GROWTH OF EDUCATION IN ANDHRA PRADESH : A STUDY OF REGIONAL DISPARITIES

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requirements for the award of the degree of
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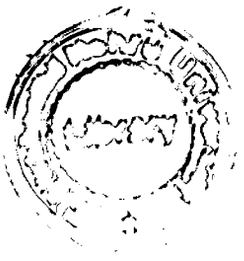
C. UPENDRANADH



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I affirm that the research for this dissertation titled "Growth of Education in Andhra Pradesh: A Study of Regional Disparities", being submitted to the Jawaharlal Nehru University for the award of the Degree of Master of Philosophy in Applied Economics, was carried out entirely by me at the Centre for Development Studies, Trivandrum.

C. Upendranadh

C. Upendranadh

Certified that this dissertation is the bonafide work of C. Upendranadh. This has not been considered for the award of any other degree by any other university.

Supervisors:

P. K. Michael Tharakan

P. K. Michael Tharakan
Associate Fellow

G. N. Rao

G. N. Rao
Fellow

P.S. George

P.S. George
Director,
Centre for Development Studies,
Trivandrum.

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CHAPTER 1

INTRODUCTION

Education has been treated as an investment in human capital, which confers benefits on the individual and society. Expenditure on education has to compete with the basic needs of consumption in the case of an individual or family; and with other forms of priority investments in the case of society. In this respect, educational development has to be analyzed along with the system of organization of production and distribution, with the system of organization of social relations, and with the system of the State and power relations. Functioning of the educational system in a society is conditioned to a large extent by the specificities of the region and the uniqueness of its history.

It is in this context that regional disparities in educational development come to the forefront. Questions such as whether educational facilities are equally distributed across all regions or not and, whether inequities in different regions are converging or diverging over time, become important. There are evidences to show that the educational development of most of the Third World countries are still influenced by hangovers of their colonial contacts. To illustrate such relations in detail and with particular reference to Andhra Pradesh, the Geo-administrative unit under study, a historical appraisal of educational development is necessary.

Our attempt will be to understand regional disparities in

educational growth. The historically determined educational disparities are to be identified by analyzing educational growth under colonial rule. Such an analysis will incorporate the role of the economy and the educational policies of the administrations in the two regions of Andhra Pradesh viz., Andhra and Telangana.

The post-independence educational progress is to be analyzed in terms of various indicators of educational development such as enrollments, public expenditure, stock of educated man-power, and wastage at the district level. Through such an enquiry the economic determinants of educational participation especially at elementary level is expected to be assessed particularly in the context of the objective of the Universalization of primary education.

A Review:

'Modern' educational development of India is dominated by colonialism. Therefore, tracing out of educational development should be with constant reference to colonial society. Different policy formulations and different political and social developments have had their impact on development of education under colonial rule. There were instances of direct intervention by colonial rulers in the educational sphere to meet their narrow personal or group needs. The fact that post Independent India had to start with very wide regional educational differences can be largely attributed to the pattern of colonial educational development. There were regions with

very high literacy rate like Kerala as well as regions in a very low literacy levels such as Uttar Pradesh, Madhya Pradesh, and Bihar. These educational disparities are the manifestations of the colonial educational policies and their varying impact on diverse geographical units of the country.

Rudolph and Rudolph(1969) discussed regional disparities in educational growth in India by aggregating state into two blocks, Rim land and Heart land. They contend that patterns of educational growth of regions have their bearings on the British rule; which had its varying impact on different regions, particularly the Coastal rimland as against Interior heart land. Such an impact accentuated established differences and/or introduced new ones in economic and social spheres including education. They argued that allocation of resources to education has been guided not only by economic but also social and political factors. Thus, apart from historical legacies, administrative and political effectiveness would determine the educational progress of different regions, by generating both the demand and supply. The authors arrived at a composite index of educational growth for each state by using equal weights to each level of education.

Corea J.C.A.(1969) in a study of similar nature, analyzed the educational progress of Srilanka for the past one hundred years in the socio-economic and political contexts. The author observed that disparities in educational systems between Northern Peninsula and the rest of the country were mainly due to the role of Christian Missionaries, who introduced English education in

the northern region as part of their proselytization activities as early as in nineteenth century. At the same time, other regions of Srilanka were having only traditional system of education. With the expanding trade and economy this disparity resulted in unequal opportunities in employment. Christian Missionaries had monopolized English education in the country, with the patronage of the State, resulting in benefits accruing to largely Tamil christian population. This had resulted in the rise of Sinhalese nationalist sentiments during fifties. Thus, the upsurge and ethnic tensions witnessed in that society were manifestations of colonial policies pursued in educational sphere.

Nair, P.R.G (1978), studied the influence of educational development on socio economic factors in the case of the State of Kerala. He observed that in Kerala economic value of education has been perceived much earlier by the general public and the State, than the rest of the country, which resulted in relatively higher rate of both male and female literacy, even before independence. The author contended that this had resulted in the formation of new social equations within the society leading to the emergence of mass social movements. Nevertheless this did not result in an improvement of the occupational structure. Kerala is a case in which the State policy, and awareness of the people have resulted in higher literacy and educational achievements with comparatively low economic development.

Educational systems in the Third World in general have emerged with a peculiar distortion of negligence of Primary

education in favour of Higher levels of education. Since technical manpower was in shortage in the early days of national independence, ex-colonies tried to boost their higher and technical educational sectors. Even granting this factor, it will not entirely explain the tilt toward higher education. At least a substantial part of it is of colonial heritage. This discrepancy itself leads to the choice of treating education as investment in human capital or as consumption.

The concept of education as a form of investment in human capital dates back to Eighteenth and Nineteenth centuries. If educational expenditure is treated as investment, it leads to issues related to returns of education to the individual and to the nation; and in what type of education investments should be made.

Colclough(1982) and Psacharopoulos(1988) provided evidences on the impact of primary education on economic development. These surveys reviewed the developments in the theoretical positions and an empirical evidences thereof, from nineteen sixties onwards. Colclough(1982) provide evidences on impact of primary schooling on economic development, measured through indicators like productivity, incomes and income distribution. He concluded that though there are still debates on theoretical issues,there is a consensus that primary schooling has considerable positive impact on economic development measured by above mentioned indicators. At the same time, evidence is scanty on the effect of primary education on informal sector, particularly on the urban informal sector. The study advocated

broad policy prescriptions toward investing more on primary education. But it ignored the politics of education, especially in Third World educational systems which were subjected to colonial interventions. Psacharopoulos (1988) reviewed the evidence on the nexus between education and development and concluded that 'it provides grounds for confidence that investment in education is a major contributor to development'.

The efforts of identifying the determinants of economic growth in developed nations would also provide a case for investing in education. These studies rested on Human Capital theory which was developed in the sixties. Denison (1974), in an exhaustive study in understanding the determinants of U.S. economic growth, apart from capital,land, labour, technology, etc., took the education as an important factor measuring the change in the labour input. Taking differentials in average earnings of the otherwise similar individuals who had completed different levels of education, as weights, the author has arrived at indices which would reflect changes in labour input. The study observed that education contributes about 10% of the compound growth observed for the period (1950-62).

Theoretical developments, from early sixties to the eighties resulted in the fading out of initial optimism on human capital theory. Many writers such as Bowels(1971), Bhagwati(1971), Bowels(1972), Bowels and Gintis(1976), etc., have expressed doubts about the validity of the propositions on which human capital theory rested. The critique of Bowels and Gintis (1975) of human capital theory was essentially in the nature of Marxian

analysis. They complain that ' by restricting its analysis to the interaction of exogenously given individual preferences, raw materials (individual abilities) and alternative technologies, human capital theory formally excludes the relevance of class and class conflict to the explication of labour market'. They argue that in capitalist system of production schools act in perpetuating existing economic and social relations. Even with in neo classical frame work, the 'screening hypothesis', 'incomplete employment contract', and 'labour market segmentation', have weakened the position of human capital theory which according to Blaug(1976) was 'truncated'[1].

The quantification of human capital would be an exercise to understand educational development of different nations. This would lead to the question of disparities in human capital formation and the policy measures in that direction. Harbison,F and Mayers (1963)'s study on inter-country comparison of human resource development is one of the pioneering studies that quantifies the human capital at macro level. In their study of comparing 75 countries on the basis of human resource development, the authors have used arbitrary weights to arrive at a composite index of educational development which was the target of criticism from many quarters. There have been many studies subsequently which quantified educational growth of nations at national and international settings.

In other words, several scholars have put forward that educational expenditure is to be treated as an investment rather than as an item of consumption. Some have also seen linkages

between educational development and economic development. But this finding has been questioned on the basis of neglecting built-in-disparities at the starting point itself,by class,social group,region and also due to earlier policy. Whatever be the differences in perspectives, the fact that educational disparities have a direct impact upon the later educational and hence economic development is generally agreed upon. This makes it important to see the educational disparities existing between the states in India.

The literature studying this subject with reference to India is quite abundant. Many of them were methodological improvements over earlier studies dealing as they do with different levels of education. Panchamukhi(1970), used Principle Component Analysis to study regional disparities in educational development of different states of india. Tilak(1979) used Constant Cost Weighted Index of educational development in studying regional disparities.

Manocha & Sarma(1979) developed a composite index of human resource development in studying regional variations in human resource development in different states of the country. The study took "effective current stock" as measurement of human capital. Also the study used cost of education at different levels as weights to arrive at a composite index of human capital. The study identifies levels of human capital formation in different states and their position with respect to rural and urban education.

Raza M. & Agarwal.Y P.(1983) studied intra and inter regional disparities in levels of literacy using 1981 district level literacy data. Inter-regional variations in levels of literacy have been studied in terms of variations in the magnitude of a selected measure of intra regional inequalities. The study tried to discern regional disparities linking it with urbanization, level of industrialization and other indicators.

Raza et,.al(1984) discussed the regional patterns (inter-state) in school accessibility, in terms of coverage of educational institutions as a proportion to population and also in terms of prescribed norms laid down in location of schools. They observe that disparities in school accessibility arises due to random selection of locations for schools.

Raza,M & Agarwal,Y.P.(1984), presented the regional patterns in higher educational growth in India. A part from surveying higher educational growth in India in quantitative terms such as interms of enrollment, the study observed spatial spread of higher education also. The study took National Sample Survey region viz., agro climatically homogenous region as a unit for analysis with an assumption that a balanced regional development would be facilitated with a regional resource base. Inequality in spatial spread has been discussed by using location coefficient, and coefficient of inequality(Sofer index).

Raza (1989) in his district level analysis of educational inequalities, observed that most of the districts of Andhra Pradesh have high levels of inequality in terms of literacy among

different strata.

Padmanabhan(1986) studied regional disparities in educational financing, by analyzing educational expenditure incurred by different states. He argued that disparities in educational financing would deprive opportunities for some sections of population and thereby hamper the well known social objectives of the State. Tilak and Bhatt,G.K (1989) also studied educational development of Haryana using district level data for the analysis.

The studies made at National Institute of Educational Planning and Administration (NIEPA) which were referred to earlier, did not provide any analytical framework to understand the observed regional disparities beyond making some passing remarks on the probable reasons for regional disparities. Also, no time series analysis is attempted to understand the changes in position of states over time.

An issue of importance in understanding educational growth of any region is wastage and non-participation. These would be of importance as they represent internal efficiency of the educational system.

At the Agricultural Economics Research Centre of University of Delhi(1972), they have studied participation and wastage at primary level education in rural India. They identified certain economic reasons and certain constraints within educational system as reasons for the problem of wastage and non-

participation. In a study by Ministry of Human Resource Development (1984) it was observed that there is a high incidence of wastage in primary education in many parts of Andhra Pradesh. Subrahmaniam, S and Rama Raju (1988) studied the wastage problem in school education in East Godavari district of A.P. These studies highlighted the economic and social factors as the main reasons for drop out and stagnation-an issue which will be discussed in the ensuing pages of this study.

Since our attempt is to study disparities in the context of educational growth in the state of Andhra Pradesh, we have to look at the studies specifically pertaining to educational growth in Andhra Pradesh . Hargopal,G. and Sudharshanam, G (1985) traced out public policy in Andhra towards universalization of primary education. They argued that the policies of the governments after independence had consistently biased in favour of higher education, which infact had resulted in low expenditures on primary education. Reddy, K.V.(1985) studied school educational growth in Andhra Pradesh from 1956 to 1983 and discussed the problematic areas[2]. These studies did not try to highlight regional disparities in educational development within the state.

The above review shows that most of the studies which tried to highlight the regional disparities in educational growth did not see the regional patterns within a state the possible exception being Tilak and Bhatt (1989), which dealt with the state of Haryana. Thus, a study dealing with the regional disparities within a State is called for in order to understand

the process of educational growth. This would be of considerable interest as state level aggregate may conceal more than it reveals. Also, some states like Andhra Pradesh, are geographically very large with the historically determined socio economic differences.

Therefore, it is important to understand the regional disparities in educational development its historical contexts as well as due to contemporary policy and economic factors.

Objectives of the study:

1) To survey the growth of Modern Educational system in the districts of the present day Andhra Pradesh during the colonial period and thereby identify the historical disparities in educational development across the regions in association with growth processes in the regional economies.

2) To delineate the educational growth in the districts of Andhra Pradesh during the Post-independence period in terms of both flow and stock variables i.,e enrollments at all levels, teachers, institutions and levels of education of work force and to analyze public expenditure on education.

3) To analyze the problem of wastage and non participation which reflect the internal efficiency of the educational system.

4) To identify regional disparities in terms of a composite index of educational growth over the period.

5) To understand the linkage between education and economic well being of population, revealed by poverty levels in the context of participation at elementary level of education in the state.

SCOPE OF THE STUDY:

(i) The study aims at providing only contextual evidence on the role of the economy in accelerating educational progress in different regions of the state during the pre independence period. We have not attempted any statistical exercise in driving home this point.

(ii) In the present study we have confined our analysis to the progress of education across the regions and then have tried to highlight the regional disparities. The finer aspects like disparities in educational progress across different sections of population (male/female, rural/urban etc) across the regions or within the regions etc., which are of equal analytical interest, have been omitted from the purview of the study.

(iii) Also, we have not attempted to analyze returns to education and disparities, if any thereof.

The chapter scheme takes the following order;

In chapter 2 we discuss the evolution and progress of Modern education in Andhra and Telangana regions in pre-independence period in association with the regional economy of the period.

In chapter 3 we present an analysis of educational growth in the districts of Andhra Pradesh in Post-independence period; in all its dimensions. The analysis will encompass enrollments at all levels, Problem of wastage and non participation in education and educational expenditures.

In chapter 4 we discuss regional disparities in educational growth in Andhra Pradesh in terms of Composite index of educational growth. We also discuss disparities in human capital

formation in the state.

In chapter 5 we analyze the linkage between educational participation at elementary level and the economic well being of population reflected at macro level by poverty levels.

A brief summary of analysis will complete our task.

NOTES

1. Blaug,Mark(1976):"Human Capital Theory; A Slightly Jaundiced View" Journal of Economic Literature 14,3 in Blaug,M (1987):Economics of Education and Education of an Economist" Edward Elgar,London.
   Meglin,I.R(1990): "Challenging the Human Capital Orthodoxy: The Education -Productivity link Re-Examined" Economic Record Vol 66(195) December, also questions the linkage between education and productivity.

2. Pillai,Rama chandra (1981): General and Technical Education in Andhra Pradesh,Telugu Academy,Hyderabad, is of similar nature which discussed the position of general and technical education in the state from 1956 up to mid-seventies.

CHAPTER 2

GROWTH OF EDUCATION IN THE TELUGU REGIONS: THE COLONIAL PERIOD

In this chapter an attempt is made to trace the genesis and the differential evolution of the modern educational system in Andhra Pradesh. This would be a prelude to our subsequent analysis of educational growth in the post-independence period.

The Starting point of our analysis is early nineteenth century; the reasons for which are the following. It was the then governor of Madras Presidency, Thomas Munro's enquiry in the second decade of nineteenth century that ascertained the nature and extent of educational progress in Madras Presidency and became the basis of western type of educational development. Educational intervention by the government had its beginnings following Munro's enquiry.

The period upto early 1850's is taken as one of stagnation and decay in the Andhra Economy[1]. As our concern here is to understand the role of the regional economy in accelerating educational growth, an examination of educational endeavour in the context of a stagnant economy, it is hoped, would provide insights into the linkage between education and economy.

The early historiography of education in India was mostly concerned with the descriptive accounts of the development of the educational system. They were engrossed in official publications for their data sources, leaving out the story of the actual

participants in education namely the people.

As in any part of the world, in India also, it was a logistical necessity of the colonizers, in consolidating their position in the newly colonized region, and to create a section of collaborators between them and the large mass of population whom they governed, that prompted a colonial educational policy in its rudiments. This had prompted Colonial regime to promote oriental learning in the early decades of the nineteenth century. Later, to create a homogenous cultural space, 'Western' education was introduced in India. Western education, in this context may be seen as an assertion of cultural hegemony along with economic and political dominance of Imperialism[2] intend to generate a colonial social milieu through the medium of educated personnel.

Also, colonial educational policies and actions generated varying responses across space and time. The response mechanisms had largely been shaped by production relations, the social system, and the policy itself[3].

An attempt is made here to visualize the possible linkages that existed between education, economy, and society in the historical context. We contend that growth and progress of modern education has to be supported by the economic base of the region, besides the policy intervention and the general awareness of the people toward education. Our attempt here would be to see the growth of education in different parts of Andhra Pradesh[4] in pre-independence period and try to understand the role of the economy (the production conditions or surplus generation and

people's affordability for education) in stimulating the growth of education.

In section 1 the evolution of modern educational system in Andhra region upto the Wood's despatch(1854) and the linkages with the regional economy of the period in question have been analysed. Section 2 deals with education and economic growth up to the turn of the twentieth century. In section 3 the educational progress till Independence and the role of the economy have been analysed. Section 4 deals with the educational Progress of the Telugu districts of Nizam provinces (Telangana) during the pre-independence period.

At the end, we analyse the broad similarities and dissimilarities in the patterns of educational growth in different regions of Andhra Pradesh during the pre-independence period.

Section 1

Early Education in Andhra (Up to 1854):

As in any other society, education in Andhra has been used to transmit dominant culture and idealogy. Much of the ancient education was religious in nature and its origins could be traced back to the Vedic period. There were centers of learning in the Andhra country in ancient, medieval and modern periods, which were patronized by kings and later by the aristocracy in many ways. Brahmins monopolized the vedic education, both as students and teachers by virtue of the so called `Dwija hood' and it was a clear indication of caste discrimination in vedic instruction.

Even before the British intervention, there were Sanskrit schools and a number of village schools in the rural society[5]. In Andhra 'Veda Pathasalas' represented higher/vedic learning centers and village schools were called `Pyall' schools (in Telugu 'Arugu Badi' or 'Veedhi Badi'). Both the systems ran parallel to each other in the sense that the village school education was not considered as preparatory for Sanskrit schools[6].

By the turn of Nineteenth century, most of the Andhra region had come under the control of English East India Company[7]. The Company used local man power, 'Dubashis'(Translators) to carry out trade as well as for running the administration. Even some of the officers of the Company got training in local languages in a college started in Calcutta, before they were sent into the regions. To impart training to officials in local languages, a college was also started at Madras in 1812 [8].

The earlier period of the Company rule did not support the missionaries in the establishment of educational institutions due to their indifferent and conservative attitude[9]. The treatise of Charles Grant in 1792[10] had raised the question of imparting learning to the local population, and it made a beginning in the `new thinking of the native moral upliftment'. There was a shift from a state of indifference to a state of dynamism yet tempered with caution and conservatism in the later decades [11]. In the Charter Act 1813, an educational clause was incorporated, which allowed Christian missionaries to function in educational and other spheres[12]. Christian missionaries were the pioneers in establishing formal western educational system in Andhra region.

In 1822 Thomas Munro the then Governor of Madras Presidency, had shown keen interest in ascertaining the facts about the indigenous education prevalent in the region. He ordered an enquiry into the nature and extent of education among natives.In response to the request of Munro, the District Collectors gave accounts on the nature of education being imparted in their territories.

The note of A.D.Campbell,the then collector of Bellary in 1823 to the Governor, gave information on the nature of Indigenous education imparted during the period. Campbell made note of the Indigenous educational methods and appreciated the `Monitor' system of imparting learning to the younger ones[13].

It was observed that teachers of Village schools had to depend on the benevolence of parents, and they used to charge fee in kind and cash for their livelihood. The fee collected varied across the districts and stages of learning. At the time of Munro's enquiry,

> "...in Rajahmundry the average fee collected from each pupil amounted to seven Annas per month; One fourth of a rupee to Two rupees per month in vernacular and one fourth to one rupee in Arabic/Persian schools in Masulipatam; One Anna to One rupee in Vizagapatam; four annas to One rupee in Ganjam"[14].

On the question of people's participation in education, A.D campbell observed that;

> "...[T]the greater part of the middling and lower classes of the people are unable to defray the expenses incident upon the education of their offsprings, while necessities require the assistance of their children as their tender limbs are capable of the smallest labour" [15].

In any case, education in Indigenous schools was relatively expensive for many of the poor peasant communities which reduced their accessibility to education.

On the extent and nature of indigenous education in the Presidency, Munro had observed in 1826 that;

> "...the state of education here exhibited,low as it compared with that of our own country, is higher than it was in most European countries at no very distant period.....; but for the last century it doesn't appear to have undergone any other change than what arose from the number of schools diminishing in one place and increasing in another, in consequence of the shifting of population from war or other causes" [16].

In some districts, Munro added;

> "... reading and writing are confined almost entirely to Brahmin and the mercantile class: in some they extend to other classes, and are pretty general among potails of the villages and principal ryots"[17].

From the observations of Thomas Munro it could be inferred that Eighteenth century witnessed a decline in education compared to the earlier period mainly due to the unfavorable political and economic climate. The views expressed by the officials like A.D.Campbell also reveal the circumstances that led to the decline of indigenous education in the Andhra region.

The differential patronage given to Village schools and Sanskrit schools had resulted in a gradual decay of the former.

With worsening economic conditions, the village community would have found it difficult to defray the cost of education. The heavy patronage to Sanskrit learning by the rich and local aristocracy had helped only certain sections of the population. In Rajahmundry many of the Sanskrit schools were patronized by Zamindars, as they used to pay stipends to students and teachers used to receive payments[18] and land grants.

As statistical accuracy was not the aim of the Munro's enquiry[19] without going into the controversy whether the figures are underestimates or overestimates, we could get a broad picture of educational progress in the districts of Madras presidency (Tables 2.1.1 & 2.1.2).

Table 2.1.1
Education in Andhra Districts of Madras Presidency in 1822-25

Telugu Districts	No. of Schools V.	A/P	S	Total	Students Boys V	A/P	S	Total	Students Girls	Total Popn.
Ganjam	255	0	0	255	2965	0	0	2965	12	232015
Vizagapatam	914	0	0	914	9412	0	0	9412	303	772570
Rajahmundry	286	5	279	570	2587	34	1454	4075	37	738308
Masulipatam	465	19	49	533	4816	234	199	5249	33	529849
Guntoor	574	0	0	574	7622	0	0	7622	102	454754
Nellore	648	50	106	804	7563	0	0	7563	58	839467
Cuddapah	494	0	0	494	5892	0	0	5892	108	1094460
Bellary	489	21	23	533	6581	0	0	6581	6	927857

Notes: V=Vernacular:A/P=Arabic/Persian:S=Sanskrit
Sources: Vittal Rao Y, (1979) Op.cit.,
Radhakrishnan.P (1986),Op.cit., p.147 for Population

It is evident that Education in the Andhra region was in a low state as compared to the Tamil regions(Tables 2.1.1 and 2.1.2). We could see the absence of places of higher learning the Sanskrit and Persian schools, in many districts, excepting Rajahmundry, Masulipatam and Nellore in Coastal Andhra which had

a high tradition of Sanskrit learning through ages. Also education in Andhra was almost entirely confined to boys.

Table 2.1.2
Education in Tamil Districts of Madras Presidency in 1822-25

Tamil Districts	No.Institutions V	A/P	S	No.Scholars V	A/P	S	Total popn.
Arcot.N	590	40	69	6887	387	418	892292
Arcot.S	875	0	0	10419	0	0	455020
Chinglepet	508	0	51	6729	0	398	363129
Coimbatore	753	10	173	8124	--	724	638199
Madras	322	0	0	5523	0	0	462051
Madura	844	0	0	13676	0	0	788196
Malabar	759	0	1	11963	0	75	907575
Salem	333	0	53	4268	0	324	1075985
Srirangaptn	41	0	0	613	0	0	31612
Tanjore	884	0	109	17428	0	769	901353
Tinnevely	607	0	0	9258	0	0	564957
Trichnopoly	790	0	9	10191	0	131	481292
Canara	---	--	--	---	--	--	---

Notes: V=Vernacular:A/P=Arabic/Persian:S=Sanskrit
'---' Data not available
Sources: Compiled form Radhakrishnan. P (1986) Op.cit., p 147 .

Although Munro had shown interest in the improvement of education, the subsequent period witnessed a negligence on the part of administration. In 1830 at Munro's initiative, a committee of public instruction was set up in Madras and 14 district schools and 70 tahsil schools were established with government grants. The functioning of these schools was found to be a failure which was attributed to inefficient teaching [20].

The policy regarding the nature of instruction generated an ideological controversy among the British officials during the period, and this continued even after William Bentink's Resolution of 1835 [21]. Madras presidency was away from the controversy on the nature of instruction and was `busy biding its

time, leaving the field of positive effort largely in the hands of the Christian missionaries'[22]. On the role of the Madras government in education during the period J.A Richey, editor of Educational records of British Government, and himself an Educational officer, commented in 1921 that;

> " ..the educational records of the government of Madras between 1839 and 1854 consist chiefly of minutes of successive governors, ... outlining policies which were never fully adopted, of reports from the Educational Board submitting schemes which were never brought into effect..... In view of the constant changes in both the policy and the personnel whose duty it was to carry out that policy , it is not a matter of surprise that the educational activities of the Madras government were not fruitful in the results or that we find in 1852 but a single institution in the presidency founded or under the immediate control of government.. "[23].

The` Madras petition'[24] of November 1839, helped in the establishment of a Central school at Madras, which formed nucleus of the later-day Madras University. The feeder schools were started in the districts in 1840 [25]. The entire educational activities in Madras Presidency during the time was smaller and the expenditure in 1852/53 amounted to little over forty five thousand rupees [26].

Though it was a period of governmental inaction in the sphere of education, efforts of G.N Taylor, the Sub-Collector of Rajahmundry in acting upon the response from native ryots of Godavari, in early fifties were laudable. The system of ` Rate schools' which depended on the public contributions, was initiated and implemented successfully in the Narsapore division of Rajahmundry. The first Central School was started in 1852 in Narsapore which was later known as `Taylor school' and branch schools were started in Palacole, Penugondah, and Auchanta

towns,on experimental basis supported by local subscriptions [27]. The further progress of this system will be dealt with in the next section.

Christian Missionary Activities:

Regarding the efforts of Christian missions the first Director of Public Instruction wrote in 1854 that;

> `In the Department of Elementary Instruction the operations of some of the mission societies are on very considerable scale. The SPG supports no less than 186 schools of which 5117 are under instruction...'[28].

J.A.Richey, observed:

> " Fortunately for the cause of education in Madras, missionary enterprise was particularly active in this presidency "[29].

Right from the early Nineteenth century, missionaries were involved in educational activities in the Madras presidency. Missionary activities were more wide spread in this presidency as compared to other provinces, partly because they began very early in this region and partly because of the extremely hard plight of the depressed castes who provided a fertile soil for religious conversions.

Christian missionaries from England had established schools in many parts of districts like Vizagapatam,and Bellary in the early Nineteenth century. With the Charter Act of 1833 which allowed non English missions to function in India the pace of missionary activities increased [30]. The General Baptist Mission, Church Mission Society, Wesley Mission Society, F.C.M. society, Luther Mission society, etc., were active in nineteenth century

in the Andhra region. As early as in 1805, the London Mission had opened a school in Vizagapatam and the Canadian Baptist Mission had started school in the same region in 1836 [31]. Efforts of the American Luther Mission in the districts of Rajahmundry and Guntur in promoting education for both boys and girls were commendable. Similarly,the Church Mission Society had worked hard in the Masulipatam district. Rev.Noble of Masulipatam, had spread liberal ideas amongst the local students which later paved the way for social reform movement[32].

Table 2.1.3
Christian Missionary Activities in Madras Presidency;1850'S

	Missionaries	No.Schools		No.Scholars	
		Boys	Girls	Boys	Girls
Prior to 1854	Catholic Societies	96	8	3190#	
1853	L.M.Society	58	-	2816#	
1854	C.M.Society	339	-	5410	3317
1854	F.C.M.Society	5	-	1210*	596*
1854	W.Mission society	Na		446	260
1854	S. P. G	186	-	3825	1349

Note:# Boys and Girls;* Average attendance & NA=Not Available
Source: Madras: Madras Provincial Report, 1882 p 9.

Andhra Economy in 1800-1850:

In order to understand the growth of education in Madras presidency and the low ebb of education in the Andhra region, one has to look into the state of the economy and the social fabric of the time in question.

The educational progress in the Telugu region was slower, as compared to the other parts of the Presidency due to some socio economic factors. Though the first half of nineteenth century

witnessed comparative political stability as compared to earlier times,the regional economy was in a bad shape as there was an allround poverty and misery.

In the Coastal regions, agriculture and rural industry, especially handloom weaving, were in a state of decay by the forties [33]. The Permanent Zamindari Settlement had resulted in "strained agrarian relations" between peasants and landlords[34] due to the exploitative practices of Zamindars and the insecure position of the peasants. The collapse of Zamindari system in Coastal Andhra occurred within twenty to thirty years after its introduction [35]. From the time the East India Company acquired the Coastal districts, irrigation was in a state of neglect. On the state of Pre-anicut irrigation in the delta region Col.A.T. Cotton had the following to say in 1837:

> ".. in this division ... there is scarcely a single work that is in a respectable state and almost whole of them are without proper sluices, calingulahs etc so as to secure their supply or efficiency.." [36].

Many reports from the officials of various districts make references to the need for improvement in irrigation and transportation [37].

A decline in the handloom industry was observed in the first half of Nineteenth century. The export of piece goods was effected by excess transit duties and excessive cost of transportation. Besides,a series of unfavorable seasons had affected the peasantry adversely. Of the three and half decades beginning with 1820/21, (1820-21 to 1853-54) only seven years were favourable and 9 were ordinary. Natural calamities had

resulted in decline in population [38]. From the third decade of the Nineteenth century, fall in prices of agricultural commodities (of grain) was observed upto late forties [39].

In Rayalaseema, there prevailed adverse conditions in rural life throughout the period. The land tenurial systems of the region for the most part of the period turned out to be very burdensome not withstanding the remissions granted on occasions of famine or drought. Ryots were subjected to a number of revenue experiments by the early Company rule, which annoyed the peasants no end [40]. Thomas, Munro observed in 1801 that ;

> " many of them(ryots) are so poor that it is always doubtful whether they will next year be in the rank of cultivator or laborer" [41].

The village lease system followed in the region between 1808 and 1822 turned out to be very exploitative, as the village headman and karnam(Accountant) used to wield unquestioned power and there were complaints of over-assessment and embezzlement of village fund. S.S.Raghavaiangar in his Memorandum on the Progress of Madras Presidency wrote:

> "...in Ceded districts agriculture has hampered notwithstanding the large remissions sanctioned by Col.Munro due to lack of irrigation,transport and fall in prices" [42].

Mr.Campbell, Collector of Cuddapah reported that;

> ".. the principal farmers of former days are reduced to poor and dispirited bankrupts..."[43].

Thus, the land tax turned out to be burdensome whatever be the land tenure system in the two regions, owing to low productivity and depressed prices during the period. The net profit to the cultivator turned out to be very meager, not even sufficient to meet his subsistence needs [44].

Education and Economy:

We could see the stagnant and decaying nature of the rural economy in the Andhra region. And such a situation obviously was not conducive to educational growth. Only a very small fraction of the rural population could manage to extract a surplus from agriculture/industry to spend on education of their children.

Needless to say, much of the participation in modern education was from the upper caste communities who had a monopoly over education by birth. This obviously served the purpose of the rulers as they needed the learned gentry to man the administration. Since Brahmins were at the apex of caste hierarchy and caste discrimination was prevalent, there would have been little or no access to education for people from the lower castes. With the precarious condition of the peasantry there would have been only little participation from the peasant communities in education though we see content wise indigenous education catered to the needs of intermediate communities. Also, it was these traditional administrative communities which foresaw the benefits of western education. There was patronage from zamindars in promoting education but it was confined only for supporting the Sanskrit education.

There was growth in activities of Christian Missions in the Andhra region wherein caste discrimination had driven sections of the depressed castes to christianity. Missionaries sought to facilitate their upliftment by imparting western education [45].

Section 2

Education in Andhra (1854-1900):

The period after the Wood's despatch(1854), had recorded educational growth in Andhra. But the real spurt was seen only during the last decades of nineteenth century. There were some conducive factors for the educational growth. A feature that was conspicuous during the period was the private effort in education supplemented by the assistance from the government.

The Wood's despatch of 1854,which was considered historically important educational document of British India, gave a strong footing to western education in India in all its essence[46]. Implementation of the Wood's despatch was favorably done in the Madras Presidency. Much of the educational policy decisions of the time were in tune with the recommendations of the despatch.

Apart from measures taken by the government, it is imperative to evaluate the performance of the Rate schools in Godavari to understand the private efforts in promoting eduction, with the help of the government in a scenario of changing agriculture.

As mentioned in the previous section, the system of `Rate schools' which depended on local contributions, was started in

the Narsapore division of Rajahmundry (Godavari) district in the year 1852. There was extension of the system in Fifties and Sixties. In 1854, Taylor, Sub-Collector of the region commented on the "wishes" of the ryots of the villages in the Godavari Delta area

> " (they)... have come forward to beg permission to contribute towards the expenses of their children's education"[47]

And to impress upon the authorities he observed

> " ... while the Tamil population are provided with no less than 950 schools, there are but 30 in the entire presidency of Madras , in which efficient Telugu instruction is imparted"[48].

The Rate system had the following features[49]:

Village offers were to be accepted and a school master was appointed in every village where voluntary subscriptions amounted to Rs 60/- annually. The contribution in aid of the school was to be distributed over the whole community of the village as fixed proportion on the rent-roll and to form a part of the annual demand. The sons of every member of agricultural body, not only the children of ryots but the sons of their relations and dependents had free admission to the school and the non agricultural residents must pay a fee of two annas per month[50].

It is to be noted that the basic principle upon which the whole system lies is the enthusiasm of the agriculturists to the introduction of modern educational system. Taylor proposed to have schools at village,Samiti and Tahsil levels and proposed to have an inspector for visiting these schools and a school for training masters [51]. The selection of the school master was left to the villagers so as to instil confidence in the people that

their traditions were not interfered with. A formal system of school hours, attendance,and syllabus was formulated[52].

It is interesting to observe that Taylor in his letter of 1854 to the government had stated that "... the ryots of the villages already benefitted by the anicut,..." [53].
He observed that this scheme could be introduced only in a thriving district and

> ".... to the altered circumstances of the agricultural population of the Rajahmundry delta, consequent upon the abundant and certain irrigation from the anicut, I attribute their consent to tax themselves for the education of their children..."[54].

Extension of the system in other villages took place in the subsequent years(Table 2.2.1).

Table 2.2.1
Extension of Rate Schools in Godavari:1856

From Apr'1855 to Sept1856	----Mugultoor taluk	-----36 Schools
May'1855 to June1856	---Oondy taluk	----19 Schools
July'1855 to Apr 1856	--Tanuku taluk	----22 Schools
sept'1856 to nov1856	----Tadimulah taluk	------9 Schools

Source:Madras:Report on the Public Instruction in the Madras Presidency for the Year 1856-75 Appendix A

The average attendance in the schools was around 50 in 1854 though there were apprehensions about the functioning of the schools [55]. Each annual report of the Director of Public Instruction from 1855 onwards gave favourable account of the growth and functioning of these schools. Inspector Capt. Mcdonald in his report to the Director observed that, the village schools were functioning well and performance of the students of schools he visited in Tanuku, Penugoondah samuts was appreciable[56]. By the end of the year 1857-58 there were 99 schools with an attendance about 2000 pupils [57].

But the Report of the Director of Public Instruction for the year 1858-59 observed that;

> ".... the system of village schools, supported by local subscriptions,..... , was considered for some years to be working well, and proposals were frequently made for its extension to other parts of the country. But the uncertain nature of the support on which it rested has latterly become apparent. The idea that the cess was purely voluntary has been,if not entirely exploded, at least considerably shaken. It has since been reported to have been organized with the aid of official influence, an influence which, though legitimate in itself, was brought to bear on the people in some instances by an unscrupulous native agency" [58].

Similar doubts were expressed on the nature of rate;

> "....it seems extremely doubtful whether even in Rajahmundry the rate can properly be called voluntary"[59].

In 1859 The government expressed its intentions to bring out a legislation,

> "...a measure which having for its principal object the maintenance on permanent footing village schools in the Godavari delta which for some years past have been supported by a rate and establishment of similar schools elsewhere to be maintained partially by a rate and partially by a grant from public treasury, is capable of being applied to the establishment of schools of any grade according to the extent to which the local community of the town or village take advantage ...." [60].

With the above provisions, Madras Education Act was passed in 1863.

The passage of the 1863 Act was to have a consensus of the village community on the question of their ward's education. It was sought to verify whether the demand for education in Godavari was a genuine decision or one that was imposed on the ryots. The Act provided a native of the village as commissioner of education

who was supposed to look into the rate and the demands of the people. Education and Revenue officials were made to act on an advisory position in village school affairs. The functioning of village school system conceived through Madras Education Act(of 1863) was not satisfactory [61]. Soon after the Act (of 1863) was in operation, 70 villages were relieved from subscribing. Among them, 30 of these belonged to the Narsapore taluk. In 1862-63 there were 99 Rate schools with 1787 pupils. At the end of 1863-64 thirty three of them were closed because of the unwillingness of the villagers to support them. In 1864-65 there were 79 Rate schools of which 72 were in Godavari delta. It is of interest to observe the comment of Acting Inspector of the Village schools that,

> "... given an intelligent set of Commissioners and if he has sufficient influence, the working of the Act may be fairly successful but other wise it does more harm than good"[62].

Thus, here too the system depended more on the influence of the person in-charge, in convincing the fellow villagers on the need of continuing the subscription toward education. Obviously the system turned out to be a failure.

As the village schools were declining in numbers, there was an increase in the Anglo-Vernacular Schools in the region. By 1868-69 there were six Anglo-Vernacular Schools, and 53 village schools of which there were 23 in Narsapore and 28 in Oondi taluks [63]. The Rate schools thus far functioning under the Act of 1863 were incorporated into the system under Madras Local Fund Act of 1871. Thus, an attempt started with a noble idea of cooperation and common spirit had to settle in the wings of the

Local Boards.

On the feasibility of the Rate system in other areas, the then Director of Public Instruction A.J.Arbuthnot wrote in 1857, that in Rajahmundry Division there was a system of joint tenure and the rate was a fixed as an annual addition to revenue of the village concerned, and it would fall lightly on the individual renters. The same facility was not available in the areas of other land tenural systems[64].

Frequent changes in the guidelines under different despatches, existence of different types of educational grant rules,and frequent changes in these rules, along with unsatisfactory performance of local boards in collecting educational rate led to serious confusion in education in sixties and seventies.

In the year 1855 the system of grants-in-aid was introduced, which was in practice for one year.Later a new set of rules was introduced in 1858. Salary grants system came into existence in 1865 but as these rules did not work well, the system of payment by results was introduced in 1868. This lasted upto 1880 when the Education Commission reviewed the whole gamut of the grants systems.

From Table 2.2.2 we see that the Progress in the Districts of Ganjam and Godavari on the whole was slow as compared to the Southern district of Nellore and Krishna. But Godavari District remained ahead in terms of number of students attending schools.

The Ceded Districts had also recorded some growth but it was impressive only in Cuddapah.

Table 2.2.2
Education in Andhra Districts; 1860'S

	1862-63		1867-68	
	Institutions	Students	Institutions	Students
Ganjam	28	1004	30	1524
Vizagapatam	16	635	28	1402
Godavari	115	2597	116	3330
Kistna	7	633	26	1135
Kurnool	2	133	5	202
Bellary	12	828	19	1134
Cuddapah	23	568	47	997
Nellore	9	204	226	3918

Source: Ramakrishna V(1983) op cit., pp 19-20

There was an increase in aided institutions in Madras presidency during the period, and as a corollary the direct expenditure of the government was replaced by increased aid to private institutions[65].

The Madras Local Funds Act of 1871 gave an impetus to education. It provided funds for maintenance of schools,and construction of buildings, through house cess from the villagers. By providing Municipal funds, a similar Act was passed to cater to educational needs of urban areas[66]. The decade 1870-80 saw rapid progress of education in terms of institutions and students.

From Table 2.2.3 it would be evident that the decade had witnessed a faster growth compared to earlier period in all the districts and the period between 1870/71 and 1875/76 witnessed growth in much higher proportions. The Coastal districts were far ahead of the Ceded districts.

Table 2.2.3
Education in Andhra Districts ;1870-1880

	1870-71		1875-76		1879-80	
	No.Sch	Students	No.Sch	Students	No.Sch	Students
Ganjam	64	1981	579	10191	548	11209
Vizagapat	69	1956	346	7788	477	9361
Godavari	123	2748	426	12112	679	18175
Kistna	68	1515	593	11045	712	12228
Bellary	132	2765	603	10214	477	7595
Cuddapah	183	2957	481	7836	302	4605
Kurnool	132	2362	265	5705	224	3592
Nellore	230	4343	433	7740	541	9278

Notes:Sch=Schools
Source: Vaikuntam V(1982) op cit., p 16.

The cost of education remained high, and this could have prevented many in availing of educational facilities for their children (Table 2.2.4).

Table 2.2.4
School Fee Charged in Madras Presidency:1880

	In Mofussil towns of 2 nd grade		In towns of 3rd grade	
	Govt	Aided	Govt	Aided
	R A P	R A P	R A P	R A P
Middle Schools	2-0-0	1-8-0	1-4-0	1-0-0
Upper Primary(2G)	0-12-0	0-8-0	0-8-0	0-6-0
Upper Primary(1G)	0-8-0	0-6-0	0-6-0	0-4-0
Lower primary(B)	0-2-0	0-4-0	0-2-0	0-1-0
Lower-Primary(A)	0-1-0	0-2-0	0-1-0	0-0-6

NOTE: Fee charged per month.R=Rupee,A=Anna & P=Paise
Source:Madras:Madras Provincial Report,1882, p 50.

During the last two decades of the century, educational progress was directed by 1882 Education (Hunter) Commission's recommendations. Many of the policy decisions were in accordance with the Commission's recommendations. A gradual withdrawal of government in secondary and higher education was seen during the period. Non-government agencies and Local bodies had taken over the Secondary school administration. The Local Board's Act IV of

1884 and District Municipalities Act IV gave provision for appointment of district and local boards to look after elementary education [67]. But the spread of education was hindered to some extent by stringent aid rules and lack of financial support to private managements [68].

The spatial spread of education, is charecterised by unevenness across the districts of the region (Table.2.2.5). Commenting on this,the Director of Public Instruction in his 1892/93 Report had to say the following;

> "..Liberal grants should also be given to persons opening schools in backward localities. These seem to me to be the only means of remedying present inequality in the distribution public funds available for diffusion of Elementary Education"[69].

Table 2.2.5
Extension of Primary Education in Madras Presidency;1892/93

District	(1)	(2)	(3)	District	(1)	(2)	(3)
Ganjam	2455	1339	55	N Arcot	2758	1813	66
Vizagapatam	2650	824	31	S Arcot	2261	1332	59
Godavari	1562	821	53	Tinnevely	1350	1003	74
Kistna	1508	1209	80	Coimbatore	1428	831	58
Kurnool	772	512	66	Nilgiris	49	29	59
Bellary	912	549	60	Trichnopoly	1264	591	47
Anantapur	740	435	59	Madura	866	391	45
Cuddapah	782	524	67	Tanjore	2634	1133	43
Nellore	1220	745	61	Salem	2089	875	42
Chitoor	1430	952	67	Sou.Canara	1058	359	34
ANdhra	14031	7910	56	Malabar	799	730	91
Madras Pr	30587	17057	56				

NOTE: (1) No. Villages/Hamlets having Population >200
(2) No. of (1) having Primary School/Section
(3) Percentage of (2) to (1).

SOURCE: Madras : Report on Public Instruction in the Madras Presidency for the year 1892/93.

The districts having vast regions of agency and hill tracts like Godavari,Ganjam and Vizagapatam did not have good school accessibility as compared to plain regions. Except Kistna which

stood second in terms of extension of schooling, other Telugu districts had primary school facility covering only about 55%-70% of the habitations.

With regard to College Education, the government followed the policy of transferring the management to private individuals. This did not turn out to be an immature decision as we could see the increase in number of colleges under private management. As there was a demand for higher education from richer sections of population, it was being catered to by the private initiative[70].

Many of the higher educational facilities were cornered by the traditional learning communities and there was only a slow entry of other communities. The elite nature of education can be seen from the parental background of the students(Table 2.2.6).

Table 2.2.6
College Pupil's Parental Background in 1881
Madras Presidency.

	Official	Trade	Farmer/Landowner	Artisan	Other
Govt.Coll	256	42	335	2	107
Aided	308	113	257	-	150
Unaided	59	13	24	-	28

SOURCE: Madras:Madras Provincial Report, 1882 .

The decade period 1880-1890 saw a higher growth than the rest of the years (Table 2.2.7 & 2.2.8).

But in his note on the progress of education during the period 1870-1890, Mr.Seshaiyar, Professor of Kumbakonam college,had observed that,

> " ...there is almost unlimited scope for the progress, when it is remembered that education in however elementary form has touched the merest fringe of the population"[71].

The note also disapproved the idea of compulsion of primary education in the region, as he felt it was not appropriate owing to the poverty of the people[72]. Thus one might conclude that educational provisions were not commensurate with the needs of the people.

Table 2.2.7
Educational Progress in Telugu Districts;1881-82

	Institutions				Scholars			
Dist	Prim	middle	High	College	Prim	Middle	High	College
Ganjam	817	24	2	1	16405	553	122	14
Vizagapat	611	26	3	2	13308	768	167	46
Godavari	835	32	5	1	22172	1260	240	66
Kistna	953	55	5	1	18648	881	153	23
Nellore	540	23	2	0	9778	447	100	0
Kurnool	395	4	1	0	6264	130	12	0
Cuddapah	483	8	1	0	8100	173	18	0
Anantpur	347	7	0	0	5692	24	0	0
Bellary	567	6	2	1	9669	329	57	15

Source:Madras:Report on Public Instruction in Madras Presidency for the Year 1892-93

Table 2.2.8
Educational Progress in Telugu Districts;1892-93

	Institutions					Scholars				
	Prim		L S	U S	Coll	prim		LS	US	Coll
Dist	Boys	Girls				Boys	Girls			
Ganjam	1562	31	43	3	1	40268	1232	603	216	17
Vizagapat	893	24	62	6	2	24669	1631	1429	444	133
Godaavari	1313	63	35	6	2	36191	3036	1143	414	135
Kistna	1650	65	45	5	2	38129	3122	1198	316	84
Kurnool	588	11	7	2	0	12745	406	227	46	0
Nellore	986	20	15	3	0	20663	1291	489	235	0
Bellary	910	18	11	11	1	19914	895	503	203	17
Anantpur	451	14	13	1	0	9248	651	267	23	0
Cuddapah	811	7	13	2	0	16872	379	286	57	0

Source:Madras:Report on Public Instruction in the Madras Presidency for the year 1892/93 p 4.

The comparative progress in the other districts of the province show the relative backwardness of the Telugu regions (Table 2.2.9). It is evident that although the performance of some of the Coastal districts and Bellary of Andhra region in

education was not unimpressive, that of the Southern(Tamil) was quite striking. Also school availability was high in South Tamil districts like Madura, Tinnevely and Tanjore. Andhra region had only 40% of total schools in the presidency.

Table 2.2.9
Enrollment Ratio and No.Institutions;1892/93
Madras Presidency

Dist	Enr M	Enr F	No.Ins	Dist	Enr M	Enr F	No.Ins
Ganjam	28.9	1.6	1643	Madras	85.6	27.9	579
Vizagap'm	11.9	1.6	992	Chegel'pt	26.6	4.6	905
Godavari	21.3	5.2	1420	N.Arcot	24.4	3.2	1583
Kistna	24.6	6.1	1774	Salem	21.4	1.9	1400
Kurnool	18.8	3	609	Coim're	18.7	2.3	1084
Nellore	16.6	4	1029	Nilgiri	34.1	11.6	83
Bellary	28.9	2.5	953	Salem	15.8	2.3	969
Anantapur	16.8	2.1	480	Tanjore	29.4	3.6	1682
Cuddupah	16.4	1.8	834	Trich'ly	24.3	3	870
Andhra	20.4	3.1	9734	Madura	23.1	1.6	1422
Madras.Pres	23.8	3.9	24316	Tinnevely	35.6	6.8	1776
				Malabar	30.6	8.6	1650
				Sou.Can	22.8	3.6	579

Note: Enr Ratio as a Percentage of 15% of Total Population
Source:Madras:Report of Public Instruction in the Madras Presidency for the year 1892/93 p 6.

The rates of literacy of population during the period would reveal the progress made by the districts in education over the past decades. We find that the Telugu regions of Madras presidency were below the average of the Presidency in literacy. The districts Kurnool, Bellary and Krishna were ahead among Telugu districts in terms of literates (Tables 2.2.10 & 2.2.11).

We find that barring Burma the Madras presidency was in a better position in terms of literacy, both in male and female literacy. Even in the category of population "learning" the Madras province had an edge over other provinces. But compared either to the other Provinces or the Tamil districts of Madras Presidency, the Telugu districts were lagging behind.

Table 2.2.10
Literacy Levels in the Madras Presidency; 1891
(Per 10,000)

District	Male		Female	
	Learning	Literate	Learning	Literate
Telugu districts				
Ganjam	238	804	10	23
Vizagapatam	205	537	13	24
Godavari	296	749	32	46
Kistna	306	900	35	42
Kurnool	461	1549	56	53
Bellary	293	1120	21	32
Anantpur	242	934	21	33
Cuddapah	210	737	11	25
Nellore	129	383	6	10
Tamil districts				
Madras	986	3119	64	26
Chenglpet	447	1523	78	29
N.Arcot	331	1177	47	19
Salem	196	751	29	16
Coimbaatore	233	919	34	18
Nilgiris	417	1275	307	165
S.Arcot	309	1327	31	13
Tanjore	536	1866	49	27
Trichnopoly	328	1326	49	23
Madura	311	1463	36	12
Tinnevelly	452	1834	104	50
Malabar	561	1641	272	119
South Canara	368	988	69	46
Agency	29	194	6	3
Madras pres.	326	1158	33	67

Source: Madras:Census of Madras 1891, p 103.

Table 2.2.11
Levels of Literacy in Provinces; 1891
(Per 10,000)

province/	Male		Female	
	Learning	Literate	Learning	Literate
Madras	320	1158	33	67
Assam	175	581	13	22
Bengal(1881)	300	590	11	18
Bombay(1881)	319	792	23	41
Burma	587	3908	49	240
N.W. Pro	98	517	4	17
Punjab	141	601	8	19
Mysore	246	807	26	47

Source:Madras:Report on Public Instruction in Madras Presidency for the year 1892/93, p 106.

On the literary sphere, there was growth of vernacular literature in the late nineteenth and early twentieth centuries. Numerous Telugu newspapers were published in Coastal Andhra in the period 1885-1905. The News papers had taken the cause of poverty and misery of the population in the rural areas apart from political and social reform activities. Writing in 1875, 'Lokaranjani' floated the idea of free compulsory education for all the children. Criticizing the costly and elite nature of education it appealed:

> " We would suggest that schools,....., at every center of native population on strictly charitable principles and the education should then be compulsory to a certain extent"[73] .

Indeed, four decades later this plea came into debate in the form of 'Gokhale's bill' in the Imperial Legislature. Thus, Mass media and popular literary forms were used in mobilizing public opinion on various issues was a feature in Andhra during the period.

Andhra Economy 1850-1900:

We would now present the factors that gave an impetus to educational growth-albeit a slow growth-in different regions of Andhra during the second half of the Nineteenth century.

Obviously when the colonial hegemony prevails over the region there would be a group of population who would try to benefit by identifying themselves with colonial rulers. The early beneficiaries of English education were obviously from the

traditional learning (Brahmin) community. With the opening up of the economy and widening of opportunities, other groups also started taking interest in education in the region from Mid-Nineteenth century onwards.

There existed some encouraging factors in the rural economy which resulted in the growth of education in the Delta regions of Andhra. In the economic front the Andhra had started a recovery from an earlier decay. All the same, neither the educational progress was uniform nor all the castes could benefit equally. The regions which witnessed commercialization with an assured canal irrigation were also leading in terms of educational development. The districts in the Northern part and Ceded districts lagged behind as compared to the Delta regions.

There were direct and indirect benefits of irrigation in the delta regions. The direct benefit being the increased general prosperity and indirect being the growth of education and consequently of the social consciousness of the population, which led to social reform movements in the region in late Nineteenth century.

The period 1859-90 saw greater expansion in area under paddy cultivation in Godavari district. The general trend of increase in area under cultivation was marked by fluctuations till early eighties [74]. In Kistna district also,the assured irrigation has resulted in replacement of inferior food crops by paddy cultivation and also in a general agrarian expansion, leading to the growth of acreage under sugar cane, oil seeds, tobacco,

coriander and so on [75].

The handicap in the transport facilities appeared to be a hindrance for larger part of the period and ryots were unable to get good price for their produce [76]. The depressing state of local market prices compared to the rice deficient districts[77] testify the inadequacy of Transport.

The last two decades of nineteenth century witnessed improvements in Transport in the form of Roads and Railways connecting the interiors to market towns. With an assured irrigation and trade, new avenues of credit had come into picture increasing the contact of ryots with outside the village. The Deltas developed trade links with grain markets in Madras and Nizam's Province during the last decade of nineteenth century [78]. As Andhra districts were commercially integrated, a process of price equalization was set in [79]. Events occurring outside the region started influencing the local price movements and availability of grains [80].

Ceded Districts:

In the Ceded districts we find an entirely different agrarian situation during the period. The little irrigated agriculture obtained was dependent on tank and/or well irrigation. The process of commercialization in Ceded districts was not as rapid as that in Delta regions because of the unfavorable climate, insufficient development of infrastructure and stagnant technology. The pattern of land distribution did

not undergo any changes and the pre-modern ethos of the middle and rich peasants also hindered the growth [81].

Rayalaseema districts had more of regar and red soil and were situated in semi-arid zone. This has resulted in cultivation of coarse grains and cash crops like cotton and ground nut in the earlier period. Artificial irrigation was necessitated due to the scarcity of rainfall in all the districts. The economy of the region prior to 1850's was in a state of subsistence though there was cotton cultivation for marketing with increasing demand for cotton and encouragement from the East India Company [82].

The growth of transport in the form of railways had started in the region from late 1860s onwards. Except Kurnool much of the Rayalaseema region was connected by rail. By 1880 many districts of Rayalaseema had experienced increase in the road mileage[83].

The increase of transport had led to market integration and there was growth of commercial cultivation. There was increase in prices of food grains and cotton which helped the economy to expand. A shift from subsistence crops to cash crops (cotton and oil seeds) was evident. By the turn of the century in the Ceded districts, commercial crops had come to claim a good share in the agriculture [84].

However, the districts of Rayalaseema have experienced frequent famines during the second half of nineteenth century. Famine of 1876/78 was intense in the districts of Kurnool,

Cuddapah, Bellary, etc dislocating population and economy.

The above descriptions of the economy of Coastal Andhra and Rayalseema in the second half of nineteenth century bring out the dynamic tendencies in production sphere leading to a process of commercialization. Infrastructure in terms of irrigation in Delta districts and railway and road transport in the Ceded districts had spearheaded this process. It can be inferred that there existed constraints in the economy for which the process of commercialization was not very rapid till the turn of the century. Also, there was a time lag in the beginning of Commercialization process between the two regions. The districts of Rayalaseema had the imprints of famines and drought in the second half of nineteenth century thereby dislocating the economy frequently.

Education and Economy:

Now we assess the extent to which dynamism in the economy of the Delta districts had influenced the growth of education in the region. One point to be made clear at this juncture is that, we are not trying to see any statistical relationship. The attempt is to see a contextual or associational relationship between the two sets of variables. As we shall see in the later section, commercialization had not benefitted all sections of the peasantry equally and that peasant stratification was visible even by the early part of the twentieth century. We may be able to speculate at this juncture on who were the people reaping benefits of modern education other than the traditional elite

groups by relying on contextual evidence.

We argue that the growing commercialization of agriculture, trade, and changes in the town and village relations resulted in village peasants perceiving the value of education and in investing in education of their wards. The comments of Taylor testify to this view. Ryots had enthusiastically responded to Rate schools soon after agriculture was made secure by providing the irrigation facilities. Also, the period in which the rate system, which depended on voluntary contributions of village ryots toward schools, had been enthusiastically received by the villagers and the circumstances under which an Act making rate compulsory were of equal importance. We have seen that the Rate system had started in 1854 but even earlier Taylor had started Anglo-Vernacular Schools in Nursapore and branch Schools at Palacole, Penugoondah and Asunta by forming local committees of villagers[85]. These had a demonstration effect on the villagers of surrounding areas.

It was noted that;

> " ..Those who visited Narsapor frequently for court and Cuchery were attracted by the systematic way of teaching in the schools and compared it with the way of teaching in their villages"[86].

It was the period of assured irrigation which has given ryots a sense of security. Thus, the participation of the ryots in Rate system could be a decision with foresight based on their desire to invest in their ward's education. The expanding market activities of the village ryot might have necessitated the families to have educated persons amongst them. It was noted that in the early part of the implementation of the system ryots

expected that their wards would be taught 'English education' but it was not so in many village schools. At the same time there were some villages which had so enthusiastically responded, that they contributed an extra amount specially for the teacher in English in their Schools [87]. Thus, the system depended on the interest of the villagers and their eagerness to get their children educated preferably in English.

We understand from the comments of various officials that Rate system depended very much on the personal effort and the personality of the officials who undertook the work. As the Rate system essentially depended on voluntary efforts and the cooperation of the entire village ryots, it needed a man of high stature to convince the villagers to the need for educating their wards. A part from Taylor, we find the Tehsildar of Oondi taluk Kakulavarapu Seshaiah had evinced great interest and it was observed that 'the schools of his taluk were in a most flourishing condition' in 1856/57 [88]. In the later period one finds the role of the officials was made a point in criticism against the system. But an enquiry conducted on the allegation that there was pressure from the Officials was found to be untrue in many villages. Even some villages had infact opposed abolition of Rate system testifying the voluntary nature of the scheme[89].

The other point to analyze is why the system failed to function in the same spirit from 1860s onwards. The main criticism of the system centered around the voluntary nature of the rate and the inability of the revenue officials to enforce

it. Board of revenue held on to the opinion that, a Sub-collector had no legal authority to enforce the payment of rate. It was also the time, when the land revenue settlements had to be reviewed. Consequently we could see that the officials had expressed doubts whether the ryots would be able to pay the rate willingly in the event of increase in water rate and land rent[90]. Referring to the issue of financing the Rate schools to the Department of Public Instruction, the Board of Revenue remarked in 1861 that

> ".. the land assessment was not that light character which would admit the cess being super added for every special object however desirable that principle in theory"[91].

The nature of the Rate system was such that it gave an impression that the agricultural communities had a major burden to shoulder in the maintenance of the schools, as non agricultural communities had only to pay a monthly fee and also have the freedom to withdraw at any time. But there was an increase in the number of children from non agriculture community in the year 1854, which shows that they did support the system enthusiastically[92].

It was under these circumstances that the Madras Education Act of 1863 had come in to force.

At this juncture one can only speculate that in the period after land settlement the land rent and water rate would have been burdensome in the region resulting in the inability of the ryots to meet this additional demand. But how come then that they were willing to contribute in the beginning ? One could

again stress that the system heavily rested on the personal effort of the officials. It was the period 1849 to 1856,(on the eve of canal irrigation) of initial enthusiasm in the field of agriculture though there were impediments operating in rural economy against expansion.

One does not find any reference to the background of students of the Rate schools, other than a broad classification of agricultural and non agricultural communities. As we see that the District of Rajahmundry is essentially an agricultural one and peasant communities dominated the population. One would assume the participation of Brahmin communities in the educational sphere as they were traditionally in the learned professions. But as the idea of rate system rests on the contributions of agricultural community, much of the participation must be from these communities.

Thus, one can conclude that the partial success of Rate system in Godavari delta was mainly a combined effect of the secured irrigation leading to agricultural growth and the personal efforts of the Officials in inspiring the people. Where as agricultural growth had increased people's affordability, a felt need emerged for education. Also they perceived the functional utility of education, inspired as they were, by the encouragement from the officials.

Even after the Voluntary Rate experiment, we can see the coming up of a number of Anglo-Vernacular Schools in the same region, reflecting the enthusiasm of the people for English

education. As we see after 1871, the working of Madras Local Funds Act was appreciated in the Delta region and the number of institutions and scholars went up. The management of Schools was vested with the local boards which functioned well. Also, the system of Grant-in- aid worked well in the region. But one can see the spurt in educational growth during the last two decades of the nineteenth century as it was the period when agriculture was in buoyancy. A retired Tahsildar of the Godavari District commented on the conditions in late Nineteenth century that:

> "... The wealthier classes were much more benefitted, ...,the vast increase in agriculture by irrigation has very materially improved the condition of ryots...roads have multiplied ....the number of village schools has so considerably increased that there are now four Deputy Inspectors(Sub Assistants) and one Assistant Inspector for the whole District in place of one Deputy Inspector.... this is besides an Inspecting School Master for each taluk...".[93].

The situation in the neighboring krishna District would not have been any different.

The growth in patronage by zamindars and growth in private, aided, unaided schools reflect the private efforts in education but this remained at Higher Educational level wherein Government policy too aimed at gradual withdrawal from education. The patronage to education by the private agencies at the turn of the century clearly reflected the interests of the emerging middle peasants. The relative negligence of primary education by the private agencies was a testimony to this factor. Also, we see that Coastal regions were in the fore front of literary activities by the turn of the century reflecting the social awakening of the educated intelligentsia. It is interesting to note that during the last decades of Nineteenth century the same

regions were in the forefront in social reform movement and two or three decades later in independence movement.

The agrarian conditions in Ceded districts were not conducive to growth as they were in the Coastal Andhra. The region was not insulated from the occurrences of famines in the period, which affected adversely the rural economy. In fact, we see that there was a decline in the number of schools and students in all the districts in the period 1875 to 1880.

Section 3

Progress of Education in the Twentieth Century:

The first two decades of educational progress in India in the twentieth century, had been moulded by the University Commission, and the efforts of Gopala Krishna Gokhale for a legislation to make primary education compulsory. The period saw greater control over education by the government. The debate on compulsory education has raised the issues related to funding of primary education. Consolidation and improving quality happened to be prime objects in the secondary education. There was a growth in private , aided, un aided, non missionary efforts in this sphere during the period[94].

Tables 2.3.1 & 2.3.2 present the spatial spread of primary schools in the Andhra region between 1904/05 and 1921/22. We see that there was substantial improvement in the availability of primary schools over the period. Many of the larger villages had

primary schools by 1921.

Table 2.3.1
Extension of Primary Education in Andhra Districts; 1904/05

Disrtict	(1)	(2)	(3)	(4)	(5)
Anantapur	626	69	502	30	80
Kistna	1253	187	868	78	69
Guntur	929	48	640.	6	69
Cuddapah	1063	184	645	38	61
Godavari	574	887	337	12	59
Bellary	830	109	472	7	57
Kurnool	718	36	339	3	47
Ganjam	2368	3149	985	177	42
Nellore	1257	339	522	3	42
Vizagapatam	2006	5874	756	34	38

NOTE: (1) No.Villages/Habitations With Population >200
(2) No.Villages/Habitations With PopulatioN <200
(3) No.of Villages/H of (1) having Primary School
(4) No.of Villages/H of (2)having Primary School
(5) Percentage of (3) to (1).
Source: Madras:Report on Public Instruction in Madras Presidency for the year 1904/05 p 99

Table 2.3.2
School Accessibility in Telugu Districts; 1921-22

Dist	(1)	(2)	(3)	(4)	(5)	(6)
Kistna	553	527	459	381	370	217
Guntoor	446	419	167	140	90	55
Kurnool	284	267	275	222	132	88
Bellary	210	197	272	188	255	100
Cuddapah	201	188	228	162	219	118
Vizagapat	483	449	345	291	281	166
Anantapur	249	232	245	199	163	106
Ganjam	379	355	620	425	898	332
Godavari	270	244	168	104	59	13
Nellore	315	251	397	230	390	92
Agency	51	38	280	56	12563	425
Chittor	310	170	382	170	445	108

NOTE: (1)No. Villages/Hamlets having Population 2000-1000
(2) No. Vill/Hamlets of (1) having Primary school
(3) No.Villages/Hamlets having Population 1000-500
(4) No. Vill/Hamlets of (3) having Primary school
(5) No. Villages/hamlets having Population 500-200
(6) No. Of Vill/Ham of (5) having Primary school
Source:Madras: Report on Public Instruction in Madras Presidency for the year 1921-22, P 39.

The Andhra region did not witness an extension in college education till early Twentieth century. No new colleges were set

up but the number of students had increased much, showing the demand for higher education(Table 2.22). The number of second grade colleges had increased marginally in the early part of Twentieth century. Many of the colleges were due to private efforts. Two first grade colleges were under government control the rest of the first and second grade colleges were in the hands of private managements either of Christian missionary or of non missionary management(Table 2.3.3).

Table 2.3.3
No.Colleges and Students in Andhra Region; 1905-1922

District	1905-06 Colleges	1905-06 Students	1921-22 Colleges	1921-22 Students
Ganjam	2	58	2	66
Vizagapatam	2	126	2	425
Godavari	2	267	2	405
Kistna	1	102	1	216
Guntur	2	89	1	105
Kurnool	0	0	0	0
Bellary	1	16	0	0
Anantapur	0	0	1	155
Nellore	0	0	1	80

Source: Vaikuntam V(1983) Op.cit., p. 91.

Progress of school education in the region also took a momentum in the period 1905 to 1920 (Tables 2.3.4 & 2.3.5).

Table 2.3.4
School Education in Andhra Districts; 1904-05

Dist	Schools				Scholars			
	Prim B	Prim G	SecB	SecG	Prim B	Prim G	SecB	SecG
Ganjam	1655	37	23	1	41293	1428	1742	3
Vizagapatam	1161	59	42	9	32407	3629	2972	114
Godavari	851	70	53	13	30225	4161	3429	183
Kistna	1491	84	44	4	43874	4400	3204	55
Guntur	1275	44	21	4	34569	2611	2145	161
Kurnool	759	12	11	1	18224	503	711	15
Bellary	615	17	13	3	14200	1047	464	81
Anantapur	527	13	9	0	10086	686	358	0
Cuddapah	950	20	17	2	18956	733	672	46
Nellore	862	17	11	4	20504	1199	939	52
Andhra#	10146	373	244	41	264338	20397	16636	710
Madras*	25418	954	874	199	818275	66055	71300	4347

Notes:# Andhra districts total;* Madras Presidency total
B=Boys;G=Girls;Prim=Primary schools;Sec=Secondary schools
Source:Madras :Report on Public Instruction in Madras Presidency for the Year 1904-05 p 64

Table 2.3.5
School Education in Andhra Districts; 1921-22

District	Schools				Scholars			
	PrimB	PrimG	SecB	Sec.G	Prim.B	Prm.G	SecB	Sec G
Ganjam	1711	76	24	1	60684	4016	4495	140
Vizagap'm	1760	95	18	1	62756	6122	4687	187
Godavari	1308	124	27	2	57514	8074	6907	223
Kistna	3047	148	37	1	101504	11682	8669	136
Guntoor	2361	135	24	1	79013	8568	4764	87
Bellary	1606	95	11	0	45002	3688	2229	0
Kurnool	859	87	11	1	28986	3851	1922	102
Anantpur	1019	83	9	1	29678	5469	1472	60
Cuddapah	1272	59	9	0	33425	2123	1431	0
Nellore	1451	122	15	1	40475	5469	3093	91
Chittor	899	61	13	1	31462	3503	2689	134
Andhra#	17293	1085	198	10	1242399	62565	42358	1160

Notes:Notes:# Andhra districts total;
B=Boys;G=Girls;Prim=Primary schools;Sec=Secondary schools

Source:Compiled from Subsidary tables (Part II) Madras:Report on Public Instruction in Madras Presidency for the Year 1921-22

Education under Dyerchy:

From 1921 on wards education came under the charge of the Provincial Minister , as the elections to Provincial Councils took place in 1919. There has been much progress in education in

the Presidency, under A.P Patro who was the first Education Minister. Establishment of Andhra University, a long pending demand of the people of Andhra was met during this period [95].

In 1920 the Madras Elementary Education Act was passed, making provision for constitution of District Educational Councils, which were vested with the powers of granting recognition and assessing educational needs of the regions.These were vested with the Director in the earlier period. It is to be noted that these councils had members of local bodies. Neverhless, the functioning of these came under criticism as the members did not take much interest [96]. Advisory bodies for secondary education were also constituted during the same period. There was an increase in the number of schools and scholars during this period of provincial government. The efforts of the government which was headed by Justice party resulted in some improvement of education among the backward communities.

With the passing of the Andhra University Act in the provincial legislature in 1925, the Andhra university was established in 1926 in Bezwada. The Raja of Pithapuram was the first pro-chancellor and Dr.C.R. Reddy was the vice-chancellor [97]. Later the university was shifted to Vizagapatam in 1929. There was a steady improvement in the activities of the university both within the campus as also in the establishment of the affiliated colleges [98]. By the end of 1936 there were, two university colleges, five Second grade colleges, seven First grade colleges, and two professional colleges in the Andhra region affiliated to university [99].

Table 2.3.6
Extension of Primary Education in Andhra Districts
1934/35(in %)

Dist	(1)	(2)	(3)	(4)
Ganjam	95.6	83.9	49.5	8.9
Vizagapatam	95.8	81.4	59	9.6
East Godavari	99	99.1	59.2	21.6
West Godavari	99	91.8	74.7	40.8
Kistna	100	95.4	69.1	55.9
Guntur	99	97.7	81.6	64.1
Kurnool	99	87	51.1	18.9
Bellary	99	77.8	48.4	12.9
Anantapur	95	77.5	38.7	12.4
Cuddapah	96	92.2	63.8	27
Nellore	97	95.3	52.4	19.4
Agency	83	15	N*	N*
Andhra	96.4	82.8	58.8	26.5
Madras	94.4	81.6	27.2	19

Note:(1) % of Vill/Hab. with population 2000-1000 having Primary School
2)% of Vill/Hab.with population 1000-500 having Primary School
3)% of Vill/Hab. with Population 500-200 having Primary School
4)% of Vill/Hab with Population <200 having Primary School
5)* Nil

Source: Madras:Report on Public Instruction in Madras Presidency for the Year 1934/35 p 37.

Table 2.3.7
School Enrollment Ratios in Madras Presidency; 1934-35
(As a Proportion to Total Male and Female population)

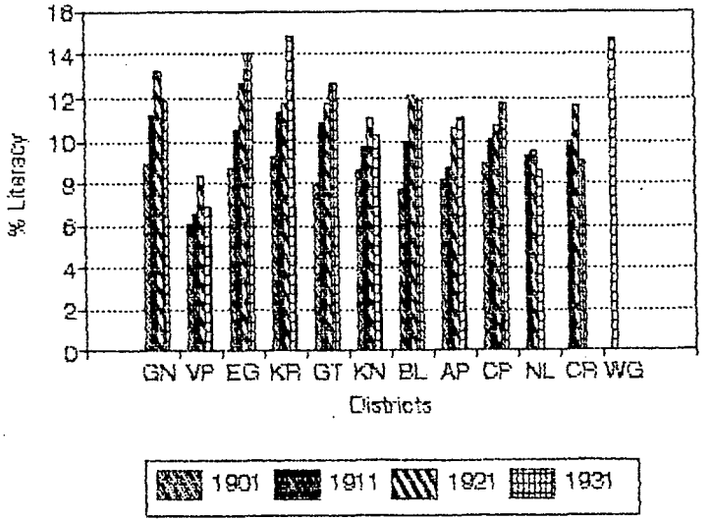
Dist	Male	Female	No.In	Dist	Male	Female	No.Ins
Ganjam	9.9	1.9	2538	Madras	20.6	11.3	534
Vizagapatm	8.2	2	2396	Chengalpet	8.6	2.8	1586
Godavari E	11.4	5.5	2366	N.Arcot	9.3	2.6	2169
Godavari W	10.8	6	1795	S.Arcot	8.5	2.1	2379
Kistna	12.2	7	2497	Tanjore	10.3	3	2510
Guntur	10.2	5.3	3348	Trichnopoly	8.5	2.2	1849
Kurnool	10.1	3.5	1643	Madura	8.7	2.7	1654
Bellary	7.5	2	1123	Ramnad	10.6	2.7	1754
Anantapur	7.6	2.3	1189	Tinnevely	13.2	4.9	2639
Cuddapah	10.1	2.9	1494	Coimbatore	6.5	2.2	1773
Nellore	8	3.3	2151	Salem	5.3	1.6	1468
Chitoor	6.9	2	1333	Nilgiris	11.8	6.3	197
Agency	5.2	1.03	1161	Malabar	16.5	8.9	4532
Andhra	9.08	3.4	25034	Sou.Canara	12.3	5.3	1484
				Madras pr	9.7	3.6	51562

Source:Madras: Report on Public Instruction in Madras Presidency for the Year 1934/35 p 4.

By the third decade of the present century, many of the villages with population more than 500 were endowed with primary schools (Table 2.3.6). Education in the Andhra region had improved in terms of number of institutions but the enrollment was not commensurate with population: the regional average has been below the Presidency average. The Delta districts, and Kurnool, and Cuddapah had of course recorded higher enrollment than the Presidency average(Table 2.3.7). As a summary of educational progress over the past decades we present the literacy levels of male population of districts of Andhra from 1901 to 1931. The figure shows that there was a set back in literacy in Ceded districts in the decade 1921-1931. It could be due to the famine connditions prevalent during the period(Fig 2.3.1).

Fig 2.3.1

Male Literacy in Andhra 1901-1931.



GN=Gangae VP=Vizagapatam BL=Bellary
EG=E.Godavari KR=Krishna AP=Anantapur
GT=Guntur KN=Kurnool CP=Cuddapah
NL=Nellore CR=Chitoor WG=W.Godavari

Andhra Economy in Twentieth Century:

As we have seen in the earlier section the process of Commercilisation had begun in the Coastal Delta districts right from the second half of Nineteenth century and in Ceded districts, with the advent of Railways and improvement in road transport the share of cash crops in the total cropped area rose rapidly. The first half of the Twentieth century accelerated the process and the relatively backward regions like Northern districts of Andhra also had entered the race of commercialization. The process had of course widened the disparities at individual levels and we can see a diversity in the process itself, across the districts and regions. These have resulted in peculiar Social relations, and the development of education also had its bearings on this.

The decades of Twentieth century also witnessed Paddy as a preferential crop in the Delta districts though there were fluctuations in the acreage under paddy in some districts [100]. The completion of Rushikulya irrigation system had contributed to expansion of area under paddy cultivation in the Ganjam district [101]. The central districts of East and West Godavari and Krishna stood as the leading districts in paddy cultivation by 1930's [102]. The irrigation gave scope for renumerative crop and investment in land by the well to do ryots [103]. In the Northern District of Vizagapatnam and parts of East Godavari, sugarcane became an important cash crop. By the middle of 1920's, Ground nut had made a sizable presence in Coastal Andhra

with Krishna and Guntoor raising the crop on a considerable scale [104]. Tobacco was the other Commercial crop grown in the Guntoor District which accounted for much of the export from Madras presidency.

On the production front rice cultivation yielded considerable income to the ryots in the context of rising prices before the onset of depression[105]. At the time of depression Small and middle peasants and Occupancy ryots were hard hit. There were numerous instances of ryots incurring debts. Village surveys conducted during the period would give the account of the debt burden of ryots [106].

As discussed earlier, Rayalaseema region consisted of large number of small peasant proprietors and the production depended on family labour [107]. As many were small peasants,there was an interlocking of product and credit markets. The response to Groundnut cultivation in this context was seen as a non market one, in the sense that the crop facilitated less dependency of ryots on money lender as it ripens earlier than other crops. But Rayalaseema ryot did respond to the price movements on crop choice as we see the displacement of cotton and inferior crops in favor of ground nut.

Trade -both internal and external- had grown in the Coastal and Rayalaseema regions from the turn of the Century. As Rice was more marketed and the distinction between food crop and commercial crop become blurred in Coastal Andhra [108]. Similarly Rayalaseema ryots marketed Oil seeds, Cotton etc.

The commercialization of agriculture has led to the growth of towns in Andhra region as market centers for trade,and agro based industries. Urbanization in Rayalaseema has increased from the second decade of twentieth century onwards [109]. The penetration of merchant capital in the rural economy would be the next logical move in the process of commercialization. No doubt market towns in Andhra "the nerve centers of agrarian trade" were dominated by merchant traders; but commercialization gave scope to the rich peasant to go into activities hitherto confined to trading communities [110]. The enterprising rich peasants ploughed back the surplus into money lending activities which again traditionally formed the arena of the trader. A Revenue officer of Ellore observed: "...It is not uncommon for a big farmer to lend money to others.."[111].

The process of commercialization had not penetrated all the regions uniformly. The intra regional and interregional patterns in the process of agrarian change have been presented in their study by Rao,G.N & Rajasekhar,D (1988). They argue that the inbuilt constraints in the Northern districts of the Coastal Andhra have slowed down the process of commoditisation of production. The predominance of zamindari lands and consequently the presence of a rentier class, insecure irrigation and rain fall have effected the process of agrarian transition in the northern districts[112]. There were rudiments of peasant capitalism(mainly dependent on family labor) in the region by the turn of the century where some of the occupancy tenants have resorted to commodity production [113].

With growing commercialization the condition of the poor peasant had not improved in anyway. The Indebtedness was a feature common in the rural economy. The interlocking of credit and product markets made the position of the peasants vulnerable. But the degree of domination of merchant money lender over the poor peasant was less in Coastal andhra compared to that in the Ceded districts[114]. Alienation of land by the poor mainly due to indebtedness and accumulation by the well to do ryots was a feature consequent to the penetration of rich peasants into credit market [115]. Thus, commercialization has widened the inequalities in the rural society. A point to note here is that in the delta regions there has come into being has sizeable number of middle peasants. Though the land holdings were small, since irrigation made land more productive they could earn surplus even from small plots of land. 62% of the patta holders in ryotwari lands pay land rent between 30 rupees to 250 [116]. Thus, Commercialization has created a large section of middle peasants in Coastal region compared to other regions.

In the Ceded Districts, there were a handful of rich peasants in each village having substantial amount of land. Unlike in Coastal region, the credit avenues for the poor peasants were limited, forcing them to subject themselves to the hegemony of the rich landlords and trader/money lender[117].

In contrast, in Coastal districts the hegemonic power hitherto exerted by the village elite had weakened and new social institutions have taken roots in the region which were helpful

for the social progress. There was an increase in the litigation in many of the village affairs, which indicate the assimilation of new social institutions in the region[118].

Education and Economy:

Thus far we have seen the production relations and agrarian expansion in the Andhra districts during the first half of twentieth century. Now we see the impact of these changes on educational front.

We argue that the dynamism injected in the economy in the period had accelerated the growth of education in Andhra districts. Much of the growth in primary education and the growth of Aided institutions testify to this fact. At the same time growth of education was not commensurative with the population growth in the Rayalaseema region as it was still susceptible to the natural calamities. The number of schools and scholars had declined in the period of famine in Ceded districts in the second decade of Twentieth century. As with the case of the regional diversities in commercialization, we find some districts which were lagging behind in education in late nineteenth century had picked up in the twentieth century. But the leading position of the Coastal regions continued. It would be interesting to note that the number of aided and private institutions especially colleges, were taking roots in the Andhra region during the early part of the Twentieth century.

Educational development in nineteenth century had led to the social reform movement in Andhra in late nineteenth century, which had extended even to early Twentieth century. The districts which were in forefront in Commercialization and education in late Nineteenth century became the hot bed of these movements. The era of kandukuri veerasalingam (1848-1919) stands as a period of social reform in the Andhra history and the Delta Districts led this social reform movement [119]. The spirit of Social reform movement was an offshoot of western education and ideas spread in the earlier period. The 'Swadeshi Movement' in the first decade of Twentieth century gave birth to National Educational Movement in the Coastal districts which was attracted by many. National schools and colleges were opened in many places of delta districts [120]. Vernacular press and media had helped in mobilizing public opinion on various social and political issues. Educational growth and the consequent social and political awakening gave an impetus to the demand for separate Andhra province in the early decades of the Twentieth century[121].

Thus, the very nature of economic and social structure which evolved in the colonial period had shaped the destiny of educational development in the regions. The organization of production, the social relations and the policies of the colonial government had together affected the growth of education in the two regions. The early commercialization of agriculture with advent of irrigation, role of money economy and the pattern of land ownership had accelerated the growth of education in the Delta regions. At the same time we could see a clear time lag in

educational growth in Ceded districts owing to the adverse economic conditions and social relations. The role of the social reform movements originated in the Delta districts had its share in educational growth in the subsequent period. Education of boys and girls was seen as an agent of change and many of the reformers advocated and worked for the establishment of schools for both boys and girls.

Section 4

Education in Telangana(1850-1947):

Introduction:

Telangana region consisting of the Nine Telugu speaking districts was under the rule of Nizams in the Pre-Independence period. The socio-economic (including educational) progress of this region has to be seen in its historical context i e., specificities of ecology,land relations,infrastructure and so on.

Practically over 25% of the geographical region, villages and one fifth of the population were out of the jurisdiction of the government administration, possessed by jagirdars and other intermediaries [122]. Hence in these areas the authority of the state government was limited. Another feature in the educational growth was the proclivity of the executive to spend greater part of finance that was available at the Head quarters

and the consequent neglect of districts[123].

The growth of the regional economy can be seen only in early Twentieth Century; the process of commercilisation of agriculture had started very late in this region compared to the other neighbouring regions. It was a process, which maintained the feudal structure of land relations and only facilitated the external market integration, with the world economy.

Educational progress in the region, albeit unevenly, could be seen from the early part of twentieth century. It was mainly policy intervention on the part of the administration that stimulated the educational growth in the region. The participation of the 'Nobles' and philanthropists in educational activities was not strikingly visible in the region, as we see in the other provinces. Also,the educational backwardness of the region in absolute and relative terms can again be traced to some of the policies followed by the government in the educational sphere.

Education in Hyderabad up to 1900:

There was no such thing as Public Education in the region till the middle of the Nineteenth Century. The Formal system of Education in Hyderabad State had started in the year 1854, with the opening of an Oriental College by the government in Hyderabad city[124].

In the earlier period there existed a system of imparting

training either through family or by having a tutor by the rich and noble families. The then resident Sanders commented

> " ..The old idea of the middle ages that gentlemen can do very well without education has still slight hold on the public mind in Hyderabad" [125].

There existed indigenous village school in villages which were not many in number. The requirement for a public position was confined to reading of Koran and rudiments of Persian and Hindustani[126]. Thus, learning was confined to the upper classes and the nobility. The first formal school was established in the year 1834, by the English missionaries of the Church of England in Hyderabad and later Roman Catholic Mission had started a school in the city [127].

Modern education in Hyderabad was the product of the endeavors of the Prime Minister Salarjung 1. The first attempt of educating the masses was started in the year 1859-60 when two schools were opened in each taluk of the State. Establishment of a Department of Education and creation of adequate funds ensued in later years [128]. The schools used to teach in Persian and Arabic which were the official languages of the government.

As elsewhere in the country in the earlier days, management of the schools in Hyderabad was assigned to local committees consisting of patels and patwaries. Thus, the role of revenue officials in the affairs of Education was a feature in the region in the early period [129]. The Department of Education was created in the year 1872/73 along with,a formal system of administration [130]. Rules,procedures, and statistical records have become imperative. In 1872, there were 142 schools with 5292 students,

of which 102 happened to be Persian schools[131].

The Education Department was made a major department in the year 1882/83 and some progress could be seen during the period 1884/85 to 1887/88. Schools were opened for children of nobles in the city of Hyderabad in the same period. A feature in educational growth in the state of Hyderabad was that many of the educational activities were undertaken by the government contrary to the other regions where private interest in educational sector was significant. The reasons have to be searched in the feudal nature of the society and the abject poverty of the population. All the same, the then Secretary of education reported in 1881/82, that there were 200 indigenous schools on which Rs 15000 was spent[132]. The idea of absorbing these schools was deferred on the ground that the principle of self help had to be encouraged [133]. As regards the education of girls, it was the missionaries who initiated it. Even as early as in 1834, St George Grammar school was started by missionaries. Missionaries had started schools for girls in Secundrabad in 1882[134]. There had been extension of girls education since the last decades of Nineteenth century, but it was mainly confined to the city areas [135].(Table 2.4.1)

Table 2.4.1
Education in Nizam's Dominions; 1896/97

Subah	No.Ins	Scholars
Head quarter	64	7049
Bider	164	10420
Aurangabad	246	15748
Gulbargah	168	12897
Warangal	170	9083

Source: Report on Public Instruction in H.H.Nizam's Dominions for the Year 1896/97

There was almost no change in the amount spent between the period 1872/73 and 1882/83, roughly about Rs 70,000 per year in the State [136]. This shows the neglect in the expansion of education. Summing up the progress made during the decade, the official observed: "that -the system...(was so) vast-...(that)the amount of money approptioned was small-...."[137].

As for backwardness of the districts, a study of that time showed three main reasons, 'the smallness of budget grants, unequal distribution of the same with reference to areas, population and revenue, and the want of inspectors for vernaculars in the districts'[138].

According to the 1881 census the total male literacy in the Nizam's dominions was 4.95% and 1.33% of population were under instruction [139]. We can see that Hyderabad city and the neighboring Medak district had high proportion of literacy and pupils under instruction. The districts away from the capital were uniformly backward(Table 2.4.2). In 1881 the percentage of educated men among Hindus was 2.9 and that of Muslims 4.9[140].

Table 2.4.2
Male Education & Literacy in Nizam Provinces; 1881
(% of Total Male Population)

Dist	Learning (1)	Literate (2)	Illiterate (3)	Dist	Learning (1)	Literate (2)	Illiterate (3)
Bider	1.21	3.78	95.01	Hyd.City	4.43	19.3	76.27
Nanded	0.66	3.26	96.08	Atraf	1.66	6.7	91.64
Naldurg	1.3	4.06	94.64	Medak	2.33	6.15	91.52
Elgandal	1.32	4.08	94.6	Sir-Tandur	0.39	2.17	97.44
Indoor	1	3.8	95.2	Khammam	1.14	4.55	94.3
Aurangabad	1.12	4.7	94.18	Nagarkurnool	1.42	6.05	92.52
Parbhini	0.79	3.12	96.09	Nalgunda	0.94	4.69	94.37
Bhir	0.96	3.89	95.14	Shorapur	1.48	3.73	94.79
Lingsugur	1.53	6.03	92.44	Raichur	1.78	3.97	94.25
				Gulbarga	1.73	6.13	92.14
Total	1.33	4.95	93.72				

Note:(1) Under Instruction
(2) Not under Instruction but able to Read and Write
(3) Not under Instruction and not able to Read and Write

Source: Hyderabad:Census of Hyderabad 1881, Statement xiii

Education in Hyderabad 1900-1950:

By the turn of the century the male literacy in the whole of the Dominions remained at 5.5%(Table 2.4.3). From 1901 Census onwards the classification of population had changed to 'Literates' and 'Illiterates'. The Commissioner of Census 1911, stated that there was a decline in the number of literates in the decade compared to the earlier two censuses. Taking population of school going age as 15% of the total population less than five percent of them were under instruction in 1911. The corresponding figure in 1901 was nearly 6% [141].

Taking for convenience of comparison, the population of otherwise not illiterate, the state of literacy in Hyderabad over the decades ending 1911 was as follows,

	Per thousand of otherwise not Illiterate
1881	32.5
1891	37.6
1901	29.55
1911	28.0

Source: Hyderabad:Census of Hyderabad; 1911

Census Commissioner observed that education showed extreme sensitivity to conditions of famine and other natural calamities. Literacy level in Hyderabad was low compared to the other provinces in the country. According to the 1911 census Bombay, Madras, Baroda, Mysore and Central Province had literacy of order 70, 75,101,63 and 33 respectively for every thousand population [142]. The proportion of Hindu literates in Hyderabad in 1911, was 23 per 1000, whereas it was 59 for the Muslim population [143].

Table 2.4.3
Literacy in Telangana Districts;1901-1911
(Literate Per 1000 Population)

	1901			1911	
District	Male	Female		Male	Female
Hyderabad	251	36	Hyderabad	239	44
Atraf	63	6	Atraf	51	4
Elgandal	33	1			
Nalgunda	32	3	Warangal	46	3
Warangal	52	2	Medak	59	3
Medak	47	4	Mah'ngr	47	2
Mah'ngr	60	7	Nizamabad	38	1
Indur	41	2	Karimngr	37	2
Sir-tandur	15	2	Adilabad	21	1
			Nalgunda	39	2
Telangana*			Telangana*	57	5
			Marthwada*	44	2
Hyd State*	55	3	Hyd state*	51	4

Note: * Total at respective geographic levels
Source:Hyderabad:Census of Hyderabad 1901 & 1911

Also it was found during the same period, as much as 83 percent of the college students,45 percent of pupils in secondary schools and 42 percent of students at primary level, belong to Muhammadan religion, who constitute little over 10 percent of the total population[144]. This was due to the patronage given to Urdu by the authorities, and the concentration of educational institutions at the state head quarters. As regards the caste wise literacy, Brahmins and Komatis had the highest male literacy, 489 and 332 per thousand males respectively[145]. Thus, earlier educational benefits have been reaped by the Hindu elite communities and Muslim nobles.

The Census Commissioner had reported in 1901, that there were 15 news papers/weeklies having a total circulation of 4670 in the State. All the papers published were either Urdu or Maratha and not a single Telugu paper was published from the province[146]. Thus educational and literary activities in the Telugu region were not adequately encouraged either by the public or by the government.

There was only a smaller increase in the number of public schools in the dominions during the inter censal period 1901-1911. The number of public schools rose from 847 to 1036 between 1901 and 1911. At the same time the number of Private schools had been on the decline [147]

Gen. Mayhew, C.I.E who was appointed as educational advisor to the government in 1910, gave a report on educational reorganization and other reforms of the educational system [148].

Many new initiatives were taken on the basis of the report during the period. Though there were failures of rain and famine conditions in the years 1917-1919, the progress of education was not hampered. Between the years 1914/15 and 1921/22 the number of primary schools rose from 1,943 to nearly 4,000 and the pupils, from 60,000 to over two lakhs [149].

There was a significant improvement in the number of schools and students during the second decade of Twentieth century. Also schools for girls were set up in the districts. It was also the period when government started mplementing Mayhew's Scheme from 1914 onwards (Tables 2.4.4 & 2.4.5).

Table 2.4.4

No.Primary Schools and Scholars in Telangana; 1913-14

	Boys		Girls	
District	In	Sch	In	Sch
Hyd.City	22	1590	18	1932
Medak	47	2790	7	288
Nizamabad	37	1893	5	380
Mah'ngr	41	2146	7	300
Nalgonda	76	2845	6	237
Warangal	46	2662	11	579
Karimnagar	81	3721	1	39
Adilabad	37	1540	2	75
Total				

Note: In=Institutes;Sch=Scholars

Source:Hyderabad:Report on Public Instruction in HH Nizams Dominions for the year 1913/14

Table 2.4.5
No.Institutions and Scholars in Telangana; 1919-20

District	Primary boys I	Primary boys S	Primary girls I	Primary girls S	Middle Total I	Middle Total S	Secondary Total I	Secondary Total S
Hyd.City	78	7245	112	5099	29	4715	17	5693
Atraf	26	1248	0	0	1	241		
Medak	126	5075	18	892	1	196	1	273
Niz'bad	191	8289	23	1484	2	574		
Mah'ngr	207	9970	45	1857	5	1218		
Nalgonda	345	18903	81	3325	6	1783		
Warangal	332	15603	63	3113	4	930	1	304
Karim'ngr	413	15563	44	1838	6	1414		
Sdilabad	162	5782	25	993	3	793		
Telangana	1880	87678	411	18601	57	11864	19	6270
Hyd St	3378	164513	748	33990				

Note: I=Institutions,S=Scholars;Total=Boys&Girls
Source:Hyderabad:Report on the Public Instruction in HH Nizam's Dominions for the Year 1919/20

The Osmania university was established in 1918 and this led to the growth of higher education. The growing demand for establishment of primary schools from the districts could not be met as evident from the fact that the expenditure on primary education has been reduced over time [150] (Table 2.4.6).

In the year 1914/15 of the total direct expenditure of the government on education 61% was on secondary education, 13% on primary and 15% on college education [151]. As much as 65% of the total expenditure (81% of total direct expenditure) was met by government funds, and 7% by local board funds. Aided and unaided institutions were mostly secondary and middle schools.

Table 2.4.6

Educational Expenditure in Hyderabad State;1914/15 to 1939/40
(On different levels, as a % of Total Direct Exp)

Year	Primary	Secondary	College
1914/15	13	61	15.6
1915/16	15	56	18
1916/17	22	52	17
1917/18	36	43	12
1919/20	42	37	13
1920/21	42	38	12
1921/22	51	34	9.8
1925/26	41	38	13
1926/27	39	39	14
1927/28	37	38	16
1929/30	35	37	20.4
1936/37*	38	53	
1939/40	48	47	

Note: From 1936/37 College Education Expenditure was shown separately under OU Account
Source: Hyderabad:Report of Public Instruction in HH Nizam's Dominions for various Years

The expenditure on primary education had gradually came down from 1921/22 onwards till 1929/30 (Table 2.4.6). The Osmania University had established a number of colleges and as feeder institutions and government had to improve the secondary education at the expense of the primary education[152]. Apart from this anomaly in educational expenditure in different levels of education, the overall expenditure on education had also been low throughout the period. As late as 1938/39 the government expenditure on education amounted to 10.27 percent of the total revenue[153].

Table 2.4.7
College Education in Hyderabad in 1929/30

	Scholars		Scholars
Nizam Coll	309	Zenana coll	12
OU.Col.Arts	545	OU.Medical	71
OU.Int.Hyd	115	OU.Eng	32
OU.In(War)	40	OU.Training	10
OU.In(Aura)	45	Total	1179

Note: OU=Osmania University
Source:Hyderabad:Report on Public Instruction in HH Nizam's Dominions for the year 1929/30

By the third decade of the present century in the districts of Warangal and Aurangabad- one college each-was established with affiliation to the Osmania university.These were the only colleges in the districts (Table 2.4.7).

It was mentioned in the Statistical Year Book of the State (1939) that;

> "... [T]the parts where educational department is directly responsible there is one school for every 11 square miles while in the Jagirs,Samsthans and Paighas there is one school for every 249 square miles" [154].

This shows the appalling situation of education in the whole of the region. But the implementation of a five year programme beginning with 1938/39 had resulted in an increase in number of primary schools(Table 2.4.8). The Compulsory Primary Education Act in Hyderabad which was introduced in the year 1946 was confined only to the six urban and four rural areas of the province [155].

Table 2.4.8
Educational Progress in Telangana: 1938/39

Dist	College I	College S	High School I	High School S	Middle I	Middle S	Primary I	Primary S
Hyd.City	7	2365	13	7201	17	5234	95	1206
Atraf			0	0	1	104	130	6426
Br.Adm			5	3885	4	1380	15	2919
Warangal	1	71	2	705	4	1234	383	20781
Karim'ngr			2	1052	9	2726	666	28202
Adilabad			1	359	5	1412	208	10108
Niz'bad			1	859	3	1028	145	8374
Medak			1	667	5	1699	178	10656
Mah'ngr			1	535	4	1643	262	14838
Nalgonda			1	810	5	2080	322	21242
Total								

Note:I=Institutes,S=Scholars(Boys&Girls)
Source:Hyderabad-Deccan:Statistical Year Book of 1938/39 Government Press.

After the police action in the state in 1948 , educational reforms were undertaken by the Military Governor and later by the care taker Chief minister. The most important being the medium of instruction. A Report on the progress of educational and cultural activities during the period 1948-54, observed that;

> "... The media of Instruction in Hyderabad state upto 1948 were mainly English and Urdu for all stages of education. Although in principle it was conceded that primary education should be in mother tongue of the pupil, yet,in practice,arrangements for even instruction at the primary level through regional languages were practically non-existent" [156].

The care taker government had taken a decision to impart school education at the Primary, Middle and Secondary levels in mother tongue and there were efforts to improve the quality of teaching. It was found that only 18.8% and 45.8% of the primary and secondary teachers respectively were trained teachers in 1950 [157].

By 1950's there were only 50% of the villages were having

primary education. Also much of the educational activities had remained up to the lower level of education. Districts had very few secondary schools by the time of Independence (Table 2.4.9).

Table 2.4.9
Educational Progress in Telangana; 1953/54

Districts	Schools(B+G) Prim	Mid	High	Scholars(B) Prim	Mid	High	Scholars(G) Prim	Mid	High
Hyd.City	748	42	66	57865	10398	31693	28673	6585	14524
Khammam	502	3	3	21792	1296	1292	7802	389	507
Warangal	834	21	10	42922	6992	4687	14331	1413	820
Karim'ngr	819	16	14	41714	6519	2994	10493	471	836
Niz'bad	532	7	3	23367	2549	1726	5695	471	419
Nalgonda	871	8	4	39021	2866	3258	13705	551	509
Mah'ngar	880	18	5	45383	5941	2995	12415	907	671
Medak	746	8	3	32117	4054	2762	8075	1135	0
Adilabad	687	9	3	25766	2210	2087	3129	684	21

Note:B=Boys,G=Girls
Source: Report on Educational and Cultural activities in Hyderabad State during 1948-1954, Appendix 2.

The above discussion on educational growth in the Nizam's dominions and especially in Telangana region reveals that the region had not acquired even the minimum standards of education acquired by the other regions of the Telugu country. One confronts with the question of why educational progress in the region was low; Was it a manifestation of Policy decisions of the government ? Was it an apathy on the part of the population to get their wards educated ? Or was it due to the poverty and economic backwardness of the population ?. We first consider the questions related to the policy aspects. We have already examined briefly the educational policy and administration in the region. The Nizam's government policy on the medium of Instruction at middle and secondary levels of education was to be seen in the context of the communal composition of the state's population and the role of the Muslim gentry in the policy

formulations especially related to employment. We were told that the policy of Medium of Instruction was not approved favorably by the intellegentsia of the time, the press, and even the British Resident at that time had expressed dissatisfaction with it [158]. It was a Muslim Administration and 'Noble' groups which had a sway over its policy making, had consciously tried to deny educational opportunities to the vast number of majority community. To cite an example, as late as in 1936 in the Warangal Subah, there were, as against 1130 primary schools the number of colleges secondary and middle schools numbered a mere 16 and 15 respectively [159]. Except Warangal and Karimnagar taluks none of the other 23 taluks of the subah had a high school and middle school to complete even the school education as late in 1936 [160].

On the efforts of Philanthropists in promoting educational activities in the region, to begin with, it was at a low level as compared to the other provinces of British India. Also, we were told that there was distrust on the part of the government in granting permission to open schools by private individuals or managements[161]. There were some business men in Warangal subah who opened schools and donated liberally for establishing libraries etc. But otherwise, education on the part of Private direction was not significant in this region.

As stated in the beginning, one has to look at the educational progress in the Nizam's Dominions in an ambience, where a total of one third of the geographical area and population were out of the jurisdiction of the administration, which were under 'Jagir' and other type of 'Non Diwani'

administrations. These were more in number in Telangana than in Marathwada region. Education in these areas was still precarious compared to Diwani areas. It was observed in 1949 that;

> " As against 5000 schools spread over 14,000 government villages covered by 50,000 square miles of area, 9,000 villages administered by non government agencies covering 33,000 Sq.miles of territory and populated by more than 40,00,000 had only 158 primary schools"[162].

As many as 98.25% of Non-Diwani areas didnot have a primary school[163].

It would be an equally important matter to look into the nature of the economy and production conditions which would have left an impact on the educational growth.

Economy of Hyderabad (1850-1950):

Hyderabad economy in nineteenth century was dominated by feudal,rent seeking elements who did not bother to dynamise the agricultural production. The life of peasants and agricultural laborers was in a state of misery due to various economic and social oppression, subjected by the state and the landlords.

Land relations were inimical to the peasant's interests in the region, where large number of them had only the bare subsistence to live on. The large scale oppression and extortion of tax from peasants from nineteenth century was a phenomenon in the region. Talukdars who were supposed to collect rent remained "Sunk in sloth, from which he was roused solely by sensuality and debauchery of the grossest kind" [164]. The cultivator's freedom was restricted even in the production process also [165].

Administration in the first half of nineteenth century was mainly military in nature. There were years of continuous warfare financial mal-administration,many treaties with British have ruined the economy of the state[166]. Government had incurred heavy debts with the local bankers[167].

Land revenue collection rights used to be auctioned,the Sowcars, Taluqdars and other chiefs would collect the revenue. The farming out of revenue involved large scale extortions from peasants which was a repressive feature of the time which could not be averted by the government[168]. Peasants had to borrow from the moneylenders at high interest rates to pay the land revenue[169]. Agricultural production was effected through out nineteenth century due to unfavorable weather, famines and other natural calamities.

Salarjung I(1853-1883) carried out reforms in the revenue system in mid-nineteenth century which tried to remove the intermediaries. He toned up the administration in all the departments and tried to streamline the economy. The reforms of Salarjung could not be carried out effectively due to lack of administrative machinery to implement them. Also, there was a vehement opposition to them from the village level government officials[170]. These reforms led to the establishment of a class of landlords called 'Deshmukhs'. They were the new incarnation of the erstwhile revenue farmers whose services were disposed of during the reforms. The revenue farmers dispossessed under the reforms, were given compensation in the form of land. Using their

leverage and the social position acquired earlier, Deshmukhs proceeded to appropriate as much of the best land as possible and in addition were granted a state annuity[171]. Thus, land lords had become a dominant authority in the rural life. Often they owned thousands of acres of land which used to be either leased out or left fallow[172]. They combined the money lending with landlordism.

Nevertheless the Reforms made by Salarjung formally removed the intermediaries between government and peasant[173]. There existed three types of land tenures in Telangana region. First, there were `Khalsa/or Diwani' lands owned by government which come under management of the state officials, and the revenue from them went to state treasury. Secondly,there existed vast tracts of land under "Jagirdars" and "Samasthanas" which were gifted by the kings and Nizams to the individuals, who paid them tribute or helped in wars by supplying army. These were large tracts some times spread over many villages [174]. About 1/3 of the Nizam's dominions consisted of non-diwani lands which were under jagirdars and samsthanadars which often do not pay any tribute to the government. Lastly, there existed private lands of the Nizams which are called "Sarf" lands the income of which went to the royal family. These lands too were leased out.

Land revenue payment used to be a part of net produce in the earlier part of the Nineteenth century. But it was changed in later period during the Reforms. The system used to be more or less like 'Ryotwari'in other areas. There used to be single pattaholders, Joint pattaholders and "Shikmidars" who cultivate

the land of the other pattadar [175]. Apart from "Jagirdars" there existed a number of land lords (Deshmukhs) owning large tracts of land [176]. Parts of the lands of Deshmukhs were being cultivated by "bhagelas" and some parts used to be leased out to tenants and some times even left fallow [177].

Land ownership was generally skewed in Nizam's dominions and particularly so in Telangana region. A survey conducted by Kesava Iyangar in the later part of 1920's revealed the land holding pattern in the villages of Warangal [178]. Considering the 'minimum economic holding' as defined in the survey as 5 acres of wet land and 15 acres of dryland, as many as 806 occupants comprising more than 50% of the total occupants had insufficient holdings [179]. No doubt one would have found similar land distribution even in the neighboring districts.

As far as the tenancy is concerned,tenants were called 'Kowldars' who lease in lands of other pattadars and other type of owners. The incidence of tenancy was not very high in Telangana. But it was quite significant in the Warangal Subah. The number of landless tenants had increased in Warangal district overtime[180]. Kowldars were 'Tenants-at-will(Asami-shikmi) who by nature had very inferior rights. These were the most exploited by the Deshmukhs [181].

The Position of cultivators in 'Jagirdari" lands was even worse, with no security of tenancy and rights[182]. Even cultivators of long standing (extending to even to a period of 90 years) had come to be regarded as tenants-at-will with no

independent rights of sale mortgage and transfer and were also evicted freely as and when they failed to pay higher kowls(rent) [183]. Jagirdars used to impose illegal taxes and extra payments on the ryots[184].

'Sarf-e-khas' lands were spread over one tenth of the total area in Nizam's province. The pattadars in these areas had suffered due to the indifference of the officials and maladministration [185]. There were no measures to augment the production in these lands either by improving irrigation or by any other efforts. The Government didnot spend any amount on these lands.

There was a steady increase in the land assessment in the Telangana region. The land revenue used to vary across the Subahs and districts[186]. Tax burden on Wet cultivation was quite high in the region. In Warangal division it ranged from Rs 18 to Rs 20 whereas in the neighboring Madras presidency the average assessment on wet cultivation happened to be only Rs 7-1-6[187].

In the production sphere, Hyderabad region from time immemorial depended on tank irrigation. And, much of the irrigation was confined to Telangana region of the Hyderabad. Tanks had irrigated about 60% of the total irrigated area in the region in early twentieth century. Warangal, Nalgonda, Karimnagar and other Telangana districts were served by tank irrigation [188]. Under utilization of irrigation facilities has been mentioned as a major reason to the low level of irrigated area in the regions. A monopolization of ayacut lands by the

rich landlords resulted in under utilization of the irrigational potential in some of the regions [189]. There has been an increase in the total irrigated area from 7,88,935 acres in 1922 to 17,10,946 acres in 1942/43[190].

In the nineteenth century Hyderabad Agriculture used to be subsistence nature. Owing to the nature of land tenures and exploitative nature of the landlords one would expect a low stagnant economy in the period. Much of the cultivation tended to be dry land raising inferior food grains and cereals. There were cash crops like castor grown in the area in nineteenth century which had market outside [191]. Some of the districts especially the ones bordering with Madras presidency, used to grow indigo for marketing in the earlier period.

There had been an increase in the cultivation of food crops and non food crops from the twenties of the present century. Ground nut was one of the major cash crops grown in Telangana from the early decades of the twentieth century [192].
Not withstanding the depression agricultural production grew in thirties. This was due to the fall in produce prices and there by bringing more land under cultivation. Food crops like Jowar and rice had displaced inferior millets like bajra, ragi and maize. Among cash crops Oil seeds especially Groundnut had come to stay in the region from mid twenties onwards. Oil seeds were grown in the districts of Nalgonda Mahbubnagar Karimnagar and Warangal.

Growth of cultivation of Oil seeds had incorporated

Hyderabad economy into the world economy as much of the oil seeds were exported to outside. Thus, external market had directed the crop mix in the region. One finds the process of crop specialization and crop diversification in the region starting from the twenties of the present century in Telangana. The inferior food crops have been replaced by crops like rice, jowar and oil seeds have taken considerable portion as cash crops[193].

The depression did not effect the acreage under various crops [194]. During the World War II, the policy of the government in paddy procurement had effected the small and marginal peasants of the regions which infact sowed the seeds of agrarian unrest in the region later and culminated eventually in an armed struggle against the Jagirdars and landlords in the late forties [195].

The incidence of agriculture labour had increased in the Telangana region during the Twentieth century as compared to the earlier period. This was due to the increase of large number of Shikmi pattadars who mainly deployed family labour [196]. There existed "Vetti' or "Bagela" types of laborers who were the attached servants of the land lord. This system which had existed in the region for long was a manifestation of debt burden of the poor peasant or laborer[197].

Thus one can conclude from the analysis of cropping pattern and production conditions that there was penetration of commercial crops in the region particularly Groundnut and other oilseeds. But one has to remember that the process of commoditisation which had started with the feudal structure of

land relations had either remained intact or even worsened over time. The experience of other regions testifies to the entry of wage labour in the economy as the process of commercialization was on leading to an activisation of the credit,product and land markets. In Telangana, interlocking of credit and product markets was quite striking. Thus we can characterize the agricultural progress in the region as a step toward commercialization wherein product market got activated first by the external demand.

Thus the agrarian economy in the region had developed to the extent that there was penetration of market forces and the formation of a small section of independent peasants who produced for the market. A majority of the peasants were in distress due to the feudal nature of land and production relations and the despotic regime.

Education and Economy

It would be interesting to look at the possible explanations for educational growth in any region in terms the economic base of the population as we feel educational activities will get accelerated with the economic development of the population.

As we have seen in one of the earlier parts educational activities in the region was very low and much of the educational activities were confined to the Head quarters. Also, we have stressed the fact that the policy decisions of the then government was an important factor in this regard. Looking at the

objective conditions of the economy in terms of production relations we could see that it was a pre-capitalist type of production relations that prevented dynamism in the rural economy till the early decades of the Twentieth century. Again, although there was agricultural growth to a limited extent, owing to the skewed distribution of land ownership and semi feudal exploitation of the peasantry, the growth of independent peasantry was slowed down.

If we look at the educational scene in twentieth century we find that only primary eduction had got any appreciable improvement in Telangana during twenties. The educational institutions of higher levels were concentrated in the headquarters and few district headquarters. As late as 1940's we find that more than 50 percent of the villages didnot have even a primary school. The early beneficiaries of education happened to be the traditional hindu elite communities and muslim Nobles of the city, as we see from the statistics of literacy and learning of different communities. Agricultural sections would have been very low in the educational field.

Section 5

An Overview: It would be erroneous to have a comparison of educational growth in terms of absolute quantities or numbers. Our attempt is to discern the patterns of educational growth across regions in the light of the economic and social structure of the region. Thus, we put together the historical evidences on educational growth in the districts to arrive at some conclusions

on the role of the economy and the policy on educational progress.

To begin with, the soil type,rain fall,irrigation and etc constitute the resource base of the region. The resource base would leave its imprints on social and economic growth. It is in this context that we reviewed agrarian expansion and growth consequent to the development of canal irrigation which eventually led to a rise in demand for education in the Delta districts of Andhra.

With the growth in and expansion of agriculture in Coastal Andhra-rather more particularly the Southern part of Coastal Andhra-a process of commercialization in agriculture had set in during the last quarter of Nineteenth century. Although the region did witness peasant differentiation, a strong and vibrant category of independent middle peasantry had emerged over time. With the opening up of the economy and widening of opportunities, these middle peasants took interest in their children's education. An expanding agrarian economy,a vigorous process of commercialization in agriculture, the rise in middle peasantry and their demand for English education were all parts of the social reform movement in Andhra especially with in the delta districts.

In the Rayalaseema region, a heavy burden of land revenue an uncertain and low rain fall, disuse of traditional irrigation systems and institutions, and poor soils and transport bottlenecks had slowed down the agrarian expansion and growth

till mid-Nineteenth century. Droughts and famines which occurred periodically in the region would wipe out the agrarian progress made till then and make the economy slide down into backwardness. Some amount of agrarian progress was registered in the second half of Nineteenth century but the devastating famines of late 1870's and 1980's set the clock of progress back, Due to all these adverse conditions, a strong and independent middle peasant category could not emerge in the region as it did in the delta region of Coastal Andhra. Consequently, the demand for modern education was not backed up by a vibrant middle peasants with rising incomes.

As for the progress of education in Telangana, although the region was integrated with the world market through an expanding commercial agriculture, an oppressive semi-feudal regime had slowed down the emergence of an independent peasantry in areas where the village oligarchies were dominant in the socio economic scenario.

As regard policy intervention, in the Andhra country we find the role of private enterprise along with Missionary activities in the educational sphere especially in middle and secondary education which reflected the growing class interest of middle sections of the society. We find as per management many of the middle and secondary schools were under Local boards or private management; this infact was the policy of the colonial government. We find little or no private intervention in the educational sphere excepting Missionary activities in the Telangana region which basically reveals the indifferent attitude

of the people toward promoting eduction. There were also instances of governmental discouragement in setting up of schools by the Philanthropic minded rich people.

To recapitulate, two policy measures had handicapped the educational progress in Telangana. Firstly, there was a policy on medium of Instruction which was discriminatory against the majority community of Hindus, and secondly, the limitation of the authority of the government only to Diwani areas.

Conclusion:

To sum up, we have analyzed the growth of education in the three sub regions of Andhra Pradesh viz., Coastal Andhra, Rayalaseema (Ceded districts) and Telangana during the Pre-independence period. The regional specificities in natural endowments, as well as the production relations,generation of agrarian surpluses,accumulation,dynamism,rise of an independent middle peasantry with rising aspirations and demand for education all formed crucial variables in explaining the differential growth in education across the three regions of the state.

The southern Coastal Andhra with assured canal irrigation and activisation agrarian markets led the other regions in terms of growth,expansion and rise of middle peasant with growing demand for English education. This led to the spread of Modern education in Coastal Andhra relatively faster. In the Ceded districts,although a process of commercialization was on even by mid-nineteenth century,poor soils,uncertain rain fall,inadequate

development of infrastructure,especially irrigation, crop failures,droughts and famines had robbed off the dynamism in agriculture. Hence the emergence of a vibrant middle peasant was slowed down. Coupled with the general, agrarian backwardness the spread of education was relatively more impeded.

In the Telangana region, an oppressive feudal set up, extortionist intermediaries, and poor development of irrigation had denied the benefits of commercialization to the peasantry. Only in the Diwani (Ryotwari or government) lands one could see the rise of market-oriented middle peasantry aspiring to go up the social ladder. But in the non-Diwani areas neither the authorities had consciously spread education nor was there an encouragement for private philanthropists to be active in the field of education. Not only educational institutions were concentrated in urban areas, but the policy of the government in terms of medium of instruction went against the majority of people.

Overall, we argue that besides the intervention by the government and public authorities, the historical specificities of the region had played an important role in setting up the pace and direction to the growth of modern education across the three regions of Andhra Pradesh.

Notes

1. A detailed discussion on the state of Economy in the First half of nineteenth century is presented in the ensuing pages.

2. Basu,Aparna(1985):"Colonial Education:Comparative Perspective" Presidential Address,Indian History Congress, 50th session, Modern History Section, Gorakhpur.

3. See Basu,Aparna(1982): Essays in the History of Education in India Concept, New Delhi, for a review of studies analyzing educational development in colonial period and the concurrent social and political developments in different regions. For an account on Andhra See Vaikuntam.V (1982):Education and Social Change in Andhra;1880-1920 New Era,Madras.

4. The districts of Andhra were part of Madras Presidency and the Telangana region was a part of Nizam Province during the Pre-independence period. Formation of Andhra Pradesh took place in the year 1956.

5. See Basu,Aparna(1982) op. cit., pp. 28-38.

6. ibid,.

7. See RamaKrishna(1983): Social Reform in Andhra, Vikas,New Delhi pp.1-2, for a description on the accession of power by East India Company in Northern Circars and Ceded districts.

8. See Sharp.M (Ed)(1920): Selections from Education Records Part I (1790-1839), Calcutta Government of India, Reprinted in 1965, National Archives of India, p 22 and Also Mangamma,J.(1975):Book Printing in India; With special Reference to the Contributions of European Scholars to Telugu(1746-157), Nellore, p.100 and pp.83-121. This college had printed many books on vernacular grammar and language.

9. See Basu,Aparna(1982) Op. cit., pp.1-2.

10. Charles. Grant(1746-1823) was in India between 1767 to 1790 and later was a member of British Parliament in 1802. He became Chairman of East India Company in 1805. He belonged to an Evangelical Party known as Chaplan sect. See Sharp,M (Ed) (1920) Op. cit., pp 16-19 and pp 81-86 for a discussion on the Treatise and extracts of the same respectively.

11. ibid., pp.16-29.

12. ibid., pp.22-25.

13. ibid., pp.65-68 for extract of the letter of A.D.Campbell to the President and Members of Board of Revenue, Fort.St.George in 1823.

14. See Radhakrishnan, P (1986): Caste-Discriminations in Indigenous Indian Education-I;Nature and Extent of Education in Early 19th Century British India. Working Paper No 63,MIDS, pp.51-52, for details of fee collected at the time of the Munro's Enquiry

15. See Sharp.M (Ed)(1920) Op. cit., pp.65-68.

16. ibid., pp.73-76 for extracts of the Minute by Thomas, Munro in 1826.

17. Cited in Madras:Report on the Results of Educational Census of Madras,1871 p 59.

18. See Radhakrishnan, p (1986), Op. cit., pp.60-62.

19. Vittal Rao, Y(1979): Education and Learning in Andhra Under the East India Company, p.68.

20. ibid., p.79

21. See Sharp (Ed)(1920) Op. cit., pp 107-117 for documents related to the controversy,the Macauly's Minute and the resolution of William Bentink. See also Richey,J.A (Ed)(1922): Selections from Educational Records Part II 1840-1859 Calcutta, Reprinted by NAI 1965, Chapter I for a discussion on the controversy.

22. See Vittal Rao,Y (1979) Op. cit., p.113.

23. See Richey,J.A (Ed)(1922) Op. cit., p.117.

24. The Petition was submitted in 1839, by about 60000 citizens of Madras city demanding establishment of higher educational facility in the city.See Vittal Rao(1979) Op.Cit,. p 125

25. ibid., pp.125-126

26. See Kapil,Fathima Kutty(1990); Education and Social Change in India Radiant New Delhi, p.7.

27. Vittal Rao,Y (1979) Op.cit., p 126. Also See Mangamma J(1972):The Rate Schools of Godavari, Monograph,AP State Archives Hyderabad p 5

28. Madras:Madras Provincial Report 1882. p 4.

29. See Richey(Ed)(1922) Op. cit., p.117

30. Vittal Rao,Y(1979) Op.cit., pp 147-179 for missionary efforts in Andhra Country in the period 1835-54. Also see Kapil,Fathima Kutty(1990) Op. cit., pp 17-24 for Missionary activities in Vizagapatam.

31. See Kapil,Fathima Kutty(1990) Op. cit., pp 17-25

32. See Ramakrishna V(1983) op. cit., and Kapil,Fathima Kutty(1990) Op. cit., pp 17-24.

33. See Rao,G.N.(1973):"Changing conditions of Agricultural Economy in the Krishna and Godavari Districts ; 1840-1890" Un published P.hd Dissertation Andhra University Waltair, pp 13-78 for a discussion on the Pre-Anicut Economy of Delta districts.

34. ibid.,

35. ibid.,

36. Cited in Rao, G.N (1973) Op. cit., pp. 53-54.

37. ibid.,p. 127.

38. ibid.,

39. ibid., p.44.

40. Saradaraju(1941):Economic conditions of Madras Presidency 1800-1850 Madras University,PP.41-52 for details of the land revenue systems in the first half of the Nineteenth Century in Ceded districts.

41. See Rama krishna V(1983) Op. cit.,

42. See Raghavaingar S.S(1896) : Memorandum on the Progress of Madras Presidency during the last forty years of British rule, pp.27-29.

43. Cited in Saradaraju, A (1941). Op. cit., p. 50.

44. Raghavaingar,S.S (1896) Op.cit., pp. 27-29

45. Ramakrishna V(1983) Op. cit.,

46. Richey,J.A (Ed)(1922) Op. cit., pp.364-393 for Extracts of the Despatch of 1854.

47. Quoted in Ramakrishna V(1982) Op. cit., p.17 Also see Mangamma J(1973) Op cit., pp.14-15

48. Ramakrishna,V(1983) Op. cit., p 17.

49. The following points are taken from Mangamma, J.(1973) Op.cit., and Vittal Rao, Y (1978) Op.cit.,pp.127-28.

50. See Mangamma J(1973) Op. cit., p 6-7.

51. ibid., p 7

52. ibid., p. 8-9.

53. See Rama krishna,V(1983) Op. cit., p. 17-18.

54. Cited in Mangamma,J.(1973) Op cit., p.15.

55. ibid., p.18.

56. Madras:Report on Public Instruction in the Madras Presidency for 1856-57 pp.41-42-43 for extracts of the Inspector's Report.

57. Vittal Rao,Y(1979) Op.cit., p.210.

58. See Richey,J.A (Ed)(1923) Op. cit., p 59

59. Vittal Rao,Y (1979) Op. cit., p.202.

60. Richey (Ed)(1923) Op cit.,

61. Mangamma,J.(1973) Op. cit., p 53

62. ibid., p. 51

63. ibid., p.55.

64. Madras: Report on Public Instruction in the Madras Presidency for the Year 1956-57 p.43

65. Madras:Madras Provincial Report, 1882 p 22,24

66. See Sathianathan(1894): History of education in Madras presidency, p.82.

67. see Review of Education in India in 1886 by Sir Alfred Craft Calcutta 1888, pp 119-120.

68. Madras:Report on Public Instruction in the Madras Presidency for the year 1892-93,p 5.

69. Madras:Report on Public Instruction in Madras Presidency for the year 1892-93.

70. Vaikuntam, V (1982) Op. cit.,pp.42-43.

71. See appendix B " A note on the Progress of education in Madras Presidency between 1870/71 and 1890/91 by S.Seshaiyar, cccxi-cccxv in Raghavaiyangar, S. S. (1896)

72. ibid.,

73. Venkata Rangaiah,M (Ed)(1965):The Freedom Struggle in Andhra Pradesh(Andhra),Hyderabad, Vol I pp80-81, Doc. No.63.

74. See Rao, G.N (1973) Op.cit., p.131.

75. See Rao,G.N(1973) Op. cit., pp. 178-79.

76. ibid., p 230.

77. ibid., p 237-38.

78. ibid.,

79. Satyanarayana, A.(1989):Andhra peasants Under British Rule,Manohar,New Delhi.. pp.31

80. ibid., p. 31.

81. see Rao & Rajasekhar(1988):"Agrarian Transition in Andhra Country Side:A Study in Interregional variations c1910-c1947" Paper presented at a Seminar on South Indian Economy c1914-c1940, Center for Development Studies,Trivandrum Conference Vol I

82. See Namerta(1989): Growth of Market Towns in Rayalaseema Region of Andhra c1890-c1945, M.Phil Thesis,Centre for Development Studies,Trivandrum, p.66.

83. ibid., p.100.

84. ibid., pp.69.

85. See section 1 above on the progress of Rate Schools

86. See Mangamma,J.(1973) Op. cit., p. 6.

87. ibid., p 12

88. ibid., p 35

89. ibid., p 35

90. ibid.,p 22 and p 35.

91. ibid., P 36.

92. ibid., p.17 and p.19.

93. Cited in Ramakrishna V(1983) Op. cit., pp. 32-33.

94. Vaikuntum, V (1983) Op. cit., pp.80-81.

95. see Jeya kumar,S (1987); Growth of Education in Madras Presidency,(1921-1937),Un published M.Phil Thesis Madurai-Kamaraj University p. 84-85.

96. ibid., p 39

97. see Jeyakumar,S (1987) Op.cit.,pp. 86-87.

98. ibid., pp.90-91.

99. ibid.,pp.91-92.

100. Satyanarayana,A (1990) op cit., p 17

101. See Rao &Rajasekhar(1988) Op. cit., p.14.

102. ibid., p.14.

103.See Satyanarayana,A (1990) Op. cit., pp.19-21.

104. See Rao,G.N & Rajasekhar,D (1988) Op.cit., p 16.

105. ibid., pp.16-17.

106. ibid., pp 27-28

107.See Rao,G.N & Rajasekhar,D(1988) Op.cit.,

108. Satyanarayana,A (1990) Op.cit., p.46.

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111. ibid., p 15.

112.See Rao,G.N & Rajasekhar,D (1988) Op.cit., p.2.

113. ibid.,

114. Satyanarayana, A (1988) Op.cit., p.19.

115. ibid., p.24.

116. See Washbrook,David(1973):"Country Politics in Madras 1880 to 1920" Modern Asian Studies Vol 17,1973 p.509

117. ibid., p.484

118. ibid.,

119. see Ramakrishna V(1983) Op.cit.,

120. Narayana Rao,K.V (1973):The Emergence of Andhra Pradesh,Popular,Bombay pp.13-14.

121. ibid., pp 7-15 for the background of Andhra Movement.

122. Hyderabad,Deccan(1941): Statistical Year Book for the Year 1348 F(1939 AD)(Here after Statistical Year Book(1939)), H.E.H Nizam's Government,Director of

Statistics and Census Commissioner PP 385-446 for the Activities of Education Department

123. See Syed Hussain Bilgrami(1886): History of Operations of H.H the Nizam's Education Department for the Last 30 Years together with a detailed report and returns for 1883-84-85 Bombay, Gladstone 1886(Hereafter Bilgrami(1886)) the letter addressed to the Government.

124. Statistical Year Book(1939) Op.Cit., p 424.

125. Cited in sheela Raj(1987): From Medievalism to Modernism; Socio Economic and Cultural History of Hyderabad 1809-1911,Popular, Bombay P 239

126. ibid., p 239

127. See Imperial Gazetteer of India,Provincial Series,Hyderabad State:Calcutta,1909. Reprint;1991 (Hereafter Referred as Hyderabad Gazetteer(1909)) P 73

128. Bilgrami(1886) Op.cit.,

129. See Hyderabad Gazetteer(1909) Op. cit., p 73.

130. See Bilgrami(1886) Op.cit., p 2-3.

131. ibid.,p 5.

132. See Bilgrami(1886) Op.Cit.,p 11.

133. ibid., p 11.

134. Sheelaraj(1987) Op.Cit., pp. 240-41.

135. See Hyderabad Gazetteer(1909) Op.cit., p 76 .

136. Bilgrami(1886) Op.cit., p. 12-13

137. ibid.,

138. ibid., pp.23-24 and p 33.

139. Hyderabad:Census of Hyderabad 1881, Statement XIII

140. See Sheelaraj(1987) Op.cit., pp 251.

141. See Hyderabad:Census of Hyderabad 1911,Part I Report PP 101 Also See pp 99-113 for Educational activities in the region during the period.

142. Census of Hyderabad 1911 Op.cit.,

143. ibid., p 101.

144. Hyderabad Gazetteer(1909) Op.cit., p 77 .

145. ibid.,

146. See Census of Hyderabad 1911, Op.cit., Part II p 66 and Hyderabad Gazetteer(1909) Op.cit., p 78.

147. See Census of Hyderabad 1911 Op.Cit.,

148. See Syed Ali Akbar:'Progress of Primary Education in the Former Hyderabad State' PP 87-97, in S.Ali Akbar(Ed)

149. Hyderabad:Report on Public Instruction in H.H Nizam's Dominions for the Year 1921/22,p

150. Syed Ali Akbar(1970) Op.cit., p. 89-90.

151. See Hyderabad:Report on Public Instruction in H.H.Nizam's Dominions for the Year 1914-15 Appendix 9

152. Syed Ali Akbar(1970) Op.cit.,

153. Rama Krishna Reddy(1987): Economic History of Hyderabad State (Warangal Suba 1911-1950)(Here after Reddy(1987)), p. 624.

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156. Hyderabad:Progress of education and cultural Activities in Hyderabad State During 1948-54 , p 1.

157. ibid., pp

158. Reddy(1987) Op.cit., pp 625

159. ibid p. 625.

160. ibid.,p. 630.

161. ibid.,p.630.

162. Cited in Reddy(1987), Op.Cit., pp.631.

163. ibid., pp 632

164. Cited in Champaka laxmi,N: The Economic and Social life of the Peasantry in the Deccan in the Nineteenth Century, Abulkalam Azad Oriental Research Institute Publication,Hyderabad pp 48

165. ibid., p 50

166. Sheela raj(1987) Op.cit., pp.99-100.

167. ibid.,

168. ibid.,

169. ibid., pp 12-13.

170. Chmpaka laxmi,N Op.cit., pp 57-59.

171. Pavier,Barry(1981):The Telangana Movement 1944-51,Vikas,New Delhi p.3.

172. ibid., p 3

173. Sheela raj(1987) Op.cit., p 101.

174. Rao,G.N & Rajasekhar,D (1988) Op.cit., p.4-5.

175. See Pavier(1981) Op.cit., p 10.

176. ibid., p 6.

177. ibid., p 6.

178. Kesava Iyangar(1931):Economic Investigations in the Hyderabad State 1929-30 vol III,Warangal District, Government Press,Hyderabad p 5

179. Kesava Iyangar(1931):Economic Investigations in Hyderabad State,1929-30, vol I,Government Press Hyderabad Deccan p.15.

180. Reddy(1987) Op. cit., p 89.

181. Pavier(1981) Op. cit., p 11.

182. ibid.,

183. Reddy(1987) op cit., p 91 pp 116-119.

184. Reddy(1987) Op. cit., p.119.

185. ibid.,p 109

186. Reddy (1987) Op.cit., p.130.

187. ibid.,p 135.

188. ºuereshi, A.(1941):The Economic Development of Hyderabad,Volume I Orient Longman

189. Reddy(1987) op cit., p 176.

190. Rao,G.N & Rajasekhar,D.(1988) Op cit., p 92-93.

191. Pavier(1981) Op.cit., P 18.

192. ibid.,

193. Rao,G.N & Rajasekhar,D (1988) Op.cit.,

194. ibid., p 59.

195. pavier,Barry(1981) Op.cit., p 59-60.

196. Qureshi,A(1941) Op.cit.,

197. Reddy(1987) Op. cit., p 536-37.

CHAPTER 3

EDUCATIONAL GROWTH IN ANDHRA PRADESH

In this chapter we analyze the growth of education in Andhra pradesh since 1956, the year in which Andhra pradesh was formed with the merger of Telangana with Andhra.

The exercise is aimed understanding the progress of education, in all its indicators, in the state and different districts, and to bring out regional patterns, if any, in educational growth.

At the time of formation of the state the school education in the three regions of the state was as follows: [See Table 3.1]. A cursory look at the table will reveal that the regions of Andhra had developed much more in education than Telangana.

Table 3.1

School Education in Andhra Pradesh; 1956/57

Regions	primary school Ins	primary school scholars	Middle school Ins	Middle school scholars	secondary school Ins	secondary school scholars
Coastal	12269	1286332	547	14992	551	224662
Rayalaseema	5845	437334	217	57060	174	78544
Telangana	7295	444442	-	-	274	148747

Note :Ins=Institutions
Source: Pillai,R (1980): General and Technical education in AP

The pattern of educational growth in districts in the subsequent period is to be analyzed. It has to be measured in terms of growth of enrollment of students, the increase in number of educational institutions and of the teachers, which constitute three crucial elements of educational growth. Educational growth (at the level of school education) in different districts is to

be presented and on its basis the regional patterns in educational growth is to be highlighted. The growth of higher education is analyzed separately at the regional level Viz., Coastal Andhra(CAP), Rayalaseema(RAP) and Telangana(TAP).

Equally important in understanding educational growth of any region is, the nature and quantum of educational wastage, the participation levels and educational expenditures. These constitute crucial elements in of educational growth as they reflect the internal efficiency of the system and the priorities involved. These aspects are also separately dealt with in the present analysis.

Educational growth in districts of Andhra Pradesh since 1960's, in terms of enrollments at different levels the number of Institutions and teachers is dealt with in section one. In section two the growth of higher education in the three regions of Andhra pradesh is discussed. In section Three the problem of educational wastage and non-participation is presented. In Section four educational finances in Andhra Pradesh is discussed.

Section 1

3.1 Growth of Enrollments:

Enrollment of students in schools is an important element of educational progress. Article 45 of the Constitution of India states that " The State shall endeavor to provide within a period of ten years from the commencement of constitution free and compulsory education for all the children until they complete the age of Fourteen years". This shows a

serious commitment of the Indian State to education. Enrollments at different levels of education increased all over the country over the initial period of Independence. As observed by many policy analysts, the decades of fifties and sixties witnessed a virtual explosion in enrollments in the third world countries. Yet, the aim of Universalization of Primary education has not been achieved in our country so far.

From a modest figure of 29076 primary schools in 1956/57, presently there are 46086 primary schools in 1987/88 in the state of Andhra Pradesh covering approximately 54 lakh students at this level (Table 3.1.1 and 3.1.2).

Table 3.1.1
School Enrollment in Andhra Pradesh
(Institution wise; 1961-1987) (in lakhs))

	Primary		Middle		Secondary		Primary&Middle		Total	
Yr	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1961/62	18.32	12.33	2.50	1.28	4.97	1.45	20.82	13.61	25.79	15.06
1962/63	18.73	12.86	2.62	1.33	5.56	1.68	21.36	14.19	26.92	15.87
1965/66	19.40	12.51	3.41	1.73	3.22	1.23	22.80	14.24	26.02	15.47
1966/67	18.39	12.73	4.14	2.15	6.06	2.26	22.54	14.88	28.60	17.14
1968/69	18.27	12.53	4.37	2.72	6.32	2.56	22.64	15.24	28.96	17.81
1969/70	19.29	12.23	4.89	2.91	7.47	3.02	24.18	15.13	31.65	18.15
1971/72	18.46	12.49	4.97	2.96	6.92	3.09	23.43	15.46	30.35	18.55
1972/73	18.83	12.39	5.61	3.34	7.17	3.48	24.44	15.73	31.60	19.21
1973/74	18.63	12.74	5.49	3.33	6.88	3.42	24.12	16.06	31.00	19.49
1974/75	18.65	12.67	5.74	3.49	7.30	3.65	24.39	16.16	31.70	19.81
1975/76	18.71	12.88	6.00	3.67	7.76	3.95	24.71	16.55	32.47	20.50
1976/77	19.25	13.11	6.27	3.80	7.94	4.13	25.52	16.91	33.46	21.04
1977/78	20.99	14.49	6.76	4.14	8.23	4.35	27.75	18.64	35.98	22.99
1978/79	21.86	15.33	7.26	4.51	8.63	4.63	29.12	19.84	37.75	24.48
1979/80	22.32	15.93	7.84	4.86	9.46	5.06	30.17	20.80	39.63	25.86
1980/81	23.64	16.78	8.35	5.09	10.26	5.74	31.99	21.87	42.25	27.61
1981/82	24.71	17.63	8.76	5.42	10.45	5.98	33.47	23.06	43.92	29.04
1982/83	25.62	18.50	9.38	5.83	11.09	6.32	35.00	24.32	46.09	30.64
1987/88	31.56	23.20	11.38	7.58	14.24	8.41	42.93	30.78	57.17	39.20

Notes: Total=Primary,Middle and Secondary combined
Source: Statistical Abstracts of AP various issues, and SCERT(1988):Educational Statistics of AP 1987/88

Table 3.1.2
Stage wise Enrollment in Andhra Pradesh
(Stage Wise 1956-1987)

	Primary (I TO V STAGE)					Upper Primary(VI & VII Stage)					High School (VIII to X Std)				
year	school	teachers	Students(Lakhs) M	F	T	school	teachers	Students(Lakh) M	F	T	School	teachers	Students(Lakhs) M	F	T
1956/57	29076	77053	15.44	9.10	24.54	372	4421	1.84	0.48	2.33	733	16165	1.77	0.32	2.09
1960/61	34050	74386	18.40	11.35	29.76	1466	13352	2.30	0.70	3.00	1124	24937	1.98	0.44	2.43
1965/66	37320	79923	22.45	15.23	37.69	2578	20209	3.45	1.31	4.77	2297	44823	3.18	0.93	4.11
1970/71	37013	79172	23.25	15.57	38.82	3123	24937	3.49	1.54	5.03	2914	49862	3.43	1.22	4.65
1975/76	37096	79014	24.56	16.77	41.34	3917	31788	4.55	2.14	6.70	3386	56075	3.93	1.57	5.51
1980/81	40611	80954	31.81	22.35	54.17	4621	35424	6.01	3.13	9.14	3795	58649	5.72	2.55	8.28
1982/83	41291	81722	33.00	23.36	56.36	5056	36650	6.72	3.66	10.39	4331	66227	6.79	3.26	10.05
1987/88	46086	97543	40.89	30.05	70.950	5724	42862	9.08	5.25	14.34	5186	67951	9.04	4.62	13.66

Notes:M=Male;F=Female & T=Total.
Source: Ranga Reddy K.V(1985): Growth of Education in Andhra Pradesh :A Review
SCERT(1988):Educational Statistics of AP 1987/88.

All the districts of AP have also recorded growth of education in terms of number of students, institutions and teachers.

The real progress of education will be captured when we look educational enrollment in relation to the population of the relevant age cohort. Gross enrollment Ratio(GER) at each level of education is computed to facilitate the analysis. The following formula is used to arrive at GER.

GER primary level= ENR.PRIMARY SCHOOL/POP.OF AGE GP.6-11

Similarly enrollment ratios at other levels of Education are computed. This indicator along with the number of teachers and Institutions would give a clear picture of educational growth in the state.

Table 3.1.3 presents enrollment ratio at primary and middle levels for boys and girls separately, for AP.

Table 3.1.3

Enrollment Ratios at School Level in Andhra Pradesh
(Institution wise) 1961-1987

	primary		Middle		Secondary		Total		Total
Yr	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	B+G
1961/62	63.66	42.16	21.72	12.46	36.16	11.77	40.51	22.13	31.32
1962/63	63.47	43.04	21.98	12.46	39.32	13.20	41.59	22.9	32.24
1965/66	60.87	39.23	25.75	14.39	20.91	8.80	35.84	20.81	28.32
1966/67	56.27	39.08	30.23	17.19	38.31	15.60	41.6	23.96	32.78
1968/69	53.11	36.83	29.77	20.04	37.79	16.62	40.22	24.49	32.36
1969/70	54.66	35.18	32.17	20.59	43.40	18.96	43.41	24.91	34.16
1971/72	49.71	34.43	30.51	19.39	38.02	18.21	39.42	24.01	31.71
1972/73	49.83	33.50	34.94	21.56	38.64	20.83	41.13	25.29	33.21
1973/74	48.43	33.79	34.78	21.19	36.34	20.78	39.85	25.26	32.55
1974/75	47.64	32.98	36.93	21.95	37.85	22.54	40.81	25.82	33.31
1975/76	46.96	32.88	39.15	22.78	39.42	24.77	41.84	26.81	34.33
1976/77	47.47	32.85	41.59	23.23	39.55	26.28	42.87	27.46	35.16
1977/78	50.86	35.63	45.51	25.02	40.19	28.11	45.52	29.58	37.55
1978/79	52.04	36.99	49.69	26.86	41.32	30.39	47.68	31.41	39.55
1979/80	52.22	37.70	54.52	28.59	44.42	33.73	50.39	33.34	41.86
1980/81	54.34	38.96	58.95	29.51	47.23	38.84	53.51	35.77	44.64
1981/82	55.80	40.17	62.79	31.03	47.17	41.12	55.25	37.44	46.35
1982/83	56.85	41.34	68.29	32.89	49.06	44.09	58.07	39.44	48.75
1987/88	64.12	47.14	89.53	59.67	57.11	33.74	70.26	46.85	58.55

Source: Same as Table 3.1.1

The enrollment ratios at primary school level shows fluctuations, and the rest of the levels Viz.,Middle level and secondary show an increasing trend through out the period. The total enrollment at school education also shows an increasing trend through out the period under study (Table 3.1.3 and Graph 3.1.1).

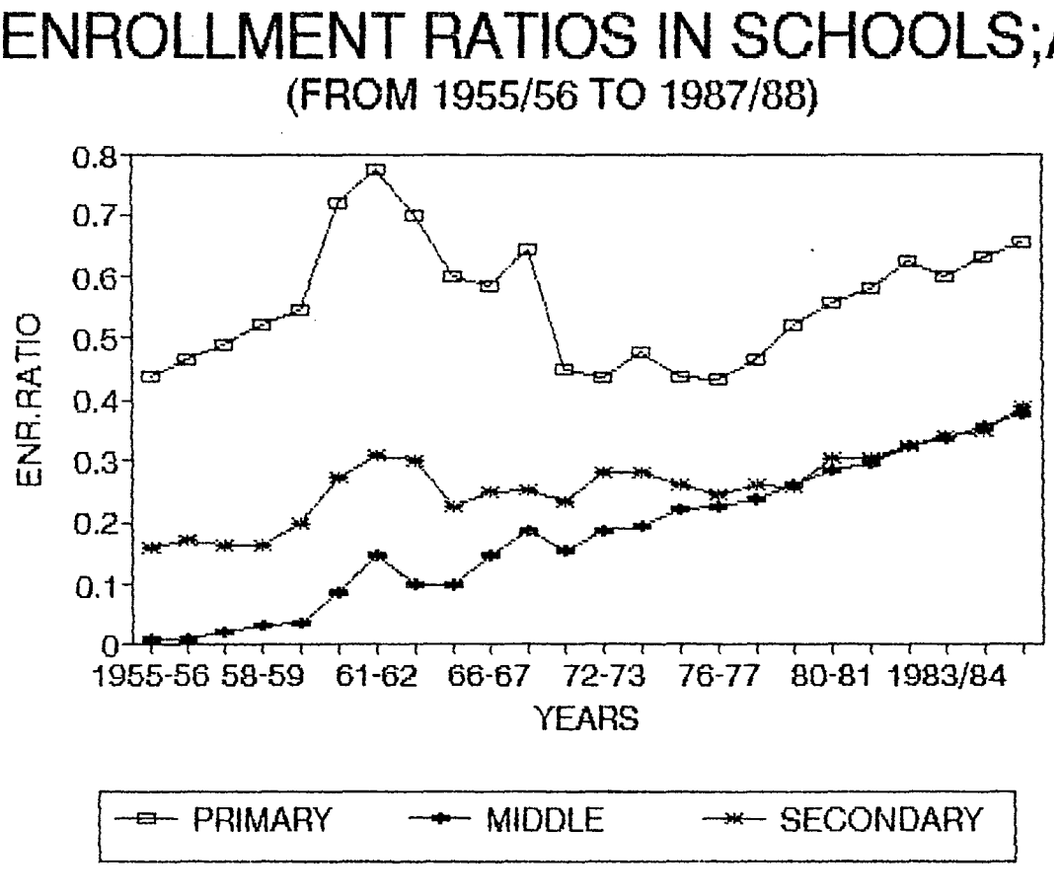
The stage wise enrollment ratios for the same period, for primary stage, also show similar trend. Beginning in the sixties a gradual decline in primary stage enrollment has been observable, which has recovered in mid seventies. Even middle stage enrollment for boys has declined during the period 1965/66 to 1970/71 (Table 3.1.4).

Table 3.1.4
Enrollment Ratios at School Level in Andhra Pradesh
(Stage wise:1956/57-1987/88)

	Primary Stage(I-V)			UP Stage(VI&VII)		
YEAR	B	G	T	B	G	T
1956/57	72.39	43.27	57.93	23.54	6.24	14.98
1960/61	84.29	52.16	68.26	28.31	8.62	18.49
1965/66	88.39	60.29	74.38	37.53	14.20	26.04
1970/71	78.79	53.28	66.09	33.46	15.21	24.44
1975/76	75.02	51.77	63.46	39.38	19.03	29.33
1980/81	87.56	62.20	74.95	46.85	24.98	36.05
1982/83	87.32	62.50	74.98	50.37	28.17	39.41
1987/88			83.70			

Notes:B=Boys:G=Girls:T=Total
Source:Same as Table 3.1.2.

Graph 3.1.1



From Tables 3.1.3 and 3.1.4 we observe discrepancy in the enrollment ratios at different levels. This is due to the unit of measurement. Table 3.1.3 presents institution wise enrollment and Table 3.1.4 shows stage wise enrollment. Thus, the estimates of enrollment ratio at primary school levels could be underestimates and that of the stage wise enrollment at middle level would be over estimates. The same discrepancy may be found while discussing the decline in Enrollments at Primary school level. A combined primary middle enrollments which constitute elementary education is presented in our subsequent analysis.

In order to understand the enrollment patterns we switch over to district wise enrollments at different levels of education[1]. The rates of growth of Enrollment ratios at all the three levels and for the total, for the period 1961/62 to 1987/88 are computed. The pattern of enrollment ratios was observed, to characterize the enrollment ratio pattern with a functional form and to estimate the growth rate for each district. Characterization of growth pattern was done by looking at the graph of enrollment ratios and we have tried different functional forms according to the graph and taken the best suited functional form. As there was a decline in primary school enrollment ratio in all the districts, for a period, we have estimated the growth rate by dividing the whole period into two parts, one for the declining period and the other for the recovery period. The Kinked exponential function was used in characterizing the growth pattern and estimating the growth rate(Table 3.1.5) for the primary school level. For the rest of the levels the growth rate were estimated by using semi-log

functional form which has suited for many of the districts for middle and secondary school enrollment ratios (giving fairly high R square and significant t-values)(Table 3.1.6).

Table 3.1.5 shows that there were two phases of primary educational growth- one a phase of declining enrollment ratios and the other an increasing enrollment ratios. All the districts have recorded negative growth rates for the period ending mid seventies and then have exhibited a positive growth rates in the subsequent period. For the Pre-1961 period, from which our data series begins, for the state as a whole, there has been an increase in the enrollment ratios at primary school level(Graph 3.1.1). The period upto mid- seventies(1974/75) for the State as a whole both primary boys' and girls' enrollment ratios recorded negative growth rates of the order 3.5% and 3% respectively. The subsequent periods recorded a positive growth of the order 3.37% and 4.06% for boys and girls respectively. It is evident that the fall in enrollment ratios in the first period has been compensated for by the growth in the next period. The enrollment levels have been restored and a growth in enrollment ratios was observable by eighties. As seen from table 3.1.5, all the districts have recorded a negative growth rate in the first period which varied from 7 years to 13 years. The discrepancy in identifying the first period is inevitable in this case since we have taken the year in which lowest enrollment ratios is recorded as a turning point.

Table 3.1.5
Growth Rates of Enrollment Ratios in Districts
Primary School Level;1961-1987.

	Primary Boys				Primary Girls				
District	G1	G2	R^2	F	G1	G2	R^2	F	T.Period
Srikakulm	3.37	2.13	0.36	K	3.19	3.2	0.42	K	1973/74
Visakha	-24.75	1.36	0.71	K	-22.8	2.7	0.63	K	1966/67
E.Godavri	-5.21	1.08	0.83	K	-5.6	1.75	0.87	K	1971/72
W.Godavri	-3.41	2.19	0.82	K	-3.29	2.96	0.71	K	
Krishna	-3.29	2.14	0.5	K	-3.24	2.4	0.56	K	1973/74
Guntoor	-1.97		0.53	Ln	-1.72		0.38	Ln	
Prakasam	1		0.13	Ln	2.51		0.73	Ln	
Kurnool	-6.61	4.42	0.81	K	-6.19	7.86	0.78	K	1974/75
Anantapur	1.41		0.28	K	4		0.61	Ln	
Cuddapah	-2.22	2.95	0.59	K	-2.59	4.1	0.7	K	1975/76
Nellore	-3.4	5.5	0.67	K	-2.37	6.96	0.72	K	1976/77
Chittor	-2.96	4.66	0.82	K	-2.61	8.2	0.92	K	
Hyd.Dist	-4.97		0.76	Ln	-4.31		0.71	Ln	
Medak	-5.68	2.53	0.12	K	-5.79	6.57	0.44	K	1972/73
Niz'bad	-8.25	8.41	0.6	K	-9.05	12.22	0.65	K	1975/76
Mah'ngr	-8.65	7.66	0.86	K	-7.01	7.9	0.81	K	1975/76
Nalgonda	-6.93	3.6	0.89	K	-8.13	5.1	0.89	K	1975/76
Warngal	-6.5	7.5	0.86	K	-5.53	8.43	0.89	K	1975/76
Khammam	-5.88	6.85	0.83	K	-5.2	8.36	0.83	K	1975/76
Karimngr	-6.03	6.27	0.59	K	-4.32	11.07	0.89	K	1974/75
Adilabad	-10.31	6.71	0.79	K	-13.6	8.32	0.85	K	1972/73
AP	-3.52	3.37	0.92	K	-3.08	4.06	0.92	K	1975/76

Note:G1=Growth Rate for Period I:G2=Growth for Period II.
F=Functional form
K=Kinked Exp;Ln=Semi log

It is evident from the table 3.1.5 that the regions educationally backward have recovered faster as compared to the other regions like Coastal Andhra and Rayalaseema.

From Table 3.1.6 we find that there has been a steady increase in the growth of middle and secondary school enrollment ratios over the entire period. The state as a whole experienced a positive growth in both the levels of education. At the same time the rate of growth of girl's enrollment ratio more impressive than Boys enrollment ratio in case of middle and secondary school enrollments in all the districts. The rates of

growth of total enrollment ratios also have shown positive growth in all the districts during the period under consideration. Middle school enrollment has increased at a compound growth rate of 6.75% and 6.01% for boys and girls respectively. Similarly, growth rates in case of secondary school enrollment ratios during the same period were 2.41% and 7.5% respectively.

Table 3.1.6
Growth of Rates Enrollment Ratios in Districts
(Middle and Secondary School Level;1961-1987)

Middle Boys				Middle Girls			Secondary Boys				Secondary Girls			
	G1	R^2	F	G1	R^2	F	G1	G2	R^2	F	G1	G2	R^2	F
Srikakulam	6.8	0.53	Ln	7.12	0.51	Ln	3.22		0.39	Ln	9.94		0.81	Ln
Visakha	3.47	0.57	Ln	3.88	0.6	Ln	-13.5	5.2	0.61	K	7.61		0.73	Ln
E.Godavari	4.1	0.62	Ln	5.18	0.66	Ln	-1.06	2.33	0.35	K	5.64		0.91	Ln
W.Godavari	4.62	0.79	Ln	4.95	0.5	Ln	1.91		0.22	L	7.85		0.64	Ln
Krishna+	4.33	0.28	Ln	5.15	0.6	Ln	0.03				2.58		0.62	Ln
Guntoor	4.3	0.71	Ln	5.34	0.71	Ln	4.72	4.56	0.8	K	4.61		0.81	Ln
Prakasam**	4.32	0.82	Ln	3.01	0.77	Ln	2.26		0.51	Ln	5.44		0.92	Ln
Kurnool	4.73	0.78	Ln	11.32	0.97	Ln	-16.9	1.44	0.29	K	5.84		0.76	Ln
Anantpur	6.42	0.71	Ln	22.29	0.97	Ln	3.95		0.71	Ln	13.45		0.94	Ln
Cuddapah	4.71	0.69	Ln	5.43	0.7	Ln	3.68		0.7	Ln	7.97		0.93	Ln
Nellore	5.52	0.84	Ln	7.37	0.79	Ln	3.1		0.6	Ln	9.9		0.54	L
Chittor	3.68	0.76	Ln	5.44	0.83	Ln	1.87		0.41	Ln	6.17		0.87	Ln
Hyd.Dist#	3.37	0.6	Ln	3.18	0.45	Ln				ln	3.16		0.42	Ln
Medak	5.22	0.68	Ln	8.02	0.8	Ln	2.4		0.48	Ln	8.22		0.9	Ln
Niz'bad	5.77	0.8	Ln	7.52	0.74	Ln	2.98		0.7	Ln	8.38		0.88	Ln
Mah'ngr@	5.91	0.92	Ln	9.46	0.92	Ln	2.40				5.79		0.62	Ln
Nalgonda	6.14	0.89	Ln	9.3	0.87	Ln	2.65		0.31	Ln	7.06		0.7	Ln
Warngal	6.08	0.92	Ln	7.89	0.95	Ln	3.22		0.6	Ln	6.68		0.85	Ln
Khammam	5.94	0.9	Ln	8.36	0.93	Ln	2.04		0.6	Ln	5.27		0.91	Ln
Karimngr	7.37	0.88	Ln	11	0.97	Ln	2.48		0.38	Ln	8.5		0.95	Ln
Adilabad	7.94	0.88	Ln	8.96	0.8	Ln	4.1		0.7	Ln	7.55		0.84	Ln
AP	6.75	0.95	Ln	6.01	0.85	Ln	2.41		0.44	Ln	7.5		0.9	Ln

Notes: G1=Growth rate in peroid I and G2=Growth rate in Period II.
1) All the growth rates are statistically significant except Krishna Sb ,Mah'ngr Sb
2) F=Functional form
L= Linear
LN=Semi log
K= Kinked Exp
3) ** Based on the data from 1971 onwards(District formation)
4)# Includes Hyd City
5)@Mah'ngr Secondary boys end point growth rate
6) + Krishna Secondary Boys end point growth rate

Thus, explanation is necessary for the observed fall in the primary school enrollment ratios in the period roughly from mid sixties to mid seventies.

Firstly, the stage-wise enrollment data also exhibits almost the same trend. From mid sixties onwards there has been a decline in enrollment at primary stage which continued till the mid- seventies. The rate of growth of stage wise enrollment ratios for the period 1960/61 to 1975/76 show negative sign in case of primary enrollment ratio for both boys and girls. It was of the order of -0.83% and -0.05% respectively for boys and girls. Infact, the fall in enrollments at primary level has alerted the government and special programmes were initiated from mid-seventies on wards to raise the enrollments[2].

It was observed that the decline in enrollments in seventies was a phenomenon common to the whole of the third world[3]. Earlier studies on educational progress of the state attributed the decline to the political unrest in some parts of the state, and unfavourable agricultural seasons, during the early seventies [4].

There has been a wide disparity in rates of growth of enrollment ratios over the period. Districts of Telangana show much higher rates of growth as compared to the other regions. This could be due to the low level of base at which these districts were in the earlier period. The decline in enrollment ratios observed in period I in many of the Telngana districts has been compensated by the increased enrollment during the second phase. But in the Andhra districts, the enrollment ratios have

declined steeply and improved comparatively smaller proportions than the case of Telangana. (One has to note here that the districts of the Andhra region were on a much higher plane in terms of enrollment than in the Telangana districts all through the period).

In order to have a better understanding of educational progress combined primary and middle enrollment ratios (Elementary Education) in the districts as unit of analysis are presented. The enrollment ratios in elementary education for the state as a whole has increased from 42.6% to 76.8% in case of boys and from 27.3% to 53.4% in case of girls during the period 1961/62 to 1987/88. The enrollment ratio at elementary level in case of boys has remained around 44 to 45 up to the later part of seventies and then started increasing. This was in agreement with our earlier observation that primary school enrollment has fallen during the same period. Similar is the case with girl's enrollment ratio which remained at 26 to 28 percentages during the same period . We see that the combined school educational enrollment ratio continued to increase through out the period of our analysis.

Districts of AP show a positive growth rate in elementary school enrollment ratio for both boys and girls for the period under consideration (Table 3.1.7). There are certain features observable in rates of growth across districts. One, the growth rates in case of girls is higher than that of boys in all the districts, and secondly the rate of growth of elementary school enrollment ratios in Telangana districts has been higher than

that of Andhra districts. Telangana districts have recorded higher growth rate than the state average which stood at 2.5 percent(Table 3.1.7). The rate of growth of total enrollment ratio (primary, middle and secondary) also show positive trend through out the period in almost all the districts. It ranged from 0.69 percent in Guntur district to 6.5 percent in case of Anantapur district, with the state average being 2.54 percent. Here again we find that the districts of Telangana have recorded higher growth rate compared to Andhra districts and were placed above state average. This was due to the low level of base enrollment ratios in case of districts of Telangana.

To sum up,

Firstly, there has been a growth in enrollment ratios in districts, at all levels during the period under consideration albeit, unevenly. The Primary school enrollment ratios have fluctuated during the period which was not the case with middle and secondary school enrollments.

Secondly, the rates of growth of enrollments show a consistent disparity across the levels, the growth rate at elementary level being lower than that of secondary level

Thirdly, higher growth rates in enrollment ratios have recorded in case of girls than boys but the disparity in girls participation has remained same (The difference between boys and girls enrollment ratio).

Lastly,the Telangana districts recorded higher growth rates as compared to Andhra districts.

Table 3.1.7

Growth Rates of Enrollment Ratios in Districts
(Elementary and All Levels 1961-1987)

Dist	Elementary Boys	Girls	All
Adilabad	1.68	3.53	4.38
Anantpur	2.41	10.04	6.50
Chitoor	1.68	3.53	2.62
Cuddapah	1.47	1.82	2.37
E.Godavari	0.87	1.34	1.40
Guntur	-0.08	0.23	0.69
Hyd**	0.22	0.08	1.03
Karimngr	3.87	7.22	4.54
Khammam	2.87	4.39	3.33
Krishna	1.13	1.73	1.32
Kurnool	0.33	3.47	1.66
Mahngr	2.31	4.22	2.58
Medak	2.48	5.15	3.50
Nalgonda	4.09	5.95	4.43
Nellore	1.69	2.86	2.65
Niza'bad	3.02	4.75	3.84
Prakasam*	1.86	2.61	2.38
Srikakulam	3.54	3.93	3.91
Visakha	-0.58	0.67	0.89
Warangal	3.32	4.66	3.87
W.godavari	0.86	1.33	1.65
RReddy	5.92	15.17	2.73
Vnr	1.65	3.40	2.06
AP			2.54

Notes:
* From the Year 1971 onwards
** Upto 1979
All=Primary,Middle and Secondary Levels combined(Boys and Girls)

Growth of Institutions:

During the same period, as one would expect with the expansion of enrollments, there has been a growth in number of educational institutions and number of teachers in all the districts. Table 3.1.8 presents the rates of growth in number of institutions and teachers. One has to be cautious in interpreting the data regarding institutions and teachers.

Firstly, there may be instances of conversion of primary schools into middle schools and so on which may reduce the number of primary schools as a whole but the sections will remain operative. Secondly, as a consequence of the first, there may be some changes in the number of teachers belonging to each type of schooling. Thus it would be appropriate to observe the total number of institutions and teachers of all levels together.

Table 3.1.8

Growth Rates of No.of Schools and Teachers in Districts;1961-1987

Dist	(1)	(2)	(3)	(4)	(5)	(6)
Adilabad	2.65	9.23	9.25	1.73	1.93	6.40
Anantapur	2.26	7.54	7.00	2.57	3.43	6.65
Chittor	2.28	6.04	5.44	1.73	1.93	6.40
Cuddapah	0.97	6.15	7.31	1.10	2.27	6.08
E.Godavari	0.49	6.75	5.52	-0.33	0.64	5.53
Guntur	-1.31	3.46	2.85	-1.86	-1.58	2.32
Hyd Dt	-0.70	8.44	7.41	0.13	1.41	8.21
Karimnagar	0.76	11.70	6.70	0.16	4.04	8.97
Khammam	1.46	12.53	6.40	1.77	3.47	8.66
Krishna	0.45	6.38	4.30	0.01	0.72	5.61
Kurnool	-2.07	4.09	2.41	-2.24	-1.20	2.45
Mahbubnagar	1.07	7.79	7.01	0.40	3.08	6.26
Meadk	-0.61	6.21	5.54	1.92	3.93	5.67
Nalgonda	1.36	6.93	7.25	2.58	3.96	6.13
Nizbad	0.98	8.91	8.59	-0.57	4.76	8.12
Prakasam	0.89	5.35	1.96	0.15	0.06	3.09
Srikakulam	-0.35	4.41	2.92	0.13	0.82	5.09
Visakhap'm	-2.59	2.26	2.88	-2.90	-2.97	4.35
Warangal	1.49	7.85	6.96	0.98	3.97	6.39
W.Godavari	0.45	7.43	5.68	0.25	0.97	5.00
Nellore	-3.45	4.63	3.68	-1.18	-0.56	4.42
RReddy	1.93	6.16	6.32	-3.32	14.28	19.29
Vijayan'rm*	1.24	3.72	4.50	9.42	9.22	33.21

Notes: (1) Rate of Growth of Primary schools
(2) Rate of Growth of Middle schools
(3) Rate of Growth of Secondary schools
(4) Rate of growth of primary teachers
(5) Rate of growth of total male teachers
(6) Rate of growth of total female teachers
* up to 1982/83.

There has been a considerable increase in number of schools and teachers in Telangana districts as compared to the Andhra

districts. The rates of growth have been higher in Telangana compared to Andhra during the period. As for teachers a higher growth rate in female teachers than male teachers is observable. The rate of growth of primary teachers has been higher in Telangana compared to Andhra confirming the trend of higher growth rates in enrollment ratios and number of institutions (Table 3.1.8).

School Accessibility:

There has been an increase in the school accessibility and availability measured in terms of the total population covered by primary and middle schools and the number of institutions with-in the habitations and within a walkable distance[5].

According to the Second All India Educational Survey conducted in the year 1965-66, in Andhra Pradesh, about 60.67 percent of rural habitations were provided with primary school/sections within the habitation and for another 26.46 percent of habitations up to a distance of 1 mile, which was considered as walkable distance (Table 3.1.9). Thus, effectively about 87 percent of habitations were provided with primary education within a walkable distance. Districts like Adilabad, Khammam were having low school accessibility than compared to state average. Many districts have habitations with school facilities at a distance more than 1 mile (Col.4 Table 3.1.9). The proportion of population covered by primary educational institutions with in walkable distance come about 90 percent for the state as a whole, and it varies across districts, districts

like Chittor catered to only 64 percent of population.

Table 3.1.9
School Accessibility in Districts; 1965/66
(as % of Habitations and Population served at Distances)

Districts	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Srikakulam	61.54	4.75	25.47	12.99	57.56	16.97	90.01	19.28	7.02	58.00
Visakhapatnam	43.62	2.75	20.55	35.83	31.34	48.11	86.92	16.75	6.99	44.06
E.Godavari	71.90	7.85	14.48	13.62	50.98	34.54	94.61	25.77	3.60	63.55
W.Godavari	81.58	8.92	15.23	3.19	60.77	24.00	97.44	32.94	2.25	49.44
Krishna	83.31	14.54	15.00	1.69	69.58	15.42	97.30	40.92	3.35	48.23
Guntoor	90.37	15.00	8.09	1.54	65.65	26.26	98.58	35.56	1.28	50.59
Nellore	60.28	2.44	31.58	8.14	69.16	-0.74	91.04	27.18	7.41	47.47
Chittor	33.89	2.78	54.81	11.30	62.69	-17.50	64.69	13.47	29.85	52.78
Cuddapah	57.05	4.27	33.01	9.94	49.01	17.98	83.97	18.72	13.05	46.15
Anantapur	67.59	4.62	18.49	13.92	36.55	44.96	90.59	17.94	5.44	34.39
Kurnool	89.41	8.09	5.40	5.19	40.82	53.78	98.92	26.23	1.11	35.48
Mah'nagar	69.18	8.54	17.55	13.27	52.70	29.75	92.52	27.37	4.14	39.43
Hyderabad	69.40	10.15	22.64	7.96	47.15	30.21	93.91	31.07	4.04	35.36
Medak	76.14	10.08	14.01	9.85	52.34	33.65	95.27	29.79	2.72	40.00
Nizamabad	71.38	7.79	22.48	6.14	56.81	20.71	93.35	25.92	5.23	51.82
Adilabad	48.14	2.65	33.25	18.61	29.73	37.02	82.60	13.35	11.89	32.53
Karimnagar	65.44	8.64	29.68	4.88	58.05	12.27	92.01	28.20	6.86	47.97
Warangal	62.96	3.70	25.54	11.50	42.74	31.72	93.14	21.07	4.59	49.39
Khammam	35.16	4.73	18.14	46.70	41.76	40.10	81.30	24.96	10.90	41.35
Nalgonda	57.79	8.03	30.80	11.41	53.06	16.14	89.87	27.42	7.28	46.23
AP	60.67	6.11	26.46	12.87	51.77	21.77	90.74	25.47	6.67	46.71

Notes:
(1)% of habitations having Primary School with in habitation
(2)% of habitations having UP Schools with in habitation
(3)% of hab. having primary school upto& at 1 Mile Distance
(4)% of habitations having primary school at >1 mile distance
(5)% of habitations having UP School at Distance upto & at 3 miles
(6)% of habitations having UP School at > 3 Miles
(7)% of Population served by Primary School within habitation
(8)% of population served by UP school within habitation
(9)% of population served by Primary School upto a distance of 1 Mile
(10) % of population served by UP School upto 3 Miles of distance

With regard to Upper Primary/Middle sections, in 1965/66, only 10 % of the habitations were having Middle sections within the habitations. Taking 3 miles of distance as a walkable distance it was found that another 21.77 percent of the habitations were having middle section accessibility within the walkable distance (The norm of 'Walkable distance' has since changed to 3 Km in later Surveys). Thus, about 60% of

habitations did not have any access to Middle school in 1965/66 (Table 3.1.9). If one assumes a more stringent criterion(Say from 3 miles to 3 Km) the accessibility would become very low. Thus it can be inferred that in Sixties educational accessibility could be one of the reasons that has retarded the progress in enrollments.

The situation has changed over time both with respect to the accessibility and coverage of population by the primary and middle schools. According to the Fourth All India Educational Survey of 1978/79 (Table 3.1.10) the state as a whole and districts have improved in providing primary and middle school facilities and the population coverage. The percentage of habitations having primary school/section within the habitation has improved to 63.97. And another 20 percent of habitations were provided with primary school/section within 1.5 Km. Similarly in case of Upper primary/Middle school/section 10.25% habitations were provided within the habitations and for another 43% within 4 Km (walkable distance). Thus, more than 50 percent of habitations were provided with middle school education within a walkable distance. The population coverage also has improved overtime.

Table 3.1.10
School Accessibility in Districts; 1978/79
(as a % of Habitations,& Population Served at Distances)

Districts	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Srikakulam	61.17	6.06	16.64	22.18	42.19	51.74	91.00	24.00	43.00	33.00
Visakhapatnam	42.18	4.01	41.18	16.64	72.38	23.61	86.40	22.50	35.50	42.00
E. Godavari	76.00	13.17	13.52	10.48	34.94	51.89	95.93	40.00	43.50	16.50
W.Godavari	89.32	15.95	3.59	7.09	11.16	72.89	98.50	41.90	44.90	13.20
Krishna	94.24	15.46	0.76	5.00	23.75	60.79	98.90	49.10	35.30	15.60
Guntoor	96.07	20.68	2.00	1.93	34.73	44.59	99.50	48.20	29.70	22.10
Prakasam	84.51	11.62	4.77	10.72	6.98	81.40	96.90	35.30	28.80	35.90
Nellore	77.36	10.46	4.17	18.47	2.27	87.27	93.00	29.20	39.00	31.80
Chittor	36.03	4.40	10.74	53.22	35.08	60.51	66.30	18.40	55.20	26.40
Cuddapah	58.62	7.01	8.95	32.43	18.53	74.46	86.40	26.30	38.90	34.80
Anantapur	69.36	8.07	9.60	21.04	29.80	62.13	91.90	28.50	24.50	47.00
Kurnool	93.90	14.76	3.40	2.70	56.62	28.62	99.30	40.30	19.30	40.40
Mah'nagar	74.71	15.84	20.43	4.86	45.05	39.11	92.80	49.30	19.10	31.60
Rreddy	76.31	15.82	11.42	12.27	18.90	65.28	93.30	39.60	34.90	25.50
Medak	81.64	14.19	8.15	10.21	37.30	48.50	96.60	37.80	33.30	28.90
Nalgonda	61.85	13.27	19.96	18.19	43.59	43.14	90.90	41.30	29.40	29.30
Nizamabad	73.99	17.42	12.29	13.72	34.76	47.81	94.00	45.80	31.40	22.80
Warangal	59.98	12.31	14.40	25.62	44.12	43.57	90.90	41.90	38.10	20.00
Khammam	49.20	10.28	33.53	17.28	52.94	36.77	51.00	35.90	36.30	27.80
Karimnagar	81.77	17.92	6.22	12.01	23.82	58.27	96.50	44.40	48.20	7.40
Adilabad	51.58	6.04	34.60	13.82	72.08	21.88	85.20	36.00	15.70	48.30
AP	63.97	10.25	15.35	20.68	46.60	43.15	91.80	26.20	45.00	28.80

Notes:
(1) % of habitations having Primary School with in habitation
(2) % of habitations having UP Schools with in habitation
(3) % of habitations having Primary School at › 1.5 Km distance
(4) % of habitations having primary School upto 1.5Km distance
(5) % of habitations having UP School at distance upto 3 km
(6) % of habitations having UP School at a distance › 3 km
(7) % of Population served by Primary School within habitation
(8) % of Population served by UP School within habitation
(9) % of Population served by UP School upto 3 km distance
(10)% of population served by UP School at › 3 km of distance
* % population served upto 1.5 Km is not included

At the time of Fifth All India Educational Survey in 1986, there has been substantial improvement in the school educational accessibility and the population covered with primary and upper primary education. Practically all the habitations were provided with primary schools within a walkable distance.

Table 3.1.11
School Accessibility in Districts;1985-86
(% of Habitations and Population served at Distances)

Dt	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Srikakulam	70.62	27.17	2.22	92.09	7.31	54.67	24.95	50.89
Vijayanagaram	76.23	23.26	0.51	95.53	12.20	54.97	35.12	46.30
Visakhapatnam	48.25	49.04	2.71	85.26	2.67	30.95	34.18	24.60
E.Godavari	81.05	14.95	4.00	93.28	15.48	51.52	43.46	39.76
W.Godavari	90.79	8.79	0.42	97.75	9.73	74.83	21.49	69.53
Krishna	95.82	4.01	0.17	98.70	18.35	64.20	43.54	47.29
Guntoor	93.76	3.62	2.62	96.76	24.77	47.58	51.48	32.87
Prakasam	87.56	11.97	0.47	94.84	16.35	48.13	42.73	33.44
Nellore	84.55	15.18	0.27	95.52	12.10	52.02	33.60	39.96
Chittor	51.03	47.92	1.05	76.70	7.06	64.71	21.67	56.52
Cuddapah	57.29	42.10	0.61	85.67	17.45	45.66	30.29	44.84
Anantapur	80.03	19.17	0.80	94.97	10.40	42.82	33.11	31.57
Kurnool	96.78	1.40	1.82	98.94	17.91	34.48	44.01	23.13
Mah'nagar	81.25	17.09	1.66	96.45	18.73	47.05	49.31	29.52
R reddy	82.20	15.84	1.96	94.71	22.64	45.71	51.72	37.29
Medak	86.19	13.24	0.57	94.26	20.84	47.04	45.68	30.67
Nalgonda	74.32	25.07	0.61	94.12	18.83	47.72	50.92	28.48
Nizamabad	76.09	23.45	0.47	94.70	23.76	58.82	56.15	33.82
Warangal	72.76	26.80	0.44	92.37	17.15	40.33	54.89	36.47
Khammam	60.75	37.81	1.43	86.53	14.12	39.30	41.10	33.43
Karimnagar	74.78	23.59	1.63	90.11	24.88	53.63	54.06	32.14
Adilabad	64.85	33.33	1.82	89.34	9.78	45.63	33.70	35.47
AP	72.15	26.59	1.26	92.74	13.47	50.06	40.68	38.50

Notes:
(1)% Habitations Prim School/Section within habitation
(2)% Habitations having Prim Sch/Section up to 1.5 Km
(3)% Habitation Prim Sch/Section at >1.5 Km
(4)% Population Served Prim Sch/Section within habitation
(5)% Habitations having UP Sch/Section within habitation
(6)% Habitations having UP Sch/Section up to 3 km
(7)% Population served by UP Sch/Section within habITATION
(8)% Population served by UP Sch/Section upto 3 km

The accessibility of Upper primary/middle school/sections has improved substantially. Over 50 percent of habitations were provided with UP/middle sections within habitations and another 40 percent of habitations were provided within a distance of 3 Km. Also, the population coverage has improved and about 90 percent of the population were provided with Upper primary school education within a walkable distance (Table 3.1.11). Thus, by 1985/86 the State is able to provide the basic educational

requirement of the people namely primary school to all the habitations within a walkable distance and substantial number of habitations were provided with UP schools. But if we use a stringent norm in choosing "Walkable distance" the figures would come down very much. Ultimately on equity grounds, it would be an obligation on the part of the State to provide primary education to all the children within their reach.

To sum up, there has been an increase in the enrollment ratios in the state at all levels of education throughout the period. But primary education has experienced a set back in the period. The enrollment ratios at primary school level have declined from early sixties to mid-seventies but ever since improved their position. An increasing trend in both middle school, and secondary school enrollment ratios over the period was observed. But the State is far from universalization of primary education as the combined primary middle enrollment ratio has reached to only 50-60 percent. As regard the rates of growth of enrollment ratios in districts, one finds a higher growth rates in Telangana in comparison with Andhra region.

In consonance with the growth in enrollments and enrollment ratios, there has been an improvement in infrastructure in the form of number of institutions and teachers. Also by 1986 all the habitations had primary school facility and substantial number of habitations having middle schools.

Section 2

3.2 Higher Education in Andhra Pradesh:

In this section, an analysis of Higher education in the State as a whole, and across the three regions Viz., Coastal Andhra,Rayalaseema & Telangana is presented. We have not attempted a district level analysis of higher education as it may not give a correct picture. In a district wise analysis, some of the districts having Universities and higher educational centers have advantage over the other districts in terms of enrollment figures. Also, the inter district and intra regional migration of students for higher education which is not uncommon, which might pose as problem in treating higher education at district level. The Universities situated in a particular region are considered together so as to arrive at an aggregate picture at the regional level.

When the state of Andhra Pradesh was formed there were three universities one each in the three regions Viz., Andhra University in Coastal Andhra, Osmania University in Telangana and Venkateswara University in Rayalaseema. There were 7 government degree colleges and 37 private colleges in the state in 1956/57. The position of Telangana districts was very low compared to the other parts. The higher education in Telangana was virtually confined to the Hyderabad city. There was only one college in the district of Warangal.

Tables 3.2.1 through 3.2.4 present recent enrollment trends in higher education in the state and in the three regions from 1974/75 to 1985/86.

Table 3.2.1

Higher Education in Coastal Region of Andhra Pradesh(CAP)
(1974/75-1985-86)

Year		Deg/PG No.	students M	F	teachers Total	Inter No	students M	F	teachers Total
1974/75	CAP	87	66656	19091	4511	94	25541	6018	1049
1975/76	CAP	188	136844	39042	9348	208	46249	11893	2341
1976/77	CAP	104	65277	19893	5037	119	17786	6032	1407
1977/78	CAP	109	70391	23179	5110	130	24274	8721	2308
1978/79	CAP	112	75403	27177	5201	138	34354	11875	1589
1980/81	CAP	119	94851	36540	5948	160	49290	17685	2215
1981/82	CAP	132	100118	39398	6210	80	56919	21004	2537
1982/83	CAP	137	106594	42040	6405	213	62736	24201	2848
1983/84	CAP	147	103057	42802	6398	225	59003	23480	2884
1984/85	CAP	155	97593	43736	5987	242	57635	23348	3145
1985/86	CAP	155	95896	42200	6619	242	59802	26177	3171

Note:Deg/PG=Degree and Post Graduate Colleges;Inter=Intermediate Colleges
M=Male;F=Female
Source:Statistical Abstracts AP various issues

Table 3.2.2

Higher Education in Rayalaseema Region of Andhra Pradesh(RAP)
1974-75 To 1985-86

Year		Deg/PG No.	students M	F	Teachers Total	Inter No	students M	F	teachers Total
1974/75	RAP	36	27507	7770	1892	50	16260	2851	625
1975/76	RAP	37	27752	7776	1904	60	14607	3107	708
1976/77	RAP	37	24838	7268	1961	64	11689	2909	813
1977/78	RAP	40	26743	8682	2061	67	15490	3837	861
1978/79	RAP	45	29106	10562	2677	71	22177	5728	942
1980/81	RAP	56	37859	13404	2514	88	33829	9189	1282
1981/82	RAP	68	43269	15644	2702	111	40570	11399	1569
1982/83	RAP	72	47331	16119	2740	140	48598	14416	1880
1983/84	RAP	82	47459	16085	2238	142	45376	14210	1977
1984/85	RAP	89	52355	17292	2973	153	45070	15472	2214
1985/86	RAP	92	51316	17288	3021	153	47230	16126	2107

Note:Deg/PG=Degree and Post Graduate Colleges;Inter=Intermediate Colleges
M=Male;F=Female
Source:Statistical Abstracts AP various issues

Table 3.2.3
Higher Education in Telangana Region of Andhra Pradesh(TAP)
1974-75 To 1985-86

Year	Deg/PG	students		Teachers	Inter	students		teachers
	No.	M	F	TOTAL	No	M	f	TOTAL
1974/75	TAP 79	54085	13153	3040	114	32226	7510	1521
1975/76	TAP 93	51962	13979	3180	122	26076	1326	7353
1976/77	TAP 94	29858	12700	3236	120	17101	4765	1767
1977/78	TAP 101	26694	13694	3357	126	15898	5850	1808
1978/79	TAP 101	143365	15741	3460	129	28348	9639	1964
1980/81	TAP 102	55621	22503	3681	153	57190	17562	2518
1981/82	TAP 112	64586	24880	3503	174	69802	19612	2756
1982/83	TAP 114	76327	28052	4076	207	83568	24378	3087
1983/84	TAP 121	76575	28959	5639	216	83158	26254	3390
1984/85	TAP 131	73628	32583	4766	236	83560	28279	3524
1985/86	TAP 132	60484	31278	4329	237	93523	30958	3705

Note:Deg/PG=Degree and Post Graduate Colleges;Inter=Intermediate Colleges
M=Male;F=Female
Source:Statistical Abstracts AP various issues

Table 3.2.4
Higher Education in Andhra Pradesh
1974-75 To 1985-86

AP	Deg/PG	students		teachers	Inter	students		Teachers
	No.	M	F	Total	No	M	F	Total
1974/75	202	148248	40014	9443	258	74027	16379	3195
1975/76	318	216558	60797	14432	390	86932	16326	10402
1976/77	235	119973	39861	10234	303	46576	13706	3987
1977/78	250	123828	45555	10528	323	55662	18408	4977
1978/79	258	247874	53480	11338	338	84879	27242	4495
1980/81	277	188331	72447	12143	401	140309	44436	6015
1981/82	312	207973	79922	12415	365	167291	52015	6862
1982/83	323	230252	86211	13221	560	194902	62995	7815
1983/84	350	227091	87846	14275	583	187537	63944	8251
1984/85	375	223576	93611	13726	631	186265	67099	8883
1985/86	379	207696	90766	13969	632	200555	73261	8983

Note:Deg/PG=Degree and Post Graduate Colleges;Inter=Intermediate Colleges
M=Male;F=Female
Source:Statistical Abstracts AP various issues

It is evident that there has been an increase in the enrollment at higher education both at degree, post graduate and junior college levels in the state. The rate of growth of enrollment has recorded higher in Telangana region compared to the Andhra regions (Table 3.2.5).

Table 3.2.5
Compound Growth Rates of Higher Education in Regions
1974-75 To 1985-86

	Deg/PG No.	Students M	Students F	Teachers Total	Inter No	Students M	Students F	Teachers Total
CAP	3.43	2.68	7.52	1.34	6.98	10.12	15.21	8.86
RAP	11.07	8.30	10.19	4.63	12.40	15.27	21.07	13.97
TAP	4.58	5.52	10.98	4.95	8.50	17.22	25.46	4.42
AP	5.18	4.35	8.97	3.00	8.67	13.99	18.97	7.31

Source: Calculated from Tables 3.2.1 to 3.2.4.

From Table 3.2.5 the following points emerge:

1) The rate of growth of higher education has consistently been higher at intermediate level than at graduate level.

2) Growth rates for number of students in Telangana and Rayalaseema were higher compared to Coastal region.This shows the improvement in these regions in the sphere of higher education.

3) The rate of growth of girls enrollment has been consistently higher than that of Boys in both Intermediate and graduate levels for all the regions. This is due to the low base of girls' enrollment and the increasing participation of girls at lower levels of education.

Now we see enrollment in higher education in terms of courses of study in general education(Table 3.2.6). We find that the share of graduates is very high compared to Post graduate students. The shares also vary slightly across the regions. The proportion of graduates in total in Coastal Andhra was smaller compared to Rayalaseema and Telangana regions. Even among graduates one finds that Arts and commerce graduates has been increasing compared to that of Science graduates.

Table 3.2.6
Course wise Enrollment at Higher Education(Graduation and Above)
(as a Percentage of Total Graduation & PG Enrollment)

Region	Yr	BA	B.Sc	B.Com	M.A	M.Sc	M.CoM	TOT GR EN	TOT PG
CAP	1983/84	31.97	27.89	40.13	51.28	20.75	27.9	92.16	7.83
	1984/85	33.01	26.34	40.64	51.29	22.81	25.89	92.09	7.90
	1985/86	39.48	25.14	35.36	58.37	26.88	14.74	92.19	7.80
RAP	1983/84	37.07	24.39	38.53	53.07	34.70	12.21	94.85	5.14
	1984/85	41.64	23.36	34.98	50.26	32.42	17.30	95.31	4.68
	1985/86	33.53	28.80	37.65	29.47	22.44	48.07	95.54	4.45
TAP	1983/84	31.64	34.08	34.27	46.17	42.69	11.13	95.43	4.56
	1984/85	33.29	32.61	34.09	32.53	59.31	8.15	96.18	3.81
	1985/86	34.12	34.37	31.49	50.26	41.92	7.80	93.61	6.38

Source: Statistical Abstracts of AP Various issues

Table 3.2.7
Enrollment Ratios at Higher Education in AP
(Graduation and above; 1974/75 To 1984/85)

Year	Male	Female	TOTAL	Co. Eq
1974/75	4.19	1.07	2.58	41.37
1975/76	5.97	1.59	3.72	42.71
1976/77	3.22	1.01	2.09	48.64
1977/78	3.24	1.13	2.16	52.51
1978/79	6.34	1.30	3.76	34.69
1980/81	4.58	1.69	3.10	54.42
1981/82	4.93	1.82	3.34	54.43
1982/83	5.33	1.92	3.59	53.47
1983/84	5.12	1.91	3.49	54.81
1984/85	4.92	1.99	3.43	58.05
1985/86	4.46	1.88	3.15	59.89

Notes:
1) As a percentage of respective population of age group 20-29

2) Co.Eq has been calculated using the following formula

$$\text{Co.Equality} = \frac{\%\text{ of Female enr.in total enrollment}}{\%\text{ of Female pop.in total pop.of 20-29}}$$

3) The Ratios presented are derived by using population cohort 20-29

Source: Calculated from the tables 3.2.1 to 3.2.4.

From Table 3.2.7 we see that there has been fluctuations in the enrollment ratios at higher education for

both male and females separately and together for the state as a whole. But over a period of 10 years enrollment ratio has remained at four percent in case of males and it has shown a marginal increase in case of female resulting in an increase in total enrollment ratio from 2.58 % to 3.15 percent. The year 1978/79 recorded maximum enrollment compared to the other years. The average annual percentage changes stand respectively at 6.31,8.01 and 6.22 respectively for male,female and total enrollment ratios. The co-efficient of equality had increased over the years from 41 in 1974/75 to 59 in 1985/86, which meant that a higher participation of females in higher education.

To conclude, there has been growth in higher education, but it has still confined to the smallest group of population. The disparities in higher education is revealed from the enrollments in the three regions and the number of institutions. The regions of Coastal Andhra has higher number of institutions and scholars compared to other regions. But the regions of Telangana and Rayalaseema show higher rates of growth compared to Coastal Andhra region. One heartening point to note is the increasing trend of women's participation in higher education.

Section 3

Wastage and Non-Participation in Education.

According to IV All India Educational Survey,in India for every three children enrolled at primary and middle schools, one eligible child is missed out. Of the three enrolled Two drop-

out before reaching class V[6].

From the Fifth All India Educational Survey we learn that about 50 students out of every 100 students who joined at class I will be out of school before they reach class V . According to Census of 1981, 7.58 percent of total population of age group 5-14 are recorded as main workers,and 44.73 percent of male and 61.54 percent of female children of age group 6-10 are not attending any school [7].

The picture that emerges from this is that, the educational system has its in-built constraints in achieving Universalization of primary education which are in the form of 'Wastage' and 'Non participation'. Identifying the problem of wastage, the Kothari Commission observed;

> "... Wastage and Stagnation like headache and fever and not diseases in themselves, they are really symptoms of other diseases in the educational system, chief among which is lack of proper articulation between education and health and the poor capacity of the school to attract and hold students.To these may be added the third ailment poverty which falls outside the system"[8].

By non-participation in education we mean the inability of the child to enter into educational system at any time of child hood. This reflects the inability of the educational system in attracting the potential students into its fold and to that extent it can be considered as a leakage in educational resources. The question of wastage and non-participation has to be addressed in the context of socio economic milieu in which educational process is taking place. To be explicit the question really is which are the strata of population who are not able to avail themselves the educational opportunities ? Or What are the socio economic reasons for the premature withdrawal of the children from the educational system even before completion of a

minimum of four years of education? What are the reasons for the inability of the educational system, to hold the students and/or attract the students ? These questions have to be dealt with in the context of Wastage' and 'Non-participation'. A discussion on these two issues is presented in this section.

Wastage in Education:

Definitions:

The Hartog Committee in 1928, defined "Wastage" to mean " the premature withdrawal of children from school at any stage before the completion of the primary course" and "stagnation" was defined as " the retention in a lower class of a period more than a year"[9].

These definitions are compact and logically unambiguous: But the nomenclature seemed to have changed over time. Now wastage includes both the aspects mentioned above in which former one was a component called "Drop out" and the later one as another component called "stagnation". Thus, Wastage takes to distinct forms[10] ;

(i) some pupil leave the system at different points without completing the stage

(ii) Some repeat the same grade.

But in some earlier works the terms 'wastage' and 'drop out' were used synonymously[11].

Also there seem to be different opinions as to whether or

not the concept of wastage/drop out linked to educational objectives of the particular stage. One definition of wastage invokes the concept of 'Incremental Gains' in learning outcomes. Here the idea is that every year of schooling leads to partial fulfillment of educational objectives put forward for the stage and the years of study have to be taken into consideration in measurement of "Drop out". The other view does not take this into consideration[12]. They treat any pre-mature withdrawal of student before the completion of the stage as Dropout.

Apparently both the definitions seem to be logical: and acceptance of any particular definition depends on the particular stage at which the measurement is being considered. For example, if the drop out at primary level is the point in question then one expects to take in to consideration the second definition as appropriate as it is the constitutional obligation on the part of the government to give education to all children of age group 6-14. Also, some of the earlier studies have pointed out that the "functional literacy" is said to be achieved only with a minimum of four years of schooling for the child[13]. Thus, the problem of drop out at primary level deals with those who " participate in the education without being permanently literate in the regular course of time"

Measurement :

It has been observed that, for the purpose of measurement, both drop out and stagnation are inter connected. Some times drop out of any child from school may be manifestation of stagnation and to that extent measurement of stagnation may be under

estimated. Similarly, a child dropped out at a certain grade may enter into educational system after some years (into the same grade) in which case,it may be treated as both drop out in the first stance and stagnation later. Thus, the problem of decomposition of wastage into stagnation and drop out involves a close monitoring of the specific cohort of students,throughout their career. Nevertheless the difficulties presented do not thwart the gravity of the problem as the crude indicators themselves would divulge.

The measurement of "Wastage" in it's two components, varies with the definition for 'Drop out' one takes into consideration. In case of the definition based on the concept of Incremental gain in learning outcomes,the assumption is that the earlier child leaves the system the more would be the wastage in the system due to him. For example a child leaving the school after class III contributes to a lesser wastage than the one leaving at class I. But the difficulty found in the method comes from the problem of lapse into illiteracy. The method is questionable in its application at primary stage as we assume a minimum years of schooling necessary for attaining functional literacy. Also the method needs stringent data requirements. The other methods of measuring "Wastage" have been discussed by Subrahmanyam and Rama Raju (1988). Following are the three types of measurements followed subject to the availability of the data and the objectives of the study.

(i) Apparent cohort method

(ii) Reconstructed cohort method

(iii) True cohort method

(i) Apparent Cohort method: In this method, the enrollment in different grades would be compared with enrollment in grade I and the diminution in enrollment in successive grades will be treated as wastage.

When Time series data are used the enrollment in grade in a year is compared with the enrollments in successive grades in the successive years. Then

$$\text{The Index of wastage } I_w = E^{g+1}_{y+1} \;/\; E^{g}_{y}$$

In case of cross sectional data, enrollment at a grade in a year is compared with the enrollment at the lower grade on the same year. This ratio is called "Ratio of Retention".

Obviously, these two measures are deficient as they would not be able to discern the two components of wastage Viz, drop out and stagnation. Also, this method does not take into account the instances of pre-mature withdrawal due to reasons such as migration and enrollments at higher levels due to multiple entry system. Particularly in the case of cross sectional data this measure has severe limitations because it is the previous years enrollment at the lower grade that determines the enrollment at a higher grade. Nevertheless due to the less stringent data requirements this method can be employed to get a broad picture of wastage or Retention ratio.

(ii) Reconstructed Cohort method: This method isolates the two components of wastage Viz drop out and stagnation using the year grade data on enrollment. In this method first the number of promoters is found out and then subtracting the number of promoters and repeaters from the total enrollment one finds the drop out rate.

(iii) True cohort method: In this method career of a group of pupils admitted into the initial grade is followed up till they reach the final grade of the stage. In a slight variation, the career of the students at the final grade are traced back to the previous years going upto the initial year. This method is most satisfactory but it involves more stringent conditions of data requirement. Most of the case studies follow this method in ascertaining the wastage in primary education.

Wastage in Primary Education in Andhra Pradesh:

Many of the studies at all India level have analyzed the Wastage at Primary level in Different states. The Agriculture Economics Research Center of Delhi University presents the retention ratios(the ratio of enrollment of class V to class I) at primary level for different states of India, for boys and girls separately. It was observed that in Andhra Pradesh the retention ratio at primary level in 1965 happened to be 0.30 for boys and 0.10 for girls[14]. The latest All India Educational Survey Report (Fifth) shows Andhra Pradesh standing 10 percentage points below the All India average in terms of retention ratio at primary level[15]

In their study on Wastage in Primary education by Subrahmanyam,S and Rama Raju,V (1988) have calculated the Incidence of Wastage at Primary stage in Andhra pradesh, using time series data by apparent cohort method. The tables 3.3.1 & 3.3.2 present the incidence of wastage in Primary education in Andhra Pradesh from 1956 onwards.

Table 3.3.1
Incidence of Wastage in Andhra Pradesh;1956-1984
(Primary Level;Boys and Girls Together)(in %)

MEAN OF	Wastage in Grades (in %) I	II	III	IV	Total
1956/57 to 1961/62	45	12	9	6	72
1974 to 1980	37	11	9	5	62
1980 to 1984	33	11	7	8	54
1974 to 1984	36	11	8	4	59

Source: Subrahmaniam and RamaRaju (1988),Op.cit.Tables 3.1&3.2,

Table 3.3.2
Incidence of Wastage in Andhra Pradesh;1974-1984
(Primary level Boys and girls Separately)(in %)

MEAN OF	I B	I G	II B	II G	III B	III G	IV B	IV G	Total B	Total G
1974 to 1980	37	37	11	12	8	9	4	6	60	64
1979 to 1984	33	34	11	11	6	8	2	4	52	57
1974 to 1984	35	36	11	12	7	8	4	5	57	61

Source: Subrahmaniam,S & Ramaraju,V (1988),Op.cit.,
Tables 3.3 & 3.4

A recent study brought out by the Department of Education, Government of India (here after referred in the text as Eswara Prasad(1987), by the author) has taken up a district level survey of four districts of Andhra Pradesh and found the extent of drop out and stagnation in different regions of the state. The study is conducted in Kurnool,Guntur, Mahbubnagar and Meadk districts of Andhra pradesh. The Study by Subrahmanyam and Rama Raju(1988) analyzed the wastage at primary level in the district of East Godavari using True cohort method. These two studies, which are case studies, exhaustive and gives more accurate picture of Wastage at Primary stage. The results of these studies are analyzed in arriving at a micro level picture on incidence of wastage at primary stage; the incidence of wastage in different social groups of population and economic and social reasons for the same.

We present the Ratio of retention at primary stage by using stage wise enrollment figures of different districts to get a broad picture of wastage in the districts. This estimate is inferior to the estimates that are arrived at by using a True Cohort Method. Nevertheless, this exercise would give a broad impression on the order of wastage at primary level among different districts of the state. Class-wise data of All India Educational Survey Reports IInd IV And V is used in our analysis. The reason for using different data set (other than that of the Department of Education) is to get the comparability of retention ratios of districts at the time points and with that of the other States. Also, the estimates are comparable with that of the estimates arrived at using data of the Department of Education for the State as a whole for the period 1974-1984 (Tables 3.3.2 and 3.3.4).

Table 3.3.3
Retention Ratios at Primary Level in Districts; 1965-66
(II All India Educational Survey)

DIST	BOYS	GIRLS	TOTAL	DIST	BOYS	GIRLS	TOTAL
Srikakulam	29.47	14.79	22.66	Hyd*	16.04	7.30	12.77
Visakha	21.34	9.86	16.64	Medak	16.87	5.96	13.29
E.Godavari	33.11	20.66	27.11	Niz'bad	17.25	8.17	14.58
W godavari	27.57	23.83	25.72	Adilabad	11.44	5.68	9.88
Krishna	33.89	30.69	32.37	karimnagar	23.15	11.98	20.11
Guntur	28.51	25.74	27.31	Warangal	18.77	10.63	16.14
Nellore	25.08	16.71	21.40	Nalgonda	23.88	11.86	19.48
Chittor	28.05	16.90	23.47	Mah'ngr	19.14	11.42	16.48
Cuddapah	35.90	21.05	29.63	Khammam	17.45	10.28	14.65
Anantapur	22.72	9.27	17.08	AP	25.16	17.13	21.85
Kurnool	28.65	16.97	23.99				

Note:*Hyd includes city and district
Source:II All India Educational Survey Report AP 1965

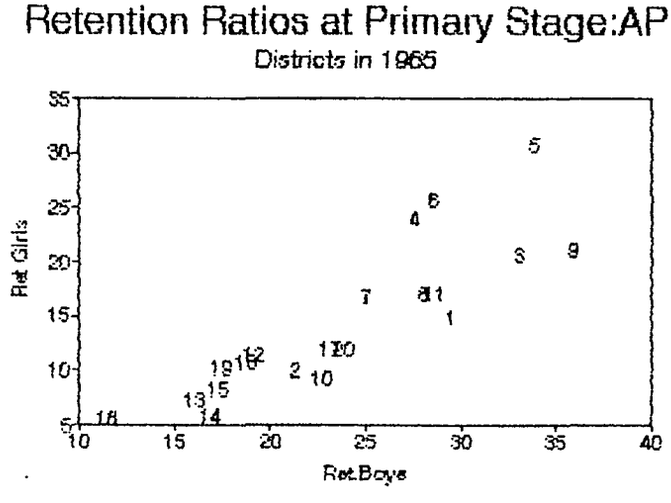
Table 3.3.4

Retention Ratios at Primary Level in Districts; 1978 and 1986

	IV All India Educational Survey			V All India Educational Survey report		
	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
Srikakulam	26.98	15.00	20.99	48.60	36.67	43.07
Viz'nagaram	---	---	----	55.14	49.10	52.21
Visakha	24.37	14.65	19.57	41.12	26.94	34.65
E.Godavari	28.66	24.91	26.78	38.48	38.67	38.57
W.Godavari	26.98	25.48	26.23	48.10	53.62	50.85
Krishna	38.65	37.55	38.10	48.43	44.52	46.55
Guntur	37.13	27.61	32.37	55.89	53.48	54.72
Prakasam	35.46	25.63	30.45	48.74	40.38	44.65
Nellore	21.88	15.44	18.66	56.35	44.87	50.88
Chittor	28.71	18.55	23.63	54.11	42.29	48.36
Cuddapah	40.23	26.19	33.21	63.89	63.00	63.50
Anantapur	23.76	14.67	19.71	42.16	32.05	37.56
Kurnool	27.53	19.86	23.69	47.92	39.80	44.35
Mah'ngr	15.64	12.49	14.06	21.32	17.70	19.98
Ranga red	---	---	----	30.12	26.57	28.61
Hyderabad*	16.67	11.43	14.05	67.14	90.89	81.33
Medak	13.56	7.95	10.75	27.37	21.35	24.98
Niz'bad	20.33	13.96	17.14	29.45	21.69	26.60
Adilabad	13.01	8.38	10.69	27.51	19.29	24.20
Karimnagar	22.66	13.58	18.12	34.46	26.48	31.04
Warangal	21.12	14.69	17.90	23.89	19.72	22.34
Khammam	18.00	14.82	16.41	32.21	28.89	30.81
Nalgonda	25.24	19.11	22.17	32.72	26.47	30.21
AP	25.57	19.56	22.56	40.30	37.11	38.88

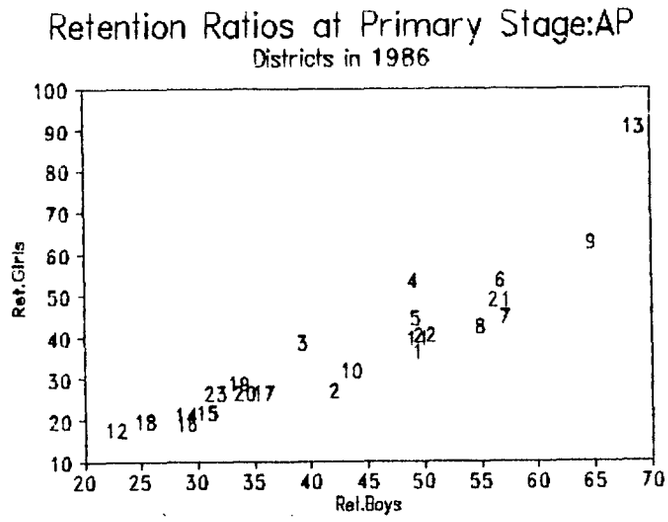
Note: * Hyd includes City and district for IV Survey & for V Survey only city
Source: Eswara prasad(1987), and Selected Educational Statistics of AP(1989)

Graph 3.3.1



Note: District Codes See p.139

Graph 3.3.2



District Codes

1 SRIKAKULAM	2 VISAKHAPATNAM	3 EAST GODAVARI
5 KRISHNA	6 GUNTUR	7 NELLORE
9 CUDDAPAH	10 ANANTAPUR	11 KURNOOL
13 HYDERABAD	14 MEDAK	15 NIZ'BAD
17 KARIMNAGAR	18 WARANGAL	19 KHAMMAM
21 VIZIANAGARAM	22 PRAKASAM	23 RANGA REDDY

The retention rates have improved over a twenty year period, 1965 to 1986 from a ratio of 22.50 to 40.30 . There was only a marginal improvement in retention ratio between 1965 and 1978. The retention among boys has virtually remained stagnant, and among girls there was a marginal increase during the period. There is a disparity in retention ratios among boys and girls in many districts (Graphs 3.3.1 and 3.3.2).

Drop out and Stagnation in Andhra Districts:

The following are the true cohorts of students of Sample schools in Selected villages of Guntur and Kurnool districts presented by Eswara prasad(198[1]) which shows the extent of

wastage in the two districts of Andhra region(Tables 3.3.5 & 3.3.6).

Table 3.3.5
Rate of Retention in Kurnool District
Retention as a Percentage of Enrollment in class I 1976/78

I			II			III			IV			V		
T	B	G	T	B	G	T	B	G	T	B	G	T	B	G
100	100	100												
100	100	100	47	57	22									
100	100	100	36	48	17	30	38	11						
100	100	100	58	72	38	30	38	17	23	43	11			
100	100	100	50	62	37	32	39	16	27	33	17	16	24	0

Source: Eswara prasad(1987)

We see that out of every 100 enrolled students at class I 16 and 32 respectively from the two districts of Kurnool and Guntur remain in the class V after five years. It means the order of Wastage is 83 and 68 respectively. There is wide disparity in boys and girls retention.

Table 3.3.6
Rate of Retention in Guntur District
Retention as a Percentage of Enrollment in class I 1976/78

I			II			III			IV			V		
T	B	G	T	B	G	T	B	G	T	B	G	T	B	G
100	100	100												
100	100	100	84	85	82									
100	100	100	83	75	94	62	65	59						
100	100	100	81	88	74	72	70	63	49	55	51			
100	100	100	61	81	79	44	56	42	50	50	50	32	40	24

Note:The data relate to the five consecutive years beginning 1976/77.
Source: Eswara prasad(1987) Op.cit.,

The rates of stagnation and drop out are higher in Kurnool district than in Guntur(Table 3.3.7). Also, the extent of drop out and wastage are higher among Harijan students as compared to all students in Guntur district. In Kurnool the differential rates of drop out and stagnation across Harijan and all children

are not very significant. The Guntur district which has lower incidence of "Wastage" has considerable disparity in drop out among All children and Harijan children. Whereas in Kurnool district the incidence of drop out is more or less same among the two sections. Thus, we notice a low wastage in an educationally developed district and the incidence of survival among Harijan and other disadvantaged groups is not commensurate with the general level of development of education. Arresting the withdrawal of these groups should be the concern of the planning programmes in education.

Table 3.3.7

Rate of Drop-out and Stagnation in Kurnool and Guntur Districts (in Selected villages of the districts Average of 1976/1981)

Dist	All children				Harijans			
	Drop out		Stagnation		Drop out		Stagnation	
	B	G	B	G	B	G	B	G
Kurnool	35.5	20.1	17.7	35.6	33.8	21.5	14.3	9.4
Guntur	21.7	23.3	34.5	37.6	33.4	34.3	45.1	45.6

Source: From Eswara prasad(1987).

At the same time districts do not show much gender disparity in case of Stagnation. But the gender disparity is high in Kurnool district which has high incidence of drop out. This shows that it is the withdrawal of female students from the school, which is a matter of concern in an educationally backward district with high drop out rate. The drop out and wastage by occur at class I more compared to the other classes.

It can be seen that the extent of drop out is higher in Kurnool at all stages compared to that of Guntur district. Guntur district shows higher stagnation than Kurnool districts at all the stages(Table 3.3.8).

Table 3.3.8
Extent of Drop out and Stagnation;
Kurnool and Guntur Districts
(In selected villages of Kurnool & Guntur;Avg of 1976-'81)

	Classes									
	I		II		III		IV		V	
	B	G	B	G	B	G	B	G	B	G
Drop out										
kurnool	44.9	55.5	35.6	37.8	29.8	30.1	29.8	27.3	34.1	19.5
Guntur	20.5	21.7	30.8	21.8	20.3	25.0	25.5	21.2	22.9	22.7
Stagnation										
Kurnool	26.8	29.6	18.4	20.8	13.2	15.7	9.9	17.0	14.7	17.1
Guntur	38.1	40.4	34.0	37.1	29.6	33.1	34.6	33.6	26.7	26.1

Source: Calculated from Eswara prasad(1987) Op.cit.,

Wastage and Stagnation in Telangana Districts:

The following are the true cohort of students in the sample schools of the selected districts, Mahbubnagar and Medak of the Telangana region(3.3.9 & 3.3.10).

Table 3.3.9
Rate of Retention in Mahbubnagar District
(Retention as a Percentage of Enrollment in class I 1976/78)

I			II			III			IV			V		
T	B	G	T	B	G	T	B	G	T	B	G	T	B	G
100	100	100												
100	100	100	42	41	38									
100	100	100	36	41	38	24	34	17						
100	100	100	44	48	43	27	30	31	18	28	36			
100	100	100	39	43	36	31	37	27	21	25	39	16	20	12

Table 3.3.10
Rate of Retention in Medak District
(Retention as a Percentage of Enrollment in class I 1976/78)

I			II			III			IV			V		
T	B	G	T	B	G	T	B	G	T	B	G	T	B	G
100	100	100												
100	100	100	25	30	16									
100	100	100	33	39	23		14	6						
100	100	100	25	27	25	14	14	14	15	16	5			
100	100	100	36	41	23	8	16	13	10	12	6	7	7	4

Note:The data relates to the five consecutive years beginning 1976/77.
Source: Eswara prasad(1987) Op.cit.,

The extent of retention of Students up to the class V is very low in the two districts compared to the Andhra districts. (There appears to be a slight discrepancy in the All students total,boys and girls for the summations would not tally in case of Medak). There is a wide disparity in retention rate among boys and girls in Medak district especially so at the first four grades. Thus, the extent of wastage at primary stage in the Mahbubnagar district stands at about 84 percent while in Medak it is as high as 92 percent. Educational wastage in regard to girls at primary level in both the districts stand at 88 and 95 percents respectively. Gender disparity is higher in Medak district which has higher degree of wastage.

In case of East godavari district taking the base year as 1980/81, the following is the true cohort of students that has been observed in the sample schools of the selected Mandals. Thus, the figures are not comparable with that of the districts discussed above to get a view of the extent of wastage in the district (Table 3.3.11).

The rate of drop out in the district stands at 37 percent and is slightly higher in case of girls. As the case of other districts and state trend, the rate of drop out is higher at the first grade compared to the other three, constituting more than 35 percent of drop out. The first two grades come to over 54% of the total drop outs. Taking students who took more than five years to complete the primary stage and who are still continuing in the grade we find the extent of stagnation which stands for boys at 33 percent, for girls at 36 percent and for both together

34.7 percent. Finally, there is no gender disparity in drop out and stagnation in the district.

Table 3.3.11

The Extent of Wastage at Primary Level in East Godavari(in %) (in selected villages)

	Boys	Girls	Total
Completed grade V			
in 5 years	30.2	25.7	27.8
6 years	20.8	21.7	21.4
7 years	4.9	7.6	6.3
Total	55.9	55.0	55.5
Still continuing			
Grade I	1.0	0.1	0.6
II	0.6	0.4	0.5
III	1.0	1.5	1.2
IV	1.2	1.0	1.1
V	3.5	3.7	3.6
Total	7.3	6.7	7.0
Drop out in			
Grade I	14.0	13.2	13.6
II	6.5	9.0	7.7
III	8.6	8.5	8.5
IV	5.7	4.9	5.4
V	2.0	2.7	2.3
Total	36.8	38.3	37.5

Source:Subrahmanyam,S & Rama Raju,V (1988) Op.cit.,p 40

From the study on East Godavari, it was found that within the district also there is disparity in drop out rate and stagnation rate. It was observed that the incidence of stagnation and drop out declined across the regions as one moves from more developed region to less developed region. After Identifying regions as more developed less developed and backward, the authors have selected three Mandals one each from the three regions viz., up land and agency, Eastern delta and Central delta. The Mandals Thondangi, Alamuru and Ravulapalem respectively represent regions with low(LD), medium(MD) and high(D) literacy levels. (Table 3.3.12).

The backward regions had higher incidence of drop out. The incidence of drop out declines with the development. Also the disparity of drop out rates among boys and girls is higher in less developed regions.

Table 3.3.12
Region wise Drop out Rate in East Godavari District
(in Percentage)

Mandals	Boys	Girls	Total
Thondangi(LD)	39.4	55.3	46.1
Alamuru (MD)	43.4	29.3	36.7
Ravulapalem(D)	30.3	33.1	31.7

Source:Subrahmaniam,S& Rama Raju,V (1988) Op.cit., p 49

From the discussion, we can observe that there has been wide variations across the districts in the incidence of Wastage.In general we observe that the districts Guntur and East godavri show lesser degree of Wastage compared to the other districts like Kurnool, Mahbubnagar and Medak. (note that East godavari is not strictly comparable with the other districts as the time period varies).

Now we look into the reasons for the incidence of wastage observed in the districts. Though the analysis pertains to the selected districts the situation in the remaining part of the State would be no different in terms of the causes of wastage.

Factors Influencing Wastage:

Two sets of factors influence wastage in education. One, related to the educational system, and the other related to out

side the educational system. The first group can be termed as "Internal factors" and the second group as " External factors". These two sets of factors are however mutually interdependent.

Internal

It was found in the study of Eswara prasad(1987) that the extent of wastage(drop out and stagnation) is systematically higher in the schools with single teachers in all the four districts under study (Exception being boys in Kurnool in the case of drop out and Medak regarding stagnation). The extent of drop out among two types of schools varied; more than fifty percent in Guntur district to 8 to 9 percent in Mahbubnagar district (Tables 3.3.13).

Table 3.3.13
Stagnation and Drop out in Single and Multiple Teacher Schools in East Godavari
(in selected sample schools; as a % to enrollment)

Stagnation Nature of School	Guntur B	Guntur G	Kurnool B	Kurnool G	Mah'ngr All	Medak All
Single	47.5	58.2	23.2	44	37.6	43.6
Multiple	31.6	37.0	39.8	40	28.1	71.7
Drop out Nature of School						
Single	54.5	52.0	39.4	37.2	16.6	4.78
Multiple	27.63	25.2	36.4	29.4	13.21	16.13

Source: Eswara prasad(1987)

In East Godavari district it was found that the extent of drop out is higher in case of single teacher schools. Drop out is found more in the Single teacher schools in backward regions like Thondangi(Table 3.3.14).

Table 3.3.14
Drop out According to Number of Teachers in Schools
(in selected schools of sample villages in E.Godavari)
(drop out in percentage)

No.teachers	Thondangi	Alamuru	Ravulapalem
One	43.5	9.1	11.1
Two	34.8	36.4	41.7
Three	2.2	15.1	8.3
Four&>	19.5	39.4	38.9

Source:Subrahmanyam,S & RamaRaju,V (1988) Op.cit.,p 65

Along with it was found that the teacher-pupil ratio in all the districts turned out to be higher than the prescribed norm resulting in a heavy burden on teachers.Also, it was found in many of the schools in the surveyed districts, that the shortage of facilities in terms of good accommodation, sufficient floor space, and other instructional facilities,and teachers.It was found in East Godavari district that, the major requirement of schools in Backward region was teaching staff and in other regions also there was need for facilities in terms of accommodation and instructional aids[16].

EXTERNAL

Many of the earlier studies have identified economic and social reasons as crucial factors in explaining the Wastage and non participation at Primary level. The main economic and social factors identified being Family income/land holding pattern, Caste & Occupation of Parent and education of parents which would influence not only drop out rate but non participation rate also.

In the East Godavari district the classification of house

holds to which drop out students belong to, confirms the influence of family income on educational participation(Table 3.3.15). The study of Eswara prasad(1987) also finds similar results in the selected districts.

TABLE 3.3.15

Economic Status to which Drop outs Belong;East Godavari

	Poor	Very Poor	Marginally Poor
Thondangi	91.4	79.0	12.4
Alamuru	57.6	28.8	28.8
Ravulapalem	36.4	18.2	18.2
Total	66.5	47.2	19.3

Note:Poverty line is fixed at Rs.100 per capita monthly income and Rs 75 is the norm for identifying marginally poor.
Note: Subrahmaniam,S & Rama Raju,V (1988) Op.cit.p 76,

As for the reasons for drop out are concerned, financial inability of parents, domestic work, engaging in agricultural and other productive activates were the main reasons for the parental indifference to education. In the backward villages of East godavari district, about 39 percent of drop out accounted for by poverty and 24 percent of the students dropped out to help the family in cattle rearing[17]. Similar situation prevails in other villages, and the other districts like Kurnool and Guntur, to a lesser degree [18].

It is of interest to note that in the dry district of Mahbubnagar about 42 percent of drop outs are due to financial problems of parents and 28 percent due to engagement of children in agricultural work. While in Medak district about 40 percent of drop out is due to the engagement of children in labour and 20 percent due to the engagement of children in Agricultural work:

the rest being the indifference of the children in continuing in school[19].

To conclude, Andhra Pradesh is a state which recorded high level of educational wastage at primary level. We find from the ratio's of Retention that there is an improvement in levels of retention over the period particularly between 1978 and 1986. We observe wide variations in the retention rates across the districts and also among male and female students. The total wastage at primary level in Andhra Pradesh computed by apparent cohort method shows a decline from 72 percent in Sixties (Average of 1956/57 to 1961/62) to 54 percent by 1980's (Average of 1980 to 1984).

The case studies of five districts reveal that, the incidence of wastage is higher in the Telangana districts of Medak and Mahbubnagar as compared to Guntur and Kurnool Districts. Also, broadly we can say East Godavari district which is educationally forward district, as a whole shows less wastage than other four districts. Even within a district we find wide variations in the incidence of wastage; the less developed regions are more prone to the incidence of drop out and stagnation.

As regards the influencing factors, we find the educational requirements in terms teachers facilities and other amenities are hindering the participation rates at primary level. In economic front we find that poverty as a main factor influencing parents to withdraw their children from schools. Many of the children

are being engaged in household work and in agricultural and other activities. Thus, the opportunity cost of child's participation in education seem to be high in rural areas.

Non-Participation in Education:

The problem of non-participation in education by the potential students as mentioned earlier amounts to leakage in educational efforts. The problem has its origins in the socio economic milieu, as the case of Wastage. A concurrent feature of the problem is "child labour".

According to the Census of 1981, in India, the work participation rate of population of age group 5-14 stands at 5.96 percent while in rural areas it is 7.28 percent in case of main workers and 8.97 percent in case of all workers. In absolute numbers 13.6 million children are in labour force in 1981(of them 11.2 million as main workers and 2.4 million as marginal workers). Estimates from other sources like planning commission and sample surveys put the figures much higher than the census figures[20]. The estimates of child labour may in fact differ radically from the reality due to the inability of the methods and definitions to capture the real incidence[21]. Nevertheless the incidence seems to be declining over period from 1961 census[22].

The constitution of India provides various measures for the protection against children being exploited. Various Articles like,Article 24, 39(e), 39(f) provide legal measures against use

of child labour and exploitation[23]. Even then the incidence of child labour is substantial. Incidence of child labour is found to be of higher order in the state of Andhra Pradesh compared to All India average and southern states. According to 1971 census the incidence of child labour is found to be 11.81 percent in case of males and 6.62 percent in case of females[24]. The figures have increased to 14.69 percent in case of male and 11.18 percent in case of females in 1981.

From census of 1981 we have calculated the incidence of non-participation in education and child labour(WPRC) in the districts of Andhra pradesh (Table 3.3.16 & 3.3.17).

Table 3.3.16
Non Participation in Education in AP;1981
(As a percentage of population of age 5-14)

	Rural		Urban		Total		Persons		
District	M	F	M	F	M	F	Rural	Urban	Total
Srikakulam	56.27	76.26	33.04	46.96	53.79	72.97	66.27	40.00	63.38
Vijay'nrm	58.32	77.82	33.47	47.98	54.49	73.17	68.07	40.72	63.83
Visakha'pm	63.29	81.64	30.76	42.37	53.72	69.82	72.47	36.56	61.77
E.Godavari	57.26	64.64	35.26	42.84	52.57	56.91	60.95	39.05	54.74
W.Godavari	51.91	59.50	31.60	40.22	47.84	55.62	55.70	35.91	51.73
Krishna	47.77	59.83	29.37	36.28	41.92	52.52	53.80	32.83	47.22
Guntur	50.31	65.93	35.60	45.56	46.32	60.24	58.12	40.58	53.28
Prakasam	48.21	71.76	31.21	46.46	45.69	68.15	59.99	38.83	56.92
Nellore	49.69	67.23	31.44	39.35	46.12	61.86	58.46	35.40	53.99
Chittor	45.21	68.31	26.97	37.63	42.08	63.12	56.76	32.30	52.60
Cuddapah	49.88	75.38	31.33	46.49	46.41	70.07	62.63	38.91	58.24
Anantpr	55.28	79.50	33.72	48.25	50.90	73.26	67.39	40.99	62.08
Kurnool	59.84	80.91	39.22	53.19	55.01	74.21	70.37	46.21	64.61
Mah ngr	67.87	85.67	34.52	50.33	64.10	81.66	76.77	42.42	72.88
Rreddy	56.03	77.03	26.39	40.81	49.39	68.92	66.53	33.60	59.16
Hyderabad	*	*	25.92	32.70	25.92	32.70	*	37.55	59.90
Medak	60.57	84.22	26.64	43.20	56.17	78.85	72.39	29.31	29.31
Niz bad	63.05	85.93	35.66	49.82	57.86	79.03	74.49	34.92	67.51
Adila bd	69.97	89.36	36.26	56.24	63.63	83.18	79.67	42.74	68.45
Karim'ngr	64.51	85.17	31.33	48.24	59.20	79.26	74.84	46.25	73.41
Warangal	60.19	82.16	24.31	41.09	54.31	75.39	71.18	39.78	69.23
Khammam	61.59	77.97	25.57	37.94	55.72	71.52	69.78	32.70	64.85
Nalgonda	58.86	80.00	23.67	39.95	54.54	75.30	69.43	31.75	63.62
AP							63.74	31.81	64.92

Notes: M=Male,F=Female
Source:Census of India 1981,Series 2 AP,Part IV(b)(i)

Table 3.3.16 presents district-wise non-participation rates. It would be of interest to see the variations. Firstly, we have to state that these figures correspond with the enrollment figures for the age group 5-14 which have reached 40-50 percent through out the State in eighties. As one would expect female non-participation has been higher in both rural and urban areas in all the districts(Graph 3.3.3).

Graph 3.3.3

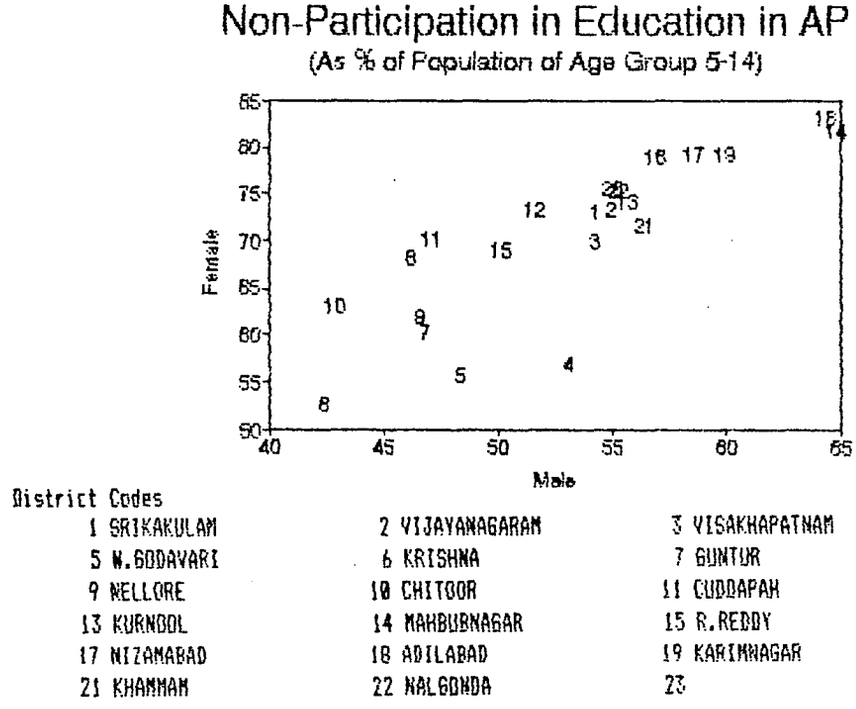


Table 3.3.17 presents the Work force participation rate among children (WPRC) for 1981. It is high among males compared to females. This is so when the non participation rate among females is high compared to males(Table 3.3.17). This only shows

that much of the non-participants among females were not recorded as main workers. Many of them may be working as domestic helpers and rearing the younger ones. The inclusion of marginal workers not attending school would in fact increase the estimates.

Table 3.3.17
Incidence of Child Labour(WPRC) in AP;1981
(Main workers as a percentage of pop 5-14)

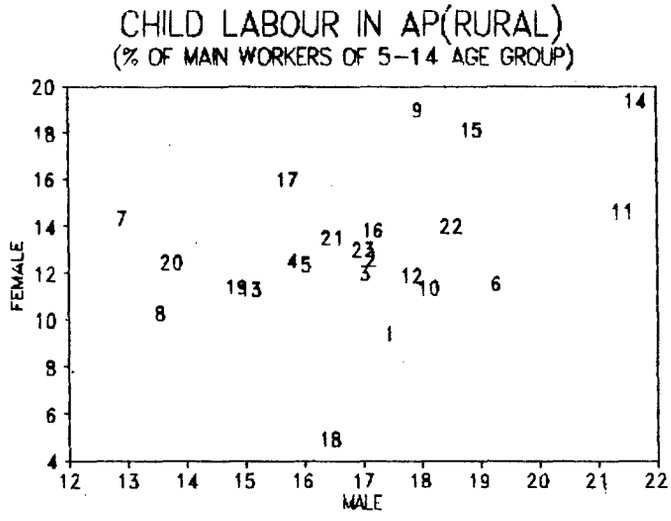
Districts	Rural		Urban		Total	
	M	F	M	F	M	F
Srikakulam	15.87	12.38	5.46	2.89	14.75	11.32
Vijayan'rm	15.63	12.56	5.64	2.12	14.09	10.93
Visakhap'm	16.88	12.04	3.27	1.06	12.87	8.74
E.Godavari	16.17	4.98	8.61	1.43	14.56	4.22
W.Godavari	17.26	9.47	7.63	2.60	15.32	8.09
Krishna	14.81	11.34	6.99	2.54	12.33	8.60
Guntur	15.45	16.02	6.38	3.30	13.00	12.47
Prakasam	12.72	14.35	5.74	5.44	11.69	13.07
Nellore	13.41	10.30	7.05	2.93	12.17	8.88
Chittor	14.59	11.42	6.04	2.11	13.12	9.84
Cuddapah	13.48	12.46	6.92	3.60	12.25	10.83
Anantpr	16.20	13.56	5.56	2.66	14.04	11.38
Kurnool	18.58	18.17	7.77	4.60	16.05	14.89
Mah ngr	21.15	14.64	7.82	4.94	19.64	13.54
RReddy	19.11	11.57	3.89	1.31	15.70	9.27
Hyderabad	*	*	4.08	0.80	4.08	0.80
Medak	17.56	11.93	4.66	2.90	15.89	10.75
Niz'bad	17.81	19.02	5.45	5.46	15.46	16.43
Adilabad	18.23	14.06	4.10	2.28	15.57	11.86
Karim'ngr	21.38	19.39	5.56	6.99	18.84	17.41
Warangal	16.98	12.64	2.99	4.17	14.69	11.24
Khammam	16.89	13.86	3.62	1.48	14.73	11.87
Nalgonda	17.84	11.37	5.38	2.48	16.31	10.33

Notes: M=Male,F=Female
Source:Census of India 1981,Series 2 AP,Part IV(b)(i)

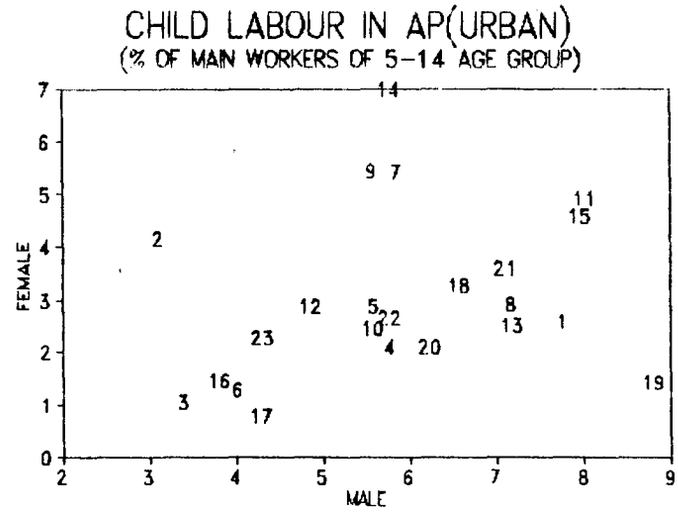
Districts vary very much in the incidence of child labour in both rural and urban areas. The WPRC in rural males varies from 21 percent in Mahbubnagar and Karimnagar to 12 percent in Prakasam district. The WPRC in rural areas in general do not show much variation compared to urban areas. The disparity in WPRC between male and female can be seen from the Graphs 3.3.4

and 3.3.5.

Graph 3.3.4



3.3.5



District Codes

1 W.GODAVARI	2 WARANGAL	3 VISAKHAPATNAM	4 VIJAYANAGARAM
5 SRIKAKULAM	6 R.REDDY	7 PRAKASAM	8 NELLORE
9 NIZAMABAD	10 NALGONDA	11 MAHBUBNAGAR	12 MEDAK
13 KRISHNA	14 KARIMNAGAR	15 KURNOOL	16 KHAMMAM
17 GUNTUR	18 E.GODAVARI	19 CHITOOR	20 CUDDAPAH
21 ANANTAPUR	22 ADILABAD	23 AP	

As we have argued earlier, the incidence of wastage, and non-participation in education are closely linked to the economic conditions of the population,especially that of the lower stratum. Micro level evidences have been presented showing high correlation between incidence of drop out and child labour. Rural labour Enquiry committee 1974/75 highlights the fact that for landless agricultural labour house holds, the average annual number of days of wage paid employment for children is higher than that of women, and compares favorably with men. On average children earn about 50 percent of what adult men earn[25].

The non-participation in education across the income groups of population in rural and urban areas of the country would reveal that the percentage of never enrolled among age groups 6-11 and 11-14 is consistently high among the lower two fractile groups compared to the others in both rural and urban areas. There is a trend of declining incidence of non- participation as we move from lower fractile to upper fractile groups(Appendix 3.3.1 & 3.3.2). It is evident that the proportion of never enrolled in the age group 6-11 is highly concentrated at 0-20 fractile group, 32 percent in case of rural male and 50 percent in case of urban male. The respective figures for females are 33 and 52 percent. We find that in the population never enrolled in each fractile group large proportion of them belong to 6-11 and 11-14 age groups. About 19 percent of rural males and 20 percent of urban males of fractile group 0-20 belong to the age group 6-11. Similar is the situation in case of females also. The situation obtained in the state of Andhra pradesh may not be

different from that of the national scene.

From the discussion on Wastage and non-participation we observe that the state of Andhra Pradesh has high incidence of educational wastage and non participation. Available micro and macro evidences point out that these two were closely linked to the rural economy and from among the rural poor high incidence of wastage in the form of drop out and non participation. Within the state of Andhra pradesh, the districts from Telangana and northern Coastal Andhra have high incidence of wastage compared to the coastal districts.

Section 4

Educational Expenditure:

The pattern of educational growth in any state crucially depends on the volume of funds available with the state for educational sector and the distribution of the same across different sub sectors of education viz., Primary, secondary, higher and technical education etc. The finance for education come from two sources;

1) Expenditure by Public funds
2) Expenditure by Private funds

Public expenditure on education means the volume of funds expedited by governmental and semi governmental (Local bodies) on educational activities. Expenditures incurred by Central and State governments and local bodies and other governmental agencies come under thais category. The main components of private expenditure on education comes in the form

of fees payed by students and household expenditure on education, the philanthropic activities by the public.

We present here the growth of educational expenditure in Andhra pradesh. Our analysis pertains to Public expenditure on education especially by the government on different levels of education. The role of private finances in education though not insignificant, is kept out of the purview of the present analysis. Also we have not attempted district wise analysis on educational expenditure, ideally it would have revealed the nature and distribution of educational expenditure.

Educational Expenditure in Andhra Pradesh:

Educational expenditure in Andhra pradesh has been on the rise since Fifties. With a total expenditure of Rs 14.60 Crores in 1956/57 the expenditure has reached to more than Rs 1090 crores by 1989/90 (both at current prices). In terms of constant prices the expenditure has increased from Rs.40.32 crores in 1961/62 to Rs.181.5 crores by 1987/88(Table 3.4.1).

The total budget expenditure on of education has increased at a compound growth rate of 6.95 percent over the period 1961 to 1987. Among the three sub sectors, primary educational expenditure has grown at a rate of 7.37,secondary education 6.47 and higher education 9.67 percentages(Graph 3.4.1).

Table 3.4.1
Educational Expenditure in AP (Revenue) on Different Sectors
(at Constant Prices (1970/71 Prices) Rupees in Crores)

Yr	pr/ele	sec	univ	other	total	INDEX pr/ele	sec	univ	other	total
1962*	17.14	10.47	7.45	5.25	40.32	100.00	100	100.00	100	100.00
1963	17.43	10.81	5.99	5.84	40.07	101.69	103.23	80.39	111.17	99.39
1964	15.33	12.73	3.82	5.77	37.66	89.44	121.59	51.31	109.85	93.41
1965	16.04	13.61	3.61	6.42	39.68	93.53	129.92	48.52	122.23	98.41
1966	15.80	11.30	3.80	6.79	37.69	92.17	107.88	50.99	129.25	93.48
1967	17.19	12.62	3.78	6.43	40.02	100.25	120.53	50.74	122.40	99.26
1968	17.58	14.07	4.88	5.80	42.32	102.52	134.33	65.57	110.29	104.97
1969	20.93	16.73	5.38	5.90	48.95	122.09	159.77	72.28	112.29	121.40
1970	22.23	17.86	6.90	6.05	53.04	129.69	170.52	92.63	115.09	131.54
1971	25.38	18.51	8.24	7.09	59.22	148.04	176.76	110.64	134.92	146.88
1972	23.73	17.42	9.41	7.26	57.82	138.41	166.37	126.34	138.15	143.41
1973	24.15	18.88	8.72	4.63	56.37	140.84	180.27	117.13	88.03	139.82
1974	28.36	20.37	10.93	4.65	64.32	165.43	194.54	146.80	88.57	159.53
1975	24.72	18.76	11.09	4.65	59.23	144.20	179.11	148.95	88.58	146.89
1976	36.60	26.08	14.91	6.70	84.30	213.51	249.07	200.27	127.45	209.08
1977	37.60	25.45	16.70	6.28	86.03	219.33	243.01	224.24	119.46	213.37
1978	42.03	29.27	17.83	10.16	99.29	245.15	279.55	239.38	193.29	246.26
1979	43.69	30.16	18.42	11.86	104.12	254.81	287.97	247.34	225.75	258.26
1980	43.70	29.58	21.02	7.78	102.08	254.90	282.49	282.18	148.05	253.18
1981	48.29	31.89	21.39	8.55	110.12	281.66	304.55	287.21	162.62	273.12
1982	52.26	35.39	24.37	9.32	121.34	304.83	337.96	327.16	177.42	300.96
1983	67.33	39.73	27.92	8.74	143.71	392.71	379.36	374.87	166.26	356.44
1984	79.31	43.10	30.57	11.22	164.20	462.62	411.5	410.49	213.51	407.26
1985	77.49	46.30	33.17	11.16	168.13	451.99	442.16	445.45	212.40	417.00
1986	83.92	52.35	36.47	9.30	182.05	489.5	499.9	489.73	177.03	451.54
1987	84.00	50.84	38.00	8.71	181.56	489.97	485.53	510.28	165.73	450.31

Notes: From 1985/86 onwards Elementary education
Others includes Special,Technical,Adult educations
and Youth welfare and Administration etc.
* 1962 refers to financial year 1961-62 and so on
Source: AP Budget Documents various years

As a percentage of total expenditure on education the sectorial distribution of funds take the following order (Table 3.4.2).

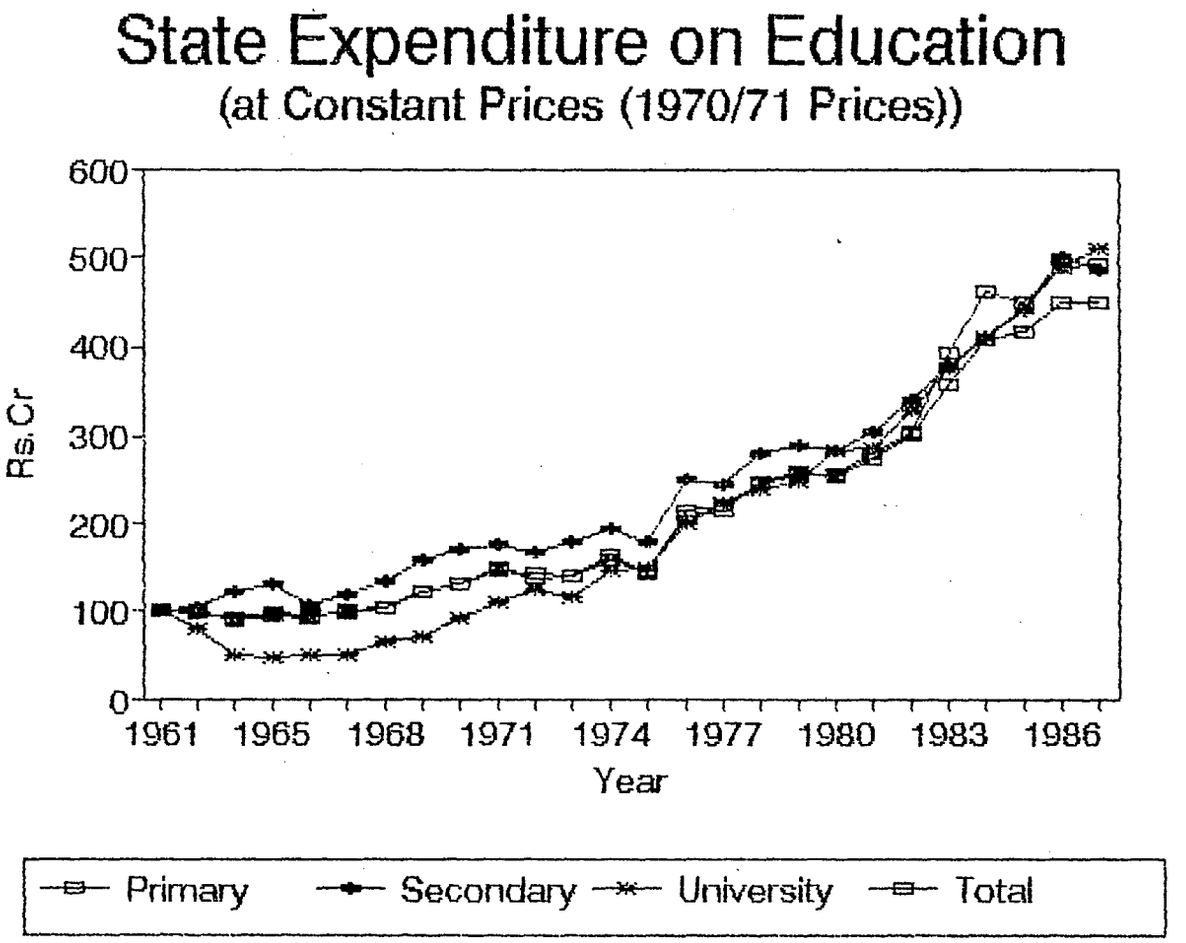
Table 3.4.2

Sector wise Educational Expenditure in Andhra Pradesh;1977-1988

YEAR	PRIMARY	SECONDARY	UNIV/HE	TECHNICAL	OTHER	TOTAL
1977/78	43.94	29.82	14.33	3.02	8.89	100
1978/79	43.21	28.88	15.12	3.03	9.76	100
1979/80	42.81	28.97	14.97	3.21	10.04	100
1980/81	43.85	28.96	13.67	3.08	10.47	100
1981/82	43.07	29.16	14.01	2.94	10.82	100
1982/83	46.85	27.64	13.45	2.46	9.60	100
1983/84	48.30	26.24	12.70	2.73	10.03	100
1984/85	46.15	27.53	13.66	2.40	10.26	100
1985/86	46.09	28.75	20.03	3.17	1.96	100
1986/87	46.26	28.00	20.93	3.08	1.73	100
1987/88	47.19	28.89	18.98	2.88	2.06	100

Source:SCERT(1988):Hand Book of Educational Statistics,P 117

Graph 3.4.1



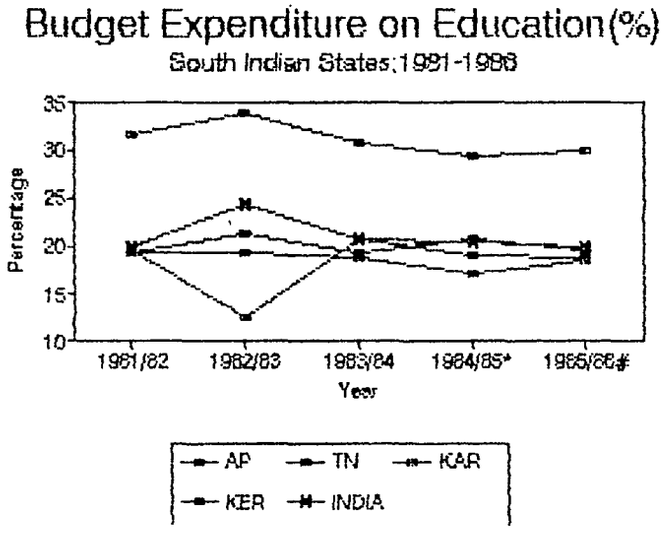
For comparisons we present the proportion of budget allocations to educational sector in 1980s by state governments of southern states. Kerala spends about 30 % of its budget on education and rest of the states including Andhra pradesh are spending much below that proportion and some times even below the national average(Table 3.4.3,Graph 3.4.2).

Table 3.4.3
Budget Expenditure on Education:South Indian States
(As a % of Total Budget;1981/82 To 1985/86)

State	1981/82	1982/83	1983/84	1984/85*	1985/86#
AP	19.7	12.6	20.8	19.3	18.9
TN	19.4	21.5	19.4	20.8	19.7
KARNATAKA	19.5	19.4	18.9	17.3	18.7
KERALA	31.8	33.9	30.9	29.5	30
INDIA	20	24.4	20.8	20.5	20.1

NOTE:* R.E and #B.E
Source: SCERT(1988):Hand Book of Educational Statistics, p 123

Graph 3.4.2



There is a considerable divergence in the priorities chosen within the educational sector among the Southern states. Kerala spends more than fifty percent of it's educational budget allocation on primary education which highlights the nature of

educational development in the state in earlier period, which happened to be more equitous compared to the other parts of the country. Andhra Pradesh spends relatively more amount on higher education than the other states(Table 3.4.4)

Table 3.4.4
Sector wise Distribution of Educational Expenditure
Southern States;1983/84

State	Primary	Secondary	Un/HE
AP	49.1	26.6	18.7
TN	48.2	27.3	17.1
KAR	54.3	21.9	17.6
KER	52.4	28.7	13
INDIA	48.1	33	12.5

Source: SCERT(1988):Hand Book of Educational Statistic, p 120

The phenomenon is not uncommon in India and the other South Asian countries. Tilak(1988) observed " a clear pattern of allocation of resources unfavourable to Primary education in South Asian countries"[26]. This could be traced back to the distorted educational pyramid developed during the colonial period. The political expediencies do not provide a will to any government to reverse the trend.

Another feature observed in educational finances has been that a very little percentage of educational expenditure is allotted for physical capital formation in education. In several South Asian countries the current expenditure constitutes more than 95 percent of total expenditure[27].

Owing to the above mentioned trend in educational expenditure one may question the wisdom of an analysis of educational expenditure. Would it not be sufficient to look at

the pattern of increase in teachers as much of the educational expenditure has been going into that account? But the usefulness of an analysis of educational expenditure mainly lies in the fact that it determines the policy aspects of educational growth and sets the priorities of educational financing and mobilization and distribution of funds on different levels of education.

To conclude, the pattern of educational expenditure in Andhra pradesh has been similar to those followed in many states and at all India level. We find the heavy reliance on public, especially government funds, accompanied with adhoc criterion of financing.

Appendix 3.3.1

Distribution of Persons Never Enrolled as Students Over Fractile Groups by Sex and Age
(in Percentage)

	RURAL						URBAN					
	MALE		FEMALE		PERSONS		MALE		FEMALE		PERSONS	
FR.GP	6-11	12-14	6-11	12-14	6-11	12-14	6-11	12-14	6-11	12-14	6-11	12-14
0-10	17.48	16.28	17.8	15.51	17.67	15.81	28.04	26.83	28.31	29.98	28.19	23.75
10-20	15.4	16.53	15.71	14.55	15.58	15.32	22.6	26.89	24.17	23.5	23.47	24.31
0-20	32.88	32.82	33.51	39.96	33.25	31.12	50.64	53.72	52.48	53.48	51.67	53.57
20-40	28.12	26.04	27.22	26.97	27.6	26.61	31.27	27.73	30	27.53	30.56	27.6
40-60	20.3	20.65	21.08	21.18	20.76	20.98	13.78	10.98	12.5	16.04	13.07	13.47
60-80	13.87	14.66	12.95	14.68	13.33	14.67	3.51	4.56	3.91	3.03	3.73	3.52
80-90	3.46	4.24	3.99	5.21	3.77	4.84	0.25	2.48	0.85	0.47	0.58	1.25
90-100	1.37	1.6	1.25	1.9	1.3	1.78	0.55	0.63	0.26	0.45	0.39	0.48
80-100	4.83	5.84	5.24	7.11	5.07	6.62	0.8	3.01	1.11	0.92	0.91	0.73
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

Appendix 3.3.2

Distribution of Population of Fractile Groups Never Enrolled as Students Over Age Groups and Sex
(in Percentages)

	RURAL						URBAN					
	MALE		FEMALE		PERSONS		MALE		FEMALE		PERSONS	
FR.GP	6-11	12-14	6-11	12-14	6-11	12-14	6-11	12-14	6-11	12-14	6-11	12-14
0-10	19.89	6.67	19.44	7.04	19.62	6.89	22.92	7.78	15.49	7.33	18.34	6.27
10-20	18.70	7.22	18.08	6.96	18.32	7.07	18.56	7.83	14.05	6.10	14.95	6.28
0-20	19.31	6.94	18.36	9.09	18.99	6.97	20.73	7.80	14.58	6.64	16.27	6.84
20-40	18.16	6.06	16.10	6.63	16.92	6.40	17.75	5.58	10.25	4.20	12.33	4.52
40-60	15.78	5.78	14.28	5.96	14.86	5.89	13.47	3.81	6.62	3.80	8.46	3.54
60-80	13.39	5.09	10.77	5.07	11.77	5.08	6.54	3.01	3.95	1.37	4.44	1.70
80-90	8.83	3.90	8.19	4.44	8.43	4.24	1.75	6.15	3.49	0.86	2.82	2.47
90-100	5.11	2.15	4.43	2.79	4.73	2.54	7.24	2.94	2.15	1.66	3.73	1.86
80-100	7.32	3.18	6.83	3.85	7.02	3.59	3.65	4.87	3.05	1.13	2.98	0.97

Source: NSSO(1991): Participation in Education Survey, 42nd Round, Sarvekshana 14,3, Jan-Mar 1991

Notes

1. District formation during the period has been taken care of. We have interpolated population figures for the inter censal period by taking the growth rates of population in the newly formed districts by the population of previous census of taluks which come under the newly formed districts. For example in calculating the population estimates of the district Prakasam which was formed in 1971,we have taken the population of the respective taluks in 1961 census and computed the rate of growth. Similar is the case with the other new districts.

2. See Pillai(1980):General and Technical Education in AP for a discussion on the fall of enrollment ratios in seventies.

3. It was observed that the declined enrollment ratios in early seventies was due to financial squeeze and misallocation of educational outlays. See Blaug(1987) Op.cit.,

4. Pillai (1980) Op.cit., and Reddy,K.V.R (1985) Op.cit.,

5. Kothari Commission(1964-66) recommends 1 mile and 3 miles as walkable distance for opening of new schools. "Walkable distance" norms have been assigned in some of the studies of NCERT and the Educational surveys conducted by NCERT would give the number of institutions according to the distance. These can be used to measure mean educational distance of habitations in districts and states. See Raza,.et.,al(1985) School Accessibility in India for detailed analysis on educational accessibility in districts of India basing on IV All India Educational Survey(1978) data. We have not attempted such an exercise for Andhra Pradesh as the data of V All India Educational Survey is not fully available.

6. Government of India(1987): Wastage,Stagnation and Inequality of Opportunity in Rural Primary Education A Case Study of Andhra Pradesh,Department of Education Ministry of Human Resource Development(Here after referred as Eswara Prasad(1987))

7. See Kusum K.Premi(1990): "Working Children and Universalization of Elementary Education:An Exploration" Journal Educational Planning and Administration Vol 4(1),1990.

8. Eswara prasad(1987) Op.cit.,p 1.

9. ibid.,p.1

10. See Subrahmaniam and Rama Raju(1988): Wastage in Primary Education(A Study of East Godavari),CESS,Hyderabad for a detailed discussion on definitions and measurement of wastage.

11. Eswara Prasad(1987) Op.cit., Seem to be using the words "Wastage" and "drop out"interchangeably meaning 'premature withdrawal of child from educational system' which in fact means drop out. The author uses 'stagnation' meaning retainment of child in the same grade for more than one year.

12. Subrahmaniam and Rama Raju(1988) Op.cit.,

13. Agricultural Economics Research Center(1977), Op.cit., had discussed the method of assessing wastage by taking functional literacy concept into consideration.

14. ibid.,

15. NCERT(1990): Fifth All India Educational Survey;A concise Report,

16. See Subrahmaniam & RamaRaju(1988) Op.cit., for detailed discussion on reasons for drop out

17. Subrabhmaniam and Rama raju (1988) Op.cit., P 79

18. See Eswara Prasad(1987) Op.cit.,

19. ibid.,

20. See Pravin Nangia in "Protecting Working Children" UNICEF Staff Working Paper No.4 (Ed) William E Mayers 1989.The estimates vary from 44 millions found by ORG Baroda based on All India Sample Survey conducted in 1980-81 to 17.36 Millions projected by Planning commission in 1982.

21. See Anil Bordia(1989):"Education for Working Children in India" in William Mayers(Ed) " Protecting Working Children" UNICEF Working Paper No 4

22. See Kusum K.Premi(1990): "Working Children and Universalization of Elementary Education" Journal Educational Planning and Administration, Vol 4(1) pp 1-12

23. ibid.,

24. ibid.,

25. Pravin Nangia'(1989) Op.cit. p 53

26. Tilak,J.B.G (1988): Educational Finances in South Asia Working Paper No.88-1 United Nations Centre for Regional Development, Nyoga, Japan

27. ibid.,

CHAPTER 4

REGIONAL DISPARITIES IN EDUCATIONAL GROWTH: ANDHRA PRADESH

An assessment of regional disparities in educational growth, would be in terms of the growth of education and levels of education of population across the regions. Here our emphasis would be on two types of educational indicators. One, the "flow" variables like the enrollment ratios at different levels, number of schools and teachers etc, and another "Stock" variables which determine the educational levels of population. An analysis of flow variables of education give the nature of educational growth that is taking place at the period under consideration. An analysis of Stock of human capital gives the nature and composition of cumulative out put of educational system and it also sets the priorities for educational planning. Thus, we analyze disparities in educational growth in the state in terms of both educational flow variables and educational levels of population.

In this chapter we deal with the disparities in educational growth in Andhra Pradesh in terms of both the "Flow" and "Stock" variables. Section I deals with the regional disparities in educational development in Andhra Pradesh by developing a composite index of educational growth, using the flow variables of educational growth. In Section 2, we analyze the disparities in human capital formation in terms of average level of education of the work force in different districts over the period.

Section 1

Regional Disparities in Educational Growth:

As stated earlier, studies in the context of regional disparities in educational growth have employed various methods in explaining the same. Every method has its merits as well limitations [1].

Before we make a statistical exercise, we present ordinal ranking of the districts according to the variables chosen for the analysis. We have taken twelve flow variables of educational development for our analysis at two time periods 1965 and 1987(Table 4.1.1).

List of Variables used in the Analysis

V1 = No.of Primary Institutions
V2 = No.of (M+S) Institutions
V3 = No.of Primary Teachers Male
V4 = No.of Primary Teachers Female
V5 = No.of (M+S) Teachers Male
V6 = No.of (M+S) Teachers Female
V7 = Enr.Ratio Primary Boys
V8 = Enr.Ratio Middle Boys
V9 = Enr.Ratio Secondary Boys
V10= Enr.Ratio Primary Girls
V11= Enr.Ratio Middle Girls
V12= Enr.Ratio Secondary Girls

Note:M+S=Middle and Secondary combined

Table 4.1.1
Ordinal Ranking of Districts in Educational Development

1965			1987		
Dist	Avg.Cr	Rank	Dist	Avg.Cr	Rank
Anantapur	11.67	14	Anantapur	8.17	4
Adilabad	15.83	20	Adilabad	15.33	20
Cuddapah	10.42	9	Cuddapah	10.00	6
Khammam	13.50	16	Khammam	14.17	16
Chitoor	6.33	3	Chitoor	6.67	1
E.Godavari	7.33	5	E.Godavari	8.67	5
Guntur	4.50	1	Guntur	7.83	3
Hyderabad	7.00	4	Hyd city	11.75	11
Karim'ngr	14.25	17	Karim'ngr	11.92	13
Krishna	4.67	2	Krishna	7.75	2
Kurnool	10.00	7	Kurnool	11.75	12
Mah'ngr	11.33	12	Mah'ngr	14.83	19
Medak	14.58	18	Medak	17.08	23
Nalgonda	11.67	13	Nalgonda	10.67	10
Nellore	7.92	6	Nellore	10.42	8
Niz'bad	15.33	19	Niz'bad	14.42	17
Srikakulam	10.25	8	Prakasam	13.25	14
Visakha	10.58	10	R.Reddy	15.83	21
W.Godavari	12.08	15	Srikakulam	14.58	18
Warngal	10.75	11	Visakha	13.75	15
			Vijaya'nrm	16.42	22
			W.Godavari	10.58	9
			Warngal	10.17	7

Note:Avg.Cr=Average Cumulative rank
Source: Statistical Abstracts of AP various issues

Many of the districts have either retained their position or remained in the same rank brackets of ordinal ranking at the two time periods. But We see that Anantapur, Karim nagar, Warangal, and Karimnagar have improved their rankings in 1987 as against 1965(Table 4.1.1). Thus, there has been no drastic change in the advanced districts of 1965. Of the top ten, six districts have remained in the same rank bracket while the other districts have moved downward by 1987 (note that the number of districts have increased in 1987).

But the ranking in this method does not take into consideration the variability of the variables across the cases.

It gives equal weights to all variables(weight=1). For an objective analysis one has to resort to a method which takes into consideration the variability across the cases(here districts). We explain this point with a hypothetical illustration.

Suppose we have two variable V^1, V^2, and two districts D^1, D^2 (cases). Let the scores be the following;

	V^1	V^2
D^1	50	10
D^2	30	20

In the case of Ordinal ranking the first and second variables get the same weights. By taking average score we observe D^1 in the first place and D^2 second place.

Suppose we assign weights which consider the proportion of the variability across the cases. For illustration, by taking the ratio of range to mean score as weight, we find the two districts getting the same combined score and thereby one does not find any difference in the performance of the districts. Thus, we find that the ranking involving variability across the cases would be more objective compared to the ranking with equal weights. Thus, we use the Principal Component Analysis(PCA) which takes weights according to the variability. PCA, has been used earlier by Panchamukhi (1975) and Hemalata Rao(1984) in arriving at a composite index of educational development.

The same twelve flow variables are taken for the analysis and a composite index of educational development is constructed for each of the districts. The exercise is carried out for two time points i.e., 1965, and 1987. Before comparison

of weights of the variables, and ranks of the districts at two time periods, we have to take note of the following points, which limit our comparison.

One, ranking of the districts is done by different sets of weights derived at the two time points, as principal factors Secondly, the relative importance (higher loading) of the variable(s) in contributing to the variability explained by the factors mean that the particular variable(s) has moved divergently compared to the other variables. Our comparison of the ranks at two time periods has only little significance; at the same time we compare the ranks of the districts to illustrate the changes in the weights over the period, which would reveal the process of educational development of the districts. Thus, our analysis pertains to understanding of the relative importance of variables over the period across the districts.

The Methodology:

Principal component analysis is a multi variate method which helps in representation of multiplicity of related random variables for any observational set. It will thus provide an exploratory modelling and substantial data reduction. When a large number of variables are available for potential study it may be of interest to inquire initially whether they can be replaced by a fewer number of random variables either a subset of the original or certain functions of them,without loss of much information[2].

If there are p random variables with large amount of variability(many large variances), the analyst may use PCA to explain or understand variability. The method essentially consists of computing such linear combinations of the original variables that capture successively, the largest proportion of variance in the original variables[3].

Mathematical model:

A Principal Component Analysis of a set of m original m variables, generates m new variables, the principal components PC_1, PC_2,....PC_m, with each principal component being linear combination of the S's scores of the original variables that is,

$$
\begin{aligned}
PC_1 &= a_{11}X_1 + a_{21}X_2 + \ldots\ldots\ldots + a_{m1}X_m = XA_1 ; \\
PC_2 &= a_{21}X_1 + a_{22}X_2 + \ldots\ldots\ldots + a_{m2}X_m = XA_2 ; \qquad \text{-------(1)} \\
&\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \\
&\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \\
PC_m &= a_{m1}X_1 + a_{2m}X_2 + \ldots\ldots\ldots + a_{mm}X_m = XA_m
\end{aligned}
$$

The coefficients of PC_1 are so chosen so as to make its variance as large as possible.The coefficients for PC_2 are chosen so as to make the variance of this combined variable as large as possible, subject to the restriction that scores of PC_1 and PC_2 are uncorrelated. In general the coefficients for PC_1 are chosen so as to make its variance as large as possible ,subject to the condition that it be un correlated with the scores on PC_1 through PC_{1-1}.

In other words, each principal component is a linear combination of weighted original variables. This can also be written as;

$$PC_i = \sum_{j=1,2,\ldots,m} a_{ij} * X_j$$ where a_j = factor loading of 'j' variables

j = 1,2 .....m or

It is customary to take the variables rescaled before going for PCA. Generally normalized original variables are taken, in order to avoid scale problems. Suppose we have original sets variables X_{ij}, we can arrive at a set of normalized variables

$Z_{ij} = (x_i - E(x_i))/\delta x_i$ for all j variables.

Results:

Principal component analysis of the twelve educational development indicators gives the following factor loadings for the first two principal components at two time points. These two factors in case of 1965, together, explain about 84 percent of variation. Similarly in case of 1987 the first two factors explain 74.8% of variation.

Table 4.1.2
Factor Loadings

	1965		1987	
Variable No	Factor I	Factor II	Factor I	Factor II
V1	-.04130	.30921	-.79913	.48042
V2	.81479	-.32668	.27638	.65707
V3	.03724	.52458	-.81341	.50566
V4	.64317	.66117	-.13761	.91216
V5	.86773	-.30795	.18470	.53660
V6	.92466	-.01005	.72326	.57923
V7	-.17876	.86718	-.83721	.30127
V8	.60501	-.55639	.90738	-.08713
V9	.79761	-.11283	.85817	.28354
V10	.00830	.91330	-.71020	.51559
V11	.72997	.14828	.64675	.50604
V12	.94050	.09103	.73143	.47573
Var Explained	47.5%	37.3%	47.3%	27.5%

Basing on the above weights we have computed composite index of educational development in each case. Here we observe that, in case of 1965 data the first factor has positive correlation with all the variables except variable V7(Primary enr ratio B). Also, we find that the first factor has significant positive correlation with 7 variables which explains educational development. The second factor has negative correlation with v2 v5, v6, v8, and v9 and significant positive correlation with v7 and v10 (Table 4.1.2). In case of 1987 data we find that factor one has significant negative correlation with v3,v7 and v10 and significant positive correlation with all the other enrollment variables (v8 through v12). The second factor has no negative correlation with any variable but it has significant positive correlation with only v4.

Since the first two principal factors in 1965 explain about 84% variation, and in 1987, about 75% variation, we have taken the sum of the indices formed due to both the factors as composite index of educational development for the each time point. Hemalatha Rao(1984) used similar procedure in arriving at composite index in case of educational development in Karnataka. Thus, Composite index of educational development= EDI due to F_1 + EDI due to F_2 .i.,e

$CEDI_{65} = EDIF_1 + EDIF_2$
where $EDIF_1 = a_{11} * x_1 + a_{12} * x_2 + \ldots\ldots + a_{112} * x_{12}$
and $EDIF_2 = a_{21} * x_1 + a_{22} * x_2 + \ldots\ldots + a_{212} * x_{12}$
here $a_{j1}, j=1,2$ refers to factor loadings and x_{j1}, i=1 to 12 refers to normalized variables.

Table 4.1.3 presents the composite index of educational development and the ranking of districts according to the ordinal

value of the composite index at two time points.

Table 4.1.3

Composite Index of Educational Development (Ranking) in AP:1965 & 1987

1965			1987		
District	Index	Rank	District	Index	Rank
Adilabad	-4.1614	20	Adilabad	-0.4269	9
Anantapur	-1.7388	13	Anantapur	4.9647	2
Chitoor	2.0821	5	Chitoor	-1.6481	15
Cuddapah	0.6770	8	Cuddapah	-1.1206	13
E.Godavari	1.3603	6	E.Godavari	-2.0481	18
Guntur	2.9378	3	Guntur	-1.4322	14
Karim'ngr	-3.9745	19	Karim'ngr	3.0156	4
Khammam	-2.4541	14	Khammam	-0.2623	8
Krishna	5.7057	2	Krishna	-0.6860	11
Kurnool	0.6257	9	Kurnool	-1.9500	17
Mah'ngr	-2.8330	16	Mah'ngr	-0.4312	10
Medak	-3.8401	18	Medak	-1.0788	12
Nalgonda	-2.6476	15	Nalgonda	1.5437	6
Nellore	2.6309	4	Nellore	-1.8374	16
Niz'bad	-3.2472	17	Niz'bad	2.6336	5
Srikakulam	0.7707	7	Prakasam	-4.4483	23
Visakhapatnam	0.4519	10	Srikakulam	-4.3641	22
Warngal	-1.4025	12	Visakhapatnam	-2.6499	20
W.Godavari	-1.2744	11	Warngal	4.1389	3
Hyderabad	11.1856	1	W.Godavari	-2.1915	19
			R.Reddy	0.5352	7
			Hyd.city	13.6963	1
			Vijayanagaram	-4.1545	21

Source: Same as in Table 4.1.1

From the Table 4.1.3 we see that there has been a shift in the relative position of districts in terms of educational progress. We see that by 1987 Telangana districts have picked up and are ahead of Andhra districts in terms of educational progress.

As mentioned earlier our composite index of educational development reflects only the relative measure of educational development in districts. It essentially shows that the districts of Telangana have started improving the educational standards and government is also aiming at the development of education in the

backward areas. It is being reflected in the upward movement of Telangana districts.

Does this mean that the districts in the upper end have slided down from their position ?. It could not be the case as we see that the ranking is relative and the districts which are already at a higher plane in earlier period would in fact remain there itself as we have an upper bound in case of educational progress (Districts reaching 80 to 90 percent of enrollment at first level would certainly show a slower rate of growth compared to the districts which were at a lower base).

To substantiate this point we present the ranking of the districts in 1987 according to the weights derived from the 1965 enrollment data. We see that the districts which were at the top half in 1965 have more or less remained the same (Table 4.1.4).

Table 4.1.4
Composite Index of Educational Development 1987
(with 1965 weights)

District	Index	Rank
Anantpur	7.417131	2
Adilabad	-3.01528	22
Cuddapah	1.81724	4
Khammam	-1.54371	18
Chitoor	0.476731	7
E.Godavari	-1.54023	17
Guntur	-0.14012	9
Hyd.city	11.48795	1
Karim'ngr	-0.72563	12
Krishna	1.788946	5
Kurnool	-1.41731	15
Mah'ngr	-2.93264	21
Medak	-2.29156	20
Nalgonda	0.448817	8
Nellore	0.517085	6
Niz'bad	-0.70905	11
Prakasam	-1.30998	14
R.Reddy	-4.13039	23
Srikakulam	-1.219	13
Visakhapatnam	-2.24678	19
Vijayanagaram	-1.47971	16
W.Godavari	-0.37872	10
Warngal	2.407298	3

This only shows that the shift of the districts from the rank pattern is due to the change in the weights which again is due to the movement of the variables so divergently contributing to the overall variation.

In order to investigate this aspect we have to observe the change in the ranks in 1987 due to the use of two types of weights i.e, by using 1965 weights and 1987 weights on 1987 data. The comparison is justified to the extent that it is hoped to reveal the change in the nature of variability among the districts across variables. We classify the districts into two categories, those districts which have not changed their position and those which have changed their position. Again, with-in the

districts that have experienced change in ranks, taking 1965 ranks as base one can identify districts which have moved upward in ranking and those which have slided down(Table4.1.5).
Now, we have to see the changes in the variables in these districts in the two time periods.

Table 4.1.5
Changes in the Rankings:1987 Vs 1987/65

No change	Upward Movement	Downward Movement
Hyd,Anantapur Warangal,E.Godavari Kurnool,Visakha	Karimnagar,Nizamabad Nalgonda, Khammam,Adilabad, Mah'ngr,Medak	Krishna,Cuddapah Guntur Chitoor Nellore,W.Godavari Srikakulam

Note: Districts with slight differences in ranks like E.God,Kurnool are included in the group "No change" Also Vijayanagaram,R.Reddy and Prakasam were omitted from the analysis.

Except six districts the others have moved upward or downward in the rankings in comparison with the rankings of the 1965 weights. The districts of Telangana(except Hyderabad) have moved upward and the districts of Andhra have moved down wards.

We know that in 1965 many of the districts of Andhra were far ahead of Telangana districts,and subsequently these districts were ahead in the ranks. Since the ranking with PCA is a relative one and by 1987 the variability of the variables across the districts reduced, one would expect a shift of backward districts to the upper ranks. This in no way means that the advanced districts have slided down. It only means that the districts which were on higher ranks have experienced more growth than the other districts. This can be substantiated by observing average ordinal ranks of the districts in 1987. We find that many of the educationally advanced districts have retained ranks that they

held in 1965.

Movement of Variables:

We first note that factor one explains more or less the same variation in both the time points and factor two explains variations of 37 % for 1965 and 27 % for 1987. The variables v1, v3, v7, and v10 have substantially higher weights in 1987 than the earlier period(sign ignored) in the first factor. The variables v1, v3,v7, v10 represent the number of primary schools, primary male teachers and enrollment ratios for boys and girls respectively. Thus primary educational variables have acquired importance in the factor one in explaining variance at 1987. The composite index constructed in 1965 gets higher weights in the first factor due to v2 the number of middle and secondary institutions, v4 number of primary teacher females, v5 Number of male teachers in middle and secondary sections v6 Number of female teachers at middle and secondary sections, v9 male Enrollment ratio at secondary level, v11 Female enrollment ratio at middle level, and v12 female enrollment ratio at secondary level.

And the composite index in 1987 gets higher weights in the first factor from v1 v3 v6 to v12. All the variables except V2 Number of middle and secondary institutions, V4 Number of female primary teachers and V5 Number of male middle and secondary teachers. We find that there has been a substantial decrease in variability measured by Coefficient of variation in case of theses three variables from 1965 to 1987. Thus the first factor

in case of 1987 incorporates many of the variables of educational development.

Thus, we see that the relative shift in the ranks is due to the changes in the weights in case of first factor, where in the primary level educational variables in the second period have higher loadings compared to first period. From the movement of variables we see that the districts of Telangana have experienced an increase in these variables at a higher rate than that of Andhra districts during the period (See Section 1 Chapter3).

Thus, one can infer that there has been an upward movement of the districts from their earlier position mainly due to the movement of the variables and subsequently the movement of the weights. This again indicates that certain measures were taken in these regions in improving education interms of enrollments and facilities.

Section 2

Disparities in Human Capital Formation in Andhra Pradesh:

An expansion of stock of educated manpower would always be helpful for any state/region in economic social and demographic fronts. It is held that educational expansion lead to minimisation of educational inequality across the population and regions. An assessment of stock of human capital will have policy implications giving insights into which level of education is to be expanded, and at what proportions.

Human capital formation can take place in many forms, of which formal education is most prevalent form. Owing to the paucity of data it would not be possible to analyze the stock formation of educated manpower through the other streams of learning like, Adult Educational Programmes, Literacy Campaigns , Non-Formal Education, and on the job training,Apprenticeship etc. Human capital stock is changed by the net additions to the educated population which come out of the educational systems. One has to note here that the time lag involved in human capital formation is longer compared to any other investment returns and also there will be leakage to figures on enrollment in educational institutions' investment in the form of wastage and non-participation may not reflect in the human capital stock.

In the present section we analyze the educational levels of work force in Andhra pradesh and inequalities in educational attainment across the districts. Levels of literacy of population would serve as an indicator reflecting the stock of human capital. But it may not be able to capture the actual levels of education of population especially economically active population who were in the work force. For this reason we make use of the Census data on the levels of education of main workers. One can also take the educational levels of adult population as a whole but the most important segment of adult population is the economically active population which is represented by main workers. We have taken only male workers for the periods 1961 and 1971, as we found for female workers the mean level of education in 1981 itself is very low owing to the

large number of illiterates among women workers(We have presented mean level of education of female workers separately for the year 1981).

Our main hypothesis is that with educational expansion over a period, the strength of educated work force as well as the mean level of education would increase. At the same time,it would be of interest to see the inequalities in education measured by coefficient of variation or by Standard deviation. The contention here is that the expansion of educational opportunities would result in the decline of inequality. In a conventional set up one expects educational expansion to result in a declining educational inequality which in turn reduces the income inequality. But Ram(1990) argues, in the context of income distribution, that both the mean level of education and dispersion or inequality of education may not act on the same direction. It is true that mean level of education would tend to reduce income inequality but the nature of dispersion can reinforce/offset the income inequality. In short the relationship between mean level of schooling and inequality in schooling need not be a linear. Also, mean level of education would in fact reflect the internal efficiency of the system, and would set the priorities for educational expansion. Here we intend to investigate the above conjecture in the case of Andhra Pradesh. We inquire into the nature of dispersion with the expansion of education. We measure the dispersion in terms of both Standard deviation and Coefficient of Variation.

In an exercise of assessing levels of education of work

force Psacharopoulos & Arrigada (1986) observed mean level of education of work force in South Asia very low, compared to the other regions of the world (Table 4.1.1).

Table 4.1.1
Levels of Education of Work Force in 1981

Region	Mean Yrs of Schooling	Region	Mean Yrs of Schooling
Eastern Europe	10.5	East Africa	3.7
Dev.Market.Eco.	10.0	Middle East&N.Afr	3.4
Southern Europe	6.8	South Asia	2.5
East Asia&Pacific	6.4	West Africa	1.8
Latin America& Caribbean	5.8		

Source: Psacharopoulos & Arrigada(1986) Op.cit.,

It is observed that, in India the composition of work force constituted 66 percent without education and 14.5 percent with in-complete primary education in the year 1981. The figures for 1961 were 89.9 and 5.2 respectively[4].

In a study of international comparison using the same sets of data, Ram(1990) found that, there exists a threshold mean level of education until which the inequalities rise and decline when the threshold level is reached. It was found that 6.5 years of mean level of education as a threshold level from which the inequalities tend to decline for the whole of the countries as sample[5]. Thus, a curvilinear relationship has been found between mean level of schooling and schooling inequality[6].

Educational Levels of Work Force in AP:

Before discussing educational levels of work force it would be of interest to analyze the trends in literacy levels of the population(Table 4.2.2).

Table 4.2.2
Literacy Levels of Population in AP; 1971-1991

Dist	1971 Persons	1981 Persons	1981 Male	1981 Female	GROWTH Persons 1981/71	1991 Persons	1991 Male	1991 Female
					(%)			
AP	28.52	34.09	44.63	23.26	50	37.46	46.62	28.04
Srikakulam	22.09	25.93	37.35	14.83	32.48	31.13	41.59	20.82
Vijayan'm	21.5	24.58	35.05	14.19	32.99	29.37	39.14	19.60
Visakhap'm	25.19	31.56	41.39	21.55	61.21	39.40	48.57	30.00
E.Godavari	35.58	40.16	47.35	32.88	37.27	41.37	46.78	35.95
W.Godavari	39.68	42.96	49.43	35.88	32.29	45.66	50.93	40.37
Krishna	40.44	47.08	54.75	39.15	44.97	45.81	52.19	39.22
Guntoor	35.26	40.58	50.84	30	41.69	40.70	49.11	32.04
Prakasam	26.64	33.5	46.13	20.55	54	35.10	45.71	24.19
Nellore	30.59	36.31	46.3	26.08	48.9	41.29	50.02	32.38
Chitoor	29.26	35.98	48.57	22.09	49.54	43.11	53.75	32.11
Cuddapah	28.47	35.16	49.58	20.1	54.2	41.52	54.22	28.27
Anantapur	27.81	33.22	46.59	18.98	46.61	35.69	47.23	23.50
Kurnool	27.71	32.91	45.75	19.55	48.05	33.60	44.47	22.22
Mahbubnagar	18.32	22.47	32.47	12.26	57.97	24.95	45.36	15.94
R.Reddy	23.99	34.04	45.22	22.32	103.03	41.95	50.91	32.40
Hyderabad	61.95	66.48	75.56	56.47	46.89	55.03	61.88	47.58
Medak	18.97	24.62	36.52	12.45	64.58	27.51	37.79	16.94
Nizamabad	20.15	24.76	36.32	13.34	61.68	29.13	39.77	18.69
Adilabad	16.68	21.53	31.75	11.01	68.91	27.79	37.57	17.80
Karimnagar	17.68	24.25	35.9	12.5	74.23	31.97	44.32	21.56
Warangal	21.24	26.97	37.77	15.66	59.85	33.99	44.50	23.08
Khammam	21.9	29.35	37.86	20.38	76.82	34.10	42.06	25.81
Nalgonda	19.97	25.73	36.14	14.94	64.83	32.14	42.39	21.48

Note:The literacy rate for 1971,1981 are taken as a proportion of population excluding 0-6 age group.
As for 1991 population of 0-7 are treated as illiterates and as a percentage of total population

Source: Directorate of Census Operations(1988): A profile of Population of AP ,1981
Registrar General: Census of India Series 2 ,Provisional Population Totals 1991

There has been improvement in literacy levels of population over the period from 1971 to 1991. Before comparison we have to note that the rates of literacy presented for 1991 are as a percentage of total population whereas for the rest of the two

periods it is the effective literacy rate(i.e, population of age group 0-5 are excluded). To that extent the literacy rates of 1991 are under estimates. The rate of growth of literates over 1971 to 1981 has been higher in the districts of Telangana and visakapatnam as compared to Coastal Andhra region. All the same the Coastal districts are ahead in both male and female literacy in 1991 also. It is necessary to explain the decline in literacy rates of male and female population in Hyderabad district in 1991. At this juncture it is difficult to arrive at any conclusions as the data for 1991 is provisional.

Mean Levels of Education of Workers:

We have calculated the mean level of education and educational inequality of male 'Main workers' of different districts of Andhra Pradesh. The exercise is for three sets of time periods Viz., 1961,1971 and 1981. Data from the decennial census have been used for this purpose.

The mean level of education is calculated by using the formula $Mean(S)=\Sigma L_i S_i$ where L_i is the proportion of Workers having ith level of education,and S_i is the number of years of schooling for the completion of ith level of education.

In other words,

$$Mean(S)=[(L_0 * YRSP_0)+(L_1 * YRSP_1)+.....+(L_n * YRSP_n)]/100$$

Where

$S_i = YRSP_i$ =Years spent in completion of ith level of education.

In case of educational level "Literate but not educated" we have assigned the value of S_i ($YRSP_i$) as 1. This is done to avoid

any possible upward bias in using any other value[7]. For illiterates the years of schooling assigned is zero. The inequality in schooling across the districts has been identified both with absolute measure, the standard deviation(SD) and mean related measure Coefficient of Variation(CV). Using the above notation,

$$(SD)_i = [\Sigma L_i (S_i - S)^2]^{1/2} \text{ and } (CV)_i = (SD)_i / S.$$

Tables 4.2.3, 4.2.4 & 4.2.5 show the values of mean level of education and the dispersion for the three time points. Before going in for a comparison we have to mention here that the mean level of education in 1961 is not strictly comparable with that of 1971 and 1981 due to the differences in classification of workers into educational groups. In the 1971 and 1981 census,the educational classification includes "middle" school level which was absent in the 1961 census. To that extent in 1961 the mean level of education could be an underestimates.

The mean level of education has increased in all the districts over the period. For the state as a whole the mean level of schooling of male workers has increased from 0.91 years in 1961 to 2.56 years in 1981. From the 1981 results we find a wide disparity in level of schooling among male, female and rural urban population. The mean level of schooling for female workers is 0.63 years in 1981. The mean level of schooling in case of Urban male is 5.14 years and that of rural male it is 1.76 years,during the same period. Also we find wide disparity in educational levels of female workers in urban and rural areas.In urban areas the mean level of schooling for female workers is 1.68 years and the corresponding rural workers it is 0.26 years(

Table 4.2.5).

As a pre cursory to the increased level of education, there has been a decline in the percentage of illiterate workers over the three decades. The over all illiteracy of male work force in the state has declined from 69.55 percent to 61.19 percent during the thirty years ending 1981. In 1981 the rate of illiteracy in female work force stands at 94.59 whereas that of rural male stood at 68.85. In case of urban work force, in 1981 the rate of illiteracy stand at 35.25 and 80.04 percent respectively among male and female populations.

Table 4.2.3
Mean Level of Education and Educational Inequality in AP;1961
(of work force(Main workers,Male)

District	Mean	CV	SD	CV*	SD*
Srikakulam	0.68	26.12	17.75	17.36	15.08
Visakhapatnam	0.85	25.72	21.93	9.85	15.38
E.Godavari	1.17	19.89	23.26	11.64	20.55
W.Godavari	1.40	17.45	24.36	16.33	25.26
Krishna	1.49	17.51	26.17	40.30	33.80
Guntur	1.23	18.95	23.34	44.51	31.20
Nelore	0.90	23.00	20.79	21.22	19.50
Chittor	1.02	21.00	21.40	32.17	24.43
Cuddapah	0.92	21.24	19.63	27.35	21.62
Anantapur	0.92	22.54	20.72	18.94	19.05
Kurnool	1.08	20.82	22.38	51.76	31.07
Mah'ngr	0.47	32.27	15.10	-75.23	-15.47
Hyderabad dt	1.96	17.52	34.32	99.65	58.20
Medak	0.44	30.88	13.65	13.22	10.38
Nizamabad	0.63	28.08	17.73	23.33	16.15
Adil'bd	0.63	29.20	18.45	24.98	16.64
Karim'nagar	0.58	28.54	16.56	19.87	14.37
Warangal	0.65	27.16	17.74	24.73	16.88
Khammam	0.62	28.65	17.90	25.92	16.82
Nalgonda	0.54	30.56	16.35	28.60	16.30

Source:Census of Andhra Pradesh,1961

Table 4.2.4

Mean Level of Education and Educational Inequality in AP;1971
(of work force (Main Workers) Male)

	MEAN	SD	CO.VAR	SD*	CO VAR*
Srikakulam	1.35	26.71	19.74	24.67	18.08
Visakhapatnam	1.58	31.20	19.80	29.81	19.76
Eas.Godavari	1.91	34.62	18.15	37.98	21.59
Wes.Godavari	2.22	43.55	19.60	46.39	22.58
Krishna	2.77	60.24	21.76	62.40	22.57
Guntur	2.54	51.26	20.16	55.54	22.84
Prakasam	2.05	37.39	18.28	41.60	22.12
Nellore	1.88	34.28	18.27	37.20	21.46
Chittoor	1.90	34.42	18.12	37.77	21.56
Cuddapah	1.99	35.40	17.81	40.08	21.92
Anantapur	2.16	39.98	18.48	44.76	22.45
Kurnool	2.25	42.85	19.03	47.21	22.64
Mah'ngr	1.24	27.23	21.90	22.26	17.12
Hyderabad	3.45	94.54	27.39	84.94	19.46
Medak	1.06	25.05	23.58	18.43	15.33
Nizamabad	1.49	29.92	20.14	27.68	19.12
Adilabad	1.13	25.32	22.46	19.78	16.00
Karimnagar	1.33	28.07	21.12	24.13	17.87
Warangal	1.51	30.17	20.01	28.21	19.29
Khammam	1.29	27.37	21.17	23.34	17.56
Nalgonda	1.34	28.57	21.29	24.41	17.98

Source: Census of Andhra Pradesh,1971

Table 4.2.5
Levels of Education of Work force and Inequality in Education (Male & Female)
Urban and Total

DISTRICT	URBAN MEAN	SD	CV	TOTAL SD*	CV*	MEAN	SD	CV	SD*	CV*	FEMALE MEAN EDUCATION. URBAN	RURAL	TOTAL
Srikakulam	4.64	46.14	9.95	46.69	9.88	1.88	32.97	17.58	31.27	14.04	0.99	0.17	0.21
Vijaya'nrm	4.69	46.63	9.94	46.97	9.87	1.89	33.54	17.71	31.51	14.14	1.06	0.16	0.21
Visaka'pm	5.98	51.38	8.59	51.83	8.77	2.61	43.34	16.59	40.17	17.07	2.99	0.14	0.43
E.Godavari	4.97	47.22	9.50	48.31	9.77	2.68	37.49	14.00	40.87	17.28	2.13	0.49	0.68
W.Godavari	4.94	47.20	9.55	48.19	9.78	2.81	38.21	13.58	42.27	17.66	1.93	0.62	0.76
Krishna	5.59	47.71	8.54	50.72	9.28	3.32	41.93	12.63	46.92	18.67	2.76	0.60	0.89
Guntoor	4.87	47.26	9.70	47.87	9.81	2.97	39.25	13.23	43.77	18.03	1.70	0.55	0.69
Prakasam	4.95	45.63	9.22	48.21	9.78	2.46	36.17	14.69	38.51	16.57	1.41	0.36	0.43
Nellore	5.30	47.62	8.99	49.68	9.56	2.59	37.95	14.68	39.88	16.99	1.97	0.33	0.49
Chittor	5.63	46.05	8.18	50.85	9.23	2.72	37.46	13.78	41.28	17.39	2.30	0.32	0.45
Cuddapah	4.82	44.72	9.27	47.62	9.83	2.72	36.76	13.51	41.31	17.40	1.40	0.31	0.41
Anantpur	5.16	45.97	8.91	49.14	9.66	2.59	36.70	14.17	39.93	17.00	1.58	0.24	0.33
Kurnool	4.71	47.51	10.08	47.08	9.86	2.63	38.05	14.45	40.40	17.14	1.17	0.23	0.33
Mahbubngr	4.88	50.84	10.43	47.88	9.81	1.65	33.77	20.48	28.15	12.83	1.05	0.11	0.16
Ranga ry	6.13	54.05	8.82	52.16	8.54	2.69	42.83	15.94	40.96	17.30	3.13	0.19	0.43
Medak	5.59	53.85	9.63	50.74	9.27	6.96	55.00	7.90	53.78	6.40	1.19	0.08	5.95
Nizama'bd	4.68	50.29	10.74	46.92	9.87	1.80	35.19	19.51	30.30	13.67	0.91	0.12	0.14
Adilabad	4.28	48.33	11.29	44.69	9.87	1.94	36.22	18.71	32.07	14.34	0.96	0.10	0.19
Karimngr	4.66	50.11	10.76	46.80	9.88	1.67	34.26	20.46	28.50	12.97	0.74	0.09	0.15
Warngal	5.83	51.85	8.89	51.44	8.98	1.76	34.83	19.82	29.66	13.42	1.72	0.13	0.13
Khamam	5.44	50.64	9.31	50.22	9.43	1.96	36.71	18.77	32.33	14.44	2.57	0.18	0.24
Nalgonda	5.35	51.52	9.63	49.89	9.51	2.05	37.37	18.22	33.57	14.89	1.25	0.13	0.28
Hyderabad	6.96	55.00	7.90	53.20	6.83	6.96	55.00	7.90	53.78	6.40	5.95		5.95

Source:Census of Andhra Pradesh,1981

An attempt is made to investigate the possible relationship between educational expansion represented by mean level of education and educational inequality measured by 'Dispersion' measures Standard deviation(SD) and Coefficient of Variation(CV). We have estimated the relationship between the two indicators, by a quadratic function[8]. A priori one can assume that the inequality measured by SD or CV may increase or decrease or remain stationary with the increasing mean. Thus, a non-linear relationship may be expected between mean and Standard deviation $(SD)_i = a+b(Mean)_i + c(Mean)_i^2 + u_i$

Since, when (Mean)=0 dispersion measured by (SD)=0[9], the constant in the regression equation a=0.

Thus,the regression equation can be written as,

$$(SD)_i = b(Mean)_i + c(Mean)_i^2 + u_i$$

We have estimated regression equation for the three time points for male workers. For the period 1981 we have estimated regression equation in case of urban male workers also. We have estimated relationship between CV and mean also using the same equation, replacing SD by CV. The regression results are presented in Table 4.2.6. The SD* and CV* columns in Tables 4.2.3, 4.2.4 and 4.2.5 represent estimated values of SD and CV for respective time periods. The estimates are statistically significant for all the three periods.

Table 4.2.6
Regression Estimates

BLOCK I 1961
Independent variable SD

Variable	B	SE B	T	Sig T
Co. of Mean²	-7.77329	1.09472	-7.101	.0000
Co.of Mean	30.53334	1.44613	21.114	.0000

Adjusted R square 0.98937 Regression F =932.00

Independent variable CV

Variable	B	SE B	T	Sig T
Co.Mean²	-26.17224	3.84580	6.805	.0000
Co.Mean	53.57834	5.08030	10.546	.0000

Adjusted R Square = 0.90645 Regression F = 97.894

BLOCK II 1971
Independent variable SD

Variable	B	SE B	T	Sig T
Co.Mean²	3.05164	.76439	3.992	.0008
Co.Mean	14.09558	1.77837	7.926	.0000

Adjusted R Square =0.987 Regression F =811.282

Independent variable CV

Variable	B	SE B	T	Sig T
Co.Mean²	-3.66756	.7123	-5.148	.0001
Co.Mean	18.31221	1.65735	11.049	.0000

Adjusted R Square = 0.9565 Regression F = 231.906

BLOCK III 1981
Independent variable SD

Variable	B	SE B	T	Sig T
Co.Mean²	-1.75914	.11951	-14.719	.0000
Co.Mean	19.97240	.60062	33.253	.0000

Adjusted R Square=0.9899 Regression F=1134.651

Independent variable CV

Variable	B	SE B	T	Sig T
Co.Mean²	-1.29126	.13452	-9.599	.0000
Co.Mean	9.90973	.67605	14.658	.0000

Adjusted R Square=0.923 Regression F=139.506

URBAN MALE 1981
Independent variable SD

Variable	B	SE B	T	Sig T
Co.Mean²	-1.04374	.14869	-7.019	.0000
Co.Mean	14.90817	.80371	18.549	.0000

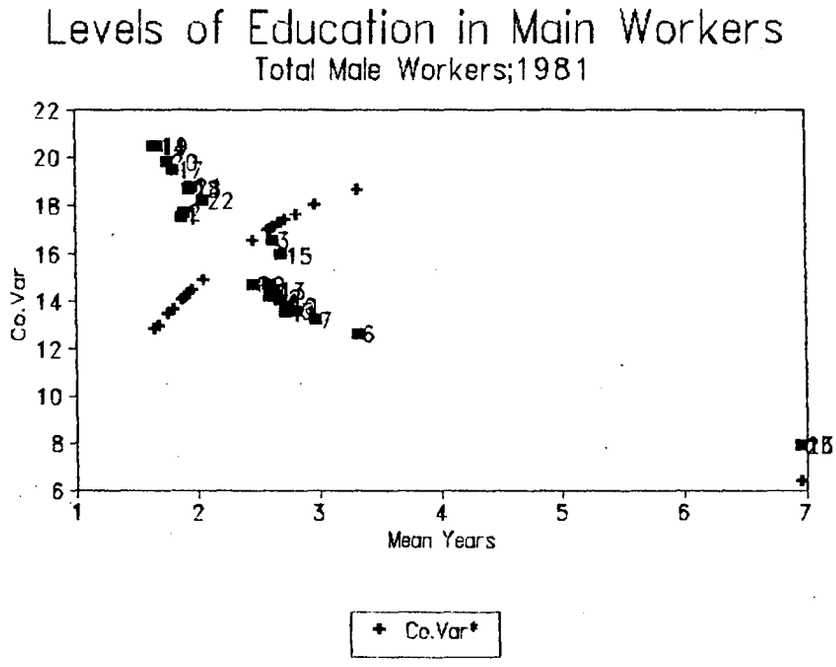
Adjusted R Square=0.997 Regression F=4511.86

Independent variable CV

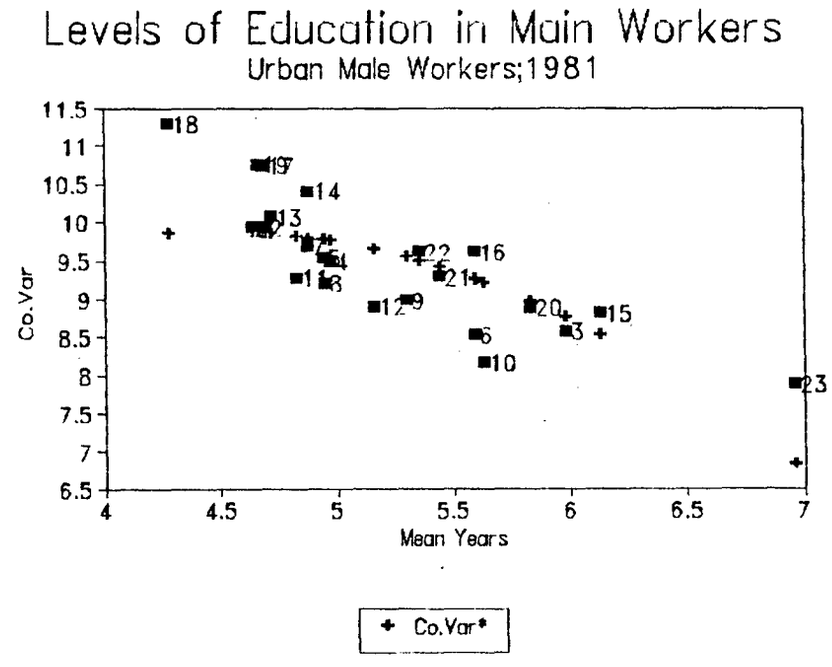
Variable	B	SE B	T	Sig T
Co. Mean²	-.49343	.03864	-12.770	.0000
Co.Mean	4.42250	.20886	21.174	.0000

Adjusted R Square=0.99452 Regression F=2498

Graph 4.2.1



Graph 4.2.2



DISTRICT CODES:

1 SRIKAKULA	2 VIJAYANAGARAM	3 VISAKHAPATNAM	4 E.GODAVARI
5 W.GODAVAR	6 KRISHNA	7 GUNTOOR	8 PRAKASAM
9 NELLORE	10 CHITOOR	11 CUDDAPAH	12 ANANTAPUR
13 KURNOOL	14 MAHBUBNAGAR	15 R.REDDY	16 MEDAK
17 NIZAMABAD	18 ADILABAD	19 KARIMNAGAR	20 WARANGAL
21 KHAMMAM	22 NALGONDA	23 HYDERABAD	

From the results presented, a non-linear relationship is observable between the mean level of education and educational inequality measured by both SD and CV. We find from the regression equation relating to 1981 that the threshold level of educational expansion is 6.5 years for the sample of 23 districts. But only Hyderabad district is able to pass that level, many of the other districts were far below the threshold level of schooling. Our result essentially prescribes for expansion of primary education in the context of reducing educational inequality. Educational inequalities tend to increase up to the critical level of education and then decline(Graphs 4.2.1 and 4.2.2).

Next we observe the educational levels of population over different birth cohorts. This is a crucial indicator of educational expansion and utilization of educational services. As educational expansion takes place more and more of latest generations would avail educational facilities thereby increasing the mean level of education of their cohort. Here what would be the nature of inequality ?. One would expect the inequalities to decline as we move from the older generation to the latest generation. Our results do conform to this hypothesis.

We have computed mean level of education and educational inequality for the population of Andhra pradesh, falling in the birth cohorts 1946-50,1951-55 and 1956-60 (belonging to age groups 30-34,25-29 &20-24 of the 1981 census). The selection of birth cohorts is made in order to assess the utilization of educational facilities by these groups soon after Independence.

We have kept out the birth cohort 1961-65(ie 15-19 age group) as a good proportion of them might be in the educational system by 1981 (Table 4.2.7).

The mean level of education has increased for both male and female population. For male the birth cohort 1956-60 has a mean of 4.22 years against 3.54 of 1946-50 birth cohort. Similarly, we find inequality measured by Co-efficient of variation has declined over the birth cohorts. One can conclude that inter-generational educational levels are on the rise as one would expect and also the educational inequalities would be reducing over time. In other words, access to education over time spreads more widely.

Table 4.2.7
Human Capital Formation in Adult Population in AP
(By Birth cohorts;Male&Female)

BIRTH COHORT	MALE		FEMALE		TOTAL	
	MEAN	CV	MEAN	CV	MEAN	CV
1956-60	4.22	8.25	2.01	12.37	3.11	8.68
1951-55	3.90	8.62	1.61	14.17	2.76	8.88
1946-50	3.54	9.11	1.24	16.86	2.39	9.50

Source: Census of India 1981 Series 2 AP

Levels of Education by Fractile Groups:

Another question of equal importance is, regarding the people who have been availing the educational facilities. We assess the educational levels of population by economic groups or by income groups. In the absence of District level and state level data on educational levels of population by income/expenditure groups, we present the levels of education of population belonging to different fractile groups of consumer expenditure, at all India level which would facilitate our

understanding of the educational levels of different groups of population. The situation in case of districts of Andhra Pradesh could not be possibly different, as the State stands always below the all India level in all respects of educational development. We have calculated cell totals and again computed levels of education of each fractile group population[10].

The tables in Appendices (4.2.1 and 4.2.2) present population with educational levels belonging to different fractile groups for rural male, persons and urban persons. we find that the incidence of low level of education and illiteracy declines as we move up from the lower fractile groups in rural India. Both as a percentage of respective educational level population and as a percentage of population of each fractile group we find the lowest two fractile groups are at a disadvantageous position. The findings show that 37.15 percent of total urban illiterate males and 22 percent of total rural illiterate males belong to the lowest two fractile groups(0-10,10-20). Whereas rural illiteracy among male in the top two fractile groups is 13 percent and the same in case of urban areas is only 4.7 percent. We find similar situation in case of female in rural and urban areas.

Now we see distribution of population of fractile groups over levels of education. As a percentage of total rural population of 0-20 fractile groups, illiterates account for over 50 percent and about 18 percent primary incomplete(no formal education but literate). At the other extreme only 38 percent of rural male belonging to 80-100 fractile group are illiterates.

The proportion of population of this group who completed middle school is about 13 percent. The disparities in levels of education is more revealing in case of urban regions though rural areas do reflect not a less proportions of disparities among income groups.

The proportion of illiterates of the total male population of 0-20 fractile groups stands at 40 percent where as the percentage among the top two fractiles stands at only 9 percent. The proportion of male population completed above middle school in rural males is just over 7 percent whereas the same in 80-100 fractile group is 56 percent. Similarly, one can infer numerous evidences of disproportionate educational achievements across economic groups for male, female and total population in both rural and urban areas.

The analysis reveals that the expansion of education has not been reached the economically weaker sections of the population. As much of the contemporary evidences presume, one can speculate that these sections of population were also socially deprived who generally belong to the lower caste and occupations. Thus most of the educational benefits have been accruing to the economically affluent sections of the population.

Appendix 4.2.1

BLOCK A

DISTRIBUTION OF PERSONS OVER FRACTILE GROUPS BY SEX AND LEVEL OF EDUCATION ATTAINED

RURAL ALL INDIA MALE

FR GP	0	1	2	3	4	5	6	7	8	9	NR	ALL
0-10	11.32	11.59	8.36	6.79	2.52	5.59	5.27	4.00	3.45	2.40	14.23	11.49
10-20	11.00	11.10	8.66	7.49	7.37	5.00	4.93	1.39	4.57	1.98	12.11	11.19
0-20	22.32	22.69	17.02	14.27	9.89	10.58	10.21	5.39	8.03	4.38	26.34	22.67
20-40	23.22	23.52	20.68	18.54	21.54	13.86	14.47	9.88	8.07	9.33	26.46	22.72
40-60	22.08	21.89	21.55	21.14	10.17	18.91	17.98	13.34	13.46	8.84	20.06	20.84
60-80	18.94	18.67	22.70	23.51	19.51	22.87	23.51	22.01	20.52	18.32	16.00	18.86
80-90	8.15	7.95	10.61	12.59	16.03	15.63	14.33	18.31	16.38	15.65	6.02	8.44
90-100	5.29	5.27	7.43	9.95	22.25	18.15	19.50	31.09	33.54	43.47	5.12	6.46
80-100	13.44	13.22	18.04	22.54	38.28	33.78	33.84	49.40	49.93	59.12	11.14	14.90
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
est(000	137119	46887	43258	28023	144	10886	3974	1094	2102	691	13824	288002

Source: See End Note 9.

BLOCK B

RURAL ALL INDIA PERSONS

FR GP	0	1	2	3	4	5	6	7	8	9	NR	ALL
0-10	13.75	10.73	8.08	6.35	4.61	5.14	4.66	4.32	3.20	2.29	15.05	11.83
10-20	13.24	10.77	8.05	7.04	6.53	4.73	4.30	1.37	3.88	2.03	12.19	11.40
0-20	26.99	21.50	16.04	13.39	11.14	9.86	8.97	5.69	7.08	4.32	27.24	23.24
20-40	24.85	23.17	19.06	17.18	25.88	12.98	13.95	8.95	7.50	8.75	25.46	22.94
40-60	20.98	22.11	21.37	20.30	10.27	13.11	17.18	13.50	12.79	8.93	19.59	20.86
60-80	16.75	19.04	23.11	24.24	16.31	23.62	22.83	20.40	19.24	17.66	16.68	18.59
80-90	6.63	8.49	11.58	13.48	15.81	16.11	15.03	18.65	17.07	15.47	6.45	8.36
90-100	3.80	5.70	8.24	11.40	20.59	19.32	22.04	32.82	36.32	44.35	4.58	6.01
80-100	10.43	14.19	19.83	24.88	36.40	35.43	37.08	51.46	53.39	60.33	11.03	14.37
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
est (000)	322429	73387	67103	39512	198	14408	4949	1419	2563	772	32222	558962

LEVELS OF EDUCATION OF POPULATION IN EACH FRACTIE GROUP

BLOCK A

(% distribution of population of fractile groups over each educational level)

PERCENTAGES ACROSS TAKING CELL TOTALS AS 'ALL'

RURAL ALL INDIA MALE

FR GP	0	1	2	3	4	5	6	7	8	9	NR	
0-10	52.80	18.49	12.30	6.47	0.01	2.07	0.71	0.15	0.25	0.06	6.69	100.00
10-20	52.59	18.15	13.06	7.32	0.04	1.90	0.68	0.05	0.33	0.05	5.84	100.00
0-20	52.70	18.32	12.68	6.89	0.02	1.98	0.70	0.10	0.29	0.05	6.27	100.00
20-40	50.44	17.47	14.17	8.23	0.05	2.39	0.91	0.17	0.27	0.10	5.79	100.00
40-60	48.96	16.60	15.08	9.58	0.02	3.33	1.16	0.24	0.46	0.10	4.48	100.00
60-80	45.09	15.20	17.05	11.44	0.05	4.32	1.62	0.42	0.75	0.22	3.84	100.00
80-90	41.70	13.91	17.13	13.16	0.09	6.35	2.12	0.75	1.28	0.40	3.11	100.00
90-100	35.28	12.02	15.63	13.56	0.16	9.61	3.77	1.65	3.43	1.46	3.44	100.00
80-100	38.91	13.09	16.48	13.34	0.12	7.76	2.84	1.14	2.22	0.86	3.25	100.00

BLOCK B
RURAL ALL INDIA PERSONS

FR GP	0	1	2	3	4	5	6	7	8	9	NR	ALL
0-10	67.05	11.91	8.20	3.79	0.01	1.12	0.35	0.09	0.12	0.03	7.33	100.00
10-20	66.99	12.40	8.48	4.37	0.02	1.07	0.33	0.03	0.16	0.02	6.16	100.00
0-20	66.99	12.15	8.29	4.07	0.02	1.09	0.34	0.06	0.14	0.03	6.76	100.00
20-40	62.49	13.26	9.97	5.29	0.04	1.46	0.54	0.10	0.15	0.05	6.40	100.00
40-60	58.02	13.92	12.30	6.88	0.02	1.62	0.73	0.16	0.28	0.06	5.41	100.00
60-80	51.97	13.45	14.92	9.22	0.03	3.28	1.09	0.28	0.47	0.13	5.17	100.00
80-90	45.75	13.33	16.63	11.40	0.07	4.97	1.59	0.57	0.94	0.26	4.45	100.00
90-100	36.47	12.45	16.46	13.41	0.12	8.29	3.25	1.39	2.77	1.02	4.39	100.00
80-100	41.87	12.96	16.57	12.24	0.09	6.36	2.28	0.91	1.70	0.58	4.42	100.00

Appendix 4.2.2

BLOCK A
DISTRIBUTION OF PERSONS OVER FRACTILE GROUPS BY SEX AND LEVEL OF EDUCATION ATTAINED
URBAN ALL INDIA persons

FR GP	0	1	2	3	4	5	6	7	8	9	NR	ALL
0-10	18.81	14.68	10.91	8.72	13.68	4.35	4.28	3.05	2.25	1.82	16.50	12.61
10-20	17.91	13.31	10.86	8.34	6.49	4.84	3.82	2.17	1.25	1.30	17.28	12.03
0-20	36.72	27.99	21.99	21.77	20.17	9.19	8.09	5.22	3.50	3.12	33.78	24.65
20-40	29.43	28.20	25.93	23.64	14.57	15.08	12.60	10.26	7.60	5.30	26.27	24.50
40-60	18.44	20.75	23.02	24.36	20.28	22.41	18.85	19.75	13.73	10.83	18.12	20.38
60-80	11.11	14.92	19.16	21.90	24.47	28.09	28.82	25.71	27.63	22.52	13.87	17.65
80-90	2.87	4.67	6.28	8.13	12.60	14.46	16.11	20.11	20.08	22.34	5.08	7.12
90-100	1.44	3.47	3.85	4.90	7.91	10.78	15.54	18.95	27.46	35.89	2.88	5.71
80-100	4.31	8.14	10.13	13.03	20.57	25.24	37.64	39.06	47.54	58.23	7.96	12.23
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
est (000)	54295	24644	27640	21478	170	13347	6721	1728	7023	2044	5393	164483

LEVELS OF EDUCATION OF POPULATION IN EACH FRACTIE GROUP
BLOCK A
URBAN ALL INDIA PERSONS

FR GP	0	1	2	3	4	5	6	7	8	9	NR	ALL
0-10	49.24	17.44	14.54	9.03	0.11	2.80	1.39	0.25	0.76	0.18	4.29	100.00
10-20	49.14	16.58	15.17	9.05	0.06	3.26	1.30	0.19	0.44	0.13	4.71	100.00
0-20	49.17	17.01	14.99	11.53	0.08	3.03	1.34	0.22	0.61	0.16	4.49	100.00
20-40	39.65	17.25	17.78	12.60	0.06	4.99	2.10	0.44	1.32	0.27	3.52	100.00
40-60	29.87	15.25	18.98	15.61	0.10	8.92	3.78	1.02	2.88	0.66	2.92	100.00
60-80	20.78	12.67	18.24	16.20	0.14	12.91	6.67	1.53	6.68	1.59	2.58	100.00
80-90	13.31	9.83	14.82	14.91	0.18	16.48	9.25	2.97	12.04	3.90	2.34	100.00
90-100	8.32	9.11	11.33	11.21	0.14	15.32	11.12	3.49	20.53	7.81	1.65	100.00
80-100	11.63	9.97	13.92	13.91	0.17	16.75	12.58	3.36	16.60	5.92	2.13	100.00

Education Codes for Appendices 4.2.1 and 4.2.2:

(0) Not literate (1) Literate below Primary/No formal Education
(2) Primary/Jr Basic (3) Middle/Sr.Basic (4) Tech/Vocational Course (5) Metric/SSC/SSLC (6) H.SC/Pre-Univ/Intermediate
(7) U.Graduate, Diploma/Cert Not equivalent to degree
(8)Degree/Dip.Eq to Degree(Graduation level)
(9) PG/Dep/Cert equivalent
NR Not Reported.

Notes

1. In Chapter one we reviewed various studies on regional disparities in educational growth in Indian context.

2. Rao(1964): The Use and Interpretation of Principal component Analysis,SANKHYA Series A

3. Ram,Rati(1982):"Composite Indices of PQLI,Basic needs fulfillment,and Income" Journal ofDevelopment Economics vol 11 pp.227-47.

4. Psachrapoulos,G and Arrigada,A.M(1986): "The Educational Compositon of the Labour Force: An International Comparison " International Labour Review Vol 125(5) pp 561-74

5. Rati Ram (1990):"Educational Expansion and Schooling Inequality;" The Review of Economics and Statistics Vol 72,No.2

6. ibid.,

7. It has been observed by Sen(1977) Op.cit., and others that the minimum years of schooling to become functionally literate is 3 to 4 years. But as the census classification of literate differs from that of the notion of "Functional literacy", to avoid any kind of upward bias in the mean level we have used one year as S_1 in this case.

8. We are following the methodology of Ram(1990) Op.cit., which uses quadratic function in estimating the relationship between mean and SD.

9. For this reason Ram(1990) uses SD instead of any relative measure like CV, as the value becomes indeterminate when once mean is zero.See Ram(1990) Op.cit., Section VI. But many of the inequality measures violate this condition.
See Levison & Lau(1990):Declining Inequality in Schooling in Brazil and its Effects on Inequality in Earnings, Center Discussion Paper No 618, Economic Growth Center,Yale University.

10. Our data Source is NSS 42nd round,Participation in Education Survey,All India results published in Sarvekshana Vol 14,3 Jan-Mar 1991
In doing this exercise we have encountered inconsistencies in the data.Thus it needs a lengthy clarification. See tables 2.1 in Sarvekshana, referred. Firstly we found that in case rural male and urban male and persons the estimated totals do not tally with grand total given under all. We have estimated the incorrect figures by subtracting the estimated values of females from the 'person' estimated values under each level of education. This is done as we found in case of females and persons the estimated figures seem to be correct. In case of rural male we found the percentages under 'all' seem to be in consistent,as the total of each fractile group do not tally with the summation of cell totals. For this reason we have taken the cell totals as correct figures and computed the percentages across educational levels of each fractile group.

CHAPTER 5

EDUCATION AND ECONOMY:THE INTERACTIONS

Introduction:

In this chapter we assess the linkages between education and economy, in the context of Andhra Pradesh.

Many of the studies which have identified linkages between education and economy have rested on the human capital theory which held its sway in Sixties until a kind of skepticism had set in due to its inability in explaining numerous problems such as the problem of graduate Unemployment in India and other Asian countries, the school leaver's problem of Africa and widening income inequality in third world countries[1]. The factor substitutability (More educated Vs less educated), the assumed linkage between education and labour productivity, and returns in terms wage differentials have been the main theoretical constructs of Human Capital theory which still stands unblemished. But an array of theoretical and empirical evidences showed conclusively, the inadequacy of Human capital theory[2]. The main contention is that in the context distribution and inequality, of incomes and education, education seemed to accentuate the differentials rather than reducing them. This is due to the interdependence of educational system and capitalist development, in which education perpetuates the class structure. And the conflicting and coinciding class interests will direct the educational systems. Thus, the school system, it is argued, reproduces the social and economic differentials in a capitalist system [3].

Even within the neo-classical frame work, the 'screening hypothesis', 'informal job contract' and other empirical evidences have weakened the robustness of Human capital theory [1].

But all these theoretical and empirical evidences point out the impact of education on economic growth, personal and social returns and the resulting inequalities. The implicit assumption was that accessibility,or participation in education was either uniform or unequal which was not verified. We hypothesize that it is the family's disposable income towards education, and the capacity to forego income from child's work, that determines educational participation, even in the context of universalization of elementary education.

We are evaluating this proposition. Thus in a sense we are trying to determine the economic indicators which influence educational participation at macro setting. We arrive at this hypothesis on observation of micro evidences from many settings on educational participation and drop out.

Education and Economy:

Historical experiences of many of the present day developed countries stand as examples on the role of learning skill (education) on economic growth and development. Though mass education was of recent origin even in European countries, the active role of skill and learning was not discounted in

economic development of the capitalist countries. And mass education,in fact has followed Industrial Revolution. At the same time we have evidences showing educational development and economic development moving hand in hand. The experience of Japan and USSR show that, with the realization of economic consequences of education, there were deliberate attempts at raising educational levels of the population in these countries. Thus, the policy intervention of the regime (democratic / authoritarian) had expanded the educational services to the people.

The new nations, liberated from the colonial rule have embarked on an enormous expansion of education which was taken as "Engine" for economic growth throughout the fifties and sixties. No doubt it did help in economic growth particularly in supply of educated man power to meet the shortages. But soon the same countries have experienced "Open Educated Unemployment" and have encountered setbacks in achieving universalization of elementary education. The reasons were not difficult to discern. The Third World education has experienced these paradoxical situation because; one, of the distortions in educational pyramid which had the imprints of colonial educational policies, secondly and more importantly, it is the dynamics of emerging class relations and interests that prevented any structural reform in the Educational System[5]. The financing of different levels of education and the rates of growths of educational levels would at once reveal the situation. Nevertheless we observe that the question of participation in education is crucially dependent on the policy regime and the economic well being of the population.

In chapter 2 we have tried to establish a contextual linkage between the economic growth of the region (albeit unevenly among the population) and the subsequent educational development in certain regions of the Colonial Andhra. We have argued that,it was the material improvement of certain sections of population who were able to generate surplus from agriculture, that had stimulated educational progress.

The participation in education remains a crucial issue in the case of the Third World countries though the governments have committed to compulsory education and advocate universalization of education. For example, the problem of non-participation in education and educational wastage are more acute in India compared to other South Asian and Third World countries. The situation is closely linked to the economic and policy aspects of the country. Though the Government is committed to free and compulsory education, it do not seem to have taken measures in that direction both in terms of providing educational facilities and enforcing the laws effectively. The work participation rates of children of age below 14 years is quite high in India, and there seem to be no efforts in arresting the trends of drop out and non participation in education. The ~~rural~~ tribal families depend on the incomes of the child who constitute this way economic assets. The Government has not taken adequate steps in raising incomes of the ~~rural~~ tribal population so that they can dispense with the incomes from the children. Instead, as argued by Weiner, the policies of the government toward enforcing compulsory education seemed to be of incentive in nature, rather than taking it as a duty[6].

Thus the role of economy in determining the educational participation is to be assessed. At first sight, in a scenario of Universal education up to elementary level as a policy frame work, determinants of demand for education may seem to be of no consequence. But the rural educational participation crucially depends on the dispensation of the family, of the income of the child from employment(main/subsidiary). Thus participation in education at the primary and middle stages can be taken as a function of the economic well-being of the population both at macro and micro levels. We hypothesize a linkage between educational participation, in terms of Enrollment ratios and economic well being of the population measured in terms of poverty levels.

To test the hypothesis, first linear correlation between these two sets of variables is computed. The exercise is done at two periods of time 1972 and 1978/79 for which district wise data on poverty levels are available[7]. We have used Elementary school enrollment ratios and levels of poverty both at urban and rural areas of the districts for the two time points(Table 4.6). This exercise is exploratory in nature, as ideally one would be expected to take net enrollment ratios (Gross enrollment ratio deducted of drop out and stagnation) instead of gross enrollment ratios.

As one would expect, a statistically significant correlation is observable between the two sets of variables. The sign of the coefficient is also indicative of the relationship. But

correlation does not reveal any causation but only association between the variables.

Table 5.1
Correlation Coefficients

	1972		1978	
	Pov R	Pov U	Pov R	Pov U
Ele enr M	-.4604*	-.2774	-.3821*	-.3897*
Ele enr f	-.6896*	-.4637*	-.4428*	-.4410*
Ele enr(M+F)	-.6188*	-.4013*	-.4303*	-.4325*

Notes: * indicates coefficients are significant at 5%

In order to assess any causation we hypothesize elementary enrollment ratios as a function of levels of poverty.
Thus, (E.ENR)=f(Pov)
The following regression equations were used for estimation
Ln(E.EnrM)=Const+Ln(PovR)+Ln(PovU)+e
Ln(E.EnrF)=Const+Ln(PovR)+Ln(PovU)+e
Ln(E.EnrT)=Const+Ln(PovR)+Ln(PovU)+e

where,
E.Enr= Enrollment ratio at elementary level for males and females separately and total.

Table 5.2
Regression Estimates

1972	Dep=E.EnrM	Dep=E.Enr F	Dep=E.Enr(M+F)
Co.PovR	-.616	-1.624*	-1.009*
Co.PovU	-.259	-0.858	-0.483
const	2.878	9.324	5.332
$\bar{R}$-square	.10	0.34	0.26
F-stat	2.20	6.18*	4.57*
1978			
Co.PovR	-.129	-0.318*	-0.205
Co.PovU	-.149	-0.417	-0.240
const	0.221	1.540	0.677
$\bar{R}$-square	.06	0.14	0.11
F-stat	1.70	2.69*	2.29

Note: * indicates significant at 5% level.
Dep=Dependent variable,Pov=Poverty,
Co=Coefficient,R=rural,U=Urban
All dependent and independent variables are taken in Logerthemic form

We find that, though not all the estimates are

statistically significant, the signs of the coefficients are predictably negative. Also, the regression estimates with dependent variable female enrollment is statistically significant for the period 1972. From the F-statistic we find that the regression model envisaged is significant in case of female enrollment as dependent variable for the both time periods and for total enrollment in case of 1972.

The estimated coefficients of the regression equation involving 1972 and 1978 female enrollments as dependent variables show statistically significant relationship with rural poverty. It is the female enrollment that is being effected adversely in the event of poverty. The gender disparities of enrollments at lower level can thus be explained as an outcome of the poverty of the parents. The same is not found in case of urban areas where the opportunities are not adversive.

Conclusion:

There is a causal relationship between educational participation in terms of enrollments at the elementary level and poverty levels of the population at the macro level though statistically not significant. One infers that the female educational participation is sensitive to the family levels of living. This result gives a crucial dimension to educational participation at the lowest levels. It emphasizes the role of the family incomes in determining the educational enrollments.

What are implications of these results ? We argue that

apart from educational intervention to improve enrollments, a multi pronged strategy encompassing programmes which would not only improve enrollments but sustain the same. As we observe enrollments at lower levels are closely related to economic well-being of ~~rural~~ tribal people, education in ~~rural~~ tribal areas has to be incorporated in to the whole gamut of rural development packages where in raising family incomes is also a crucial component. The educational participation of the children, better health and nutrition would be the targets in this context.

Notes

1. Blaug,M (Ed) (1987):Economics of Education and Education of an Economist; Edward Edgar,London

2. See chapter 1 for a discussion of the relevant studies.

3. See Bhagwati,J(1973), Bowels,S(1971), Bowels,S(1972) Bowels,S and Gintis,H (1978) and others.

4. See Blaug,Mark (1987) Op.cit., Meglin(1990) Op.cit., presents evidences challenging the Education Productivity linkage.

5. See Bhagwati(1973) Op.cit.,

6. Weiner,Myron (1991): The Child and the State in India: Princeton, Princeton University Press.

7. Data on district level Poverty were available in the following; For 1972, Sastry S.A.R (1981) :Measurement of Poverty;Positive and Normative, Anveshak 9(1)and For 1978, Radhakrishna,R Et.al(1988): Levels of Living in a State Setting The Case of Andhra Pradesh CESS Publication, Hyderabad. We have taken comparable estimates from these two sources

CHAPTER 6

SUMMARY AND CONCLUSIONS

The pattern of educational growth in Andhra Pradesh has been analyzed in the previous chapters. Now we summarize the major findings which emerged from our analysis.

The analysis started with a premise that historical specificities of different regions play crucial role in determining the rate and type of educational progress of regions. We hypothesized that the dynamic aspects of rural economy, with its offshoot of development of enterprising middle peasants who interact with the agrarian markets, induce demand for education in the early stages of modern education and subsequently accelerates further progress.

We analyzed the post-independence educational progress in the districts of Andhra Pradesh, and tried to highlight the regional disparities in educational growth in all its dimensions. Regional disparities in educational progress in terms of growth of individual indicators of education and in terms of a composite index of educational progress was highlighted. Disparities in human capital formation in the state was also analyzed.

As a limited and exploratory step, the role of the economic well being of population in inducing the demand for education at lower levels was also assessed. Here we used Poverty levels as a proxy for economic well being. Many of the micro level studies on educational participation/wastage had shown the role of family

income as a determinant factor in explaining the phenomenon. Taking a cue from these observations, we have hypothesized that at macro level, educational participation measured in terms of enrollment ratio at lower level, had a functional relationship with both rural and urban poverty. Our exercise tested this hypothesis.

Historical evolution and progress of education in different regions of Andhra Pradesh, testifies the hypothesis that the regional specificities and the earlier pattern of growth obtained shape the contemporary educational progress. The types of policy intervention that went in earlier times depended upon the specificities of the existing regimes.

In the case of evolution of Modern education in Andhra during the early nineteenth century, the stagnant and decaying nature of the economy, was found to be wanting in sustaining the educational activities. Evidences presented in Munro's enquiry point to the fact that there was a decline in Sanskrit and village schools from late eighteenth century due to the un-favorable economic and political climate, compared to even the earlier period. We find from this enquiry that in village schools, education was costly and owing to the poverty and subsistence nature of economy not many could avail of the educational facilities. Further, the discriminatory nature of indigenous education prevented some sections of the people from educational benefits.

Policies in improving education were half hearted and even

inconsistent during this period. It was the Christian Missionaries who pioneered in establishing modern educational institutions in the Andhra region. During the same period, in the Telugu speaking regions of the Nizam's Dominions, the then existing feudal-type regime devoid of any clear cut educational policies. In point of fact, there was no formal system of education in Hyderabad during the period.

The second half of nineteenth century witnessed a change in agrarian scenario, especially with the advent of irrigation, in the delta-districts of Coastal Andhra. The early agricultural growth had its influence on the emergence of an independent middle peasantry who were able to generate surpluses from agriculture. This resulted in a rising demand for education from the region especially from Godavari delta, though there were impediments still operating such as lack of transport etc. The system of 'Rate Schools' which depended on the support from the village community, was an offshoot of the people's urge for educating their children. The village community could have perceived the importance of education in the growing monetization of the economy. The consistent support and encouragement of the local officials like G.N.Taylor helped a great deal in the establishment of schools in the villages of Godavari delta from 1854-56 onwards.

Unfortunately, after some time the system did not function effectively as there was a lot of controversy on the functioning of Rate schools and ultimately they were merged with local board schools in 1871. The failure of the Rate School system could be

traced to the feeling that the rate had become a burden on villagers in the event of high assessment of land and water tax, and lack of enthusiasm among the officials.

Throughout the second half of nineteenth century , we observe a much more growing interest in the educational activities in Coastal Delta-districts,as compared to Rayalaseema. Though with the growth of Railways, the Ceded districts had intensified the growth of cash crops for markets from late nineteenth century, yet, the emergence of sections of middle peasants with agricultural surpluses to invest in education, as was the case in the Delta districts, was not a striking phenomenon. This was mainly due to the poor soils, uncertain rainfall and crops, droughts, shortages and famines which went against the emergence of a sustained economic growth. A powerful land lord-money lender axis operated in the rural economy of Ceded districts. As a result the process of commercialization was slow in the region compared to Coastal Delta districts and consequently educational growth also was relatively slow.

By the early twentieth century, the educational growth in the Andhra region was accelerated. However this progress as compared to other Tamil districts was still low. There was a growth in number of institutions and scholars during the period. Along with Delta districts, northern and Ceded districts had also shown educational growth.

Accelerated educational growth in the region could be traced to the vigorous commercialization and social development which

took place during the period. The policy of the government even, with its inherent inadequacies, helped to some extent, develop private effort in education in the Andhra region. The growing social and political reforms helped in accelerating educational progress in nineteen Twenties and Thirties. Spatial spread of education also was appreciable by twenties of the present century in Andhra districts. The Ceded districts also showed progress in education during the period. The period witnessed growth of private efforts in the form of aided and un aided educational institutions in Andhra region, showing the general interest among people in education. Many of the important towns of Andhra had colleges, and establishment of Andhra University in 1929 had accelerated educational growth in the region.

In the twentieth century there was growth of education in Telangana districts but it was confined only to primary education. The schemes initiated in twenties and thirties yielded results in improving primary education but in secondary and higher educational levels the region still remained backward. The economy of the region, though linked with the world market, was essentially based on a feudal set up which prevented the emergence of a strong section of independent middle peasant, which would have accelerated educational progress in the region as it did else where. The policy of the government in educational sphere were discriminatory in nature which hindered the private effort as well as general growth of education. As late as in 1940's the Hyderabad region had only 50% of the villages with primary schools, whereas the other regions had considerably higher level of educational progress.

Thus, an analysis of educational progress in pre-independent Andhra Pradesh reveal that it is the dynamic tendencies in the rural economy of Coastal Andhra that energized the demand for education from the population- especially rural population. The semi-feudal oppressive production relations, coupled with discriminative policies of the Hyderabad government had hindered educational progress in that region.

In the post-independence period large scale educational expansion is seen in all the districts. There was an explosion of enrollments in fifties and early sixties, and a decline in the subsequent period till the middle seventies. Andhra Pradesh was no exception to this universal phenomenon. There have been efforts to improve educational enrollment ratios from the middle of seventies and it resulted in progress in eighties.

Our analysis reveals that it was the primary school enrollment ratios that witnessed a decline from early sixties to mid- seventies. There was a consistent increase in middle and secondary enrollment ratios from sixties to eighties. Though there has been a decline in primary school enrollments, the recovery in enrollment ratios was higher than the declines in most of the districts.

Also, we find that the districts of Telangana region have witnessed higher growth rates in enrollment ratios compared to Andhra regions, confirming the fact that the needs of the educationally backward districts were attended to by the governmental initiative. All the same, the districts of Andhra

have remained ahead of Telangana in enrollment ratios at all levels the only exception being Hyderabad. As regard the accessibility to schools, the state achieved the goal of providing primary education to almost all villages and people by 1986. Thus, the disparities in terms of educational accessibility at primary level has been eliminated over the period. In the case of Middle level education, school accessibility still remained as a problem. On average only 65 percent of villages were having middle sections within a walkable distance. As a corollary to increase in school enrollments there has been an increase in number of schools and teachers.

Coming to higher education, we observe that the rate of growth of higher education in the state has been higher than that of school education, which shows the bias in educational expansion. We find that there is more participation of girls in the higher education in the recent years. Yet, higher education catered to small section of the population.

We have analyzed the growth of higher education in the state at the level of regional aggregates. The analysis shows that the Coastal Andhra districts lead in terms of enrollments and institutions followed by Telangana. The rate of growth of enrollments is higher in Telangana region compared to Andhra region and Rayalaseema. The enrollment ratios at higher education level stands at roughly 3.5 % between 1974 to 1985 for the state as a whole. The male enrollment ratio fluctuated during the period but female enrollment ratio showed a consistent increase and stood at 1.88% in 1985/86. With regard to the

course wise enrollment we find all the three regions had a higher concentration of non-science graduates compared to science graduates. Also, Post- graduate enrollment remained below ten percent of total higher educational enrollment.

The problems of wastage and non-participation in education also has been analyzed. Our analysis points out that there has been a high incidence of wastage at primary level in Andhra Pradesh; this is in the form of drop out and stagnation. We observed that the retention ratios at primary level have improved over the period, from 22% to 38% for the state as a whole during 1978 to 1986. The districts show wide variations in rates of retention- the Telangana districts showing lower levels compared to Coastal Districts. We do not find a wide gender disparity in rates of retention in 1986 compared to earlier period.

From the case studies analyzed, the educationally backward districts are found to have higher levels of wastage. Also, Telangana districts had higher levels of wastage compared to Andhra. We observe a higher incidence of wastage among poor, backward and disadvantaged groups of population. Poverty was found to be the main reasons for drop out and stagnation at lower levels of education.

As regards the educational finances, we find that in Andhra Pradesh, the pattern of educational expenditure is in no way different from that of the majority of the states or the all India pattern. The growth rate of higher educational expenditure has been higher than that of the primary education.

In order to understand the regional patterns of educational growth, a composite index of educational growth has been developed at two time periods to arrive at relative positions of the districts.

It was found that by 1987, as compared to Andhra districts, many of the Telangana districts have advanced. This shows that the relative performance of the Telangana districts in the interim period has been better in the later period compared to the other districts. We have also seen this aspect in case of rates of growth of enrollments and number of schools also. The Telangana districts have shown higher growth rates compared to Andhra districts. Thus, there have been efforts to improve education in the districts which were educationally backward in 1965.

Regional patterns in human capital formation in the districts of the state was analyzed, in terms of mean level of education of work force. Compared to earlier periods, the mean level of education of male workers has improved in 1981. And the dispersion measured in terms of co-efficient of variation has also increased over the period. We found a curvilinear relationship between mean level of education and educational inequality as measured by Standard deviation and co-efficient of variation. The analysis revealed that 6.5 years as threshold level of education for the male workers from which one expects a decline in inequality in educational attainment. We find that mean level of education in case of female workers in 1981 was

very low compared to male workers. Also, as one can expect there is a wide rural urban disparity in mean level of education.

Finally as a tentative and an exploratory exercise we have tested the functional relationship between educational participation and the economic well being of the family. We have analyzed the relationship by a regression between enrollment at elementary level and poverty levels of the population at district levels for two time periods for which data are available. Our results show that there is a negative relationship between poverty level and educational enrollment. It is significant in the case of girls enrollment and rural poverty. This result is crucial since it reveals that it is the girls enrollment that poverty, in the first instance, affects the girl's enrollments adversely.

Thus, our analysis of educational growth in Andhra Pradesh, points to a trend of reduction in regional disparities, in as much as the regions recognised as educationally backward, have been getting more governmental attention in the sphere of educational development. This aspect comes out sharply in our analysis of regional patterns in terms of educational development index. In Andhra Pradesh, higher education is growing at a higher rate than school education, which again is in tune with the All India pattern. But higher education enrollment remained a mere 3-4 percent of respective populations. Andhra Pradesh is considered as a state of high educational wastage. We find that because of large wastage and non-participation in education, the state is not able to utilize the resources economically. The

disparities across the districts in the sphere of wastage are much more pronounced here as compared to the enrollments. We find an uneven expenditure pattern of education,higher education getting priority over primary education.

Finally, the analysis of disparities in human capital formation in the state, reveals that there has been an increase in mean level of education over the period from 1961 to 1981. Also, we see a curvilinear relationship between mean level of education and educational inequality.

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