Re-Examining the Inter-Regional Differentials for Elementary Education:

A Case of Coastal Andhra & Telengana region in the state of Andhra Pradesh

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Abstract

This paper examines the differentials existing across the regions of Telengana and Coastal Andhra (Kosta) [1], to identify bias in development priority – in the sector of elementary education. Traditional literature has always used literacy and enrolment variables to assess education, which has not kept view of the social context of elementary education. It is evident that the socio-cultural, religious, economic and demographic factors play a vital role in enhancing or diminishing educational chances of the children. Essentially the paper looks into the various issues manifested in the system of Elementary education, such as social inequalities of caste, class and gender. It studies the regions in terms of the available qualitative infrastructure in the form of qualified teachers and government spending apart from the available facilities provided in the schools. The study has used the variables furnished from secondary references, notably the *District Information System for Education (DISE)* data for the year 2007-08, and *Sarva Shiksha Abhiyan (SSA) Household Survey* Data 2007, apart from using data from other commonly used references (such as the census). The challenges these differentiated circumstances pose for the children create the differences in educational attainment. The attempt is hence to throw light on the 'differential achievement in education' of the children across these regions due to the scenarios they prevail in. What we find is that Telengana does compare poorly on various educational variables to Coastal Andhra, however there are similarities in the trend prevailing across these regions and eventually policy resolutions to improve the prevalent scenario of elementary education are suggested at the state level.

Key Words

Elementary education, differential achievement in education [2], differentials, literacy, enrolment, social context of elementary education

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[1] Note: During the course of this paper, the region of Coastal Andhra may be referred to as Kosta.

[2] Note: It needs to be understood that *'Differential achievement in education'* and *'differentials'* are totally different elements.

- *Differentials* refer to the indicators such as *change in literacy rates, enrolment, dropout rates* etc (among others) that exist across different regions.
- However *differential achievement in education* draws its definition from the theory of differential education propounded by J.E.Wallace (1922) which suggests that other than a child's IQ, there are other factors that have a more prominent impact on one's education. These factors may include social class background, gender and ethnicity etc.

Introduction

This paper makes an attempt to examine various aspects of education in the state of Andhra Pradesh at a disaggregate level. Though it relies on secondary sources of data, it draws inferences made from other micro and macro studies conducted in the state and elsewhere. The approach adopted was to streamline the various *issues* plaguing the Indian elementary education scene at large. These issues (Lall 2005) are that of:

i. *Access:* Apart from the physical availability of institutions, other barriers to access – e.g. socio-economic, linguistic–academic, physical barriers for the disabled, etc.

ii. *Participation & Equity:* Participation rates in Education are poor largely because students from disadvantaged groups continue to find it difficult to pursue it.

iii. *Quality:* Adequate infrastructure, teaching quality, Educational Attainment.

iv. *Relevance:* Education in India needs to be more skill-oriented – both in terms of life-skills as well as livelihood skills.

v. *Management:* Need to build in greater decentralization, accountability, and professionalism.

vi. *Resources:* Is the present share of expenditure for education enough?

Extensive literature has supported the argument that Andhra Pradesh exhibits symptoms of the above mentioned issues in its elementary education sector. As such, we address each of these issues objectively – for the case of Andhra Pradesh across its regional components of Kosta and Telengana – through the assessment of specific identified indicators (from secondary sources). The study of these *indicators/variables/differentials* as we would refer to constitutes this study.

This would hence facilitate an examination of the 'differentiated educational attainment' [3] across the regional ethnicities of Telengana and Kosta, in an attempt to articulate our understanding of the development priority in the sector of elementary education.

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[3] The theory of differential education (Wallace 1922), as well as its justification, rests upon two basic orders of demonstrated fact:

- First, the fact that large individual differences exist in the original and acquired make-up of children and in the rate of the growth and development of their powers and capacities;
- And secondly, the fact that children who exhibit certain well-defined kinds and degrees of specific or generic, differences require special physical and hygienic treatment or educational training. This is either because (he ordinary treatment does not eradicate or adequately ameliorate their handicaps, or because it does not furnish sufficient opportunity for the development of their special capacities.
- In addition to this, we add that differentiated circumstances that prevail with respect to the child include the social context. It includes the family and the extended kin group, the caste hierarchy, the economic conditions and class relations, the religious beliefs and practices and the social demography of the region **(Premji Foundation 2004)**. Thus the study of prevalent differentials would involve the examination of aspects such as social inequalities, the availability of school-related infrastructure, availability of faculty, the local livelihood and the very access to the education facility.

As such, putting the study into perspective, the examination would address:

a. Trends in the status of primary education and public expenditure on primary education in a regional context,
b. Factors (demographic, socio-economic etc) influencing educational attainment in a regional context, and
c. Constraints (economic, institutional and policy) on achieving total literacy or higher levels of performance in the elementary education sector. The intention here is to examine the problem of schooling (primary) at the district level and also between rural and urban situations.

Trends in Literacy

Andhra Pradesh exhibits a lower literacy rate (61%) than the national average (65%). However, the gap between the two has narrowed down during the last decade (1991-01). The gap is more in the case of male literacy than that of female literacy [4].

The improvement is significant in the case of Female literacy in the state when compared to the all-India level *(see table 1)*. An added perspective to this is that, in rural Andhra Pradesh, there are 731 households for every thousand households without female literate and 465 households without any literate in the family. At the all India (rural) level these figures are 633 and 331 households respectively [5].

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[4] It may be noted that primary education and literacy represent different levels or degrees of learning. However, the differences between these two seem to be narrowing in the case of Andhra Pradesh. This may be due to the universalization programmes of the government (the DPEP), and other initiatives post the 1986 public-policy in education over the decade of 1991-01.

[5] Since the number of households without female literates and without any literates is higher in AP, as against the nation-wide figure, hence the effective literacy rate will be much below than that of all India level (Reddy and Rao 2003).

For, an illiterate in a household with at least one literate (proximate illiteracy) will be much better off than an illiterate in a household without any literate person (isolated illiteracy) due to the externality affect of literacy (Basu, Foster and Subramaniam 2000). This externality will be stronger (positive) in the households in which at least one female member is literate. The female literacy in the state is low even in urban areas as compared to all India. This may be attributed to the zamindars of the Telugu speaking areas have not encouraged universal education in the coastal as well as Telengana regions.

Table 1: Trends in Literacy Rates across Regions

Region	Category	1971		1981		1991		2001	
		Lit - %	CV	Lit - %	CV	Lit - %	CV	Lit - %	CV
Coastal Andhra	**Male**	35.5	13.5	48.3	13.1	55	8.4	70.9	6
	Female	19.5	34.8	27.8	32.5	35	24.5	54.1	17.2
	Total	27.61	20.9	37.63	19.9	45.07	14.4	62.5	10.6
Telangana	**Male**	27.4	29.5	43.9	28.8	52.1	19.6	69	9.5
	Female	10.7	66.3	20.5	67.1	28.5	45.2	47	22.7
	Total	19.14	**39.8**	32.18	**41.7**	40.47	**28.5**	58	**14.8**
Andhra Pradesh	**Male**	33.18	22.8	46.7	20.6	55.1	14.5	70.9	8
	Female	15.8	51.4	24.9	47.6	32.7	33.9	51.2	20.1
	Total	24.57	30.9	36.43	29.6	44.09	21.1	61.1	12.7

Source: Census of India
Note: CV = Coefficient of Variation in percentages.

As per 2001 census, coastal Andhra region attained 62.5 per cent while Telengana regions had attained 58 per cent literacy, and the state figure being 61.1 per cent. The coefficient of variance is significantly higher in the Telengana region during the early decades, but has fallen substantially (suggesting the educational backwardness of the region).

Between 1971 and 2001, along with the increase in the literacy rates, the regional disparities (as evident from the CV – Coefficient of Variation) [6] have come down substantially at the state level.

Table 2: Rural-Urban Disparity Index across Regions

Region	1971	1981	1991	2001
Coastal Andhra	50.4	49.5	41.2	23.3
Telengana	**67.3**	**63.4**	**54.4**	**35**
Andhra Pradesh	58.2	54.8	46.2	27.6

Source: Census of India

The rural-urban dichotomy exists very evidently in case of Telengana [7], and is highest throughout all the periods, although a sharp decline has been seen between 1991 and 2001.

[6] Coefficient of Variance: $c_v = \frac{\sigma}{|\mu|}$ - Standard deviation; Mean

[7] The Urban Rural disparity Index have been calculated by taking the ratio of urban to rural literacy rates multiplied by hundred. The index ranges from '0' to '100'. Disparities tend to decline along with the ratio and vice versa.

Table 3: Gender Disparity Index across Regions

Region	1971	1981	1991	2001
Coastal Andhra	45.1	42.4	36.4	23.7
Telengana	60.9	53.3	45.3	31.9
Andhra Pradesh	54.7	47.8	42.3	27.8
All India	52.2	46.8	38.7	29

Source: Census of India

The situation of Gender disparity has been high but has significantly has improved in Andhra Pradesh in comparison to the national figures over the period of 1991-01 [8]. Telengana has shown far greater disparity than all the regional components across all the periods and – as per 2001 census figures - the gap in disparity is substantial at 31.9 per cent. However, the drop in disparity has been sharper in its case compared to that of Coastal Andhra, and hence the narrowing of the inter-regional variations.

Table 4: Social Disparity Index (Literacy Rates of SC/ST) across Regions

Region	1971		1981		1991		2001	
	SC	ST	SC	ST	SC	ST	SC	ST
Coastal Andhra	50.8	76.9	36	26.9	60.5	68.3	41.45	58.84
Telengana	69.4	71.2	53.4	43.4	64.7	74.4	34.67	48.11
Andhra Pradesh	60.8	74.5	47.2	46.2	60.8	71.1	53.5	37.1
All India	63.5	72.5	58.6	50	60.7	68.3	37.4	29.6

Source: Census of India

The Telengana regions have recorded a remarkable improvement in its social disparity variables. Both the regions compare favourably better than the state average in SC and ST literacy rates. Incidentally, it's been noted that the SC and ST populations inhabit the most of the villages with smaller populations (below 500). These smaller habitations due to their small size are prioritised the least for school-related infrastructure and in many cases for the provision of the school itself (Reddy and Rao 2003). Incidentally, such small habitations are predominantly inhabited by SC and ST populations. The neglect of these habitations results in the exclusion of children belonging to these depressed communities - SCs and STs- from opportunities for primary education.

[8] The overwhelming progress in reduction of gender disparity could be attributed to the adult female literacy campaigns in particular (The annual adult education programme Akshara Sankranti first held in 2000 being one of them. As part of the programme, illiterate adults are identified and educated during a six-month course.), and the universalization programmes of the government in education over the decade. Additionally the central programmes such as DPEP and other initiatives post the 1986 public-policy contributed to the cause in education.

Assessment of Flow Rates

We further attempted to evaluate flow variables [9] (retention rates, transition rates, flow rates, dropout rates) that essentially indicate current achievement unlike stock variables which present the outcomes of past efforts. These variables were selected from the District Report Cards 2007-08.

Telengana exhibits a higher transition index *(refer Annexure: Table a)* compared to Andhra. The transition index conveys information on the degree of access or transition from one cycle or level of education to a higher one. Viewed from the lower cycle or level of education, it is considered as an output indicator, viewed from the higher educational cycle or level, it constitutes an indicator of access. As such, we can understand in the case of Telengana that the region is better accessed to secondary education compared to Kosta.

Coastal Andhra however has higher retention compared to Telengana as students dropping out are higher in Telengana *(refer Annexure: table d)*. This means that the high transition rate is a paradox [9]. However, Telengana districts exhibits better variance (4.77) in transition rates compared to Kosta (6.35). This could be due to the greater ratio of secondary and higher-secondary schools to primary schools, in Telengana.

The dropout ratios have fallen at the state level across 1992-00 at 12.3 percentage points, and there has been a similar fall across Coastal Andhra (14.3 percentage points) and Telengana (10.3 percentage points). Telengana also shows a higher dropout rate (46.7 per cent) than Coastal Andhra and the state figure. However this needs to be looked at cautiously in the wake of fictious enrolment [10].

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[9] Refer to the Annexure *tables a, b, c & d* for detailed account of all the flow rates, i.e. – Retention Rates, Transition Rates and Dropout Rates.

[10] The transition paradox in Andhra Pradesh could be due to the phenomenon of fictious enrolment. The state introduced the non-detention system in 1971 under which children are promoted to the next higher class each year irrespective of their progress assessed through any formal test. Teachers were required to canvass all children of school-going age and enrol as many children in school as possible. There are conditions of minimum enrolment of children required for the continuance of a school and the teachers in the school. Because of these conditions the teachers enrol as many names as possible, without any concern as to whether the enrolled children would attend school or not. In some instances, children are enrolled not by parents, but by the teacher, and without their knowledge. Sometimes, the names of children who, in fact, had been enrolled and attended school but had later dropped out on their own for valid reasons, are not deleted from the rolls. Once a child is enrolled in the first year of primary school, his/her name will be carried throughout the primary school stage. The automatic promotion system facilitates and necessitates such practices (GOI, 1987). In recent years, after the implementation of mid-day meals scheme, school enrolment has greatly increased as every child whose name is registered is eligible for benefits from the scheme. But, many children are not regular in attending school, nor do teachers bother to ensure attendance.

Availability of School Infrastructure

Telengana – on all counts – has lower school-related facilities compared to Kosta. Most of these schools without any common toilets would be attributed to the schools in backward regions in smaller habitations with inappropriate infrastructure.

Table 6: Qualitative Indicators in Primary Schools across Regions

District	Schools with common toilets	Schools with girls toilets	Schools with drinking water facility	Government Schools having Kitchen-shed
Telengana	59.66	49.43	85.75	33.11 (28.03 without Hyderabad)
Coastal Andhra	75.32	52.95	93.53	28.88
Andhra Pradesh	61.27	46.66	90.00	32.46
India	62.67	50.05	86.75	0.46

Source: DISE Raw Data 2007-08

Among other qualitative indicators for the two study regions, there has been a consistent rise in the trend of student teacher ratio for Telengana. However coastal Andhra has exhibited a similar trend as the state in student teacher ratios. More notably, during the last critical decade of 1991-01 – which has seen landmark policy initiatives for primary education at the centre and state level – Telengana has shown a positive rise in Student teacher ratio (4.3 per cent), while in Coastal Andhra the ratio has fallen drastically at 21.8 per cent. *(refer Annexure: Table e)*

The Supply Demand Tussle

In the elementary education sector a range of supply and demand issues account for the issues generally raised. The supply side issues include aspects like access (availability of schools in the vicinity), other school-related infrastructure, quality of education (commitment of teachers, curriculum) etc. Similarly on the demand side the issues are high opportunity costs, high costs of education, low returns from education, etc.

Although both these demand supply side aspects are crucial, since primary education has been made a fundamental right the stress is often on the supply side factors. The poor performance in attaining higher literacy rates could be viewed from the supply as well as demand sides. Analysing the supply factors in specific will throw light on how far the government's role has succeeded in contributing to the growth of elementary education in the state. From all the observation, we could certainly appreciate the need to integrate demand and supply factors in order to bring the children to school and retain them. Bringing the children to school, keeping them in school and make them literate goes beyond access

factors. This demands, apart from demand factors, intensive institutional arrangements such as social mobilisation of the community on child labour and education (Dev 2001).

Organizations such as the MV foundation have shown success at such attempts, as would be evident from the various approaches - adopted for the cause of universalizing education – such as its Area-based approach. [11] Its replicability at the macro level needs to be explored. This calls for addressing the problem through evolution of proper institutional arrangements rather than focusing on demand (poverty) and supply (simple access) factors.

Assessment of School Management

In order to assess the performance of the various school-management types post the decentralisation of our education system, we see the schools with respect to their management. What we would observe is that majority of the share – over 70 per cent – of the primary and upper-primary schools fall under the administration of Mandal Parishads at the taluka (Mandal) level. This trend is similar at the state and across both the regions of Andhra and Telengana; however the share is marginally lower for Telengana at 67.36 per cent.

Table 7: Management-wise share of Elementary schools

DISTRICT	Management-wise distribution of Elementary Schools					
	Central Government	State Government	Mandal Parishad	Municipal	Aided	Un-Aided
Telengana	0.02	9.91	67.36	0.00	1.75	20.95
Coastal Andhra	0.03	6.10	76.44	3.69	5.18	8.56
Andhra Pradesh	0.02	6.74	73.12	2.23	3.28	14.60

Source: Commissioner & Directorate of School Education, Andhra Pradesh

Un-aided schools which are elementary schools in the private sector (most of which are concentrated in urban areas), constitute the next highest share of schools. At the state level, it accounts for 14.6 per cent of the schools. Telengana has a prominent share of unaided schools at almost 21 per cent, against Coastal Andhra which has only 8.5 per cent of schools of this type.

[11] The area based approach is pioneering effort adopted by the M.V. Foundation in the state of Andhra Pradesh to declare and maintain hundreds of _child labour free zones‘ thereby concentrating on protecting the rights of all children and ensuring that all of them attend full time formal schools. For those children who are out of school, it draws up specific plans to withdraw them from work and make all arrangements to prepare such children to be integrated into schools. For those who are already in schools, planning is facilitated to ensure that the children are retained in school and continue to be so without any disruption. By doing this, child labour is prevented and children‘s rights are protected and the zones are declared _child-labour free zones‘.

Aided private schools on the other hand, constitute a marginal share, with the share highest in Coastal Andhra, which could be attributed to the region's demand to better quality education, and the government's attention to further the cause [12].

Table 8: Management-wise share of enrolment in Elementary schools

Region	Management-wise Enrolment in Elementary Schools					
	Central Govt	State Govt	Mandal Parishad	Municipal	Aided	Un-Aided
Telengana	0.05	6.04	42.35	0.00	3.35	48.20
Coastal Andhra	0.03	3.05	51.24	3.50	6.14	36.04
A.P.	0.04	4.14	49.29	2.50	4.91	39.11

Source: Commissioner & Directorate of School Education, Andhra Pradesh

As we can see in table 8, the majority share of enrolment is accounted for by the schools administered by the Mandal Parishads – at 49.29 per cent. Coastal Andhra has the greater share of Mandal Parishad schools with 51.24 per cent as against Telengana, which has 42.35 per cent. These schools account for over close to 70 per cent or more of the share of schools at the state and regional levels, hence suggesting that the share of the schools is not proportional to the enrolment.

However, the private un-aided schools are not far behind with 39.11 per cent. It's noteworthy that this share of enrolment – by these schools - is achieved with only 14.6 per cent share of the schools. Telengana has the greater share of enrolment from un-aided schools at 48.20 per cent (from 20.95 per cent share of schools), while Coastal Andhra has 36.04 per cent (from 8.56 per cent) – thus scoring higher on enrolment per school.

Table 9: Management-wise distribution of teachers (Teachers per 1000 schools) in Elementary schools

Region	District Management						Total
	Central Govt	State Govt	Mandal Parishad	Municipal	Aided	Un-Aided	
Telengana	58.88	34.98	34.54	0.00	22.07	30.69	32.30
Coastal Andhra	45.73	27.20	31.93	23.01	21.66	16.89	25.43
Andhra Pradesh	52.80	35.02	38.09	22.31	23.07	30.78	33.98

Source: Commissioner & Directorate of School Education, Andhra Pradesh

[12] This trend takes into account the growing demand for Private schools, especially since the late 1980s, and more so in the 1990s **(AP HDR 2007)**. With a spurt of private-aided and un-aided schools mushrooming in rural, semi-urban and urban areas, the percentage growth of municipal schools to other schools, is minimal and to the extent of being negligible. The growth of educational institutions over the years show that private schools, with their competitive standards, attractive packages and the facilities that they offer to the clients in terms of quality of teachers and the quality of education imparted, seem to attract more students towards them. The growing awareness about the value of education with rising expectations from parents about the quality of schooling, and the general feeling that public schools are not offering good quality education has led to an increasing demand for private schools. The failure of public schools in maintaining quality is attributed to many factors from teachers to infrastructure.

The Central Government schools seem to be performing best on this regard with the highest number of teachers per 1000 students, with Telengana highest (at 58.88 teachers per 1000 students enrolled), while Coastal Andhra has 45.73 teachers per 1000 students.

On this regard, Telengana performs better (at 32.30 teachers per 1000 students enrolled), while Coastal Andhra has 25.43. The availability of teachers is consistently high for Telengana region, particularly for Mandal Parishad schools and Un-aided Schools, both of which account for the major share of schools across the study regions [13].

[13] This is a far from the 'norms for intervention of the Sarva Shisha Abhyan' which suggests One teacher for every 40 children in Primary and upper primary level.

Public Spending on education

The supply side issues such as the provision of schooling, availability of school-related infrastructure etc. are directly related to public spending on education. As we understand from the table below, the cost of education accentuates the demand problems.

Table 10: Expenditure per Student by School Type (Rs/Year)

Region	Expenditure per Student by School Type (Rs/Year)								
		Government				Private			
		Boys	%*	Girls	%*	Boys	%*	Girls	%*
Coastal Andhra	Developed	840	1.1	833	1	2065	51.6	2068	41.9
	Backward	497	1.1	429	1.1	1335	50.1	1001	41.2
Telangana	Developed	398	4.8	376	2.2	1060	39	2150	27.9
	Backward	451	2	442	2.2	1467	25.3	-	-

Source: Rao, 2002
Note: Figures in brackets indicate proportion of expenditure on school fee.

The costs of education at the primary level seem to be much higher when all the costs such as uniform, transport costs, pocket money, etc., are included. The costs are about four times higher in the case of private schools compared to government schools. The direct costs of school fee and textbooks account for less than 3-4 per cent of the total costs in the public schools while it is above 40 per cent in the case of private schools [14].

Table 11: Assessment of government grants across regions

Region	Schools receiving School Development Grant	Schools receiving TLM Grant
Telangana	61.65	58.45
Coastal Andhra	68.64	67.02
Andhra Pradesh	58.79	59.98
India	15.30	14.78

Source: DISE Raw data 2007-08

In the case of AP, surprisingly the share of primary education has reduced from 55 per cent (in 1995-96) to 53 per cent (in 2001-02). And a disheartening trend is that of the spent expenditure an extremely high share of it (84 per cent in 2001-02) is for the salaries of teachers. This becomes all the more threatening when we observe the large share of para teachers in primary education in Andhra Pradesh. (Bajpai, Dholakia and Sachs 2008).

In their study on Scaling up Primary Education Services in Rural India, Bajpai, Dholakia and Sachs (2008) also have expressed this aspect of teacher's salaries constitute most of the revenue expenditure on education. However, this is considered a non-plan expenditure item in the state budget.

[14] More than a third of this expenditure goes towards uniform followed by notebooks, pocket money, etc. (Rao 2002)

In the case of a severe resource crunch at the state level, the non-plan expenditures are always the easy targets for the cuts. That is how, sanctioned posts of teachers in primary and secondary schools are allowed to remain unfilled for years leading to the serious scarcity of teachers in the public schools. Currently, these vacancies are filled on ad hoc temporary basis by para-teachers who are paid almost one-fourth or less of the salary of a regular teacher. While this is a reasonable solution to save public resources in the short run, it may not work in the long run unless a new scale/cadre of para-teachers is formally established in the government.

It needs to be noted that "Andhra Pradesh (AP) has a recognition among other states like Bihar, Chhattisgarh, Jharkhand, MP, Rajasthan and UP, for hiring together 68% of all para-teachers across the country. The southern states of Kerala, Karnataka and Tamil Nadu, all of which perform better than AP, have a negligible percentage of para-teachers" (Mehta 2008).

Table 12: Teachers and Para Teachers across regions

Region	Total Teachers		% of Para Teachers
	In Govt Schools	In Private Schools	
Telengana	55.98	44.02	13.65
Coastal Andhra	**73.24**	**26.76**	**16.15**
Andhra Pradesh	64.23	35.77	15.19
India	69.00	31.00	10.30

Source: DISE Raw data 2007-08

As noted in the table above, Coastal Andhra has 16.15 per cent of its total faculty strength in the form of Para teachers. This is part could contributes to a marginal reduction in pupil-teacher ratios (PTRs), elimination of single teacher schools, lowers the cost of providing elementary education. These are confirmed by teacher attendance studies (Kingdon and Rao 2010).

If we are to look into the professional qualification of the mentioned share of para teachers, that's where we get a clearer picture. Coastal Andhra – as earlier mentioned – has 16.15 per cent share of the elementary faculty as para teachers, and more than half of them, i.e. 58 per cent have graduate or post graduate qualification. However, in the case of Telengana, of the 13.65 per cent teaching faculty, this figure stands at 39.21 per cent.

The rest of the contract teachers (as para-teachers are also referred to) – a staggering 60.79 per cent have received education up to Higher Secondary only. A more startling statistic is that half of these teachers are educated up to secondary level only. So there is a clear quality differential existing between Coastal Andhra and Telengana.

Table 13: Regular Teachers based on Professional Qualifications

Region	Share of Regular Teachers by Educational Qualification		
	Up to Higher Secondary	Graduate	Post Graduate and above
Andhra Pradesh	16.29	57.31	26.40
Coastal Andhra	14.86	57.36	27.78
Telangana	17.72	57.49	24.79

Source: DISE Raw data 2007-08

The same trend is also visible in the case of regular teachers although not substantial. Coastal Andhra has 85 per cent regular teaching staff with graduate or more qualification, whereas this stands at 82 per cent for Telengana, slightly lower than the state level (83.71 per cent).

Table 14: Para Teachers based on Professional Qualifications

Region	Share of Para Teachers by Educational Qualification		
	Upto Higher Secondary	Graduate	Post Graduate and above
Andhra Pradesh	49.38	44.03	6.59
Coastal Andhra	40.77	50.67	8.56
Telangana	60.79	34.42	4.79

Source: DISE Raw data 2007-08

While taking into consideration the case of para-teachers, since they are locally hired, it is thought they may be absent less often and be more accountable to the VECs, the school management committee and parents.

The malady of Out of School Children

This assessment was achieved from the data sourced from Household surveys – as part of the SSA - were conducted to know the number of out-of-school children and reasons of never been enrolled and dropout.

Table 15: Reasons for Never Enrolled or Drop Out

Region	Engaged in Work	Lack of Access	Migration of Parents	Others	Sibling Care
Coastal Andhra	34.80	6.87	18.58	35.11	4.64
Telangana	44.43	11.00	9.83	28.24	6.51

Source: SSA Household Survey 2007-08

Engagement in work is the single largest reason for non-attendance of schools by children. In Telengana, it stands at 44.43 per cent, and 34.80 per cent in Coastal Andhra. Apart from work, we can observe that 18.58 per cent of the students in Kosta are found dropping out or have never enrolled due to the migration of their parents, while this has only accounted for 9.83 per cent of permanent non-attendance in Telengana. Notably, lack of access accounts for a greater share of dropouts/non-enrolment in Telengana than in Coastal Andhra.

Table 16: Nature of work in which child is engaged

Region	Agri. Labour	Begging / Rag Pickers	Const. Work	Domestic Work	Indus. Worker	Mining Work	Working - Restaurant	Working - Shops	Others
Kosta	22.50	0.75	1.47	31.18	2.89	0.68	1.47	6.49	32.5
Telengana	22.71	0.61	0.91	38.71	2.27	0.43	1.74	9.54	23.07

Source: SSA Household Survey 2007-08

Taking into account the child labour involved in enterprises that constitute establishment enterprises, it stands at a staggering 29.84 per cent in Telengana and 28.8 per cent in Coastal Andhra [15].

Apart from this, agricultural labour accounts for a great share of children in Telengana (24.14 per cent) and Coastal Andhra (22.34 per cent) to drop-out or not enrol at all. This could be attributed to the backwardness in the agricultural sector thus accounting for the downtrodden social disparity of the rural agricultural households in Telengana.

[15] An Enterprise is an undertaking engaged in production of goods and / or services not for the sole purpose of own consumption; When such an enterprise is run by employing at least one hired worker on a fairly regular basis, it is termed as an Establishment enterprise.

Conclusion

What becomes evident from the course of this study is that it all comes down the management of the supply and demand issues. The supply side issues include aspects like access (availability of schools in the vicinity), other school-related infrastructure, quality of education (commitment of teachers, curriculum etc.). Similarly on the demand side the issues are high opportunity costs, high costs of education, low returns from education, etc. Schemes should achieve an integration of demand and supply aspects. While supply factors ensure higher enrolment, demand factors help improving the retention rates.

Coming to the issue of dropping out in these schools, we must understand within this scenario that the problem of dropouts begins at the later stage of primary and post-primary level. Hence the availability of and accessibility to middle and high schools should be synchronised with respect to the number of the primary schools.

Then coming to address the share of schools under government and private administration there needs to measures by the government to facilitate the private players to increase the share of schools. Going by precedent, this scenario does not hold well for the large share of rural and poverty-stricken households as the cost of education among these private schools is extremely high *(Refer: Table 11- Expenditure per Student by School Type)*. We must understand that more private players entering the sector may improve standards of service however, this might come at a premium – which would even affect the large share of middle class population who regularly attend government schools. This speaks of the need for a balance to be maintained and the idea is for the government not to withdraw, but provide competent and qualitative benchmarks for the private schools through their illustrative presence in different areas. The government must also adopt an integrated approach among the education and other departments to take responsibility of all the school-related amenities, as this is the only real means to retain the children in the school.

This could be achieved if the government could facilitate the following for the schools under private administration:

- Providing appropriate incentives,
- Establish inspection norms,
- Admission criteria and procedures, etc.

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We must identify with a unique feature of Andhra Pradesh i.e. - the development of participatory institutions. The state is well-known for its strong emphasis on rural

development, community empowerment and support for women's groups. This needs to be capitalised in the state government's strategies and interventions to facilitate bringing more number of out-of-school children to school. Most of the efforts in community initiatives would needs awareness, counselling and creating learning opportunities. Campaigns such as the *'Chaduvulapanduga'* and the *'Badibata'* (APHDR 2007) held during the late 1990's and post 2000's should be revived and implemented as a continuous process through community mobilization. Because if the community do not hold a stake in this process, any other attempt is only an ad-hoc effort by the government, with no real long term gain.

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Although both demand supply side aspects are crucial, since primary education has been made a fundamental right the stress is often on the supply side factors. However, as clear as it is, only a balance of these two factors will bring the scenario under control. This could be possible in two ways - first, by meeting the manifest demand for schooling from parents who can not only afford it but who are also aware of the value of education and are willing to send their children to school; second, by transforming latent demand into manifest demand or by creating demand. Latent demand indicates parents who are potential consumers of educational services but, who, owing either to lack of willingness or affordability or both, are not sending their children to school. Provision of easy access (physical, economic and social) to school may encourage parents to send their children to school; but it is the quality of schooling that matters in retaining children (throughout the completion of their schooling cycle) in school, as either inadequate access or poor quality of schooling or both together may discourage manifest demand. Turning latent demand into manifest demand needs pro-active initiatives by educational service providers through providing incentives and persuading and motivating parents (of school-age children). This becomes a classic case of supply creating its own demand for schooling.

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When we draw our attention to the public spending on education, we do argue for greater expenditure. However, we must apprehend that a staggering share of the present expenditure goes on teacher's salaries. Though landmark initiatives have been stipulated to improve access and enrolment, none of this might actually help if the expenditure is not directed at improvement of school-related infrastructure (which as earlier stated is the single strong reason to keep the students in school). Hence, there needs to be a conscious effort towards hiring Full-time Teachers. The argument against this is the high salaries of these teachers and

their strong unions which do not allow a reduction in their pay. As such the effort on this regard should facilitate a minimum threshold for appointment of para teachers. Apart from that a conversion of the salaries of teachers into plan expenditure item (as they are presently non-plan expenditure items). In the overall environment of severe resource crunch and constant pressure under Fiscal Responsibility and Budget Management (FRBM) concerns even at the state level, the non-plan expenditures are always the easy targets for the cuts. That is how, sanctioned posts of teachers in primary and secondary schools are allowed to remain unfilled for years leading to the serious scarcity of teachers in the public schools.

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Annexure

Table a: GPI and Flow rates across Regions

	District	Gender Parity Index	Retention Rate	Transition Rate
Telengana	Adilabad	0.96	85.3	86.8
	Karimnagar	0.97	100	96.3
	Khammam	0.98	100	94.8
	Mahbubnagar	0.94	58.2	83.1
	Medak	0.97	64	93.1
	Nalgonda	0.95	86.5	92
	Nizamabad	0.95	83.7	91.8
	Rangareddi	0.93	90.9	98
	Warangal	0.97	63.1	94.2
	Hyderabad	1.01	94.3	98.1

	District	Gender Parity Index	Retention Rate	Transition Rate
Andhra	East Godavari	1	99.1	91.9
	Guntur	1.01	70.8	83.9
	Krishna	0.99	100	91.7
	Nellore	0.98	87.8	89.1
	Prakasam	0.99	75.2	77.9
	Srikakulam	0.97	97.4	88.1
	Visakhapatnam	0.99	94.2	89.7
	Vizianagaram	0.96	77.1	80.4
	West Godavari	1	100	96.4

Source: Gender Parity Index (AP HDR 2007); Retention Rate & Transition Rate (District Report Cards 2007-08)

Table b: Calculating the coefficient of variance for Retention rates across the regions of Telengana & Coastal Andhra

Retention Rate							
Telangana	**X**	**X**	**X^2**	**Andhra**	**Y**	**Y**	**Y^2**
Adilabad	85.3	4	16.00	**East Godavari**	99.1	10.03	100.60
Karimnagar	100	18.7	349.69	**Guntur**	70.8	-18.27	333.79
Khammam	100	18.7	349.69	**Krishna**	100	10.93	119.46
Mahbubnagar	58.2	-23.1	533.61	**Nellore**	87.8	-1.27	1.61
Medak	64	-17.3	299.29	**Prakasam**	75.2	-13.87	192.38
Nalgonda	86.5	5.2	27.04	**Srikakulam**	97.4	8.33	69.39
Nizamabad	83.7	2.4	5.76	**Visakhapatnam**	94.2	5.13	26.32
Rangareddi	90.9	9.6	92.16	**Vizianagaram**	77.1	-11.97	143.28
Warangal	63.1	-18.2	331.24	**West Godavari**	100	10.93	119.46
Total	**731.70**		2004.48		**801.6**		1106.30
Hyderabad	94.3						
	Mean X (x)	81.30		**Mean Y (y)**	89.07		

Coefficient of Variation (C.V.) – Telengana		**Coefficient of Variation (C.V.) – Andhra**	
Standard Deviation	14.92	**Standard Deviation**	11.09
C.V.	18.36	**C.V.**	12.45

Retention Rate (RR)

$$RR = \frac{\text{Enrolment in Grade IV/V in year 't' – Repeaters in Grade IV/V in year 't'}}{\text{Enrolment in Grade I in year 't – 3'/'t – 4'}} \times 100$$

$$c_v = \frac{\sigma}{|\mu|}$$ Where σ - standard deviation; $|\mu|$ - Mean

Table c: Calculating the coefficient of variance for Transition rates across the regions of Telengana & Coastal Andhra

Transition Rate							
Telangana	**X**	**X**	**X^2**	**Andhra**	**Y**	**y**	**Y^2**
Adilabad	86.8	-5.43	29.48	**East Godavari**	91.9	4.22	17.81
Karimnagar	96.3	4.07	16.56	**Guntur**	83.9	-3.78	14.29
Khammam	94.8	2.57	6.60	**Krishna**	91.7	4.02	16.16
Mahbubnagar	83.1	-9.13	83.36	**Nellore**	89.1	1.42	2.02
Medak	93.1	0.87	0.76	**Prakasam**	77.9	-9.78	95.65
Nalgonda	92	-0.23	0.05	**Srikakulam**	88.1	0.42	0.18
Nizamabad	91.8	-0.43	0.18	**Visakhapatnam**	89.7	2.02	4.08
Rangareddi	98	5.77	33.29	**Vizianagaram**	80.4	-7.28	53.00
Warangal	94.2	1.97	3.88	**West Godavari**	96.4	8.72	76.04
Total	**830.10**		174.18		**789.1**		279.22
Hyderabad	94.3						
	Mean X (x)	92.23		**Mean Y (y)**	87.68		

Coefficient of Variation (C.V.) – Telengana		**Coefficient of Variation (C.V.) – Andhra**	
Standard Deviation	4.40	**Standard Deviation**	5.57
C.V.	4.77	**C.V.**	6.35

Transition Rate (TR)

$$TR = \frac{E_{g+1}^{t+1}}{E_g^t} \times 100$$

where

E_{g+1}^{t+1} = New entrants into Grade V/VI in year 't+1' and

E_g^t = Enrolment in Grade IV/V in year 't'

Table d: Dropouts Ratios in Primary Schools across Regions

Region	1992						2000					
	Boys	range	Girls	Range	Total	range	Boys	Range	Girls	range	Total	range
Coastal Andhra	44.4	23-61	53.7	44-64	**48.9**	42-63	33.1	27-44	36.2	30-49	**34.6**	29 - 46
Telangana	55.3	25-72	61.7	27-75	**57**	26-73	46.2	8-62	47.2	6-64	**46.7**	7-63
Andhra Pradesh	48.5	21-72	56.4	27-75	**52.6**	26-73	39.4	8-62	41.2	6-64	**40.3**	7-63

Source: Department of Education, Govt of Andhra Pradesh
Note: Figures in brackets indicate the range across the districts

Dropout Rate

$$(d_g^t) = \frac{D_g^t}{E_g^t} \times 100$$

where

d_g^t – Number of student's dropping out from Grade 'g' in year 't'

E_g^t = Total number of students in grade 'g' in year 't'

Table e: Trends in Student Teacher Ratios at Primary Level

Region	1981	1991	2001	Percentage Change	
				1981-91	1991-01
Coastal Andhra	37.5	56.3	44	50.1	-21.8
Telangana	23	48.5	50.6	110.9	4.3
Andhra Pradesh	27.5	51.9	46.5	88.7	-10.4
All India	54	59.4	58.8	10	-

Note: * pertains to the year 1998-99.
Source: Census and Department of Education, Govt of Andhra Pradesh.