calculate; and 24 had acquired formal education. The study was based on primary data and multi-stage sampling method was used. The tools used comprised interview schedule for illiterate and literate women, questionnaire for qualified women and scale constructed by Jan (2004), regarding "Decision-Making Power among Women."

The scale consisted of 43 items on different aspects which were divided into 5 categories, i.e., Egalitarian (where husband and wife jointly took decisions), Feminine (decisions taken by respondent herself or female members in the family), Masculine (decisions taken by respondents' husband or father), Familial (decisions taken by parents in-laws and/or grandparents) and Non-Specific (decisions taken by secondary relations, i.e., uncles, aunts, guardians, etc). The scale was further sub-divided into three categories,

i.e., decisions related to child rearing practices, decisions related to self-empowerment and decisions related to fertility.

The least score obtained on the scale was 43 and the highest scored was 215. Among all decision makers i.e., egalitarian, feminine, masculine, familial and non-specific, the decision-making power was divided into three levels, i.e., low (Q1), medium (Q2) and high (Q3). Q1 obtained the scores of up to 107, Q2 up to107-152, and Q3 up to 152-215.

The data collected was coded, scored, and analyzed using computer software 'Statistical Package for Social Sciences' (SPSS), computing percentages, $\chi 2$ -value, degrees of freedom, and levels of significance. Levels of significance were obtained at the p-values of ≤ 0.01 (highly significant), ≤ 0.05 (significant) and ≥ 0.05 (insignificant). The reliability of the scale regarding 'decision-making power among women' was tested for its validity in the state of Jammu & Kashmir and was found reliable by 91 percent.

Results and Discussion

For the smooth running of a family, it is very important that equal status and equal power should be given to the basic constituents of family, i.e., man and women; so that they can rear up their children in a better way and solve their day to day problems for achieving their desired goals. Decision-making process is generally influenced by the level of knowledge.

Women's Decision-Making Power Related to Their Empowerment

Women's decision-making power related to their empowerment is shown in Table 1. It is found that 33.03 percent of literate and qualified women on egalitarian basis participate in local government and exercise their right of voting – 58.00 percent, against only 1.92 percent illiterate women. Illiterate women mainly depend on masculine, familial and non-specific decision makers, not only for participating in local government and voting, but also for undertaking income generating activities, and visits to friends and relatives. However, an equal percentage of literate and qualified women i.e. 29 percents respectively themselves decide for their participation in local government as well as in voting. Literate women undertaking decisions for income generating activities on egalitarian basis comprise 33.33 percent and on feminine basis 20.83 percent. However, 16.67 percent of them also depend on masculine and familial decisions for income generating activities and seeking permission for visits to relatives and friends. Qualified women, who have received formal education, mainly enjoy egalitarian and feminine decision-making power; they constitute 41.66 percent and 37.50 percent respectively for undertaking income generating activities and for decisions related to visits to relatives. Similarly, they also exercise 45.83 percent egalitarian and 37.50 percent feminine decision-making power for visit to their friends. Such differences among illiterate, literate and qualified women were found significant ($p \leq 0.05$) with respect to participation in local government and choice for undertaking income generating activities. Thus, education plays an important role in empowering women.

TABLE 1
Women's Decision-Making Power for Their Empowerment

Decision-Making Power	*Educational Level*						*Total*	*%*	*χ^2 Analysis*
	Illiterate		*Literate*		*Qualified*				
	N	*%*	*N*	*%*	*N*	*%*			
Participation in Local Government and Voting									
Egalitarian	1	1.92	8	33.03	14	58.33	23	23.00	
Feminine	2	3.84	7	29.01	7	29.16	16	16.00	
Masculine	14	29.09	7	29.01	2	8.33	23	23.00	
Familial	18	34.06	1	4.16	1	4.16	20	20.00	16.40_8**
Non-specific	17	32.06	1	4.16	-	-	18	18.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	
Choice for Undertaking Income Generating Activities									
Egalitarian	5	9.62	8	33.33	10	41.66	23	23.00	
Feminine	5	9.62	5	20.83	9	37.50	19	19.00	
Masculine	16	30.77	4	16.67	3	12.50	23	23.00	
Familial	13	25.00	4	16.67	2	8.33	19	19.00	11.58_8**
Non-specific	13	25.00	3	12.50	-	-	16	16.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	
Visit to Relatives									
Egalitarian	4	7.69	6	25.00	9	37.50	19	19.00	
Feminine	6	11.53	10	41.66	10	41.66	26	26.00	
Masculine	16	30.76	4	16.66	4	16.66	24	24.00	
Familial	14	26.92	4	16.66	1	4.16	19	19.00	7.759_8*
Non-specific	12	23.07	-	-	-	-	12	12.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	
Visit to Friends									
Egalitarian	6	11.53	10	41.66	11	45.83	27	27.00	
Feminine	2	3.84	6	25.00	9	37.50	17	17.00	
Masculine	16	30.76	4	16.66	2	8.33	22	22.00	
Familial	12	23.07	4	16.66	2	8.33	18	18.00	10.10_8*
Non-specific	16	30.76	-	-	-	-	16	16.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	

N=100; Column percentage; * p-value ≥0.05; ** p-value ≤0.05
The degree of freedom (d. f.) in subscripts of $\chi 2$ value.

Goode (1974) examined that women's participation in politics and government as an important issue. The role of women in politics and government, however, remains limited, although their parliamentary representation has steadily increased over the past decade. By July 2006, women accounted for just fewer than 17 percent of parliamentarians. Worldwide, 10 countries have no women parliamentarians at all, and in more than 40 others, women account for less than 10 percent of legislators. Goode (1974) also found that opening of higher paying areas of employment to women promoted more decision-making power among them. As women become economically productive, their

spheres of influence increase. They are more likely to be included in the decisions on how the resources should be distributed. Women are given little freedom in visiting their friends and even relatives. In Burkina Faso and Mali, approximately 60 percent of the women reported that husbands alone decide when they can visit friends or relatives. One-third of Bangladeshi husbands control their wives' mobility outside the home. In Latin America, the Caribbean, and Nicaragua, data shows that 18 percent of women require men's permission before leaving home to visit friends and families.

Women's Decision-Making Power Related to Their Fertility

Table 2 reveals women's decision-making power related to their fertility. Illiterate women mainly depend on masculine decisions for their reproductive behaviour. Only 5.76 percent illiterate women plan their family on egalitarian basis. They hold only 3.84 percent feminine decision-making power for family planning. Moreover, illiterate women hold only 1.92 percent egalitarian decisions for undertaking birth control measures and control on unnatural abortions respectively. On the contrary, 70.83 percent literate women enjoy egalitarian decisions for their birth control measures. Similarly, 70.83 percent qualified women exercise egalitarian decisions for planning their families. Literate (45.83 percent) and qualified (58.33 percent) women also utilise egalitarian decisions in addition to feminine decisions (41.66 percent and 33.33 percent respectively) for control on unnatural abortions. Such differences among qualified, literate and illiterate women were found statistically significant at 0.05 levels in cases of decisions related to family planning, and control on unnatural abortions. Thus, attainment of education has positive influence on reproductive decisions among women.

Eva and Schmeewind (2006) found that one of the most important choice a women or couple can make is the decision to use contraception. Even if a couple wants a child as soon as possible after marriage, the use of contraception thereafter for child spacing is a sensible decision. Abid (1995) found that using contraceptive to limit the number of children is crucial for the well being of children, families and communities. Honduras (2001) studied that overall 25 percent of women and 28 percent of men perceive that men alone should be responsible for reproductive decisions. For women having less than secondary education, being of medium or low socio-economic status and living in an average area, were each associated with male centred decisions-making. According to a report entitled 'Sex Selective Abortion' by Ganatra et al. (2001), there are two stages of decision-making in terms of sex selection. The first stage is decision to take a sex determination test. The 2nd stage of decision involves an actual abortion if the test reveals the female foetus. According to this report the decision to the test appears to be largely taken by the husband and wife, although in some instances mother-in-law do suggests the test. But husbands are known to play pivotal role in all pregnancy related decisions.

TABLE 2
Women's Decision-Making Power Related to Their Fertility

Decision-Making Power	*Educational Level*						*Total*	*%*	*χ^2 Analysis*
	Illiterate		*Literate*		*Qualified*				
	N	*%*	*N*	*%*	*N*	*%*			
Family Planning									
Egalitarian	3	5.76	18	15.40	17	70.88	28	28.00	
Feminine	2	3.84	3	12.50	5	20.83	10	10.00	
Masculine	32	61.53	3	12.50	-	-	35	35.00	5.90_8**
Familial	10	19.23	-	-	2	8.33	12	12.00	
Non-specific	5	9.61	-	-	-	-	5	5.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	
Birth Control Measures									
Egalitarian	1	1.92	17	70.83	2	8.33	20	20.00	
Feminine	-	-	3	12.50	22	91.66	25	25.00	
Masculine	38	73.07	2	8.33	-	-	40	40.00	11.68_8*
Familial	7	13.46	2	8.33	-	-	9	9.00	
Non-specific	6	11.53	-	-	-	-	6	6.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	
Control on Unnatural Abortions									
Egalitarian	1	1.92	11	45.83	14	58.33	26	26.00	
Feminine	3	5.76	10	41.66	8	33.33	21	21.00	
Masculine	25	48.07	2	8.33	1	4.00	28	28.00	7.75_8**
Familial	17	32.69	1	4.00	1	4.00	19	19.00	
Non-specific	6	11.53	-	-	-	-	6	6.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	

* p-value ≥ 0.05; ** p-value ≤ 0.05: The degree of freedom (d. f.) in subscripts $\chi 2$ value.

Women's Decision-Making Power Related to Their Children as per Educational Level

Decision-making power among women related to their child rearing practices is given in Table 3. Health, education and marriage of children are concerns mainly of literate and qualified women, rather than of illiterate women. About 45.83 percent qualified women and 41.66 percent literate women take care of health of their children on egalitarian basis. Equal percentages i.e. 29 percents literate and qualified women hold feminine decisions regarding health of their children. On the contrary, 36.53 percent illiterate women depend on masculine decisions and 26.90 percent familial decisions related to health of their children. However, 50 percent of qualified women and 45.83 percent literate women do plan for education of their children on egalitarian basis. Similarly, 50 percent literate and 54.16 percent qualified women take egalitarian decisions while arranging marriage for their children. On the other hand, only 1.92 percent illiterate women take egalitarian decisions for education of their children. Moreover, among illiterate women, the percentage of masculine, familial and non-specific decision makers are found to be more

than egalitarian and feminine decisions. Such differences between literate, illiterate and qualified women are statistically found significant ($p \leq 0.05$) for decisions related to health and education of their children. In other words, education through formal and non-formal systems has a favourable impact on women for their child-rearing practices.

TABLE 3
Women's Decision-Making Power Related to Their Children

Decision-Making Power	*Educational Level*						*Total*		*χ2 Analysis*
	Illiterate		*Literate*		*Qualified*				
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	
Health of Children									
Egalitarian	5	9.61	10	41.66	11	45.83	26	26.00	
Feminine	4	7.69	7	29.01	7	29.16	18	18.00	
Masculine	19	36.53	4	16.66	5	20.83	28	28.00	6.88_8**
Familial	14	26.90	3	12.50	1	4.16	18	18.00	
Non-specific	10	19.23	-	-	-	-	10	10.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	
Education of Children									
Egalitarian	1	1.92	11	45.83	12	50.00	24	24.00	
Feminine	5	9.61	3	12.50	9	37.50	17	17.00	
Masculine	17	32.06	8	33.30	2	8.33	27	27.00	5.32_8**
Familial	22	42.30	1	4.16	1	4.16	24	24.00	
Non-specific	7	13.46	1	4.16	-	-	8	8.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	
Marriage of Children									
Egalitarian	5	9.61	12	50.00	13	54.16	30	30.00	
Feminine	-	-	4	16.66	7	29.01	11	11.00	
Masculine	21	40.38	1	4.16	3	12.05	25	25.00	4.48_8*
Familial	17	32.06	7	29.01	1	4.16	25	25.00	
Non-specific	9	17.30	-	-	-	-	9	9.00	
Total	52	100.00	24	100.00	24	100.00	100	100.00	

N=100; Column percentage: * p-value ≥ 0.05; ** p-value ≤ 0.05
The degree of freedom (d. f.) in subscripts $\chi 2$ value.

David *et al.* (2005) found that in joint families, females are given negligible importance in deciding educational status of their children. Roelofs *et al.* (2005), observed that extent of decisions related to marriage of the children has vast variation in families. In most cases, the marriage of the children is decided by the male members of the family. In older days, the grand parents were given more importance in deciding marriage of children and children's choice were given least importance; but reverse is the case in present times. Macia (2001) through 'Demographic and Health Surveys' (DHS) reveals that in many households, women have little influence over important household decisions, including decisions related to health, education and marriage of children. In

only 10 out of the 30 countries surveyed, did women participate in the decisions related to marriage of their children.

Correlation of Decision-Making Power with Age and Family Income

Table 4 shows the correlation of decision-making power among women with their age, family income and education status. It is observed that with the increase in education status among women, their overall decision-making power increases by 96 percent ($p \leq 0.01$). The egalitarian (97 percent) and feminine (41 percent) decision-making powers also show increase with the attainment of literacy among women; whereas, masculine (25 percent), familial (58 percent) and non-specific (95 percent) decisions in the family decrease with increase in women's education. Such impact of education on all indicators of decision-making process i.e. egalitarian, feminine, masculine, familial and non-specific, are statistically found highly significant ($p \leq 0.01$). Increase in family income and age of women have also shown favourable and significant impact on all indicators of decision-making process.

TABLE 4

Correlation of Decision-Making Power with Age, Family Income and Educational Status

Increase in	*Decision-Making Power*					
Variables	r_1	r_2	r_3	r_4	r_5	r_6
Age	0.100*	0.328**	0.429*	0.432*	-0.010*	-0.386*
Family Income	0.684*	0.517**	0.190*	0.188*	-0.058*	-0.148*
Education Status	0.966***	0.972***	0.415**	-0.258***	-0.586**	-0.956***
	Overall	Egalitarian	Feminine	Masculine	Familial	Non-specific

* p-value ≥ 0.05; ** p-value ≤ 0.05; *** p-value ≤ 0.01

Jan (2004) also found that with increase in age, the egalitarian, feminine and masculine decision-making power increases, but familial and non-specific decreases. Also as the size of family decreases, the egalitarian and feminine decision-making power of women increases whereas familial and non-specific power decreases. The increasing age of women makes the masculine, familial and non-specific decision-making power decrease, but increases the egalitarian and feminine decision-making power.

Conclusion

It is important that equal status and equal power should be given to men and women, so that they can rear up their children in a better way, and solve their day to day problems for achieving their desired goals. The families where women have received some education live life in a better way than the families where the women are totally illiterate. Today women are playing a crucial role in the economic welfare of the family. They perform different tasks depending upon their educational status, the number of people in the family, and such other factors. Education has positive impact on decision-making power of women. Illiterate women are mostly dependent on masculine, familial and non-specific decision makers in their families. They possess very low egalitarian and feminine

decision-making power in all aspects of life. However, as the literacy level increases among women through formal or non-formal system of education, their decision-making power in the family also improves. Literate and qualified women are much better placed in taking more egalitarian and feminine decisions than illiterate women. This has helped them to improve their status in family and society and made them more empowered.

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Parent Teacher Associations

An Innovative Methodology for Change: Grassroots View from Madhya Pradesh

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Abstract

The importance of decentralized decision-making at local community level and people's participation and their institutions at all levels, are central to bringing change, in a hierarchical and stratified society like India. The primary school in India emerges as a pivotal social institution that questions status by ascription or accident of birth and promotes status by achievement.

The last decade in Madhya Pradesh has witnessed a major change in the role of the community. This has been institutionalized under the "Jan Shiksha Adhiniyam" (JSA), which brings the community to the centre-stage for ensuring active participation of those who are left at the margins. The Act provides for setting up of Parent Teacher Association (PTA) for each school, giving them the responsibility of school management. This innovative method is to ensure the involvement of parents who are the main stakeholders.

Main agenda of this paper is to examine the effectiveness of this innovative method of the state to involve people through Parent Teacher Associations (PTA) in the decision-making process in the state of Madhya Pradesh. The paper argues that this methodology has given a new direction insofar as the participation of marginalized in the decision-making process is concerned. For this purpose primary data collected for a larger study undertaken in Madhya Pradesh have been used. The paper tries to answer key questions relating to the functioning of PTAs with a view to making the working of PTAs more effective in the total process of achieving the goals set for social change. Hopefully, it is this remedy which will ultimately reduce the causal factors of economic disparities and social inequalities.

A few suggestions are also made to enhance the capabilities of the stakeholders at the grassroots level.

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Introduction

The role of education in development has been clearly recognised ever since the days of Adam Smith. However, it is only in the late 1950s that the importance of education in human and economic development has been clearly accepted. Along with this, need for educational planning as well as its integration with development planning has been distinctly felt. Five decades of experience of planning in India reveals that planning at macro level has not necessarily resulted in reduction of regional imbalances and hence planning at micro level has been emphasized vehemently in recent years, more particularly in the 1990s.

In India, impressive gains have been made in education, yet the goal of universalisation of primary education is still elusive. While 95 percent of villages have a primary school within walking distance, some 69 million children between the ages of 6-14 years yet remain out of school.

Community Participation in Education

Facilitating community participation in education has been a major issue of debates for quite some time now. Many scholars and organizations consider it as an essential condition for enhancing the impact and sustainability of educational programmes. According to some observers 'School based management' is essential in order to strengthen the process of enhancing school effectiveness through increased community involvement. Williams identifies (cited in Paliwar and Mahajan, 2005) three models relating to education and community: the traditional community based education in which the government plays a minor role; the government provided education in which the communities play a negligible role; and the collaborative model in which communities play a supportive role in government provision of education. There is a need to understand that quality education needs autonomy from the state. The reform of education in countries like India has to begin necessarily with the conviction that schools have to become accountable to parents and neighborhood instead of to bureaucrats. A far-away central authority cannot ensure accountability. Responsibilities for education are concurrent not only for national and state bodies, but also for state and intermediate bodies. The 73rd and 74th constitutional amendments delegate responsibility for primary education to locally elected bodies known as Panchayat Raj Institutions, at the district, block, and village levels. Hence, the local bodies have become important players in basic education as they have been granted constitutional status. Though it has facilitated the transfer of the management of schools to PRIs, the real challenge of creating an enabling environment for the qualitative participation of all groups/ stakeholders has not yet been addressed fully.

With the strong push towards decentralization under the newly launched SSA scheme, the education system is looking to the community for participation in the functioning and monitoring of their schools. The community ownership is central to the SSA programme. However, it seems the districts are as yet unclear how SSA will actually become a movement and will be different than other programmes of similar nature

implemented in the past. But there are several caveats to the successful implementation of such an initiative. Findings of a study conducted by PRIA in 14 states covering all the regions of the country, on the involvement of Panchayat Raj Institutions in primary education, reveal that in majority of the states, though the PRIs have been vested with the powers to supervise the attendance of teachers, they are not authorized to initiate any disciplinary action against them, except for complaining to the higher authorities. In such a situation, the PRIs were found to play a marginal role in relation to the matters of teacher management. However, their role in construction of buildings and maintenance was found to be comparatively better. Low levels of awareness about their rights are also a barrier for them. Weak alignment of three 'Fs' (funds, functions and functionaries) has not created the conditions required for the accountable governance and community participation. For effective local-level planning and administration, capacity at the grassroots level needs to be built up. There is a lack of organizational mechanism to institutionalize the capacity that is created. In the absence of such mechanism, the local level units will continue to depend on higher-level institutions. Therefore, to sustain the efforts made towards decentralization, there is a need to institutionalize local level planning competencies and withdrawal of central and state government initiatives in a planned manner.

Enhancing capabilities within local communities is thus a pre-requisite to effective community participation in education. Communities need to be made aware of how they can and must hold schools and teachers accountable. It must be impressed on them that teachers and HMs are government servants placed in schools to serve the community, their job being to teach and train the children belonging to that community. They should be trained about the basic qualities exhibited by an effective school, the meaning of quality education and their constitutional right to demand it for their children. The importance of setting expectations of teachers, HMs, schools and students learning must also be stressed. Strong expectations can influence and shape what a teacher or administrator feels responsible for in his or her work.

When the community understands the importance of simple concepts, such as the effect of time for learning in children's education, the community can perform informal supervision of the school. Monitoring could be done on a daily or weekly basis on informal measures such as keeping track of the time the school starts and closes, the time lunch breaks and other types of recess start and end, the punctuality of teachers and teacher absenteeism. This monitoring needs to be conducted in an open, guilt-free and transparent manner.

Community Participation in Madhya Pradesh

The last decade in Madhya Pradesh has witnessed a major change in the role of the community. After 73rd Amendment Act, Madhya Pradesh became the first state which enacted new Panchayat Raj Act in 1993 and formed PRIs. After formation of PRIs, the state government gave several powers and responsibilities to PRIs including education. There has been a movement of the community from the periphery of the educational

system to its active participation in school management. This has been made possible through concerted efforts of mobilising the community through awareness generation programmes, training, use of media etc. This has been further institutionalized under the "Jan Shiksha Adhiniyam" 2002 (JSA), which brings the community to the centre stage for ensuring quality and equity in education. The Act provides for setting up of Parent Teacher Association (PTA) for each school, giving them the responsibility of school management. This is to ensure the involvement of parents who are the main stakeholders and thereby enhancing their capabilities. The PTA elects a President and a Vice-President from its members. The Head Teacher of the school is the Secretary of the PTA, which meets once a month. The JSA lays down clear cut role and duties of the PTA, empowering it with powers to perform its roles and duties effectively. The JSA also lays emphasis on certain activities to be carried out by the PTA to ensure its involvement in school management. The activities include:

- Ensuring 100 percent enrolment of children in the 5-14 years age group.
- Ensuring regular attendance of students and teachers.
- Assisting in the development of the school and school assets.
- Presenting the needs of learners to Gram Sabha, seeking grants from it.
- Assisting the teachers in the discharge of their duties to impart quality education.
- Raising funds for the development of school.
- Motivating illiterates and neo-literates to strive for sustainable and continuing education.

The rights of the PTA include:

- Preparing the Jan Shikshan Yojana (People's Education Plan).
- Maintain, operate and strengthen Shala Shiksha Kosh (school education fund).
- Decide and recommend school uniform for the students of the school.
- Monitor children's growth in the achievement in various competencies of different subjects.
- Supervise and review all development, academic, administrative and financial activities of the school.
- Recommend withholding salaries of teachers in case of willful default.
- Examining and advising on the Public Evaluation Report (Jan Shiksha Prativedan).

The PTAs are further strengthened through mobilization activities and training programmes targeted towards bringing equity in education. These include the following:

1. Awareness campaign for elected panchayat members, especially for female Panch (elected representative of a local body).
2. Training programme of members of PTA on their roles, functions and activities as given in Jan Shiksha Adhiniyam, with special orientation on issues of girls' education.
3. Orientation programmes for the members of Mahila Self Help Group & Padhna Badhna Sangh.

4. Camps for mobilising out-of-school children, Maa Beti Mela, Bal Mela, Orientation of Gender units.
5. Publicity campaign through rallies, slogan writing, pamphlets, posters.
6. Training of Preraks "Social animators" who have been appointed for each village under the Continuing Education (CE) Programme for implementation of continuing education activities and who also work for bringing all children in the age group of 5-14 years to school.

Rights and Responsibilities of Teachers

Teachers have both rights and responsibilities under the Jan Shiksha Adhiniyam. So far, the teachers were alone in the endeavor of ensuring good education. Now they have the support of the community and parents through Parent-Teachers Association in each school. Teachers cannot be deputed for non-teaching tasks without explicit orders of State Government (under Section 10). This provision has made available to them more time to focus on improving quality of education. Teachers have also the right to their professional development [Under Section 25(4)].

- Incentives would be given for meritorious teachers.
- Teachers will ensure regular attendance of children in the school.
- Punishment of children in any form is banned.

Teachers will:

- Provide quality and remedial teaching to ensure achievement of children up to a satisfactory level.
- Ensure equitable treatment to all children.
- Present and review the Annual Academic Report (Jan Shiksha Prativedan) to Parent Teacher Association to ensure transparency.
- Organise PTA meetings every month to consult and review the academic achievement of children and other problems of the school.

Rights and Responsibilities of Parents

The Act provides learning facility as per norm. Now it is parent's responsibility to ensure that all children are enrolled in school.

Parents have the right to

- Form Parent Teacher Association and elect President, Vice-President and Executive Committee;
- Identify suitable persons like retired teachers to contribute their time to teaching in schools on an honorary basis and enlist them through PTA;
- See answer sheets of their children in meetings of Parent Teacher Association and to take action to improve situation of weaker children;
- Admit their children in schools in mid-session, in case they migrate to different destinations in course of the year;
- Augment resources of school through Shala Shiksha Kosh;
- Management of school is the responsibility of Parent Teacher Association; and

Learning achievements of children would be reported to PTA in every quarter [under Section 25(3)].

Methodology

The present paper is based on a study conducted in the districts of Ujjain, Shajapur and Jhabua of Madhya Pradesh. From each district one block was selected for the study randomly. For the purpose of the study it was proposed to select 20 primary schools from each block. As the Gram Panchayats (GPs) have different number of primary schools within their jurisdiction, the number of GPs selected for the study varied from one district to another. Hence, 10 GPs from Ujjain district, 09 GPs from Ratlam district, and 13 GPs from Shajapur district were selected purposively. Thus, in all, the total number of GPs and primary schools is 32 and 60 respectively.

Head Masters, Teachers and PTA members were the units of our observation. From each Gram Panchayat, Head Masters of all 60 primary schools were interviewed. Covering all teachers of the selected primary schools, a total number of 72 teachers in all were interviewed (other than Head Masters). A total number of 300 PTA members from 32 GPs were interviewed. Thus, the total sample size was 432.

Analysis and Interpretation of Field Data

Keeping in view the scope of the paper only such issues were taken up for analysis as related to the views of members of PTAs. An attempt has been made in the following pages to know how far formation of PTAs has helped in the enhancement of the capabilities of the stakeholders, and how far it resulted in the improvement of the educational system.

Educational Status

Table 1 depicts that 23 percent of the total PTA members are illiterate, 25 percent literate, while 18 percent of the respondents have studied upto primary. Middle and higher secondary educated respondents are 22 and 9 percent respectively. Only 3 percent of the total respondents are Graduates. Thus educational status of PTA members clarifies that 77 percent of the total respondents are literate or educated.

TABLE 1
Educational Status of PTA Members

S. No.	*Educational Status*	*Respondents*	*Percentage*
1.	Illiterate	69	23.00
2.	Literate	75	25.00
3.	Upto Primary	54	18.00
4.	Upto Middle	66	22.00
5.	Upto Higher Secondary	27	09.00
6.	Graduate	09	03.00
	Total	300	100.00

Prior Participation

Prior to new panchayat raj system, the role of villagers was very limited in relation to school affairs. Only a few rural elites used to have some participation in the activities related to the development of schools. An effort has been made here to find out whether there is any change in the pattern of participation of parents in the management of schools of their villages.

Table 2 presents the pattern of participation of respondents in the school development prior to becoming members of PTAs. 65 percent of the total respondents had no participation in the school affairs, only 35 percent of them had their roles in different capacities. 28 percent respondents said that they did participate in the school development activities, and 17 percent were of the view that they tried to keep a watch on regular attendance of teachers. 13 percent respondents lodged complaints to officials concerned in cases of irregularities. Prior to PTAs in most of the rural schools, the School Development Committees were in existence when only 15 percent of the respondents used to participate in the meetings of School Development Committees.

TABLE 2
Participation of Members in School Development Prior to Becoming PTA Member

S.No.	*Type of Participation*	*Respondents*	*Percentage*
1.	No participation	195	65
2.	Participating in school development activities	84	28
3.	Keeping watch on regular attendance of teachers	51	17
4.	Lodging complaints to officials concerned in case of irregularities	39	13
5.	Participating in the meetings of School Development Committee	45	15

This analysis makes it clear that prior to PTAs, only 35 percent of the respondents were involved in the affairs of schools in one way or the other. Only 15 percent respondents were members of the former School Development Committees. This percentage of participation is low because formerly the involvement/ participation of social and economic elites of villages was much more and the representation of other backward sections of society was almost negligible.

Role of PTA Members

PTAs have been empowered to perform various duties for the universalization of school education in rural areas. Some such powers have also been given to the PTAs which were formerly performed by education department. This aspect is studied under Table 3.

Table 3 depicts that 92 percent respondents attended the meetings of PTAs. It has been a problem of schools in rural India that schools do not open regularly and teachers do not come regularly and punctually. It is a significant and welcome sign for the whole

rural schooling system that under the new system, 74 percent respondents do ensure regular opening of schools and 69 percent monitor the regularity and punctuality of teachers. As schools have various problems of day-to-day functioning, 36 percent of the respondents discuss these with the teachers and try to resolve them. A very important duty has been assigned to the PTAs that enjoins upon them to find out the names of such students who are not regular in school. The PTA members contact the parents of such students and motivate them to send their children to school regularly. Only 15 percent respondents opine that they contact the guardians of such children who are not attending school regularly. Another work of PTA is to strive for the availability of teaching material in the school. Table 3 shows that only 5 percent of the respondents make efforts in this direction.

TABLE 3
Role Being Played by the PTA Members

S.No.	*Role*	*Respondents*	*Percentage*
1.	Attend PTA meetings	276	92
2.	Ensure regular opening of schools	222	74
3.	Ensure regularity and punctuality of teachers	207	69
4.	Discuss various problems relating to schools with the teachers and try to resolve them	108	36
5.	Contact the guardians of those children who are not attending school regularly	45	15
6.	Efforts for the availability of teaching material in the schools	15	5
7.	No role	6	2

Thus looking at the roles of PTA members we find that the weightage they give to their roles is in the following order:

(i) Attending the PTA meeting (92)
(ii) Ensuring regular/timely opening of schools (74)
(iii) Ensuring regularity/punctuality of teachers (69)
(iv) Discussing and resolving of school problems (36)
(v) Contact with guardians of irregular students (15)
(vi) Have no role (2)
(vii) Efforts to make available teaching material (5)

Type of Role

It is also important to know the nature of role in day to day functioning. Therefore, this aspect was also inquired from the respondents as to what type of role did they have vis-a-vis the school.

Table 4 reveals that 54 percent of the respondents contact and motivate the guardians for sending their children to school regularly. This is the most preferred role. Making

efforts for construction and repair of school building, is the role perception of 31 percent respondents while 54 percent respondents involve themselves in the annual survey of the school age going children and 56 percent make efforts for the admission of such children in the school. 54 percent respondents make special efforts to bring girls of SC/ST/OBC to school, and 23 percent of PTA members try for making available teaching material in the school.

TABLE 4
Types of Role being Played by PTA Members

S. No.	*Type of Role*	*Respondents*	*Percentage*
1.	Annual survey of the school age going children	162	54
2.	Admission of such children	168	56
3.	Contact and motivate the guardians for sending their children regularly	162	54
4.	Special efforts to send girls of SC/ST/OBC to school	162	54
5.	Efforts for construction and repair of school buildings	93	31
6.	Efforts for making available teaching material in the school	69	23

It is very important from the point of view of PTAs role that majority of the respondents are playing one role or the other in relation to management of school. All types of role mentioned above are significant for the universalization of elementary education.

Expectations from a Teacher

The teacher is the kingpin of school education and has a very important role for the learning and studies of the child. The general expectations of the society are that this profession demands devotion and dedication on the part of a teacher. The main societal expectations have been given in Table 5.

TABLE 5
PTA and Expectations from a Teacher

S.No.	*Expectation*	*Respondents*	*Percentage*
1.	Honest	252	84
2.	Discipline	117	39
3.	Regular and punctual	93	31
4.	Promote Extracurricular activities	33	11
5.	Attentive	18	6
6.	Reside in village and contact the guardians regularly	6	2

Table 5 reveals the expectations of PTA members from a teacher. 84 percent respondents say that a teacher should be honest, and 31 percent expect him to be regular and punctual. Discipline is expected by 39 percent respondents, while 11 percent respondents say a teacher should promote extracurricular activities. Attentiveness of a teacher is expected by 6 percent respondents, and only 2 percent expect that the teacher should reside in the village and contact the guardians regularly. Thus, the weightage given by the PTA members to the behavioural and accountability aspects of a teacher is as under:

a) Honesty (84)
b) Regularity and punctuality (31)
c) Disciplined (39)
d) Promotion of extracurricular activities (11)
e) Attentiveness (6)
f) Residence in village and regular contact with guardians (2)

Concluding Remarks

It can be said that one pre-requisite for decentralization to be successful is adequate level of human capital at the local level. In Madhya Pradesh, the rural literacy rate is around 58 percent. Sen has argued that 'One's ability to obtain and understand information about laws, policies and the rights to which one is entitled is often highly dependent on the ability to read'. In such a case when large numbers of PRI/PTA members are poorly educated, the teachers raise the question of the capacity of these members to perform their functions and desirability of being placed under them. The Government of Madhya Pradesh has made amendments to Madhya Pradesh Jan Shiksha Niyam 2003 on 15th September 2006. According to these amendments, the mother, father or guardian of such children who secure highest percentage of marks in the annual examination of the preceding academic session in class 1st, 2nd, 3rd and 4th respectively will be made members of the Executive Committee of the PTA of the school. Though this amendment has been made in order to strengthen the PTAs but our field experience suggests that it has not made any positive impact on the overall functioning of PTAs/schools. Reason for such a situation lies in the fact that the parents of those children who are performing well, in most of the cases, are satisfied with the school environment as their children are doing well and hence they do not evince any interest or do not suggest anything which can go against their children and bring them in conflict with the teachers. It would have been better had the parents having highest qualification been selected as the member of the Executive Committee.

However, the analysis of the responses of the PTA members makes it abundantly clear that participation of stakeholders in the school's management and functioning plays a key role in achieving material improvement. We saw many examples that highlighted the importance of community and parents participation. For instance, the PTAs in many schools demanded computers for their children. They themselves took charge of mobilizing the funds. PTAs also provided the school with tables and chairs for teachers.

Some of the schools, where PTAs are quite active, provided assistance to the teachers for teaching in the classes, and for physical/material facilities, constructed classrooms, and separate latrines for girls and boys, and providing drinking water facility for the school. Many of the PTA members expressed that prior to the formation of PTAs, they did not have any significant role to play except with regard to construction of the school building or finding temporary space for the school. Lack of interest and apathy in the overall well-being of the school add to the state of inertia amongst teachers. In such a situation PTAs have contributed much in enhancing their capabilities to a great extent.

However, there were some cases where the things were still not in good shape. School records from about 20 percent of schools showed that for roughly 50 percent of the school year, one teacher was absent, meaning that a single teacher taught all the five standards. This occurred despite the strong links with the community: community and parent involvement is therefore not synonymous with accountability and monitoring. Linkages between systems of monitoring and accountability, and effective community participation need to be made deeper and strengthen the roots of accountability. More frequent informal interactions between parents and teachers can also play a significant role in the healthy functioning of a school.

The findings of the study suggest that the state and the districts have succeeded in providing the critical immediate inputs that contribute to universal primary schooling. Under the Public Education Act (Janshiksha Adhiniyam), the PTAs have been empowered to look after school functioning and its effectiveness. It can be said that it is a step towards the enhancement of capacities and providing opportunities to the stakeholders. Enhancing the capabilities has given the needed opportunities to the weaker and the deprived sections, and large number of children hitherto denied primary education, to now avail this benefit. The enrolment pattern revealed that more than 98% of the children enrolled belonged to the SC, ST and the other backward communities.

It has been observed during the field visits to the selected schools that the teachers are now more dedicated and concerned with more than mere teaching. They visit every family in the village and remain in constant touch with the children's parents.

In all the three districts, the people have been giving equal importance to the education of their daughters. There has been a remarkable increase in the number of children attending the schools. The Block Resource Centres are working, PTAs are meeting, have sensitized people about gender issues, and to the special problems of the girl children. This is a remarkable achievement in so far as enhancement of the capabilities of the girls in the rural schools is concerned. However, our field observations also suggest that PTAs have not yet focused their efforts on initiating learning improvements in schools. Their participation is more in infrastructure related activities, management of which is relatively easy since it produces tangible results and funds are made available for this activity by the government. Till now PRIs/PTAs have played a very little or no role in dealing with the issues of teacher absenteeism and in enhancing the quality of learning in rural schools. Recently, the state government has handed over

the responsibilities of construction works the Gram Panchayats. It can now be hoped that PTAs will focus their attention on quality aspects.

Suggestions

The first and foremost thing the PTAs have to recognize is that everything cannot be left to the government. To make major headways, community should involve itself more deeply in the task of education of the children. Suitable provisions have already been made in the JSA and the related rules but their effective operationalisation at the grassroots level need to be ensured.

Parents should come forward not only during times of crisis but also to constantly monitor the performance of both the students and the teachers. They should take up a more pro-active role in their children's education.

Commitment and attitude of the teacher can be fostered by accountability. Accountability, in turn, can be effectively enforced through parent-teacher associations (PTAs). Through these associations, parents will also become equally accountable for the performance of their children.

In all the three districts, the number of never-enrolled and out-of-school children was found to be small. It seems that efforts of the PTAs have succeeded in bringing out-of-school children into the school system. However, retention of such children needs attention of PTAs.

The efforts for strengthening the PTAs can be done by the voluntary organizations, NGOs and other active agencies like Panchayats etc. who are operating at the grassroots level.

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An Analysis of Efficiency of Education in Kerala

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Abstract

Kerala's performance in literacy and elementary education, in comparison with other Indian states, has been well documented and the state's enviable position in these respects is widely recognised. However, issues concerning whether the expenditure incurred by the state on education matches the returns accrued to the society still remain. Though returns to education may not be confined to the catchments of the state GDP, this paper seeks to examine efficiency of education in Kerala, mainly by exploring how much is the achievement in education of the people of the state instrumental in making a change in the state GDP.

Introduction

Education is increasingly regarded as an important resource of human capital as it contributes to socio-economic development by endowing individuals with means to improve their knowledge, skill and capability for productive work. It makes, therefore, an essential factor of production that contributes to the GDP of a nation. Public expenditure on education, in relation to the social and economic returns it mandates to fetch, still commands serious academic and planning concerns; though, it does not appear to have been adequately addressed in the development literature in India. A change in educational status of the individuals of a state would contribute to its GDP if and only if it makes a corresponding change in the quality and level of their participation in the economy. This paper seeks to ascertain as to how much successful are the improvements in educational attainment of the state of Kerala in effecting a significant change in the total volume of the output of the state.

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The paper is organised in the following manner. After locating the state in the educational map of India, with reference to various parameters of educational performance, the current level of education in Kerala across various socio-economic groups, have been ascertained. The performance in education front of a state is rather an offshoot of what is ultimately delivered by the public instruction system of the state. Therefore, the structure and the constitutional dynamics of the public instruction system in response to the growth in the clientele size have been assessed in detail in the paper. The employment scenario of the state has been overviewed in the next section. The success rate of the search for a job in relation to one's educational attainment has been taken up thereafter.

Relative Educational Performance of Kerala

Table 1 provides a relative assessment of the educational performance of Indian states as well as India as a whole. Kerala ranks first in respect of all, except in one, of the five parameters considered, namely, median number of years of schooling (2005-06, for females), literacy rate (2001), drop-out rate I-X classes (2003-04) and school attendance rate (5-14 years) in the year 2004-05. Either of the states of Goa, Delhi, Mizoram, Tamil Nadu, or Himachal Pradesh rank second for these parameters. Kerala, which maintained the lead in median years of schooling for males in both the NFHS-1 and NFHS-2 surveys, lost to Delhi in the third NFH survey. In fact, Kerala stands way ahead of the second best performer in respect of many of these measures. Females in Kerala far outperform their counterparts in India as a whole. The striking feature of educational performance of Kerala is that the level of attainment of females is quite comparable to that of males. It is the only state with single-digit total drop-out (class I-X) rate, and it remains to be the only state with much better girl drop-out rates than that of boys. It may be seen against the fact that many states in India are having drop-out (I-X) rate of more than 80 percent. The school attendance rate and its disparity index (Tilak, 1983) show that in Kerala, schooling is almost a universal phenomenon (97.6 percent), cutting across gender and regional barriers. In fact, girls record a slightly higher school attendance rate than that of boys. On the whole, it could be discerned that the literacy and elementary education are more diffused in Kerala than in any other state in India[1].

However, 'Student achievement - Class V' score, a parameter throwing light on the quality of education, of Kerala for both Mathematics and Language is much lower than even the national average. Moreover, contrary to the trends shown till recently, the median number of years of schooling in Kerala, for both males and females, has declined during the last NFH survey. Currently (2005-06), this number was at 8.0 years for males and 7.5 years for females (NFHS-3). This was reported to be 8.1 years and 7.6 years

[1] This is not a new phenomenon either. It is rather a capability consistently maintained from the days of the first population census. In 1890 census, Cochin, Travancore and Malabar region showed higher figures of literacy (18, 11, and 9 percent, respectively), than Madras Presidency (6 percent) or India (5.8 percent) as a whole (Jeffrey, 1992).

respectively in the 1998-99 survey and 7.0 and 6.4 in 1992-93 (NFHS-2 and NFHS-1). One proximate reason for such a decline in the median years of schooling might be the dip in the school attendance rate (6-17 years), as reported by the last two NFH surveys. While it was 91.0 and 90.8% for boys and girls respectively in 1998-99 NFH survey, the current level is slightly lesser (90.4 and 89.7 respectively). These indicate that something untoward had set in, that comes in the way of the state to consolidate the gains accrued till now on education and stay at the peak of the educational scenario of the nation.

TABLE 1

Performance of Kerala in Education Front in Respect of the Standard Parameters

	Median Years of Schooling 2005-06		*Literacy Rate (%) 2001*		*Drop-Out Rate Class I-X 2003-04*			*School Attendance Rate (5-14 Years) 2004-05*			*Student Achievement (Class V) 2002*	
Source	*NFHS*		*Census*		*MHRD 2006*			*NSSO, 2006*			*NCERT 2003*	
								SA Rate	*Disparity index#*			
Place	M	F	M	F	B	G	C	C	M - F	U - R	Ma	La
India	4.9	1.9	75.3	53.7	61.0	64.9	62.7	82.1	6.7	9.99	46.5	58.6
Kerala	8.0	7.5	94.2	87.7	12.1	4.9	8.6	97.6	-1.74	1.84	35.9	35.0
(Topper)	9.3	7.5	94.2	87.7	12.1	4.9	8.6	97.6	-4.72	-7.33	74.5	73.4
	Del	Ker	Ker	Ker	Ker	Ker	Ker	Ker	Meg	Skm	Man	Man
(2nd best)	8.3	7.0	90.7	86.7	19.4	33.0	26.5	96.1	-2.66	-4.87	62.6	71.1
	Goa	Del	Miz	Miz	Har	HP	Har	TN	Skm	Del	Bih	TN
(Lowest)	3.2	0.0	59.7	33.1	83.5	85.4	83.2	65.2	17.56	28.2	34.5	49.2
	Meg	$	Bih	Bih	Meg	Bih	Meg	Bih	Raj	ArP	HP	Asm
(2nd last)	3.6	1.2	63.8	38.9	81.0	84.4	82.6	72.1	16.41	23.1	35.9	49.5
	Bih	Ori	ArP	Jhar	Bih	WB	Bih	ArP	Bih	Jhr	Ker	J&K

Abbreviations: M-male, F-female, P-person, B-boy, G-girl, C-child; U-Urban, R- Rural; Ma-Mathematics; La-Language.

State code : Mah-Maharashtra, TN-Tamil Nadu, Miz-Mizoram, Bih-Bihar, Meg-Meghalaya, ArP-Arunachal Pradesh, Raj-Rajasthan, UP-Uttar Pradesh, Ori-Orissa, WB-West Bengal, AP-Andhra Pradesh, HP-Himachal Pradesh, Man-Manipur, Asm-Assam, J&K-Jammu & Kashmir, Skm- Sikkim, Jhr-Jharkhand, Del-Delhi.

Note: The code of the corresponding state is given just below the figures.
$ - Six states, viz., Jammu & Kashmir, Rajasthan, MP, UP, Bihar and AP
# - Tilak, 1983.

Educational Achievements of Kerala – A Comparison of Population Groups

As has already been noted, the estimates by NFHS (2005-06) of median number of years of schooling of the people aged six-years and above, Kerala is much ahead of almost all other states, though it has slightly diminished recently. This may be noted against the fact that the median number of years of schooling for females was 0.0 for six states in India, and below primary level for many of the states in India. The NSSO report No. 473 (55th Round – July 1999-Jan 2000) provides the distribution of the population according to the level of education they have attained, across various sections of the society. To

compare the levels of education corresponding to the contrasting sections of the population, an index for educational achievement is computed in this study, using the weighted average, weights being the number of people under each category and values of education being: 0 for illiterate, 1 for 'literate', 2 for 'literate up to primary', 4 for 'primary', 7 for 'middle', 10 for 'secondary', 12 for 'higher secondary' and 15 for 'graduation or higher education'.

TABLE 2
Education Achievement Index (EAI) Across Various Sections of the Rural Population in India and Kerala

Sections of Population	*India*		*Kerala*	
	Male	*Female*	*Male*	*Female*
All	2.08	1.27	6.98	6.36
	(4.33)	(2.34)	(6.55)	(6.08)
Agricultural Labourer	1.53	0.86	5.68	5.09
Social Group				
ST	1.56	0.84	5.86	4.55
SC	1.73	0.94	5.56	4.89
Religion				
Hindu	2.10	1.25	7.15	6.34
Muslim	1.79	1.19	6.01	5.46
Christian	2.51	2.11	7.61	7.53
MPCE (Rs)				
< 225	1.26	0.62	4.81	4.01
> 950	2.98	2.31	8.74	6.36

Source: NSSO, 2001; Figures in parentheses correspond to 2004-05 (NSSO, 2006)

The 'Education Achievement Index (EAI)' thus computed across contrasting sections of the rural population in India and Kerala is presented in Table 2. The table stands a strong testimony to the supremacy of Kerala over the education levels of the people elsewhere in India. In Kerala, even the persons in the agricultural labour households, the group having the lowest EAI among the population groups in India considered; far out-perform their counterparts elsewhere in India; or, for that matter, any contrasting sections in India, in education. Gender disparity is relatively less. The disadvantaged sections of the population viz., SC and ST achieved comparatively lesser education levels in Kerala; though, their attainments also stand much above the levels of their counterparts in other parts of India. The education-deprivation of these sections have been noticed by other authors also (Kochar, 2006; Roshni, 2007)[2]. Among the three religions, the educational attainments of Muslims were considerably below the levels of Christians. The most

[2] Moreover the communal fervour and the political patronage the private managements traditionally enjoy helped them evade or even undermine any serious attempts by the administrators to revamp the system in favour of the socially and economically deprived sections (Mathew, 2006).

noticeable feature of education in Kerala is that the monthly per-capita expenditure (MPCE) had a significant bearing on the educational attainments of the population, as the disparity in EAI between the lowest rung of MPCE class and highest rung is the largest, than any contrasting groups in the population. Income might be the single determinant, which hinders, in a big way, the process of attaining higher levels of education in Kerala[3].

Structure and Transitions of Public Instruction System

It must be reiterated that the elementary schooling in Kerala is well penetrated into all sections of society and across both genders. The structure of the school education system in Kerala and the trends in its capacity utilisation against the growth in the size of the beneficiary class would largely illustrate how this is being achieved. The proliferation of schools, the number of students enrolled in these schools for the year 2002-03 and the growth of the system during the 13 years till then are provided in Table 3. Average student strength of school and teacher-student ratio also is included. Private participation in the form of 'aided' and 'un-aided' systems of management of educational institutions had been active and pervasive right from the days of the state formation[4]. The 'aided' schools are those schools that are supported by the state government in its running, by providing the salary and other allowances and pension for the entire regular staff at the same rate as that of government school staff, though the power of recruiting and other administrative controls rest with the private management itself. On the other hand, the 'un-aided' schools are the set of non-government schools which are established and maintained by the private managements themselves and the government exercises practically no control in its daily functioning but monitors their conduct as to whether they conform to certain broad policy frameworks set by the respective board of school education. Apart from these, there is a strong evidence of the existence of a large number of un-recognised, un-registered schools, which also are seen to enrol a large number of students, obviously at the risk of the students themselves (Kumar and Lathika, 2007).

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[3] Even the lower levels of education among SC and ST could be a fall out of their income deprivation, as the MPCE of SC (rural) was 78 percent of the MPCE of general population (Rs. 766/-) only and that of ST was only 88 percent (NSSO, 1999-00). It may also be noted that though SC and ST sections have a demographic representation of only 9.81 percent and 1.14 percent, respectively, of the total population of Kerala, 19 percent of SC and 3 percent of ST population are in the economically vulnerable (BPL) section (GoK, 2005).

[4] In fact, it has a long history, dating back the British rule when it had strong linkage with the Christian missionary activities. Jeffrey (1992, pp.58) noted: "European missionaries, looking for converts, were happy to have lower caste students in their schools".

TABLE 3
Number and Growth of Schools and Students in Kerala by the Type of Management of Schools

	Schools			Students				
	Number	*Growth (%)*		*Number*	*Growth (%)*			
	2002-03	Exp. 90-91 to 2002-03	ACGR 60-61 to 02-03	2002-03	Exp. 90-91 to 2002-03	ACGR 60-61 to 02-03	Strength/ School 2002-03	Students per 100 Teachers 2002-03
Govt.	4492	--	0.601	1701942	-2.56**	0.437	379	2848
Aided	7282	--	0.465	3020959	-1.22**	1.17	415	2773
Un-aided	497	4.11**	5.83	264419	5.29**	--	532	3344
All	12271	0.14**	0.603	4987320	-1.47**	1.01	406	2824

Source: GoK. 2004[a]. Educational Statistics since Independence.
Note: -- Trend not significant even at p=.05; ** - Significant at p<.01; "Exp. growth" – Exponential growth.

Currently (2002-03), about 50 lakh students are on the rolls in a total of 12271 schools in Kerala. While about 60 percent of the schools are in the aided sector, government has only just above one-third of them. However, the 'un-aided' sector which had only a scanty presence in early 1960s in Kerala, has made its presence strongly felt by the year 2002-03, with over 4 percent of schools and 5.03 percent student enrolment under its fold. The most noticeable feature of annual compound growth in the number of schools is that it has almost been stagnant during the period since 1960-61, except in the case of un-aided schools, in which case the growth has been remarkable (5.83 percent). While both the number of government and aided schools remained growthless during the last 13 years (till 2002-03), the mushrooming of un-aided schools with 4.11 percent growth during the period, was a striking feature.

As per census 2001 data, 97.34 percent of the 5-14 age population was enrolled in schools. The declining growth in school-age population, age 5-14 years, in Kerala (-0.1 percent of annual compound growth, during the last decade, Kumar and Lathika, 2007) and the too-little-size of the residual-enrolment, reversed the growth (-1.47 percent of exponential rate) in the total school enrolment. The explanation to the 'growing disinterest' in establishing new schools by the government is partly due to reduced size of school-catchments. While the government schools, in average, had 379 students on their rolls in the year 2002-03, the un-aided schools had an average strength of 532 students (40 percent more). Given the huge volume and growth of fixed costs (plan expenditure) incurred in running the schools, size-neutral as they are, it appears that the government finds it difficult to manage to enrol at least the number of students required to run them cost-effectively. As on 2003, 1201 schools in government sector and 1340 schools in aided sector were declared 'un-economic' schools (GoK, 2003). Eighty-two percent of these schools are lower primary schools.

In the un-aided schools, the student-teacher ratio is 33.44; whereas, it is 28.48 and 27.73 for government and aided schools respectively. In other words, in the government

and aided sectors, where the students have to virtually pay no tuition fees as against the case of un-aided sector, they enjoy better student-teacher ratio. However, even in this constrained space arising out of the negative trend in total school enrolment, earmarking a large number of primary schools for closing for economic reasons and the favourable student-teacher ratio in the government sector, the un-aided sector keeps penetrating tremendously, most probably at the expense of the public education system. The presence of a large number of unregistered and unrecognised schools also tends increasingly to corrupt the scene. If the trend continues, the existing schools that provide free schooling (government and aided) would find it difficult to survive. Rampant privatisation of education system also puts a strong barrier to the economically deprived classes in accessing the educational system, as the household costs of educating in un-aided schools are prohibitively high for them.

Expenditure on Education

The costs involved in maintaining the system are to be ascertained before examining as to how productive the educational attainments of Kerala really are. Education means a fair share of the state's rare resource stock. Kerala spent about Rs. 3080 crores in education, including higher education, during 2003-04, which is 19.9 percent of total revenue expenditure, 38.2 percent of the total development expenditure, 26.1 percent of total revenue receipts and 3.84 percent of net state domestic product (at current prices) for the year (GoK, 2006). Per pupil annual expenditure by the state alone is Rs.3047 for primary stage (2002-03) and Rs. 5830 for secondary stage (GoK, 2004).

TABLE 4

Government Expenditure (in Rs. '000) on School Education, Its Growth and Correlation Coefficients with the Number of Schools and Enrolment

Category	*Expenditure (Rs. 000) 2002-03*	*CV (%)*	*Exp Growth (%)*	*Correlation Coefficient – r_{11}*			
				No of Schools		*Enrolment*	
				Govt (G)	*G + Aided (A)*	*Govt (G)*	*G + Aided (A)*
Plan							
Primary	101775	57	17.24**	-.2897	-.6391*	-.7701**	-.7592**
Secondary	268274	82.28	24.20**				
Total	370049	72.65	22.44**	0.1856	-.2496	-.8975**	-.9051**
Non-Plan							
Primary	10299958	37.86	9.82**	0.1320	-.3549	-.9498**	-.9594**
Secondary	8989284	45.17	11.96**				
Total	19289242	40.43	10.69**	0.1439	-.3746	-.9625**	-.9683**

Source: GoK. 2004[a]. Educational Statistics since Independence.

Note: ** t value for trend coefficient significant at p=.01, 'Exp. Growth' – exponential growth rate

During the twenty-year period from 1980-81 to 2000-01, expenditure on general education registered a ten-fold increase (GoK, 2001) and education in Kerala was found

to be costlier by about 50 percent than that of the Indian average and as per 1999-2000 budget estimate, it was 1.62 times that of India (Chakrabarti, 2006). Plan and non-plan public expenditure on school education by level of schools is given in Table 4. The non-plan expenditure on school education (upto secondary level) in the year 2002-03 was Rs.1928.9 crores and Rs.37 crores under the plan head. The growth in plan expenditure and non-plan expenditure over the period under reference is phenomenal. Total plan costs experienced sharp escalation at an exponential rate of 22.4 percent during the 13-year period; whereas, the non-plan expenditure grew by 10.69 percent. However, the correlation coefficients of state expenditure with the number of schools and also with the number of students revealed that the rate of growth in actual size of the system was not commensurate with the growth in educational expenditure. The maintenance/fixed cost of the system which is by and large size-neutral, takes a heavy toll on the exchequer.

Such a huge and disproportionate growth in fixed costs or the non-plan varying costs of the system could be justified only if the system returns in quality terms; that is, improvement in academic attainments of the participants. However, the assessment of Class V students' achievement for the year 2002 (Table 1) by NCERT (2003) showed that Kerala cuts a very sorry figure in this respect. In fact, the achievement score for Mathematics (35.9) of Kerala class V students was better than the score of only one state in India (Himachal Pradesh, with a score of 34.5), and much below the average Indian score (46.51). The language score of Kerala (34.99) was just third from the last among the Indian states. The 1994 study of NIEPA/NCERT also concluded that Kerala's educational standard was very poor and it ranked as low as 18th among the Indian states in terms of reading, writing and mathematical capacity of the student (Kochar, 2006). An analysis of the school final examination (SSLC) also proved counter to the quality of school education, not only in terms of the general performance but in terms of the attainments of the socially deprived classes of SC and ST also (Roshni, 2007). In other words, it emerges that the government is spending heavily on education, with the total outlay growing widely out of proportion of the growth of the system as well as of the actual intake[5].

Productivity of Education in Kerala

Human capital theory exponents have already perceived education as a basic input for production or generation of income (Meier, 1995). Standard methodology of accounting of growth in human capital specifies an aggregate production function in which per capita income is dependent upon three input factors: labour 'L', physical capital 'K', and human capital 'H'. From the micro-economic perspective, an estimation of the productivity of education could be made by conducting a primary survey and finding the ratio of the "permanent annual benefits stream" due to education and the cost of obtaining such

[5] The household expenditure of education also shows the high costs involved. As per NSSO estimates (60th round, 2004), 3.33 percent of the rural Monthly Per Capita Expenditure of Rs. 1372 is allocated for education.

education (Psacharopoulos, 1991). But estimating the productivity of H of a state, using production function approach was not possible in this study, as time series data on human capital, in terms of either 'number of school years completed', or 'EAI' as defined in this paper or any other similar parameter, was not available. We did not, either, conduct such a primary survey to make our point. Instead, as a measure of productivity of educational attainments, 'education elasticity of GDP', which is defined as the ratio of the percentage change of GDP of the nation/state during a period to the percentage change in educational attainment during a previous period, is computed. In this study, the number of years of schooling, available from the first two NFHS reports (IIPS, 1997 and 2001), was taken as the measure of educational attainment. The period considered, therefore, is 1992-93 to 1998-99 and the GDP is just one year after the terminal years of this period. As already noticed, the median number of years of schooling in Kerala in 2005-06 (NFHS 3) was less than that in 1998-99, and hence, elasticity of education for this lap (from 1998-99 to 2005-06) has not been attempted in this study.

TABLE 5

Growth (exponential) of Gross State Domestic Product and Elasticity of Years of Schooling on GSDP/ GDP by Sectors of Kerala and India

Sector	*Kerala*				*India*			
	GSDP 2002-03 (% of Total)	*Growth 1993-94 to 2002-03 (%)*	*Elasticity (92-93 to 98-99) of Years of Schooling*		*GDP 2002-03 (% of Total)*	*Growth 1993-94 to 2002-03 (%)*	*Elasticity (92-93 to 98-99) of Years of Schooling*	
			Male	*Female*			*Male*	*Female*
Agriculture	13.46	-2.53**	0.790	0.662	19.48	2.06**	1.280	--
Primary	17.52	-1.82**	0.725	0.608	21.5	2.13**	1.276	--
Secondary	20.42	4.42**	2.145	1.798	22.03	5.73**	3.459	--
Tertiary	62.06	7.57**	3.480	2.917	56.47	7.75**	4.372	--
Total (Rs crore)	42271.52	4.65**	2.371	1.987	1318362	5.82**	3.221	--
Per-Capita Income (Rs.)	13067	3.93**	1.987	1.665	12496	3.96**	2.124	--

Note: -- Median school years for females for the initial year (1992-93) was 0; hence elasticity not computed.

Source: GoK, *Economic Review*, various issues; NFHS-2, India and Kerala.

However, we do admit, or are afraid, that this approach of evaluating the productivity of education would render education worthless if it could not contribute to the GDP of the state. The approach defies rationality, as education would improve one's quality of life, even if s/he is not employed, or contributes nothing to the GDP; and improving one's quality of life would well serve the purpose of any capability, let alone education. If the intangible benefits by way of savings in healthcare expenses due to the prophylactic measures one could adopt with the aid of one's education, guiding or tutoring the children in the family or outside. free of cost, participating in gainful decision-making process in the family etc. are also reckoned with, one could discern that education could

fetch far more returns to the family, or to the society as a whole than what it actually returns in money terms. This may be the reason why returns of education are perceived to be varying in accordance with gender (Duraiswamy, 2000), marital status (NFHS I & II), place of employment (Zacharia, Irudayarajan, 2004) etc. Moreover, in India, wages of men are generally higher than that of women, especially in primary sector and unorganised sector. Rate of returns of education of men, therefore, would naturally be higher than that of women if returns are computed purely on the basis of benefits (cash) from employment. In spite of all these, we hopefully maintain that estimation of education elasticity of GDP, as defined above, has great economic and academic relevance. The estimated values of education elasticity of GDP are presented in Table 5. This table also provides the total GSDP and sector-wise share of Kerala, in 2002-03, and the growth rate (exponential) of these sectors for a period from 1993-94 to 2002-03. The sectoral share of GSDP in Kerala shows that it became something like an inverted pyramid, with the tertiary sector showing greatest growth and the primary sector the least. The trend is identical in the case of India as well. The growth trend for the last 13 years shows that in Kerala the GDP growth was impressive, except for the primary sector, which took a retreat (faster in agriculture sector). The growth in tertiary sector was highly commendable. The pattern was more or less the same for India as a whole, except that the primary sector, especially the agriculture sector, also grew considerably during the period. India, as a whole, has a more pronounced growth than Kerala, in all the sectors. The general trend with the education elasticity of GDP is that education is more efficiently utilised in tertiary sector than in secondary, which in turn, is more efficient than that in the primary sector. The education elasticity of GDP of male is found to be more than that of females. However, this could not be validated for the whole of India, since computation of elasticity for females in India was not possible, the median years of schooling for females in India being '0' for the initial year of the period considered. Generally, education elasticity of GDP in all the sectors in India is better than the elasticity of their counterpart sectors in Kerala. In fact, in India the education elasticity in agriculture, primary and secondary sectors is more than 1.6 times than the respective elasticities of Kerala. Why, then, educational attainments in Kerala are less productive (in terms of the GDP)?

Education of an individual will make its contribution to the GDP, if and only if he participates in the economy. Even the emigrated employment and a resultant foreign remittance would not contribute to GDP directly, though remittance volume has a direct association with the education of the remitters[6]. Moreover, there is no report of a major

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[6] While in 2004, the remittance of an illiterate was Rs.24,760, it was Rs.47,646 by those who had primary level of education and Rs.53,727 for secondary level. But note that being a share of the output of the remitter's labour/service s/he did outside the '*domestic territory*' of the state, as part of his/her involvement in the process of production there, these remittances do not figure under National Accounts Statistics methodology in the calculation of gross state domestic product of the state, as s/he is a '*resident*' outside the state and his/her economic interests lie there (GoI, 1980).

capital investment in Kerala during the period (Subramonian and Pillai, 1986; Kannan, 1998). Things being so, in Kerala, despite its huge foreign remittance inflows running to about Rs. 19,000 crore (22.04 percent of NSDP and 1.74 times the state revenue receipts) in 2003 (Zacharia and Irudayarajan 2004), major contributions of education of an individual to the state GDP should come from the process of getting himself employed within the state. The current employment scenario and the recent trend may, therefore, provide valid insights to explain the lower education elasticity of the state. The following section would provide an analysis of the education-employment linkages.

Education-Employment Linkages

As already noted, higher education elasticity is best achieved by adequate utilisation of one's education and skill levels through appropriate employment. It is worth analysing, in this context, the association of one's attainments in education and the likelihood of his being employed. NSSO, on the basis of their 55th round (1999-2000), provided (NSSO, 2001) the 'Education-Specific Worker Population Ratio'[7]. The picture corresponded to the post-liberalisation phase of India. The pattern that emerges from the tables is that the likelihood of being employed decreases as the education level increases up to the higher secondary level, whereafter it tends to surge. In general, in India, the pattern is cup-shaped, with the lower level and highest level of education accommodating highest number of workers and bottom level of the cup corresponding to the middle or higher secondary level of education (Kumar and Lathika, 2007). There is no much difference in the pattern between urban and rural, or male and female. If the illiterate workers are excluded, the pattern strictly follows this shape. NSSO 60th round (Jan to June, 2004) had also vindicated that added education does not necessarily enhance the scope for employment. By this time, the employment scene in India was already afflicted by the vagaries of globalisation and liberalisation. Citing the prevalence of unemployment in India, the NSSO concluded that "unemployment rate in both rural and urban areas among educated was higher than that among those whose education level was lower than secondary" (report No. 506 pp.45). It was higher for females, especially for graduate-females. Attainment of higher levels of education delays one's entry into employment. However, a weak education-employment linkage does not suggest that education has nothing to do with the increase in the quality of his/her participation in the economy. It could be possibly that the academic content of the educational packages offered by the traditional system is not effective in meeting the challenges of the emerging employment scenario. It might as well be that the traditional avenues of employment are not growing commensurate with the quantity or quality of education pursued by the new generation.

The relationship of ones education with his/her job status has already been reported by various authors as well. For instance, Ghose (1999) noticed an "elongated U-shaped"

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[7] Education-Specific Worker Population Ratio is defined as the number of persons of age 15 years or more who are usually employed in a particular educational category, per 1000 persons, in that educational category.

curve between education (in years) and work participation rates, for India as a whole. He had also observed that there is a close correspondence between the level of education of workers and the sector of their employment (Ghose, 2004)[8]. In short, it could be inferred that the likelihood of one's being employed is not directly proportional to the attainments in education. It largely depends on what stage of education one finally achieved and what sort of employment s/he was searching for. Once a level of education is attained, one tries to get the kind of employment which best suits his/ her education or skill levels and job preferences. When these attempts to get such an employment within a tolerable limit of waiting period fail, one searches for a job which s/he prefers less and which demands only a lesser educational attainment. However, the NSSO data shows that persons – in fact, many of them - with practically no formal education and even illiterates could manage to get employment. For instance, as per NSSO report number 473, among agricultural labourers in India, 46.5 percent of males and 68.8 percent of females were illiterates, though their peers in Kerala were far better in literacy[9]. In fact, illiteracy and low levels of educational attainment confine their scope for employment to hard and low-paid labour, despite the fact that their labour forms the backbone of the food security and other vital livelihood systems in India and education and skill enhancement improve the performance level of labourers, including those in the foundation sector.

As far as the scope for employment is concerned, education could be regarded as rewarding, only if the educational attainment could better the scope for getting employment than in the case of lower or no educational. Estimates on the per-year employment-advantage of added education (from a reference level) could be made by finding the ratio of the difference in the worker population ratio corresponding to the higher level of education that of the reference level and the years spent to complete the added education. Thus, if 'r_e' is the worker-population ratio corresponding to the educational level 'e' of the individual, 'r_0' is the ratio corresponding to the reference level of education 'o', and 'n' the number of years to complete the educational level 'e', and '0' is the number of years to complete the education reference level 'o', then,

$$\text{Marginal advantage of employment due to education} = \frac{\Delta r}{\Delta n} = \frac{(r_e - r_0)}{(n-0)}$$

[8] Generally, workers in agricultural sector were found to have the lowest level of education, with the average number of years being education of 2.6; in industry, these 4.5 years and in service sector 5.8 years. The casual workers among them had the lowest education and the regular workers the highest (Ghose, 2004).

[9] Only 12.6 percent of total male agricultural labourers in Kerala were illiterates; but among females the rate was 22.6 percent (NSSO, 2006).

Table 6 provides the worker-population ratio corresponding to 'non-literates' and computed value of 'marginal advantage of employment due to education' corresponding to the various levels of education for different population groups. It reiterates that the labour market in India offers many employment avenues even to illiterates, especially to male illiterates. In rural India, 89.1 percent of illiterate males could make it to some employment or the other, and in urban area their share was 83.6 percent. However, in Kerala, the employment avenues for illiterates appear to be much less. While in urban area, only 54.6 percent of the illiterate males could make it to find a job, in rural Kerala it was slightly better (68.3 percent). All this means that a great chunk of employment is open for those who have no formal education at all. As mentioned earlier, the recent NSSO survey (report number 506) also corroborates this. The unemployment rate among illiterates and persons with low education in India was very low (in 2004) when compared with that of their educated peers. They also could find jobs relatively early.

TABLE 6

Education Specific Worker Population Ratio (WPR) and Marginal Advantage of Employment Due to Education in the Year 1999-2000

		WPR	*Marginal Advantage of Employment Due to Education*						
			r_0 = wpr of the just previous educational level					*r_0 = 'illiterate'*	*r_0 = 'secondary'*
		Not literate (n = 0)	*Up to primary (n = 4)*	*Middle (n = 7)*	*Secondary (n = 10)*	*Higher secondary (n =12)*	*Graduate or more (n = 15)*	*Up to secondary (n = 10)*	*Beyond secondary (n= 5)*
Rural Kerala	M	683	30.0	-15.00	-39.67	-57.50	67.00	-4.40	17.2
	F	257	0.5	-28.67	-8.00	-6.50	39.67	-10.80	21.2
	P	370	35.25	-14.00	-22.33	-46.50	58.00	3.20	16.2
India	M	891	-4.75	-40.00	-13.00	-17.00	41.00	-17.80	17.8
	F	404	-25.25	-32.67	-10.67	-19.50	45.00	-23.10	19.2
	P	582	16. 0	-28.33	-5.33	-7.00	51.67	-3.70	28.2
Urban Kerala	M	546	59.25	-2.00	-43.33	-93.50	116.33	10.10	32.4
	F	167	19.0	-25.00	10.67	-16.50	50.67	3.30	23.8
	P	257	60.25	-8.00	-19.33	-54.50	88.00	15.90	31
India	M	836	-3. 0	-33.00	-21.33	-31.00	66.00	-17.50	27.2
	F	229	-20.75	-15.67	1.67	3.50	47.00	-12.50	29.6
	P	429	18.25	-15.00	-7.00	-19.00	66.00	0.70	32

Source: *Sarvekshna*, Journal of NSSO. Issue No.87, Oct. 2001- Mar 2002, Vol. XXV No. 2 &3.

As the higher educational attainments of the job seeker would not, by itself, deter the employer offering him a particular job, it follows that the reduction in the prevalence of employment was due to the aversion he develops towards certain jobs even in the context of restricted availability of the kind of jobs for which the higher educational attainments were a prerequisite. In fact, as they climb the educational ladder, they set a job preference-hierarchy for themselves and snub certain jobs as not acceptable any more. These job preferences restrict the likelihood of their being employed, resulting in a lesser

incidence of getting employed as they advance to the next educational rung, upto graduation. When illiteracy is the reference level of education, marginal advantage due to attaining higher levels of education is found to be negative for many population groups, indicating reduced scope of getting employment. Graduation provides a plethora of acceptable employment opportunities, making the marginal advantage of employment to attain its highest level. This is true of the whole of India, without exception to Kerala. The marginal advantage of education upto the secondary level and upto graduation is shown in the last two columns of Table 6. Post-secondary education pays rich dividend, and graduation becomes advantageous in finding a job.

Conclusion

The education front in Kerala, in relation to other Indian states, paints a rather rosy picture. Literacy and elementary schooling are seen to be well-diffused into all sections of the society cutting across gender borders. However, despite steeply escalating costs, quality of education is in question. According to national 'learning achievement test' reports, it is way behind the national average. Moreover, the private (un-aided) managements, who wield almost absolute power of control on their institutions including the fixation of fees, salaries of the staff etc. in total disregard to the social and constitutional mandates they are purported to serve, tend to exert their firm grip on the whole system by penetrating deeply into the already shrinking catchments of local schools. This makes it more difficult for the government not only to sustain economically the utilisation levels of the institutional capacities of the state public instruction system, but also to oblige the constitutional mandate (Article 45) of rendering free and compulsory education upto the age of 15 years. The education elasticity of GSDP in Kerala is found to be far less than at the national level, for both men and women. Women in Kerala, with the better educational levels as compared to their counterparts elsewhere in India, find it difficult to get a job matching their educational capabilities. Educational increments upto graduation, do not add to the scope for employment in Kerala.

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RESEARCH NOTES/COMMUNICATIONS

Secondary Education in Iran
Towards Connecting Education to the Needs of Economy

Nematollah Azizi*

Abstract

This paper aims to report teachers' and students' view about recent educational reform which focussed on the ways and means to narrow the gap between secondary education and labour market. Indeed providing a market-oriented education was adopted as a strategic policy by the Ministry of Education in Iran due to increasing unemployment rate amongst school leavers during 1990s. Empirical work, using questionnaires and interviews, has been carried out in secondary schools in both rural and urban areas.

Introduction

The importance of an effective reform in the country's educational system in general and secondary education in particular is better understood if we pay attention to two challenging issues in Iran. First, the country's population is one of the youngest populations in the world among which over 50% of the population are under 24 years old. It was as a result of the post Islamic Revolution population policy which led to a high growth rate during 1980s and 1990s. Secondly, because of social and cultural awareness, there has been an increasing demand for remunerative education as a right. It resulted in rapid growth in student population that reached nearly 20 millions in the late 1990s (MOE, 2003). Although in the light of newly adopted population policy, the country is experiencing the lower birth rate and consequently the number of students has reduced, but it is still a challenging dilemma for the country's instable and oil-based economy.

However, in addition to increasing number of students in recent years, mismatch between education and the needs of the economy is another problematic factor leading to an ever higher rate of unemployment among the country's young people. Official rate of unemployment in 2003 was about 15 percent (SCI, 2004). Though politically denied, this rate in some deprived provinces like Kurdistan is over 30% among working age

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population. The latest data from the Ministry of Education (2003) reveals that nearly 17 million students study nationwide, among them about 10 million study in lower and upper secondary education. To understand this deep-rooted problem, it is desirable to add that at the time only about 60 percent of young people have access to secondary education. One can then well imagine how critical will be this problem if schools provide learning possibility for this huge number of young people.

Therefore, like many other developing countries, students in Iran are leaving secondary school though what they have learnt is different from what the work and the labour market requires. This is because the Iranian schooling system is not paying proper attention to what young people, as the future employees, need and how the system can increase their career abilities to participate in the world of work. Problematic circumstances of the young people from the employment point of view have led policy makers and educators in many societies to reform educational systems toward making education more relevant to the needs of the economy. For education to be relevant enough to young people to sustain their motivation and commitment, it must be a part of a clear pathway to success, replete with real opportunities that are worthwhile and attainable. To create this reality, educational reform and practice must be linked to economic development and employment prospects. The key actors that play a noticeable role in youth preparation for their adulthood are qualified and well-trained teachers. From this respect too, the country is suffering. Because, many of the teachers have no practical experience and even have no idea about the requirements of employment opportunities. The latest report of the Ministry of Education (2003) suggests that nearly 50 percent of all the teachers in primary schools and a considerable number in secondary education have no university degree. This is again a critical paradox which challenges the country's quality-oriented strategies for a better education. These circumstances have led to a high degree of educational ineffectiveness and failure in the country's system of education.

However, no systematic research has been carried out in Iran to investigate such problems which hinder secondary education from achieving its objectives. This research was an attempt to provide a basis for addressing these problems, from which policy indicators or further studies might be considered.

Background

The socio-economic changes currently taking place in many developing countries require that they undertake a restructuring of secondary education. Since the demands of producing skilled workforces to match societal needs at the production, technical and professional levels are great, it is important for secondary education to prepare young people who are highly motivated and who want to pursue learning as a lifelong process. Reviewing of educational reforms in most countries around the world makes a clear point that one of the strong bases for these reforms is to bridge the gap between education and the economy. Therefore, making education relevant to the world of work in both schools and out of school schemes (training programmes), is one of the crucial issues facing the official bodies in any society. The range of investment in education and the range of

researches and studies to improve the quality of education in both state and private organisations show that education has a viable role in economic development. Particularly in terms of increasing youth employment, education has been recognised as an essential factor. Thus, decreasing of youth unemployment and increasing of economic benefits for both individuals and society are recognised goals when the relationship between education and the economy is discussed (Blaug 1973; Carnoy, 1977; Dore and Oxenham, 1984; UNESCO, 1991; Azizi, 2003).

While a shortage of qualified workforces at the time of rapid technological developments, at least in some sectors, exists in all countries, meeting new employment requirements by the most effective educational systems, even if all the appropriate measures are adopted, will not take place immediately. The mismatch between education and the economy in developing societies is increasing because of providing non-irrelevant theoretical education and over-schooling to students which has raised their expectations regardless of local job possibilities (Carnoy, 1977, pp. 22-23). Therefore, if unemployment implies a considerable economic, social and individual waste (Alexander, 1996), then one of the claims frequently made will be that the problems referred to youth unemployment are in large measure a reflection of deficient educational system. Schools no longer teach the 'basic skills' and the educational system does not prepare young people adequately for the world of work. The courses in the last few years at school are seen as irrelevant by many of the less academically tuned young people and too detached from actual working-life and the problems of industry (Jackson, 1985; Bynner, 1996; Shackleton et al, 1995). In part, the lower quality of young labour and its higher unemployment rate, are attributable to inappropriate education. This problem can be reduced by improving quality of education and vocational training and effectively relating it to the modern economy (Hart, 1988; Stallmann et al, 1991; Bynner, 1996; Woodhall, 1997).

Therefore, in order to improve youth employment, UNESCO (1991) has suggested the following effective approaches: emphasising on learning experience at workplace; facilitating the movement from work into education and vice versa; promoting educational forms, methods and structures which incorporate work skills in general education; and furthering of national efforts for introducing work as an integral part of general education; and the inculcating employable skills in school leavers to enable them respond to changing needs of technological development.

OECD studies about the experiences of 14 OECD countries regarding transition from compulsory education to work change during the 1990s indicate that few countries can afford to have their young people enter the labour force unequipped for longer term participation in changing career patterns. These studies reveal the complex and many-faceted national institutional arrangements that can result in successful transitions to working life (OECD, 2000). Therefore, the school reforms implemented in the EU countries in the late 1990s were an attempt to anticipate trends in the labour market and in the organisation of work. The reforms were responses to views that the knowledge and skills young people bring to the labour market are in need of qualitative revisions.

According to these views, changes in the content of work, the introduction of new technologies, current forms of occupational mobility, and the rate of change in itself require employees who are more adaptable and able to acquire, in the future, new and applied skills and knowledge. There has been a search for means of improving cooperation between education and working life. Today, networking with local enterprises, formal representation of business and industry in bodies that design curricula and qualifications, and giving educational establishments more latitude in responding to local needs, are popular development targets (Azizi and Lasonen, 2004).

The emphasis on educational reforms in secondary school has focused increasingly on schools, and prominent among these is the requirement versatility to perform diverse and multiple functions. But despite continuing doubts about the efficiency of the relatively recent initiatives outlined, they contain elements essential to the development of an appropriate indigenous system of secondary education. Therefore, the improvement of quality and effectiveness of these systems in developed nations are considered highly important and are recognised as *strategic goals* in the work programme on the future objectives of education and training systems of the European Commission" called "*Education and training in Europe: divers systems, shared goals for 2010"* (European Commission, 2002, p.8).

Although 'the rise in youth unemployment means that many young people are losing skills or employability' (OECD, 1994. p. 41), causes of youth unemployment are multi-faceted and complex. Bynner (1995) pays attention to individual factors causing unemployment and stresses the importance of basic and work-related skills for the occupational trajectories. In his view education contributes not only to the human capital of an individual but, even more importantly, provides a skilled individual in a society full of risk. The role of education and training in resisting unemployment is more as a protector of young people than as a guarantor of entry to employment (de Goede, et al. 1996). Drawing on comparative data collected on young people's transition to employment in England and Germany, Bynner and Roberts (1990) develop the argument that education both serves labour market needs in enabling employers to select people for jobs, and contributes to its transformation through the skills brought into employment and the demands the newly educated place on the products of industry.

As Wilson (1995) has highlighted, analysing of employment structures has important implications for the scale and nature of education and training provision. These key issues can be summarised as: recovery from economic decline; medium and long-term shifts in labour requirements; maintenance of the existing stock of skills; links between education and training and economic performance; equity versus efficiency (Metcalf, 1995, p.26). However, following UNESCO (1992), the increasing emphasis on education for the world of work has been simulated by such important factors as:

1. the need to ensure the relevance of education to countries' socio-economic development priorities;
2. the accommodation of increasing technological developments in society in relation to labour force requirements;

3. a wish to reflect the changing expectations of employers in education;
4. helping school leavers obtain access to employment;
5. developing in pupils a basic literacy with regard to science and technology; and
6. a wish to contribute to the modernisation of education system so that the changing needs and aspirations of both individuals and the society as a whole are met (pp. 366-78).

However, despite the many reforms which have been launched in education since 1960, and also the recommendations presented by a number of national educational commissions, particularly after the 1979 Revolution, covering changes to the structure and organisation, objectives and policies for improving the effectiveness of secondary education system, the system is still facing many problems and developmental issues. While the education's resources are spent on academic secondary education, the country's technical and vocational education, ill-organised and with its poor conditions, has nothing to attract students and their parents. It seems that these are two extremes of one equation. Therefore, these problems not only interrupt the objective of preparing a well qualified and appropriately trained workforce to meet the increased economic development needs of Iran, but also lead to increasing unemployment amongst young people. It is clear that the shortage of skilled and semi-skilled people in the Iranian workforce was one of the main factors preventing the realisation of the objectives of a number of socio-economic development plans (ME, 1990).

Methodology

Purpose and Questions

The purpose of this study is to examine the views of secondary school teachers and students about the extent that Iranian secondary education is connected to the economy. It aims also to address and examine their views on the following moot points:

- To what extent does secondary education place emphasis on those skills and qualities which are crucial for the world of work?
- To what extent has a connection between the needs of labour market and curriculum been emphasised?
- To what extent curriculum policy makers are taking into account the labour market needs of the economy in designing the present high school curriculum?
- To what extent industrialists have been involved in designing the high school curriculum?
- To what extent the high school curriculum is sensitive to local employment circumstances?
- To what extent do problems and weaknesses of secondary education affect the employment chances of high school graduates?

- How can secondary school pupils be prepared so they can meet more effectively the demands of their future work life?

Sample

A group of 110 teachers and 115 students selected by stratified random sampling method that represented all the education districts in Kurdistan Province. The teachers group consisted of 65 males (59.1%) and 45 females (40.9%). The students group consisted of 69 males (60%) and 46 females (40%).

Research Instruments

Both quantitative and qualitative methods of educational research were used to collect data. These included scrutiny of existing documents (policy statements on the issue, and conducted appraisals), questionnaires and interviews. Questionnaires were developed on the basis of my experiences as a lecturer in former Sanandaj Teacher Training College (now University of Kurdistan) and observations carried out then. Some questions were open-ended, while the rest required the respondents to tick on those they preferred on a five-point interval scale ranging from 1 = not at all, 2 = to a little extent, 3 = more or less, 4 = to a large extent, and 5 = completely. Data were analysed with regard to the questions asked and processed using frequency distributions, then converted to percentages. However, certain statements and questions were included deliberately to extract responses which would reveal any extreme views about different aspects of secondary education. A small group of experienced teachers (10 teachers) were interviewed so as to solicit detailed information about the problem that was not covered by the questionnaires and also to recheck the validity of collected data.

Findings and Discussion

Generally, in clarifying the relationship between secondary education and the economy's needs in Iran, this research concludes that the current secondary education system in the country has not been structured in the way that responds best to those needs. The majority of teachers and students believe that there is a big difference between what schools teach and what our industry requires, but it can be reformed and improved. This can be seen by taking into account and analysing teachers' and students' views about the following main areas of enquiry: *essential skills for employment, education-industry relation, curriculum characteristics, the causes of youth unemployment and strategies for youth preparation for employment.*

Essential Skills for Employment

Many research enquiries and studies have highlighted skills, abilities, and qualities required for increasing the level of employability of young people for a changing labour market. Therefore, the first area of enquiry was to identify '*to what extent the secondary school curriculum places emphasis on qualities such as: communication skills, thinking*

skills, positive attitudes and behaviours, responsibility, adaptability and flexibility, and team work skills'.

As was explained, employers are expected to employ those people who are able to: communicate with others; think and act logically; have a positive approach and attitude to work; work within a group; adapt to different situations and shift from one site to another effectively (Leroux and Laflrur, 1995; Cumming, 1988; Azizi, 2003). Therefore, it is absolutely important to ask: *to what extent the secondary school curriculum places emphasis on those skills and qualities which are required for the world of work?*

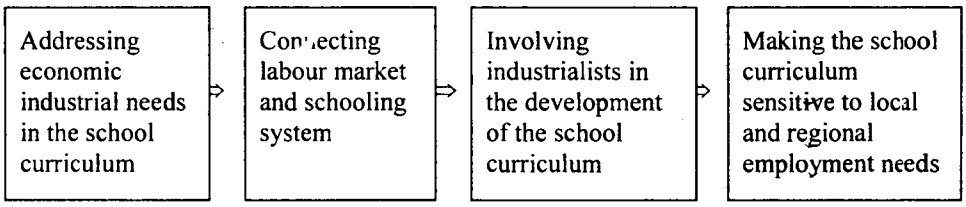
The responses of high school teachers and students were mostly similar about the kind of emphasis needed in the school curriculum regarding required skills and qualities for the youth employment. Of the teachers sample, 54% teachers and among the students 67% students, believed that there is no emphasis on these abilities. No significant difference was identified between males and females regarding this question; 63% of males and 67% of females agreed that no emphasis is given to key skills required for a modern economy. This result revealed that the basic skills needed by all types of jobs, have not been addressed properly in the school programmes. According to the responses the only noticeable point of schools in this respect is their focus on positive behaviour and manners in students. However, with a brief look at the subjects which students in all branches of secondary education should study, two points could be raised. First, it seems that if these subjects were to be reordered and restructured, they would prepare students for the required skills for employment. But the current schooling system is an ill-organised system which includes an ill-arranged liberal curriculum. Second, perhaps we should assume that what we need to make our young people employable, is a re-examination of the whole process of our schooling system and highlighting reasons of the system' weak performance. Also statistical differences between teachers and students and males and females were tested using a chi-square (x^2) test. The null hypothesis was rejected at the 5% level. There appears to be very little difference in the attitudes of both teachers and students to most of the parameters investigated. The same statistical tests also shows that there is no real difference in the views of males and females in both groups.

This result is similar to the claims of educational studies in both developed and developing countries that what is going on in schools is not what a changing economy requires. So in order to match these two systems with each other, we repeat Ascher's (1987), Zuga's and Lindstrom's (1989) and other authors' comments that public school programmes should prepare students to have a broad range of basic skills so as to be able to cope with a rapidly changing industry. This finding raises the question of how policy makers must restructure secondary school curricula so as to include appropriate subjects and materials and also the question of the right way to present and to teach these subjects to students.

Education-Industry Relations

The second area of enquiry was the nature of the relationship between the school system and industry, how educational systems can be more effective in this respect and to what extent and how industrialists should participate in the educational process. It is also important to look at the linking of education and industry to see what range of opportunities is provided for pupils to demonstrate that the realities of the world of work has different forms in industrial societies. An important aim for this partnership is to improve the preparation of young people for future work and to cater for unemployment amongst young people. In most of the developing countries, different regions have different economic sectors and activities. Therefore, it is necessary that central government develops a flexible policy in which local authorities in different areas are able to address local and regional matters in their school programmes.

Therefore, of the sample, 93.7% teachers and 95.7% students strongly believed that a connection between the school curriculum and labour market needs is required. Also the majority of responses (88% of teachers and 91 % of students) agreed that "*industrialists should be involved in designing the school curriculum*" and that "*sensitising the high school curriculum to local employment circumstances*" is necessary. This is while 87% of teachers and 88% of students have said that the labour market needs have not been addressed to in the designing of school curriculum and industrialists are not involved in educational decision making. In addition to the above analysis, significance was tested using a chi-square test. The null hypothesis was rejected at the 5% level. There appears to be very little difference in the attitudes of both teachers and students to all of the items investigated. Moreover, analysis of males' and females' attitudes concerning these questions has shown that there is no significant difference between their views. This would indicate a high level of agreement between teachers and students about the present nature of the school-industry relations, and how these should be. Consequently, the majority of both teachers and students pointed out that (a) it is highly important that the requirements of labour market be addressed in the school curriculum; (b) industrialists be involved in the development of the high school curriculum; (c) the school curriculum be sensitive to local employment circumstances; but (d) Iranian curriculum policy makers have ignored the labour needs of economy and industry in the developing of the school curriculum. The above four comments can be reordered in a correlation which takes into account economic needs in the school curriculum by policy makers on one side and the other three points on the other side:



A basic outcome of this process is decentralised curriculum development in the country. Economic needs must be addressed to in our schooling system; as a consequence of this, we must develop school-industry interfaces, which will then increase involvement of industrialists in developing curriculum and this in turn will highlight local and regional circumstances which need different remedies. The current Iranian schooling system at secondary level may be seen negatively as industrial and economic requirements have not been addressed to in the curriculum. There is thus no attempt to link schools to industry, to involve employers in the curriculum designing, or to decentralise the educational system to cater for local needs.

Curriculum Characteristics

Approximately 80 percent of the students in secondary schools studied non-vocational courses in the 2002/2003 academic year. Students in the general high schools can follow one of the main three streams: Maths, Sciences, or Humanities. Again, according to the Ministry of Education, most students prefer Humanities (Social Sciences). A third area of the current enquiry was to ask teachers and students about the emphasis in the current high school curriculum. Is it a theoretically or a practically-based curriculum, or is it a curriculum with a mixture of both theoretical and practical activities? How can the school curriculum be described?

Secondary school teachers and students agreed that theoretical and practical aspects of any subject should be integrated in such a way that both aspects are emphasised. Integration of both academic and technical vocational education courses fulfil the recommendations of UNESCO and ILO (2002), i.e., that a new system of life-long education, in which TVE and academic subjects are both an integral part of a unified system of education, will reduce barriers between academic and TVE courses. This result was thus consistent with the finding of Poole and Zahun (1986) who concluded that neither academic nor vocational education alone could provide the skills needed for jobs in the future. Psacharopoulos (1988) and Lasonon and Young (1998) indicated that a solid foundation of general skills and knowledge are needed by vocational education students.

Results based on using chi-square and (.05) level of significance thus reveal some difference in the attitudes of teachers and students to the items investigated. Also the analysed data by gender revealed a very small difference in the views of males and females on the related questions. That means a high level of agreement among males and females' views to this section than teachers and students.

This finding highlights the following points about what respondents think:

- The current secondary schools curriculum is largely academic (70% of the teachers and 85.2% of the students);
- A mixed curriculum with a balance of academic and practical subjects and activities is highly preferred (66.4% of the teachers and 67.8% of the students);

- Schools with largely academically-based curricula are unable to increase or maximise the employment chances of students (only 13.6% of teachers and 19.1% of students suggested that a largely academic curriculum would help students to have more employment chances after school);
- The methods of teaching for secondary education should be relevant to the employment chances of pupils (67% of teachers and 62% of students);
- While careers education is considered as an important element in the secondary schools but clearly, schools do not use the careers education and guidance services to help and guide their students make better career choices (86% of teachers and 79% of students).

They also describe the current high school curriculum as a process that does not take into account the future employment needs of students; its methods of teaching are inappropriate for the future employment needs of students; its elements are not sufficiently integrated; it does not emphasise the world of work sufficiently; it is concerned with the development of theoretical rather than practical knowledge; and the practical elements of curriculum are not taught in conjunction with local industry.

Therefore, a major issue for policy makers is how they should restructure the school curriculum and related processes and activities in which not only is the curriculum built up on a rational basis, but it directs young people towards employment opportunities. For this they need to make a curriculum which is balanced with both academic and applied knowledge, to develop control mechanisms to continuously improve the quality of schools' programmes, to review teacher education so as to develop some sort of partnerships with industries, and to provide a wide range of choices for students to continue their education to a higher level or to enter the labour market.

The Causes of Youth Unemployment

The fourth area of enquiry concerned the problems and factors which related to the nature of the secondary schooling system and the affect they have on the employment chances of high school graduates. Indeed in this section, in the format of the question "*Which of the following factors do you think affect the employment chances of high school graduates?*", I have tried to address which of the inadequacies and weaknesses of education, as internal or external factors, be seen as effective factors on youth unemployment. For example: *the gap between the educational system and the world of work, ignoring the role of careers education and guidance, lack of emphasis on the applied and the work-related skills in curriculum, not concerning to work experience and training, and so on.* Therefore the findings highlight those aspects of the educational system which are arguably effective in increasing youth unemployment. However, in this respect significance was tested by using chi-square. The statistical outcomes appear to show very little difference in the attitudes of teachers and students to most of the items investigated. Also it indicates that male and female attitudes are mostly similar to the items investigated.

The findings revealed that our ill-organised secondary education, along with other economic and social problems, is contributing to raising the rate of unemployment amongst young people. In this respect, according to respondents, youth unemployment to some extent is the school system's fault because:

- there is a big gap between what students learn at school and what the world of work requires;
- there is no appropriate careers education, occupational guidance and counselling in the school programmes that could motivate and direct students towards suitable choices for their future study and employment;
- there is an unnecessary emphasis on theoretical points and an ill-developed curriculum which ignores basic, applied, and practical knowledge;
- there is no on/off job training and internship for secondary level students;
- no emphasis is given in the school curriculum to the significance of work in socio-economic development;
- there are no opportunities for students to be made aware and to understand the variety of employment choices in society;
- the schools' principals and teachers have failed to use local opportunities concerning linking education to work;
- employers and industrialists have not been involved in transferring their opinions and experiences in the developing of the school curriculum;
- educational officials have ignored sufficient investment in the education-industry relationship;
- it seems that educators and officials believe that academic-based courses are more useful than vocational-based courses; and
- it being a highly centrally controlled education, local and regional needs of employment have been ignored.

Overall, a considerable number of both teachers and students reported that they felt that the current secondary schooling system had failed to prepare students appropriately for working life. These results then indicated that secondary schools with their problems are not capable of giving students any advantage in employment. How then can we now expect that students graduating from such schools will be well prepared to enter the labour market? There seems to be a mismatch here between expectation and the probable reality. However, it seems that the vocationalisation of secondary education is not the only solution for youth unemployment: a way that Iranian policy makers are following now in introducing new secondary education in which vocational education is central. Additionally, the result of studies in many developing countries, for example, by Psacharopoulos (1988) in Tanzania and Columbia, by Chin-Aleong (1988) in Trinidad and Tobago, and by Wright (1988) in Sierra Leone, have shown that simply studying vocational-based courses do not necessarily reduce unemployment.

The high rate of unemployment and the shortage of skilled people in the labour force is linked in respondents' minds with the current educational system. A lot of teachers and students believe that the educational system, still considers the preparation of students for to higher education as its main objective, and is responsible for these problems. Thus, they see that there is a need for a more effective secondary educational system which is more market-oriented and which can cope effectively with the problems with which the present secondary educational system is incapable of dealing.

Youth Preparation Strategies for Employment

The fifth area of enquiry concerned using teachers' and students' experiences and views in order to highlight a series of possible strategies and approaches which might improve the quality of relations between school and industry. Perhaps, secondary schools with these policies and ways could be able to prepare pupils so that they meet the demands of their future work life more effectively. Therefore, the format of the question, "W*hich of the following approaches are appropriate for the preparation of secondary school pupils so they can meet more effectively the demands of their future work life?"*

Findings regarding to appropriate policies and strategies for improving youth employment show that there is very little difference in the attitudes of both teachers and students towards most of the items investigated. However, the results reject the null hypothesis at the 5% level in the majority of cases. The result of the same test regarding male and female attitudes about these items shows that there is no significant difference between their views too. Therefore, it would suggest that teachers and students feel similarly about effective factors, policies and methods which when applied in a well-structured secondary education, would maximise young people's chances for employment.

However, this finding indicates that in order to close the gap between education and the economy in the country a range of fundamental changes in both policy and practice is required. Any new educational system requires not only supportive policies, but also the development and provision of appropriate staff, materials, and facilities. Therefore, it needs considerable effort, funds and support to reform the current educational system in the right way. It is highly expected that these changes lead to better conditions regarding the situation of young people in society in terms of preparing them for a job after secondary school and in the future, providing them with good learning experiences and opportunities, helping them to be better qualified for a career and preparing them for self-employment.

To what extent will these expectations be fulfilled? The many problems in the country's secondary schools which hinder those schools from achieving their objectives have been stated by different writers. For example, Shokohi (1995) stated that there has been a shortage of equipment and other facilities in the country's secondary schools. Hossaini Nasab (1995) considered that the existing school curriculum in Iran is unsuitable as a preparation process of students for the world of work because it had not been designed to meet either local community or national needs.

Responses to statements about youth employment preparation highlighted the most important educational changes required for the improvement of these programmes for school leavers' future employment. These are as follows:

- To emphasise essential values, knowledge and skills relating to work (85% of teachers and 91% of students);
- To allocate enough time and resources for introducing work and its different effects (76% of teachers and 88% of students);
- To emphasise training and internship in all courses (73% of teachers and 82% of students);
- To emphasise flexible and applied skills and knowledge (79% of teachers and 83% of students);
- To establish annual exhibitions in various industrial fields where students can learn more about the industry and the jobs it offers (71% of teachers and 81% of students);
- To visit industry and trade centres regularly (76% of teachers and 89% of students);
- To decentralise curriculum development (62% of teachers and 54% of students);
- To participate with employers in developing the high school curriculum (60% of teachers and 61% of students);
- To emphasise team work in schools (75% of teachers and 81% of students);
- To provide suitable opportunities for teachers to introduce workplace situations (76% of teachers and 77% of students);
- To facilitate relations between schools and other institutions by reforming management systems (79% of teachers and 80% of students);
- To emphasise quality management for developing approaches in these fields (74% of teachers and 68% of students);
- To evaluate the curriculum in order to continuously improve goals and standards (81% of teachers and 81% of students);
- To use modern educational technology in classes (80% of teachers and 89% of students);
- To use occupational guidance and consulting services in schools (78% of teachers and 86% of students);
- To emphasise careers education (78% of teachers and 72% of students); and
- To establish the office of partnership with industry in schools (73% of teachers and 80% of students).

However, the efforts of the government since 1991 to implement the new form of secondary education, and the continuous discussions aimed at increasing the enrolment of students in the TVE curricula to 50% of those in secondary education, and the

expectations of a positive change in this field has possibly had some effect on students' views of TVE which has resulted in a new record in students' enrolment in 1996/97 in TVE courses -about 589,000 compared with about 222,000 in the previous year (ME, 1996). Students are thus living and studying in an atmosphere where a positive promotion of TVE is occurring.

Secondary school teachers' and students' very positive views of work-based learning and their responses in this research reflect their dissatisfaction with the current educational system which they clearly consider responsible for a lot of problems facing society today. They reported that they see the system as unsuitable for the country's national development needs. They also criticised the education system, believing that it contributes to the high rate of unemployment among secondary school leavers. Hence, there is a great need for more TVE in Iran at this time to prepare students for gainful employment. If the curriculum at the secondary school level becomes more technically and vocationally oriented, students will be better prepared for higher education and work.

Additionally, teachers and students feel that this new approach is likely to contribute to the economic development of the country by supplying the labour market with well-trained people and by coping with technological advancement in Iranian society. This result supports Chrosciel (1989) who stated that the supply of well-trained and skilled human resources is an essential requirement for economic and industrial development. As noted earlier, this is necessary but, of itself, insufficient. Such supply without jobs and careers afterwards which can fully utilise such technological skills, will be equally problematic.

According to the educational Acts of 1991 making the secondary school curriculum more vocationally and technologically oriented, will contribute to the economic development of the country (MOE, 1991). The extent of technological change in Iranian society is one of the main reasons for offering TVE courses at secondary school level. Lastly, the finding that both teachers and students viewed work-based learning positively supported studies carried out by Slamet (1987) who investigated the attitudes of senior high school students and their parents towards vocational education in Yogyakarta (Indonesia); Akintode (1988) who conducted a study to investigate the attitudes of secondary school students towards TVE in Lagos State (Nigeria); and Shuhil (1990) who conducted a study to investigate the attitudes held by vocational school administrators, teachers and students in the United Arab Emirates (UAE).

Conclusion

Both the research document and empirical data indicate that while some steps have been taken to reform Iranian secondary education, but it is struggling with the following major weaknesses in its policies, structure, and practices:

- Although the school curriculum presents a wide and large range of subjects in the school programme for different secondary high school streams, but students are not prepared in the way to meet the labour markets needs. Indeed, the school curriculum includes most of the essential subjects which a modern economy

needs, but it needs to be rearranged and represented in an appropriate way. If curriculum planners reorder and restructure the current materials and subjects, they would be equipping students with the required skills for employment.

- While it has been recognised that involving industrialists in designing the school curriculum is essential, and education should reasonably be linked to industry, the results show that curriculum policy makers have ignored the employers' role in the development of the current school curriculum. Additionally, because of a highly centralised system, the schooling system is not sensitive to the local employment requirements and needs.
- It is agreed that a mixed curriculum (which counterbalances practical and academic subjects) will maximise youth employment chances. This is while secondary education is still a highly academically-based system and it is described as an ineffective system in terms of preparing youth for their adulthood. Basically, the vocational movement in which educational policy makers have tried to balance practical and theoretical subjects in the school curriculum, has been accepted by many developing countries as a solution for reducing youth unemployment (Abrokaw, 1995).
- Finally, it is strongly believed that the current secondary education with such a problematic structure is somehow responsible for youth unemployment in Iran, but policy makers can correct this system by a number of ways so that the preparation of young people for the world of work and maximising their employment chances be carried out successfully.

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RESEARCH ABSTRACT

Women's Education, Gender Equality and Fertility

Title	Women's Education, Gender Equality and Fertility: A Study of Secondary School Teachers in Bhubaneswar, Orissa
Research Scholar	Vandana Barik*
Supervisor	Prof. Karuna Chanana
Department/University	Zakir Husain Centre for Educational Studies (ZHCES), Jawaharlal Nehru University, New Delhi
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The study attempts to understand and analyse the relationship between women's education, gender equality and fertility. The central theme of this study was that the relationship between women's education and fertility cannot be understood properly without studying its link to the issue of gender equality. The study investigated how far gender equality in education has impact on the reproductive goals of women and men. It is not the husband's education but his characteristics that have not been covered by standard surveys which the study seeks to explore, namely, his attitudes and preferences and the kind of family he comes from. Therefore, the study attempted first to focus on the relationship between women's education and gender equality and then the role of gender equality in reproductive goals of women and men.

The relative or combined impacts of women's and men's education on reproductive goals have been seen assuming that the reproductive preferences of educated women and men may or may not be the same. The study also examined if son preference impacts on reproductive goals of women and men. It tried to explore how far gender equality in

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education reduces son preference in fertility goals. It further examined whether women's higher education and employment neutralize son preference.

The objectives of the study were: (1) to understand the relationship between higher education of women and fertility; (ii) to know the impact of gender equality on the linkages between women's higher education and family size; and (iii) to explore whether gender equality and higher education of women and men have an impact on son preference.

Men teachers may marry women who are as educated as them or they may be less educated. The husbands of women teachers may be more educated or equally educated as them. So there may be a difference in the gender equality that exists in families, of orientation and in attitudes and preferences towards reproductive goals between men who have equally educated spouses and men who have less educated spouses. Therefore, secondary school teachers were taken as the universe of the study because they are educated at least up to or above secondary level. Also they generally come from different class backgrounds.

The size of the universe was 179, comprising 93 women and 86 men teachers. The size of the sample was 137, which was drawn from among these teachers of government and non-government secondary schools in Bhubaneswar. These teachers were teaching to IX and X standards. There were 73 women teachers and 64 men teachers in the sample who are married and have completed their families i.e. the youngest child was at least 8 years old. The preferred age-group for the sample was 35 years or above. Thus the sample was purposive, considering the education of respondents and their spouses, their age as well as the number of children they have. The teachers were selected from eleven schools depending on the number teaching the IX-X standards and who fulfilled the above criteria. The study was exploratory and looked at the relationship between the three variables, i.e., women's education, gender equality and fertility. Interview schedule and interview guide were the main tools of data collection from the selected sample.

As regards educational qualifications of our respondents, it was observed that more men teachers had higher educational qualifications than women teachers. Additionally, wives of a significant proportion of men teachers had medium or low educational qualifications while husbands of a significant proportion of women teachers had high (i.e. graduate degrees) or very high (post-graduate degrees) qualifications. As far as occupation is concerned, husbands of a majority of women teachers were in senior/ junior administrative and liberal professions. On the other hand, wives of a large percentage of men teachers were either not working or in medium occupations, such as school teachers, translators or clerks in government sectors.

A majority of women and men teachers had either small (one or two children) or medium (three children) families. The majority of both women and men teachers with three or more daughters had four or five children with one son. Interestingly, a higher percentage of teachers had only son/sons as compared to those who had only

daughter/daughters. But a higher percentage of teachers had a son as the youngest child compared to those whose youngest child was a daughter.

A majority of daughters either had completed or were studying general education. On the other hand, a majority of sons were pursuing professional education. As regards the type of educational institutions the children had attended or were attending, a higher percentage of daughters were studying in government institutions while a majority of sons were studying in private institutions. The monthly expenditure on children's education showed that parents were spending more on their son's education than on daughter's education. While most of the parents were planning to educate their sons in professional courses; graduation or post-graduation degrees, girls were expected to work for general courses in general science, arts and commerce. As far as age at marriage is concerned, there was considerable change. Daughters were being married at the age of twenty plus or more. Some of them the parents preferred to marry their daughters between 20-24 years of age. In contrast, parents of most of the sons liked their sons to marry after 25 years and even at the age of 30 or more.

A majority of women teachers had medium and low parental educational level, while the parental educational level was low for most of the men. When occupations of fathers of women and men teachers were compared, most of the women teachers belonged to families where the fathers were engaged either in high or medium occupations, whereas most of the men teachers had come from families where the fathers were engaged either in middle or low occupations.

In the study, majority of the sisters of the respondents had low or very low educational qualifications as compared to brothers. In contrast, a majority of the brothers had high or medium qualifications. Additionally, most of the husbands of sisters had medium or high qualifications, while most of the wives of the brothers had low or very low qualifications. Similarly, a majority of the sisters are housewives while most of the brothers are engaged in high or medium occupations. Further, a majority of the spouses of sisters are engaged in medium or high occupations, while most of the spouses of brothers are housewives.

So far as the factor influencing a couple's decision to limit the family size is concerned, education of husband and wife was ranked high both by women and men. Husband's occupation was also considered important in influencing a couple's decision to limit the family size. A higher percentage of women teachers opined that a highly educated wife takes decision independently. In contrast, a higher percentage of men opined that a highly educated wife can mould the decision of husband and his parents.

As regards the property distribution, majority of the teachers said their sisters did not get property. While a higher percentage of women replied in the affirmative, a higher percentage of men replied negatively. As far as property distribution in the family of procreation was concerned, a majority of women as well as men were willing to give property to daughters. But on asking what kind of property (i.e. in the form of house or land) they were willing to give, their answers were not quiet clear.

Further, to know about the reason for son preference, they were asked who they expect to look after them in old age. Here too, most of the women as well as men expected their sons to look after them. Again to probe the opinion of the respondents towards son preference, they were asked why people prefer to have sons than daughters. More men than women said sons are preferred as they look after parents in old age or give financial support. In contrast, more women than men gave family-tradition related reasons.

The study supports the view that though parents are eager to give higher education to daughters, still there is gender difference between sons and daughters with regard to the kind of education they respectively are getting or the future occupational plans by the parents. Though, parents are giving priority to the education of daughters over their marriage, yet in the long run the priority has always been marriage. Therefore, career does not get priority over marriage. But for the boys, the societal norms are different. Not only education, but their employment gets precedence while marriage is made to wait.

It is difficult to study the relationship in a society wherein differences between the genders prevail in every aspect of life. Several studies have illustrated how women's education does not really have much influence over fertility. Along with education, family background of an individual has been exemplified as a great influence in decision-making about reproductive goals and thereby fertility. The present study has tried to put together important intervening variables, namely gender equality in education as well as other aspects, and the role of family background in the relationship between women's education and fertility. It tries to look at the impact of son preference in the decision of a couple about family size. Additionally, it tries to find whether son preference gets neutralized by higher education and occupations of women in a family. This will be a fruitful area of enquiry and research in future.

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Design and Development of an e-Resources in the Field of Higher Education

Title	Design and Development of an e-Resources Model in the Field of Higher Education
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Number of Pages	180

Researchers are likely to find material relevant to their subject in a variety of web-based resources: their own library catalogue; catalogues outside their own library, such as a national or union catalogue or a catalogue of another institution that specializes in similar subjects. The current process of information access for the sake of seeking information is cumbersome and requires some knowledge of the various resources, their access mechanism, the query interface they provide, and the type of results they return. It also requires a manual comparison between the results returned from several resources and does not enable the user to move from one resource to another for further discovery and navigation.

With ever-increasing information overload, web information retrieval systems are facing new challenges for helping researchers and others not only to locate relevant information precisely but also access and aggregate a variety of information from different resources automatically. Researchers and academics dealing with information, always seek quick, authentic and latest information to pursue their studies and research works. E-resources in tertiary education are determinant that provide scholarly and latest information to the research and academic community in India. UGC through INFLIBNET has updated many university libraries for e-journals viz: J-store, J-Gate, Elsevier publications etc. The users are already getting access to around 8000 scholarly e-

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journals from all areas of learning through this programme. The technical education also has started augmenting its libraries through INDEST consortium.

The higher education e-resources data centers contain substantial amount of data on all fields. For maximum benefit in conducting research and development, including the avoidance of duplication and the identification of promising opportunities, this data must be identified, retrieved, processed and integrated. Much effort is being applied to information identification and retrieval, for which sophisticated processed tools presently exist. This is especially important for the fields of higher education since intense specialization in every discipline seeks in accessible referral material as a new knowledge source as the academic communities are interested in covering myriad topic areas that spread across the traditional disciplines. Far less effort is oriented to the information processing and integration problems, especially the cutting-edge areas of referral material to infer new discoveries and innovation. The Information and Communication Technologies (ICT) communities need to be made aware of the potential of information technologies for improving the Webgoggy through S&T and the research deliverance.

Objectives of the Research Work

The dissertation is an attempt to describe a domain independent e-resource model in the field of higher education, using key semantic web technologies that support basic reasoning and domain specific rules. Its primary objective thus is to develop an e-resource model which can facilitate information retrieval in the field of higher education. Among the available related ontologies, the thesis is focused on Operating System, Biotechnology, for implementing the e-resource model. The model can easily be scaled to accommodate more ontologies.

In the recent past, pioneering research work done at places like Knowledge Systems Laboratory, University of Stanford, University of Maryland, Baltimore County and World Wide Web (W3C) Consortium, USA, has made a dent in Semantic Web and allied technologies. The development of the Semantic Web and associated technologies has given impetus to academic/research organizations to mobilize adequate resources/funds. Such a manifestation has made Semantic Web a vehicle from information-based to knowledge-based web, for human and computer consumption. The Semantic Web and its allied technologies will enable to create a universal medium for exchange of data. The Semantic Web is an evolving reservoir of knowledge, built to allow anyone on the Internet to add what they know and find answers to their queries. The Semantic Web is a structured form which is fairly easy for both computers and people to work. It will create an environment where the software agents roaming from page to page can readily carry out sophisticated tasks for users. Such agents will know the meaning of concepts used in each page. Creating a machine-readable Internet, where computers can access and analyze online content as easily as human's is the goal of the Semantic Web.

The features of Extended Markup Language [XML], Resource Description Framework [RDF] and DAPRA Agent Markup Language [DAML] are used for the development of e-resource model in a user-friendly environment.

Research Methodology

The basis of the proposed e-resource model is the set of ontologies used to define entities in the selected domain. The thesis describes an e-resource model that facilitates information retrieval within the selected domain with some degree of reasoning. The model can easily be scaled to accommodate more ontologies since we have used an ontology container. Currently, all the information describing the selected subject domains are encoded, using the Hyper Text Markup Language (HTML). A Crawler and an HTML parser are used for automated information retrieval and storage from the web pages. PostgreSQL's full text indexing feature is used by the query-answering system to store domain specific data and answer relevant queries. The Web Crawler programme was a prime example of how the current web focuses on information visualization, but does not provide semantics for software programmes to find or interpret it. Information is described in a form suitable for human consumption, using special tags, descriptive text, different fonts, or a combination of the above.

The current document-centric World Wide Web is evolving into a Semantic Web that communicates information associated with ontologies. The term ontology refers to a document or file that formally defines the relations among terms. Ontologies have been established as effective and efficient means of knowledge sharing. Ontologies are described using XML, RDF and DAML. Semantics of XML, RDF have been selected because both are semantically rich languages which provide machines with capability to read, interpret, and perform inferencing over the data. A unified representation for web data and resources are needed in today's large scale Internet data management systems. This unification through standards will allow machines to meaningfully process the available information and to exchange and integrate data coming from distributed databases and information management systems. For Semantic technologies to succeed in the field of information exchange and interoperability there is a great need to gain interoperability using standard ontologies. Use of ontologies in designing information systems facilitate achievement of higher precision and recall rate and also has ability to handle voluminous information with less resource consumption. It also facilitates information retrieval from divers, heterogeneous sources, supporting both structured and unstructured data. The e-resource model supports ontology reuse, essential for effective data integration and is linked to pre-existing ontologies to add semantics to our ontologies. This promotes common understanding of concepts, and avoids redefinition of terms defined in other ontologies.

Conclusion

The research has described an e-resource model that facilitates information retrieval within the selected domain with some degree of reasoning. A crawler and an HTML parser are used for automated information retrieval and storage from the web pages. The available and related ontologies on biotechnology and operating system are experimented for the implementation. PostgreSQl's full text indexing feature is used by the query

answering system to store domain specific data and answer relevant queries. It has been observed that due to incomplete availability of the ontologies, the work could not be extrapolated. Since Semantic Web and ontology studies are on rapid progress, there is a need for researchers to further augment the concept of e-resource model using key Semantic Web technologies.

Future Work

The limitation of the e-resource model is still confined to answering queries pertaining to that particular domain or ontology. It does provide the capability to answer queries relating two or more disjoint domains. It operates on individual domain at a given time contrary to web search engines that operate on a global context. The future work should look at applying these search techniques to a wider range of domains. To facilitate precise searches, semantic mark-up can be used as indexing terms for web documents. The future work should also extend the possibility of implementing Java Expert System Shell (JESS) inference engine to provide smarter and more precise searching capabilities.

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BOOK REVIEWS

Saldanha, DENZIL (2007): ***Education of Adolescents for Development in India – The Case of Doosra Dashak.*** Rawat, New Delhi, pp. 216, Price $25. ISBN 81-316-0127-7

Adolescents in India are estimated to be 230 million. This particular age group has a determining role in mapping the size and growth pattern of India's population. Statistics reveal that nearly one-third of the Indian adolescents have remained illiterate and unschooled. The data also explains that the group has low level of understanding and awareness on matters relating to healthcare due to inadequate educational opportunities and facilities.

Though the category of adolescents was identified in the literature and research domains of education and development studies, significant and context specific inquiries and approaches in this field still remain peripheral. While on the one hand, it has been identified that this potential age group can make significant contributions to the development of economy and society, there have been hardly any integrated and holistic programmes targeting their education and development.

In such a context, by locating the study objective in the category of adolescents – specifically focusing on the lives of people from the age group 11-20, Denzil Saldanah's work *"Education of Adolescents for Development in India: The Case of Doosra Dashak"* attains distinction in perspective since generally a large portion of the educational literature tends to engage with the administrative categories of schooling such as primary, secondary, higher secondary, professional, vocational and so on. As age becomes the central criterion here to form the research object, it also charts out the issues of a significant segment of the (re)productive force.

Doosra Dashak (DD) is one among those rare programmes, which attempt to address the educational issues and problems of the rural adolescents in India. The book presents a detailed review of Doosra Dashak's intervention in the education and development of the adolescents in rural Rajasthan. The term Doosra Dashak implies the second decade. The programme is meant for the educational development of persons in the age group 11-20 years, in order to make them lever for social and economic progress. The age group for adolescence has been a subject of debate since this category is often subsumed with youth, children or young adults. The definition of this age group tends to differ according to the particular projects and policies. Different research groups, institutions and agencies define the category of adolescents according to different criteria relevant to the context and approach. Doosra Dashak has arrived at the age group of 11-20 to define the target group of adolescents in the present context.

The project was implemented by the Foundation for Education and Development (FED) in the rural areas of Rajasthan since May 2001. It specifically focused on the regions marked by fragile ecology and low social and development indicators. The Tata

Education Trust (TET) has supported Doosra Dashak since its inception in 2001 for a period of five years with an amount of Rs. 14 million against which Doosra Dashak has to raise a matching grant from other donors. In the preliminary chapters, the author explains the social and educational context in which the programme Doosra Dashak was conceived for implementation, viewing the rural adolescents' educational graph. It also provides the conceptual explanations and rationale of selecting the age group of 11-20, constituting the category of adolescents in the present context.

Doosra Dashak's preliminary concept note was prepared in February 2000. The attempt to provide a second chance for the education of adolescents had then onwards gathered a formal framework in terms of theory and practice for achieving the targets. DD's proposal outlines its ideology of holistic education for leadership through organized action to achieve the goals of equality and social justice. The DD process essentially consists of residential training camps for adolescent participants that aim at providing integrated basic education.

The project proposal was submitted to the Sir Dorabji Tata Trust in September 2000 for approval for financial assistance. The proposal for providing basic learning facilities and healthcare system for the adolescents, aimed to cover two Blocks, namely Bap in Jhodpur and Kishanganj in Baran districts in a period of four years. The major criteria for selecting the blocks were their remoteness, socio-economic condition and low educational outreach. The funding was sanctioned by the Sir Dorabji Tata Trust through Tata Education Trust (TET) in May, 2001.

As part of the programme, residential camps were established for imparting the curriculum contents along with life skills and extracurricular activities. The teaching and learning methods were based on an activity-oriented model. Residential training was also reinforced by occasional block level continuing education programme such as science fairs. The participation of the local community and creation of linkages between the curriculum contents and the socio-cultural context were some of the key aspects in the learning process.

The second chapter details the geographic and demographic profile of the region—the Blocks under study. Initially two Blocks were identified for implementing the project. When the project began to benefit with more financial assistance from different resources, the programme was extended to two more Blocks in 2003. In the year 2005, the programme had covered five blocks. The social and developmental indicators of the selected Blocks were at a low level, the percentage of literacy, education and healthcare in particular. The drop out rate was also high among the school going children, which itself is a minority in the local population. Viewing this backwardness in terms of awareness on the importance of education, the project team had a complex set of tasks in front of them to bring the adolescents to the space of learning and sustain the process to a longer period.

The third chapter explains the whole set of processes initiated in the planning phase for the programme. Foundation for Education and Development (FED), a public charitable trust, established in Delhi in August 2000, had initiated the programme.

"Sandhan", a Jaipur based NGO, working in the area of education and development had provided academic support for designing and conceiving the project. In the preliminary discussions for conceiving the programme, a whole lot of theoretical and practical issues were considered. Seeking a rationale for educating the adolescent was the prime concern since the entire activity was to provide the opportunity for education to the persons belong to the age group of 11-20. The identification of unschooled adolescents, girls in particular, and bringing them to the centre of the learning activity were the crucial steps in the initial phase. A number of awareness programmes were arranged to inform the adolescents about the importance of education and healthcare in order to prepare them for actively participating in the knowledge-based economy and society. The project in its objectives identified the relevance of including the themes of healthcare, gender sensitivity, equality and social justice in the process of teaching and learning.

Gender and health were at the centre of the learning process. While constructing the curriculum and designing pedagogic methods, the themes of health awareness and the issues of gender and sexuality relating to the life situations of the adolescents were focused. The project committee had the task of understanding the community responses over the matter of residential education of girls. The practice of early marriage of girls was one of the major hurdles for the low level of girls' participation. The project team had to organize a variety of awareness programmes for both men and women, not only on the significance of schooling, but also on the questions of gender and equality. The third and fourth chapters make detailed description of the vision, mission and objectives towards an integrated education programme, planning and preparation of strategies for the project and curriculum development and implementation aspects.

Narratives and case studies of the lives of the adolescent participants prepared by field workers, trainers and the managerial team provide information for understanding the process and impact of the programme. The fifth chapter illustrates the life histories and experiences of both the adolescent participants as well as trainers in their journey through Doosra Dashak's residential learning camps. The case studies narrate the lives of people from different classes, castes, religions and regions. A variety of life histories were presented that constitutes the core of Denzil Saldanah's observations on the distinct approach on educating the rural adolescents and facilitating them with leadership qualities.

Apart from the case studies on the lives of the adolescent participants, the author also presents a set of narratives of the trainers' experience in facilitating the programme. The social hierarchy among the participants, especially the caste difference, was one of the major issues that was cause of conflict among some of the adolescent participants. The conflict resulted from the notions of purity and taboo on certain issues like food, brought a difficult task for the trainers' to handle. Narratives explain that trainers faced problems to handle the participants in terms of caste since some of the upper caste people refused to eat the food prepared by the participants belonging to lower caste. However, the narratives claim that the sensitive intervention by the trainers in the whole matter enabled the participants to overcome their caste bias. These observations fall into a too

generalized understanding, with a tone of promoting the programme, which lacks depth in analyzing the issue of caste.

A fundamental weakness of the approach of this book is that it belongs to the typical celebrated promotional literature in education that does not address the key theoretical and critical issues of gender, caste and other socio-cultural elements that impact education. One can find that the field observations remain as descriptions, which are converted into celebrated notes of the success stories of the project. The narratives and the life histories of the adolescents turn out to be impressionistic as the programme had brought about revolutionary changes in the lives of people in a short span of time. The concepts of gender and sexuality were loosely deployed without complicating or interconnecting them with the critical questions raised in the domains of contemporary feminist theories and criticisms. The text casually and repeatedly reads out the terms, such as empowerment of women, capacity building, gender sensitivity, community participation and so on with surface-level explanations of those complex concepts. For instance, narrating the impact of the programme on the aspect of gender sensitivity, the author says: "In almost all individual assessments, it was found that participants have imbibed a fair degree of gender sensitivity. As many as 65 percent of the boys said that their behavior had changed" (pp.143-144). This observation on the one hand does not provide any methodological explanations interconnecting with the complex properties and patterns of gender relations and on the other hand it makes the agency of women absent in the whole issue of gender sensitivity.

Though the book, in its larger framework and approach, makes an addition to the promotional literature in education, it opens up the scope of working with the adolescents as a significant target group from the developmental perspective. The book seeks for an integrated methodological framework, attempting to merge the quantitative findings with the ethnographic descriptions while sketching the learning process under Doosra Dashak.

Drawing from the experience of the programme, the study concludes with the conceptual explanations of the relations between three significant aspects that have relevance in contemporary development literature: life skills and livelihood issues, scale and significance, sustainability and the formation of people's organizations. Formulating such a framework, DD imagines for a comprehensive approach in education based on an integrated method of learning that intersects with the issues of livelihood and life skills, sustainability and community mobilization. Having made an expedition to the lives of the rural adolescents, this study has provided a platform for exchange of ideas and information among practitioners, policy makers, scholars and educational activists involved in similar projects and research.

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Chapman, DAVID W. and Mahlck, LARS O. (eds) (2004): ***Adapting Technology for School Improvement.*** International Institute for Educational Planning, Paris. pp 305, ISBN: 82-803-1255-3. Price: Not mentioned.

Recent advances in the field of Information and Communication Technology (ICT) have profoundly impacted all spheres of human life. Education, as a great service to mankind, has also drawn immense benefit out of this development, thereby improving its efficiency and quality. The most significant development has been the application of ICT to the content-delivery system which has come a long way from the traditional mailing of printed material through instructional application of radio and television to the current deployment of computer and Internet facilities in the classroom. However, different countries of the world are at different stages of development in this field also. The ICT has been profitably used at higher education stage to impart instructions through distance education mode. But at school stage, such experiences are limited.

One advantage of the use of ICT in schools would be the convenience for teachers and students in gathering needed information from the Internet virtually on any topic of interest, and thus transforming both the content and pedagogical aspects of education process. As in the case of higher education, international export of courses at school stage will also be possible whereby courses developed by best teachers in one country may be made available to students located anywhere in the world. This book is a remarkable attempt to synthesize the accumulated experiences of international community in the application of ICT in primary and secondary schools, highlighting its advantages and disadvantages. The major focus of this book is on how ICT can and is being used to enhance quality of education at primary and secondary levels of education. The authors visualize that introduction of ICT at school stage may be very helpful in improving access, efficiency and quality of school education. However, meaningful strategies have to be planned to integrate ICT in the classroom instruction. It is also anticipated that the implementation of ICT in the classroom may be uneven and lead to inequity in school quality and learning outcomes which may fuel political debates. Clear models for successfully using ICT at school stage are not currently available for want of adequate sharing of international experiences in this regard. The authors also warn against the inadequate designing, poor planning and hurried implementation of ICT which might undercut quality and lead to wastage of resources. By drawing and quoting success stories from different countries of the world, the book analyzes the challenges faced by teachers and educational planners in their efforts to integrate ICT in teaching-learning process, and strategies used to counter these challenges. Various chapters of the book combine articles discussing the issues and individual case studies which capture current knowledge and experiences with the use of ICT.

The first chapter presents an overview of the plan of the book which puts the entire theme of the book into perspective to assist the readers. The remaining chapters focus on other relevant aspects and country-specific experiences in the use of ICT in school teaching. Chapters 2 and 3 discuss the global context and key policies regarding

implementation of ICT in education in low and middle income countries. The limitations of the developing countries in using computers (due to high cost) have been highlighted and it is suggested that in such countries, use of technology helps in compensating for weak education offered by the conventional approaches. It is argued that poor countries should not try to use technologies to provide what students and teachers are already able to get through conventional education. Rather they should concentrate on the use of cost-effective strategies that compensate for weaknesses in conventional education. The message is conveyed in the following words (page 40):

> *"Poor countries should not focus their efforts on using technologies that try to go beyond what is possible with good quality conventional education. Instead, they should focus on reaching the poor through cost-effective technology that compensates for the limitations of the conventional education."*

One of the authors has suggested that culture of a society also affects the use technology in teaching children. What is good for developed countries is not necessarily so for poor and developing ones. Thus developing countries should use technology that is affordable and compensates for the deficiency of quality teachers. For successful use of technology in teaching, two things are desirable: good infrastructure and quality teachers. Both these conditions are difficult to meet for the developing countries as it requires increased fund allocation for education sector. Rich countries have used technology to make their good education even better. The discussion on the role of ICT in school improvement in middle and low income countries leads to the conclusion that such countries should use cost-effective ICT in school teaching as a *supplementary means to compensate for the weaknesses that remain after teaching through the conventional methods.* The authors underline that technologies best suited to the less developed countries are not necessarily to be found in the rich countries. So, countries are advised to *select technologies best suited to their level of affluence.*

The significance of *'top-down'* versus *'bottom-up'* approaches of policy planning and implementation (Chapters 4 and 5) of ICT has been described citing case studies. The example, in Palau, which is a less industrialized country, the government has created good computer facilities in schools - about one computer for every 12 students. However, the strategy (top-down) did not succeed because of inadequate incentives and training of teachers. The experience gives a message to other countries that if teachers are not properly trained and requisite incentives are not provided to them, even a well-designed programme of integrating technology in teaching is likely to fail. On the contrary is the success story of Jamaica (bottom-up) where people's support was mobilized to generate funds for purchasing computers and training of teachers in their use in teaching, and the government subsequently took interest as a collaborator; it gives a new lesson to nations planning to introduce ICT in schools in near future.

The success stories of the application of integrative radio instruction (IRI) in classroom instructions and teachers' in-service training (Chapters 6 and 7) have been presented by narrating in detail – the experiences of countries in Africa, Asia and Latin America. In most of the cases the IRI programmes, with judicious implementation

strategies, proved to be better than the conventional ones. The experience of Ethiopia with 13000 secondary schools and 21000 primary school teachers has been really encouraging. But, some of the projects could not sustain due to reasons discussed by the authors. However, for developing countries with scarcity of resources, these experiences provide useful directions.

The discussion on the application of computers in classrooms (Chapters 8, 9 and 10) and teacher education (Chapter 11) occupies a major part of printing-space in the book. The authors have argued that use of computer technology in classroom teaching, in addition to providing faster access to more and more information, changes children's learning style, and facilitates the use of constructivist approach in teaching, which is learner-centered and more pedagogically sound. Use of computers as tools to explore the world is in line with the constructivist philosophy of teaching. Following the approach, recently termed constructivism is possible via computers equipped with sensors as data gathering devices. Citing the success of teacher education programmes in Morocco, Argentina, Brazil, Namibia and Iceland, the authors have argued that application of technology in teaching and teacher education provides rich dividends in improving the quality of subsequent classroom learning. The authors say (page197):

> *"The experience of Morocco and Namibia suggests that education technology programmes to strengthen teacher preparedness and professional development can enhance the quality of professional training. Appropriate and appropriated technology can also strengthen education reform processes."*

Online resources may be used for direct teaching by telecast, accessing resource material, accessing teaching guides, web-based classroom communications, and in-service teacher education. In most of the developing countries, ICT is difficult to use at school stage because of high cost, both at initial purchase and maintenance levels. The author warns against the use of technology with poor content because it only makes delivery faster and wider and does not improve the quality. So, content has to be good. Use of technology results in effective learning not because of its own use, but because instruction delivered through ICT is more systematically designed and delivered.

The issues in adopting technology in schools and its possible implications have also been extensively dealt with (Chapters 12 and 13) towards the end of the book. The authors have suggested that in order to take full advantage of the use of ICT in schools, teachers and students should be made aware of its relevance and benefits through appropriate programmes that the location of computers in the schools make a lot of difference on how ICT would be used by students. The authors have drawn the attention of policy makers to the disadvantages of placing computers in the laboratories rather than in the classrooms which limits the teachers' ability to utilize them. Moreover, it has also been reported by a study conducted in Germany that use of ICT is limited to a few subject areas directly related to information science, engineering and technology. The study also showed some gender-based differences in the classroom use of ICT, female teachers tending to use computers less frequently and less confidently than the male teachers.

In the last chapter (Chapter 14), the editors of the book have presented a synoptic view of the findings of the studies described in the earlier chapters and their implications. They assert that use of ICT, though expensive, certainly leads to improvement in the quality of teaching, but warn that if not used judiciously by competent and trained teachers, it can undercut education quality and result in wastage of resources. The book highlights that use of ICT in schools has enormous implications for teacher education, pedagogy and curriculum. On the one hand, it can increase access by creating easy availability of knowledge, and cost-effective means of education, and on the other hand it may create a 'digital divide' if ICT is not available to all schools. It can create unintentional disparities among those with different levels of access to technology. Also, 'digital divide' across different countries and across social groups within a country, may widen the existing inequities The developing countries can take useful lessons from it and implement technologies that are practical, sensible and cost-effective (p 36), in view of their local conditions. The authors summarize it in the following words (page304):

> *"The application of technology to improve the quality and delivery of education represents one of the most dramatic innovations in education of the last century. While it is underway in virtually all countries, it holds particular promise in the context of low-income countries seeking to reach larger number of students with extremely limited resources. The opportunities are enormous."*

The book is a welcome introduction to the existing literature on the subject as a resource book to be profitably used in training programmes organized for teachers, policy-planners and educational administrators and to encourage student-centered learning, which compels teachers to modify or even change their methods of teaching. The notion that students can discover knowledge or information is in line with constructivist philosophy of teaching. The case studies discussed in this book are of utmost significance in view of the wave of ICT touching every nook and corner of the world. The experiences of various countries cited in the book may be of immense help to poor and underdeveloped nations where the programmes of application of ICT in education are yet to take off.

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Citizens' Initiative for the Rights of Children Under Six (CIRCUS) (2006): ***Focus on Children Under Six (FOCUS)***: Abridged Report, New Delhi, pp: 147, Price: Not mentioned.

The Report under review, 'Focus on Children Under Six (FOCUS)' is an action-oriented abridged report on the wellbeing and rights of children under the age of six years in India.

It has been put together by Citizens' Initiative for the Rights of Children Under Six (CIRCUS). It is an outcome of a collective effort to bring children closer to the centre of attention in public debates and democratic politics, and mainly draws upon the reflections and dialogues among individuals and organizations committed to the child's rights. It principally covers a wide range of issues, related to maternity entitlements, social exclusion, the politics of child rights, the concerns of *anganwadi* workers, alternative views of pre-school education, Supreme Court orders on Integrated Child Development Services (ICDS), and Tamil Nadu's pioneering work in the field of child development, among many others.

Based both on the expertise and the reviewed literature, the report asserts that the first six years in a child's life have a decisive and lasting influence on his health, well-being, aptitudes and opportunities. Since the 'Education For All (EFA)' commitments pertain only to children above 6 years, this report makes an effort to fill the research vacuum in the case of children below six where little focus has been given. In this context, the report provides a unique set of arguments which the dominant discourses failed to capture over these years. On this merit its arguments stand very well.

As the ICDS is the only major national programme in India addressed to the children under six, the report essentially builds on the field survey of the ICDS, conducted in May-June 2004, in six states namely, Chhattisgarh, Himachal Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Uttar Pradesh. These FOCUS states have been divided into two broad groups. While three of these states (Himachal Pradesh, Maharashtra and Tamil Nadu) have relatively active social policies, good indicators of social development, and effective public services, the other three states (Chhattisgarh, Rajasthan and Uttar Pradesh) have been relatively passive as far as ICDS is concerned. The report occasionally refers to the first three states as the "active states". The other three states have generally stuck to a "minimalist" implementation of the central guidelines, without investing significant financial, human or political resources in the programme. This inertia is reflected in poor outcomes. To convey the fact that this inertia is not immutable, these states have been referred to as the "dormant states".

Based on its survey findings, the report establishes the fact that the ICDS programme has been implemented in a lopsided manner, with the distribution of food supplements to children in the age group of 3-6 years "displacing" many other activities. Some services, such as nutrition counselling and pre-school education, have been deeply neglected and even virtually abandoned in some cases. Hence, it advocates that there is an urgent need to reverse this "reductionist" approach (p.27). In general, its findings show how the ICDS can make a big difference to the lives of children, provided this programme receives the attention and support it deserves. It principally advocates that childcare is a social responsibility and makes a case for universal child development services in India. Hence the report also argues for its "universalisation with quality".

Although India ratified the Convention on the Rights of the Child (CRC) in 1992, the report decries that the Indian law relating to the child is only ad hoc in nature, often inconsistent and does little to secure the rights of children (p.11). Accordingly, the report

proves that, about half of all Indian children are undernourished, more than half suffer from anaemia, and a similar proportion is left out from escapes full immunization (p.1). Apart from this, the report also talks of dismal neglect of children in parliamentary debates but also of virtual invisibility of children under six and their basic needs. In this backdrop, the report describes the slow progress in the field of child health and nutrition in 1990s is all the more striking as the Indian economy is one of the fastest growing in the world. It also establishes the fact that in comparison with India, other South Asian countries are generally doing better in nutrition and health. As India has the lowest child immunization coverage in South Asia, the report proclaims that almost any "summary index" of these child development indicators would place India at the bottom of the list of these countries. In the overall survey findings, the report complains that the state of Indian children is nothing but short of a *humanitarian emergency* (p.13).

In response to this entire malady, the report identifies two types of interventions: first, a need to address the structural roots of child deprivation, including mass poverty, social discrimination, lack of education, and gender inequality; and secondly, there is a need for immediate protection of children under six, by integrating them in an effective system of child development services that leave no child behind. With these immediate tasks, the report has worked for the rights approach.

The primary role of the rights approach is to change public perceptions of what is due to Indian children. In particular, the rights approach can help to put children's issues on the political agenda, and forge new social norms on these issues. The prognosis provided in the volume profoundly convinces the readers to understand the dynamics which are highly complex to capture. In overall assessment, the FOCUS team scholastically respects the sentiments of the potential stakeholders of the nation and education, the children. Hence, this volume will be an interesting one for those who work on the issues of social science in general and health, education in particular.

As Indian democracy in this report has been shown with severe limitations in its ability to do justice to the rights of children, the report does not share the faith in policymakers or government initiative. Rather, it addresses itself to the wider public, and regards government policy as an outcome of democratic politics (p.118). Hence, this is a unique report mainly because of its scholastic stand with suspended judgments which neither appreciate the dominance of the state nor are completely pleased about the prominence of civil society.

In this report, the CIRCUS team has attempted to present a fair account of the current situation in both its negative and positive aspects. However, the report positions Tamil Nadu's success in relative terminology (p.112); somehow it predominantly gives the impression of excessive celebration. This might have been avoided by probing the relative demerits simultaneously with the celebrated merits. Despite the fact that Tamil Nadu has performed relatively well in comparison with others, the report might have been more sensitive to the quality issues which are not upto the mark in the state. For instance, even though the state may have done well, in certain aspects, the report claims to have found mixing of milk and health powder being served to the children (p.45). The

literature and reports, emigrating from the northern region, somehow praise the status of southern India in general in this regard and Tamil Nadu in particular. But, the reviewer (as he himself is a Tamilian) strongly feels that this region is full of problems in terms of quality, which is highly elusive. The rate of unemployment and per capita income to some extent confirms this factor.

Although in a comparative perspective, Tamil Nadu's statistical figures may rank high, but only a closer examination of the issues, the reviewer believes, will give a clear picture as these are highly complex and elusive in nature. If a future survey of this kind takes note of the percentage of children from the matrix of higher caste and upper class in the *Anganwadi* centres of Tamil Nadu, then only any one can know the 'success' in its proper perspective. Otherwise, rejoicing without going deeper into the complex issues may sidetrack the reality. Apart from this, though the health services are superior which the report duly compliments, one should not forget the rising rate of AIDS cases in Tamil Nadu. The point here is, the issues are highly complex and in the name of comparisons with the dormant (BIMARU) states, one cannot call Tamil Nadu as an "active achiever".

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Y. DONDERS and V. VOLODIN (eds.) (2007): ***Human Rights in Education, Science and Culture – Legal Developments and Challenges.*** Paris: UNESCO Publishing/ ASHGATE, 320 pp. ISBN: 9780-07546-7313-2.

Presented in eight chapters, the present publication is a rare combination of insight for all those who desire to contribute in the evolving area of human rights. There is growing realization that the issue of human rights has begun to gather incredible impetus in the new world order. Now, it has become the acknowledged reality and so a cause for serious concern. The main challenge remains in the implementation of the standards enshrined in the covenants. This publication is prepared on the occasion of the 40th anniversary of the covenants (2006), and is dedicated to the 60th anniversary of the Universal Declaration of Human Rights, as a reminder to the need of determined action for the protection of human rights.

The publication contains chapters that reflect on some pertinent human rights issues closely related to the work of UNESCO. It throws light on various aspects associated with the execution of human rights within UNESCO's fields of competence. The UNESCO strategy on human rights includes the mainstreaming into all programmes, human rights education, standard settings and monitoring with special focus on human rights research. The opening chapter, written by Professor Asbjorn Eide, explains the historical background of human rights under the concept that all human rights are universal, indivisible, inter-dependent and inter-related. Here indivisibility means

ensuring that everyone is free and equal in dignity and rights. The state has not only the obligation to respect the freedom of individual but should also ensure that individuals are able to enjoy these freedoms. The United Nations has repeatedly emphasized the importance of relations that exist between them. Human rights became part of the international law through the adoption and entry into force of the UN Charter. The author repeatedly tries to make the realization of the significance of the Universal Declaration to be seen in the wider context of the world order as envisaged by the UN Charter. He applies this theory to the rights and freedoms within UNESCO's fields of competence and emphasizes that "the assumption that civil and political rights are always passive and do not incur costs for the state is wrong; the assumption that economic and social rights always require positive action and are costly is wrong." The author has also explained how the direction of globalization process has been influenced by the neoliberal ideologies and the how the issue of globalization challenges human rights scholarships, where predominant attention has been on civil and political rights.

Research is needed vastly on the impact of globalization on human rights around the world, disaggregated by gender, location, rural versus urban, and developed versus developing. He also argues that human rights treaties may establish state duties to prevent violations by private parties. The author concludes by saying that more researches are needed to determine how rights could be applied among private parties and turned into a possible line of action in the light of the determined broad rights based approach. Finally, he addresses the obstacles and challenges to these principles and offers possible ways of overcoming them, including right based approaches to development and human rights education. The role of international organizations and MNCs in this regard are also touched upon as it requires changes in the focus of academic research, including the policies of MNCs and the international financial institutions.

In an another chapter Frans Viljoen, investigates extent economic, social and cultural rights are justiciable at the global and regional level. The role of judiciary is prominent when it comes to the application of constitution in the civil life. The issue of justiciability should be first addressed at the national level, he argues. He explains justiciability as claim-based which has to be determined by a judicial body if violation is found and it should embody authoritative interpretations of the rights. He articulates that subjective rights could be justiciable while a legislative command requires the adoption of measures. He has done exhaustive overview of different countries which aims to illustrate general trends, problems and possibilities. A survey of case laws becomes essential in any discussion about justiciability. His study also shows that cultural rights do not pose the hindrances that are raised in respect of the justiciability of socio-economic rights. The exclusion of socio-economic and cultural rights in constitutional order of a state is not an obstacle to the judicial application of these rights. In conclusion, author has desired that there is a need to go beyond justiciability to reason out the impact of socio-economic and cultural rights. He concludes by affirming that justiciability is not the only way to improve the realization of rights but calls for other factors. As democratization can create a national climate that will accept the justiciability of these rights through legislation, and

together with litigation it may strengthen the efforts of civil societies to improve the social order.

Audrey R. Chapman in the next chapter explains the development of indicators for monitoring the realization of human rights, especially, economic, cultural and social rights. Chapman identifies three categories of human rights indicators as structural, process and outcomes indicators and opines that human rights indicators are important to improve legislation and policies, to identify the actors involved and give warnings of potential violations. The author accepts that problems with the development of indicators are many, as objectivity, feasibility and consistently measurable over time. So it is obvious that before developing indicators, the nature, content and scope of states need to be defined. The author sums up that by realizing the benefits that science provides, UNESCO has an opportunity to establish an important role for developing indicators within its capability, including the right to education, the right to take part in cultural right.

The idea that human rights are not applicable to private parties is criticized in the chapter written by Christian Courties. The author claims that there is no theoretical understanding in sustaining that human rights norms can impose legal duties on private parties. This chapter has detailed information about state duties to prevent violations by private parties. It has also included the growing interaction between international law and domestic law. It reflects that more comprehensive research is expected which could activate effects between private parties. The author has highlighted the fact that because of the privatization taking place all around the world, deregulation has arisen which violates all concerned issues relating to human rights norms. Finally, the author conveys that we have to leave outdated code of belief and accept the new challenges for the protection of human rights.

Prof. Fon Coomans in the subsequent chapter explains that although right to education has a solid basis in international law, but the actual position is still very unsatisfactory. There is a big gap between right to education laid down in several universal and regional rights instruments. Cooman calls the right to education a key right and links it with other rights, and thereby deals in detail with the scope and content of right to education. He asserts that obstacles to the realization of the right to education could be legal, administrative, financial or political in nature. There is still widespread discrimination against girls and children of minority groups, and general quality of education is quite low. There is a major section on obstacles that deals with problems in the process of realizing the right to education with a focus on Latin America and Africa. In addition, he asserts that there should be monitoring bodies at all levels to identify violations with in the perspective of legislation and emphasizes that then it will be easier to tackle the obstacles in fairer manner. It will certainly help to bridge the gap between human rights treaty standards and everyday reality.

Yvonne Donders, in the following Chapter, holds the position that although cultural indicators are essential to protect human dignity but these are the least developed compared to other categories of human rights. He opines that the main reason is that the

concept of culture is not static and it is more of evolving natures so it is not easy to define. This lengthy chapter entails various aspects relating to right to take part in cultural life that involves wide range of issues. This broad range of issues concerning the right to take part in cultural life poses questions about the normative content of this right. The chapter also emphasizes on the state obligations with regard to cultural rights and issues related to protection of heritage, such as museums, libraries and archives. The author concludes that more clarification is needed to advance the cultural rights as this right has been poorly elaborated in terms of content and scope.

The least elaborated human right is the right to enjoy the benefits of scientific progress and its applications. It is discussed by William Schabs in the next section. Although it has been set out in Article 27(1) of the Universal Declaration of Human Rights and Article 15(1) of ICESCR, but is being neglected by the international human rights community. He as well cites other documents, that within the debates on the effects of globalization, it is being recognized that trade related aspects of intellectual property may threaten the realization of human rights. The author has also related this right the with right to health, food, and right to receive and impart information, i.e., communication and technologies. Lastly, he insists that the issues involved in the protection and promotion of the right to benefit from scientific progress need to be further enlightened.

Book of this kind cannot have a single focus, except focusing on the protection and promotion of human rights. It is imperative to note that all the contributors strongly accentuate the concerns interconnected to human rights. It is an extraordinary contribution and excellent reading material, as all authors have taken tangible scholastic position. It combines insights into the content, scope of application and corresponding state obligations of human rights in relation to implementation.

This volume illustrates that much advancement has been on about human rights over the last two decades. However, many issues needs to be further elucidated by means of researches. As human right is an evolving concept, much exploration is needed in this area from different parts of the world which will contribute to the ongoing process. The sharing of information on human rights issues, particularly in the fields of education, culture, and science, should also involve policy makers which permit to further advancements in the dimensions of human rights. The volume is supported by thorough researches and scholarly arguments. The publication is a mine of information and invaluable resource for those working in the area of human rights, and has imbibed the entire possible domains related to human rights.

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Justin Yifu LIN and Boris PLESKOVIC, eds.: ***Higher Education and Development.*** Annual World Bank Conference on Development Economics Regional 2008. Washington DC: World Bank, 2008, pp. 285, Price: $29.95 (paperback) ISBN: 978-0-8213-7123-7 [and]

WORLD BANK (2008): ***Accelerating Catch-Up: Tertiary Education for Growth in Sub-Saharan Africa.*** Directions in Development: Human Development. Washington DC: World Bank, 2008; pp. 180; Price: $25.00 (paperback); ISBN: 978-0-8213-7738-3

For a long time, higher education policy in many developing countries has been based on several questionable premises, such as (a) developing counties do not require higher education; (b) higher education is neither growth-enhancing nor poverty-reducing; (c) higher education has over-expanded at the cost of primary education; and (d) higher education is heavily subsidised by the state, leaving little resources for primary education. Policy prescriptions, particularly from the World Bank, have argued against the expansion of higher education, and pleaded for the development of primary education instead. Neither the inter-dependence between primary, secondary and higher education, nor the crucial role of higher education in development, has been recognised. Resource-scarce governments in many developing countries have also found such prescriptions convenient, and have followed them faithfully either by compulsion or by conviction. Furthermore, global efforts towards 'Education For All,' some of which were initiated on a grand scale at the Jomtien Conference in 1990, have also led many educational planners in developing countries to concentrate exclusively on basic education. In all this, the World Bank has a major role. As Bloom et al (2005) summed up: the World Bank's lack of emphasis on tertiary education has resulted in the overlooking of higher education in development strategies in many developing countries. [David E. Bloom, David Canning, and Kevin Chan (2005). Higher Education and Economic Development in Africa. Washington DC: Human Development Sector, Africa Region, World Bank. http://www.worldbank.org/afr/teia/pdfs/Higher_Education_Econ_Dev.pdf]. All this has actually caused much damage to higher education in developing countries. The declining priority given to higher education has serious long-term implications for development.

However, in recent years the World Bank's approach has considerably changed. It has begun recognising the importance of higher education in development and as David Post observed, the World Bank now Okays public interest in higher education. [David Post, et. al., (2004): World Bank Okays Public Interest in Higher Education. *Higher Education* 48, 213–229.] *Higher Education in Developing Countries: Peril and Promise*, the Report of the Task Force on Higher Education and Society (2000), sponsored jointly by the World Bank and the UNESCO, highlighted the importance of higher education. Constructing Knowledge Societies (2004) can be regarded as the first major one in the new series of studies of the Bank that recognise the critical role of tertiary education in development of the developing countries.

The two books under review also reaffirm the importance of higher education in East-Asia, Sub-Saharan Africa and in developing countries in general. The Annual Bank Conference on Development Economics (ABCDE) has become very popular where some of the best researchers and policy makers present highly perceptive research papers. The ABCDE choosing higher education as its principal theme itself for deliberation is very important. Justin Yifu Lin and Boris Pleskovic have edited the papers presented in the ABCDE 2007, held in China. The other book, '*Accelerating Catch-Up*', prepared by Shahid Yusuf, William Saint and Kaoru Nabeshima under the supervision of Jee-Peng Tan, is published in the Directions in Development Series of the World Bank. Both books powerfully advocate increased attention to higher education.

In the report on Sub-Saharan Africa, the World Bank emphatically argues that for sustaining the recent growth in Sub-Saharan Africa and evolve it into a virtuous spiral and to stimulate even higher and sustained growth rates in a substantial number of African countries, "a significant increase in investment in physical and human capital is needed over an extended period." It is reported that each additional year of education can yield 10-15 percent returns in the form of higher wages in the region. The Bank further argues, "By raising the level of education and its quality, countries in SSA may be able to stimulate innovation, promote the diversification of products and services and maximize returns from capital assets through more efficient allocation and management. In the face of competition from South and East Asian countries, a more skill-intensive route to development could provide both resource-rich and resource-poor countries an avenue for raising domestic value added."

Africa's higher education system is highly inadequate to meet the growing needs. Presently, there are four million students in 650 tertiary institutions. They hardly make a gross enrolment ratio of five percent. Despite rising numbers, the number of students graduating is pitifully small. Average student/staff ratios have increased in all the sub-regions of Africa. Regional and inter-country inequalities are high and the overall quality, measured in terms of research output and other indicators, is well below the world average. Interestingly, in many countries of the region, higher education yields higher returns than primary education. All this stresses the imperative of improving tertiary education in the Sub-Saharan Africa. This forms the main focus of the study. After a crisp analysis of the higher education system in Sub-Saharan Africa, the Bank recommends (a) evolving a strategy for national human resource development, (b) reforms in financing arrangements, (c) institutional autonomy, (d) encouragement to diversity in teaching and learning techniques, (e) strengthening of postgraduate programmes, and (f) a search for lower-cost delivery alternatives for tertiary education.

While these recommendations are good in themselves, the Bank refuses to note the importance of certain aspects of higher education in Sub-Saharan Africa while making the recommendations. The higher education system in the region is highly privatised, with as many as 450 out of the 650 institutions being private institutions, accounting for, only 18 percent of the enrolments in the region. The large private system may be responsible for inadequate growth of the system – quantitatively as well as qualitatively.

Secondly, public expenditure on education accounts for 3.3 percent of the regional national income, a figure less than many other countries in the region. World Bank investments in higher education in the region have declined steeply from around US$164 million in 1992 to around US$ 14 million in 2000. In the recent years, however, there seems to be a reversal in the trend. Even though the Bank is well aware of these aspects, it does not stress the need to regulate private higher education, or increase public investment, or increase Bank lending for tertiary education.

The ABCDE volume covers five main themes on higher education: higher education and migration, private-public provision of higher education, financing of higher education, technological innovation, and higher education and labour markets. There are nine papers in the volume, including three keynote addresses. All of three argue that higher education is the key to advancing economic development. The contribution of higher education to economic development is both direct and indirect – directly by supplying skilled manpower to the economy and indirectly and perhaps more importantly, through increasing the ability to make inventions and innovations, including technological innovations, an aspect that Maryann Feldman and Ian Stewart have highlighted in their paper in the book. They also highlight the inter-linkages between universities and industry and how such linkages help in more innovations and transfer of technology.

The returns to higher education have increased accordingly not only in some developed countries but also in many developing countries, as Francoise Bourguignon and Halsey Rogers have documented. This is due to increasing demand for skilled manpower, which will result in further demand for higher education. This looks like a welcome feature. But Bourguignon and Rogers argue that if this trend continues, it will widen the earnings differentials between highly educated and less educated workers, and income and social inequalities will deepen. This can be a problem in India too, where demand for more skilled manpower is rapidly increasing, as Pawan Agrawal has shown in the concluding chapter of the book. Short-sighted policies may accordingly suggest curtailment of demand for higher education to reduce earnings differentials. But a sound policy could call for expansion of quality school education to the masses, along with expansion of higher education.

Weifang Min focuses on financing of higher education in East Asia, including specifically China. He notes that cost sharing in East Asian economies, particularly Japan and Korea, took the form of enrolment in private institutions. Private education has thrived because the public sector has not made adequate investments in higher education, and hence has been unable to meet the growing demand, a typical phenomenon of 'excess demand.' Min presents an interesting typology in this context: in Europe and also North America public sector has been dominant with 70-100 percent enrolments being in public sector, while in East Asia the corresponding enrolments account for only 20 percent. In contrast, while in North America, investments in education by both the governments and families are high, in Europe government investments are high and family investments are relatively low. The opposite is the situation in East Asia – low government investments

and high family investments. This may mean that governments and families complement each other in North America, but they substitute each other in Europe and East Asia. This suggests that we need different policies in different contexts.

The issue of brain drain is no more treated as a problem. It is discussed nowadays under different titles which are more positive, like brain gain, brain bank and brain circulation. Mark Rosenzweig discusses the issue of brain circulation within Asian countries. The outflow of students and graduates from developing countries to developed countries can be explained in terms of better paying jobs in developed countries on the one hand and on the other domestic policies regarding investments in higher education. Intra-Asian migration can also be explained, as Rosenzweig shows, with the help of the same factors. Low levels of domestic investment in higher education and inadequate supply of higher education and also paradoxically large expansion of higher education cause outflow of students and graduates to other countries. The former explains better the outflow of students for higher education, and the later the outflow of graduates for employment.

While there is a significant change in the approach of the World Bank towards higher education in developing countries, however it has got confined to the recognition of the importance of higher education. The Bank still strongly feels and argues that private sector can play an important role in the requisite expansion of higher education and that governments need not necessary assume a major role in this. Also the Bank believes that cost recovery measures like student fees and student loans can serve as effective methods of financing of higher education. These two issues are the focus of Daniel Levy and Nicholas Barr's two scholarly papers. Levy argues that higher education rarely remains a single-sector phenomenon; both public and private sectors co-exist in many countries, though the two sectors contrast and interact, producing more often several undesirable effects than positive effects on the growth of higher education. As Cheng Kai-ming notes, while commenting on Daniel Levy's paper, that governments are yet to learn how to dance with private participation in higher education. Nicholas Barr, an expert on student loans, highlights the strengths of student loan mechanisms. According to Barr, while this is a desirable scheme, its feasibility is not an easy issue. It could be very difficult to implement and administer loans and more importantly recover loans. Developing countries have to develop technical capacities to effectively administer loans.

While all the papers in the volume are quite useful and insightful, with very good analyses and comments by expert commentators, occasionally one finds problems with some statistics quoted. For example, Alan Winters (Director of the Development Research Group of the World Bank) mentions in a keynote address, that 'the number of colleges and universities has increased from around 5,000 to 12,000 since 1990' in India (p.16). Actually the number increased from 6800 in 1990-91 to above 21,000 in 2005-06. Similarly, while Winters quotes that 'there are now 3 million graduates per year, of whom 400,000 are engineers' in India, the outturn of degree level graduates in engineering and technology in 2002, the latest year for which detailed data are available, was of the order of about 102,000 (*Manpower Profile, Indian Yearbook 2008*. Institute of

Applied Manpower Research, New Delhi, 2008). Such mistakes, though minor and do not take away the thrust of the arguments made by the authors, nevertheless may lead any to doubt or even question the database of the organisations, like the World Bank. (These figures are reported to be based on UNESCO sources). It is important to be more careful about the data sources on the one hand when such data are available from several sources, and secondly it is important to build strong reliable database on the other by the international and national organisations, so that policies formulated are sound and effective.

To conclude, both books supplement each other and provide a very good reading on the 'higher education imperative.' They provide a marginally different reading from what we have read of the Bank's studies earlier. That is good, but not adequate.

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