CHAPTER 1

INTRODUCTION
The challenge of the twenty first century and the rapid change is compelling the country to prepare for the achievement of new millennium goals. In order to increase the per capita income particularly of the lower and middle class people, the purpose of development, as the Cocoyoc Declaration tells us, should not be to develop thing, but to develop men. The most precious developmental asset of any nation is its human resources, not its raw materials nor its technology minus man.

Although the distinction between the consumption and investment aspects of educational expenditure has been familiar since the time of Adam Smith, major interest in the economic value of education was not kindled until as recently as 20 years ago. At that time, a series of aggregate production function studies suggested that a large part of the growth of the US economy during the first half of the 20th century was attributable to increase in the stock of human capital*. It seems to be a matter of easy logic to translate the implications of this work to the developing world skilled manpower was in critically short supply. Many such countries remained highly dependent upon the skills of non-citizen workers, particularly, in senior positions in industry and government. Attention quickly shifted away from a lack of capital resources towards questions of 'absorptive capacity' and shortage of human skills as an explanation of disappointing growth performance. At the same time, the assumption was made that 'skilled' manpower by implication, western modes of education were to become universal modes of skill creation, and educational investment would to become universal modes of skill creation, and educational investment would have to occupy a central part of investment strategy if growth was to proceed.

Education is an important form of human capital that improves productivity, health, and nutrition of the people of a county, and slows down the population growth*. Education is a corner stone of economic growth and social development and principal means of improving the welfare of individuals and primary education is


its foundation. It has been recognized that human resource development through education, better health and family welfare makes important contribution to poverty alleviation. This is because education is considered as the best investment in human resource development. Investment in education, particularly female education, contributes to decline in infant mortality and improving maternal and child health by allowing spacing of births*.

Theories of modernization and development too postulate education as an important instrument for social change and societal transformation. Development, in this context, has had a dynamic definition changing from GNP as its main indicator to human development, with gender development now constituting important dimensions of societal development. What merges in the debate on development is the pre-eminence of the instrumental value of education and the need to bring women into the education stream so that society benefits from their education. Individual modernization presupposes changes in attitudes, values, cognitive behavior. This, in turn, leads to societal modernization by making individuals rational, and equips them with a scientific temper. Societal modernization through education leads to scientific and technological advancement. Thus, both individual and societal modernization emphasize the instrumental value of education.

STATEMENT OF THE PROBLEM

The system of primary education in India has gone through significant structural changes over the last two decades or so. Some of these changes are still unfolding and the eventual shape they take cannot be easily predicted. The changes are pervasive – ranging from alterations in the role of the state to definition of the professional status of teachers. Despite the scale and the speed at which they have occurred, there is hardly any recognition of these changes in the social sciences, let alone any concerted analysis, critical or otherwise. All one can find in the name of analysis is a body of promotional literature.

One of the directive principles of state policy of the constitution of India is that the state shall endeavor to provide, within a period of 10 years from the

commencement of this constitution, for free and compulsory education for all children until they complete the age of 14". Although the number of primary schools in the country and enrolment into primary school has increased dramatically in the last 50 years, successive governments have failed to make 'education for all' a reality.

Three sets of empirical observations motivate the discussion. Each deals with a basic question confronting primary education in India today:

1. Why are so many children out of school?
2. What do they learn?

With the advent of independence, the proclaimed national objective in education was to develop rapidly a system of country wide education responsive to the mass awakening in the country and befitting an independent nation in the modern age of science and technology. Universal free elementary education, removal of adult illiteracy, special attention to the socially and economically backward sections of society (Scheduled castes and schedule tribes) were to be some of the main considerations.

Since independence the educational system has undergone considerable expansion. It has increased more than four times at the primary stage, six times at the middle stage, seven times at the higher secondary and more than ten times at the university stage. There has been a corresponding increase in the number of teachers, institutions and expenditure on education.

In spite of all this expansion of educational facilities the present position in education after more than three decades of independence is hardly satisfactory. Between 1951 and 1981 the percentage of literacy has crawled from 16.6 to 36.17 per cent not even at the rate of one point per cent.

The present educational system is largely reinforcing the basic socio-economic structure with its social hierarchy and flagrant inequalities. Expansion is by and large taking place in a laissez-faire style, without purposeful interventions. In terms of distribution of gains, what is happening over the economy as a whole also
gets reflected in the sphere of education, considering the fact that 40 per cent of the Indian population is below the subsistence level and another 30 per cent marginally above it, it is hardly surprising that 63.53 per cent of the population should be illiterate.

The developing of education is highly unequal between urban and rural populations. The concentration of education facilities increases progressively as we move from small towns to cities, to large cities and then to metropolitan centres.

The progress of literacy and school education in rural areas is following a similar pattern to that in urban areas. Education is confined to large central villages and within the village, progress has been made by the socio economically better-off sections of the population. The socio-economically backward sections are lagging behind. There is a wide gulf between men and women in the literacy rate and it is all the greater in economically backward areas.

In terms of caste, the upper and trading castes were literate at the time of independence; these communities progressed further in secondary and higher education. They were followed by middle castes whose main occupation was farming. These castes also made considerable advance, both in literacy and primary education. They are now trying to push forward to high levels. But scheduled castes and tribes and other economically backward sections are woefully lagging behind, in spite of special provisions for them in the constitution.

One of the directive principles of state policy of the Constitution of India is that “the state shall endeavor to provide, within a period of 10 years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of 14”. Although the number of primary schools in the country and enrolment into primary school has increased dramatically in the last 50 years, successive governments have failed to make ‘education for all’ a reality.

Universalization of Primary Education (UPE) and Education For All (EPA) are the guiding principles of Education Policy and strategy in India. Though India signed the World Declaration, Education for All at Jomtein, Thailand in 1990, the real push
towards this objective seems to have come much later. The Ninth Five Year plan might be called as 'the cornerstone' in investment for education. As against Rs.8522 crore expenditure during Eighth Plan, allocation for education witnessed a three fold jump to Rs.24,908 crores in Ninth Plan, the share of elementary education has seen a steep jump from 47 per cent to nearly 66 per cent of the education sector outlay during this period.

<table>
<thead>
<tr>
<th>Sub-sectors of education</th>
<th>8th Five Year Plan (Expenditure)</th>
<th>Ninth Plan (Outlay)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs.in crore</td>
<td>Percentage</td>
</tr>
<tr>
<td>Elementary</td>
<td>4006.55</td>
<td>47.0%</td>
</tr>
<tr>
<td>Secondary</td>
<td>1537.99</td>
<td>18.0%</td>
</tr>
<tr>
<td>University &amp; Higher Education</td>
<td>1055.82</td>
<td>12.4%</td>
</tr>
<tr>
<td>Technical Education</td>
<td>1086.72</td>
<td>12.8%</td>
</tr>
<tr>
<td>Adult education</td>
<td>718.14</td>
<td>8.4%</td>
</tr>
<tr>
<td>Others- Languages, Book promotion, scholarships, educational planning, and administration</td>
<td>116.67</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>8521.89</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Source:</strong> Planning Commission (2000)</td>
<td></td>
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</tbody>
</table>

It is therefore evident that the goal of EFA has been given adequate attention and EFA is sought to be achieved through several measures listed below.

- Amendment to the constitution to make Elementary Education a Fundamental Right
- Decentralization of planning, supervision and management of education through local bodies at district, block and village levels
- Social mobilization of local communities for adult literacy campaigns and for promotion of primary education
Convergence of different schemes for UEE

Stronger partnership with NGOs and Voluntary organizations

Advocacy and Media campaign for UEE

Provision of opportunities for Non-formal and alternative education for out of school children in the most backward areas and for unreached segments of the population in response to local needs and demands articulated at the grass root level.

After realizing the importance of primary education a study in this direction is initiated. In order to avoid duplication in the research efforts, a modest attempt is made to review the earlier studies and identify the gaps if any.

REVIEW OF EARLIER STUDIES

RUKMINI BENERJI, based on the field studies in slum communities in Mumbai and Delhi has investigated the reasons why children are not in schools or why they are not learning. She found that it has got more to do with the nature of schools than with the economic circumstances of their families. It is indicated that while school enrolment has risen dramatically in cities and villages, the ability of the Government school system to retain and adequately educate children has been less impressive. It is further noted that the serious crisis in primary education to-day pertains to learning. Since there are no standardized tests or Board exams until High schools, this endemic problem remains hidden. She has finally suggested that a flexible approach is essential for the universalization of primary education in India. Innovative action at the local level must be recognized and encouraged. Commitment on the part of the schools and communities to the education of all children must be publicly rewarded.

Dr. Bhujendra Nath Panda and Others have found that the dropout & stagnant behaviour is not based on a single factor but it is the congregation of multiple factors i.e., lack of interest, failure in examination, physical illness, economic

1 Rukmini Benerji: "Poverty and Primary Schooling" Field Studies from Mumbai and Delhi, Economic and Political Weekly; March-4, 2000 pp 795-802
2 Dr. Bhujendra Nath Panda and Dr. Nikunj Biswas and Miss Dharitri Rani Kamung: "Factors Affecting Educational Dropout and Stagnation in the Primary Schools of Arunachal" Asian Journal of Psychology and Education Vol.25, No.1-2, 1992, Page 22-26
backwardness of the family, traditionalism, lack of parental guidance and conducive environment at home and institution. So, to overcome the above problems it is worthwhile to give emphasis on education of parents as they are the prime force behind their children to send them to school for all round development. Even the teacher should make quick contact with the parents of a child who either stops coming to school or fails to secure standard marks in the examination or stagnated for more than one year in the same class. Instead of opening the number of schools in pen and paper it will be worthwhile to recruit well qualified and devotee teachers with improving the physical surrounding of the existing school. If possible emphasis should be given to raise the standard of living of the family and appropriate propaganda should be made regarding the utility of education throughout the state by means of government and non-Govt. machineries for greater interest of the society in future. Similarly, every effort should be made to change the attitude of the parents towards education of their child.

Dr. S. Rajakutty\textsuperscript{3} has identified some areas of concern in primary education and made suggestions for financing universalization of elementary education. The author felt that despite deployment of enormous resources, innovative approaches, decentralization and community involvement, there are still many areas of concern.

- Out of school children, as per the 52\textsuperscript{nd} round WSS data, constitute about 31 per cent of the 6-11 age group.
- While narrowing down of spatial disparities suggest that educationally poor areas have experienced, in general, relatively rapid improvements, scrutiny at a more disaggregated level (taluks and villages) reveals the existence of pockets of persistent backwardness.
- A large number of children belonging to disadvantaged communities, working children and children with special needs have not yet been covered.

With regard to financing elementary education he emphasized that an effective strategy needs to be evolved to raise funds by mobilizing donations and entrusting beneficiary committees to maintain school buildings and supply of some

\textsuperscript{3} Dr. S. Rajakutty; "Primary Education in Rural areas: Access, Enrolment and Retention" Kurukshetra, October,2002 pp 11 - 20.
consumables. Community – Government – NGO partnership should be vigorously persuaded. Convergence of resources should be intensified further.

Ruddar Datt\(^4\) has observed that the fulfillment of the constitutional directive of providing free and compulsory education upto the age of 14 continues to remain a distant dream. The high rate of illiteracy (63.77%) is worrying; still more worrying are the rates of illiteracy among women (75%) and the dropout rate upto class VIII (77%). While the Educational Policy Perspective bars the depressing state of elementary education in a very candid manner, it has failed to make equally bold suggestions of the author are as follows;

1. a raise in level of allocation to education vis-à-vis the GNP at 6 per cent,
2. higher allocation within plan programmes to elementary education.
3. consolidation or improvement in rural elementary school infrastructure
4. alteration in the norms for grants with a view to building positive influences in favour of basic facilities and female education
5. assigning a key role to functionality in education for disadvantaged sections, and
6. greater autonomy to Departments and organizations carrying our elementary education and adult literacy programmes.

Autar S. Dhesi and Jaswant Kang\(^5\) have made an attempt to understand the determinants of the primary education in Hoshiarpur district of Punjab and found that the drop-out rate has not been found to be a serious problem in Hoshiarpur. The explanation probably lies in the fact that there is strong tradition which encourages learning, even though Hoshiarpur happens to be an economically backward district of Punjab. But the rate of wastage, which includes both the rate of repetition and the rate of drop-outs, does demand immediate attention.

There are some determinants of wastage which cannot be changed in the short run. For example, it is not possible to raise the educational level of the parents and restructure their occupational profiles in the short run. However, if there is a change

\(^4\) Ruddar Datt; “Failure on Elementary Education and Future Policy”; Social Change: September, 1985: Vol.15 No.3 pp 17-21

in these determinants then they would in the long run influence performance both directly and indirectly. This will be mainly as a result of the intervening variables like regularity in income, assistance in home work, positive views of the parents about education and the reduction in family size of the village and the order birth, about which hardly anything can be done. The caste-differentiation, in any case, is related to the corresponding socio-economic differentiation of the community.

They further observed that, for the purpose of policy, the emphasis has to be placed on the quality of the teachers, the school facilities, the relevance of education to the life and working conditions of the participants and to the adjustments required in school to suit the rhythm of rural life.

R. Akila\(^6\) has identified some concerns for policy and implementation which may help to effectively achieve primary education for all goals. They include;

1. Elusive EFA goals are to be urgently met. Regarding literacy attainment, male-female disparities, considering both rural-urban and OC, SC/ST factors, should be reduced. Social and gender equity can be achieved only by creating better awareness of primary education among the disprivileged and minority groups in every district.

2. There is a need to bridge the gap between lower and upper primary schooling availability and access. Bridging the gap between primary and middle levels with special focus on the needs of girls will also be essential as more children complete primary education.

3. The trend of increasing wastage needs to be curtailed, and repetition in primary classes needs proper attention. Timely tackling of discontinuation can help to curtail dropouts at all levels. Effectively implementing the Compulsory Elementary Education Act with due recognition of the special disadvantages of girls and their parents is urgent.

4. Integrating gender perspectives in all functional areas is a must. The currently used gender focus for increasing female enrolment should get sharper to ensure their retention and attainment. Some areas can be sensitizing all teachers, and encouraging mothers participation in PTAs and

\(^6\) R. Akila; "Reaching global goals in primary education, some gender concerns for Tamilnadu", Economic and Political Weekly, June 19, 2004, pp 2617-2622
VECs. Tamil Nadu's local escort system for ST girls is commendable, and more of such innovations are welcome.

5. Inadequate spending, at the present 3 per cent share of GDP, has to be rectified. In fact, the Kothari commission had recommended this even as early as the 1960s.

Glyn Edwards\(^7\) has observed that improving and maintaining the quality of education in an expanding education system is an important policy issue for severely resource constraint developing nations. He has studied Zimbabwe's primary education system. He has concluded that in an expanding educational system a major concern is that there would be a corresponding deterioration in the quality of education and an accompanying increase in wastage and repetition. The evidence presented strongly suggests that this has not occurred in Zimbabwe since independence. In fact given the fairly gloomy prediction based in 1984 data the educational system at primary level has performed remarkably well despite inherent problems such as shortages of trained teachers and overcrowding of schools. In particular, the private school sector has shown a considerable improvement in both system efficiency and cost efficiency.

He opined that some important lessons may be learned from the Zimbabwe experience for countries embarking upon a programme of educational expansion. Where both public and private educational infrastructures are already in place, it is essential that an assessment of both overall efficiencies and cost-efficiencies is undertaken of each sector and perhaps of the school types within those sectors. The private school sector may hold the key to higher cost-efficiency combined with an acceptable level of equity in educational access. This will determine the most cost-effective expansion programme. Educational quality must be closely monitored and the distribution of educational resources must be equitable. Zimbabwe's experience during the decade following independence could thus provide a valuable model for countries such as South Africa where educational expansion is imminent.

V.P. Garg has made an attempt to discuss obligation of the Articles 45 and 46 of the Indian Constitution under which there is direction to the State of providing free and compulsory primary education to the children of the age group of 6-14. He examined the implications of this constitutional obligations and progress so far achieved against this liability and gaps between achievement and expectations. These gaps have been discussed with a particular reference to Nine educationally backward States. He observed that flabbiness in higher education is in evidence and needs corrective measures. Expansion of primary and middle stage education is the desired and much needed policy. He emphasized that a balance and stable model of development of education should follow a natural sequence i.e., expansion of primary, middle, secondary and higher education in that order. It is a natural pyramid of development in education which could correspond to the pattern of economic growth. In India, development of education up till now has been in reverse order. It was top heavy bottom weak. The future strategy demands reversal of it. At operational level it would mean per capita higher investment, strengthening physical facilities, administration and organization at the levels of institution, block and district in the primary sector of education.

Karuna Chanana has opined that gender ideology under lies the societal perception of the goals of women’s education. The parameters of social paradigm which delimits women’s role as well as functions of formal education need critical examination because they continue to affect the programmes relating to primary education of girls. It is further pointed out that it is not just enough to formulate policies and programmes but to evolve strategies to neutralize or circumvent the ideological, structural, and familial impediments so that the education facilities are fully utilized. It is noted that there has been apparent shift in emphasis in educational policies from equal educational opportunity for men and women to education for women’s equality and empowerment. In addition the gender gap in education is alarming, indicating that the policy is not implemented realistically. Even the official stands of positive discrimination in favour of the SCs and STs does not benefit their women. Finally it is concluded that poverty and gender are the main

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9 Karuna Chanana, “Gender inequality in primary schooling in India: The Human Rights Perspective” Journal of Educational Planning and Administration, volume X No.4 October,1996 pp 361-381
parameters of denial of education. Socio-cultural biases in combination with poverty has an extremely detrimental effect on the participation of girl's education.

V.R. Krishna Iyer\textsuperscript{10} has observed that the strategy of banishing illiteracy in a Third World country must be fine-tuned to the dynamic development of an advancing nation. This metamorphosis must embrace people, of all ages and must offer access to education through appropriate processes like non-formal, part-time and adult education, together with the regular school-going learning exercise.

Christopher Colclough\textsuperscript{11} has shown an evidence which suggests that the economic and social returns to investment in primary schooling in most developing countries are higher, at the present time, than other forms of educational investment. Moreover, in some of the poorest countries, where real rates of return on industrial and infrastructure projects are often small or even negative, the returns to investment in primary schooling appear to be very high indeed, and more attractive than many alternatives. In countries where a large proportion of the working population is dependent upon farming, and where rates of illiteracy are very high, primary schooling thus provides an investment opportunity which should have high priority on economic grounds.

Krishna Kumar and others\textsuperscript{12} observed that the system of primary education in India has yet to be analyzed critically- a critique that would seek to probe the linkages between education and social change. This study seeks to initiate that process by looking at the District Primary Education Programme (DPEP) that was subscribed to by most World Bank borrowers, including India, as a social safety net against the social and economic turmoil that followed any structural adjustment processes. In India, the reach of DPEP extended to 240 districts across 16 States, within the first six years of its existence. Despite this, surveys showed a decline in growth at the primary enrolment stage in most Indian states. More disturbing was the increasing presence of the para teacher and the consequent labeling of the full-time teacher as an impediment to the system's further development.

\textsuperscript{10} V.R. Krishna Iyer, “Primary education-some flaws in planning”, Yojana, August, 15, 1989, pp 45-47
\textsuperscript{12} Krishna Kumar, Manisha Priyam, Sdhana Saxena, “Looking beyond the smokescreen DPEP and Primary education in India”, Economic and Political weekly, February 17, 2001, pp 560 – 568.
Karthikeswar Behera, Bamadeba Tripathy\textsuperscript{13} have indicated that according to Article 29 of the "Rights of Child", the education of the child shall be directed to the development of the child’s personality, talents, mental and physical abilities to the fullest potential. In a way the Government have invested huge funds for development of primary education with certain goals in view. The first one is that all the children within the age group of 6-14 must complete the prescribed cycle of schooling at the primary stage with cent per cent retention. The second one is that quality and equality in the achievement level must be ensured. The author has suggested that the teachers should be empowered and the way to empower them is to orient them at regular intervals towards qualitative performance. Seminars and symposia be conducted for the teachers to enrich their professional competence. Further development in relevant areas can be planned skillfully. The delicate minds are to be handled with care to avoid undue emotional attacks. As the child learns a lot from environment, it is also an additional responsibility of the teacher and parents to help the children grow in a conducive environment.

Anrudh K Jain, Moni Nag\textsuperscript{14} have observed that the launching of the Seventh Plan provided an opportunity to initiate those ‘beyond family planning’ measures which contribute to the overall objective of fertility reduction in India. At the 1974 Bucharest Conference on population, the Indian delegation was instrumental in introducing the oft-repeated slogan ‘development is the best contraceptive’. The actual experience in India since then has rarely reflected this theme, which requires that the potential impact of developmental activities on fertility be taken account of in the design and implementation of developmental programmes. In this article the authors examine education sector policies and suggest modifications from the fertility reduction perspective.

Does education reduce fertility? The research done so far in India and elsewhere shows that the answer is generally ‘Yes’ Under a few circumstances, however, women with some education, particularly if they do not complete primary school, may have marital fertility that is higher than those who have no schooling.

\textsuperscript{13} Kartikeswar Behera, Bamadeba Tripathy, “Primary education – an overview”, Kurukshetra, September,2005 pp 26-27
Such evidence has sometimes given the impression that education, unless it is completed to a level higher than the primary, is not effective in fertility reduction; from this perspective, the education sector resources should be allocated to higher education. By analyzing the macro- and micro-level Indian data on education and fertility, the authors demonstrate that the impression is not correct. There is convincing evidence that female education in India monotonically increases the use of contraception and age at marriage, both of which, in turn, decrease fertility.

The authors argued that as far as fertility reduction is concerned, educational policy should give high priority to expansion of female primary education, particularly by reducing the currently high repetition and drop-out rates from primary schools. They also pointed out that while the Five Year Plan documents of the Central and State Governments have often emphasized the urgency of making female primary education Universal in all States, actual budget allocations among different education sectors have not always reflected this emphasis.

Niraj Kumar\(^\text{15}\) has observed that primary education develops the capacity to learn, read and use mathematics, to acquire information and to think critically about information. Primary education is also the gateway to higher education. Micro-economic research has revealed that education improves individual income. Research also indicates the contribution of primary education to better natural resource management and more rapid technological adaptation and innovation. When a large share of children do not complete primary education, the productivity of the labour force and the human potential from which the society and economy can draw, are limited. In several developing regions, the average level of schooling of the labour force is still less than primary education.

It is further observed that there has been a phenomenal growth of primary education schools from 1950-51 to 2001-02. The growth is seen in enrolment of both boys and girls. The gender gap has also narrowed down to a large extent. The same is true of scheduled castes and tribes. The gap between the drop-out rate of boys and girls has also gone down. However, the public expenditure in India on

\(^\text{15}\) Niraj Kumar, "Primary education in India: Initiatives and prospects"; Kurukshetra, July, 2005 pp 9-14
primary education is much below of many of the South Asian countries. It is necessary to raise this considering the educational backwardness of the country.

M. Kabir and others\(^6\) have found that the economic conditions as well as poverty have been identified as the major reasons for dropout. Local social, economic, cultural factors also affect school enrollments. Social and religion traditions particularly affect the enrollment of girls. Some studies found that absence of toilet facilities for girls separately are closely related to irregular attendance of girl students and consequently they fail in the examinations and dropout from school. Besides household roles and responsibilities, distance of schools and absence of female teachers are also contributing to the low enrollment rate and dropout of girl students.

AREAS FOCUSED IN THE EARLIER STUDIES

1. Learning environment
2. Drop outs in primary education
3. Rural literacy
4. Gender discrimination in primary education
5. Efficiency rate
6. Constraints for the universalization of primary education
7. The role of non-monetary inputs in education development
8. The nexus between education and fertility levels
9. The link between education and social change
10. Teachers empowerment
11. Female education and fertility
12. Education for all programme

GAPS IN THE EARLIER STUDIES

1. No study has made an attempt to identify the factors for drop outs at district level.

2. There is no study in Potti Sriramulu Nellore district about the equity and efficiency in primary education.
3. Efficiency parameters like Pyramid rate of enrolment and efficiency index are not adopted by any study.
4. Most of the studies are aggregative in nature.

In order to fill up the said gaps the present study entitled “PRIMARY EDUCATION ISSUES OF EQUITY AND EFFICIENCY: A STUDY OF NELLORE DISTRICT IN ANDHRA PRADESH” is initiated with the following Objectives and Hypotheses:

OBJECTIVES OF THE PRESENT STUDY

1. To examine the socio and economic profile of the sample respondents.
2. To study the issue of equity in primary education in Potti Sriramulu Nellore District.
3. To explain the issue of efficiency in primary education in Potti Sriramulu Nellore District.
4. To identify the determinants of drop outs in primary education.
5. To suggest various measures to strengthen primary education in Potti Sriramulu Nellore district, Andhra Pradesh.

HYPOTHESES

1. Girls education is subjected to high degree of inequality at primary level in relation to that of boys.
2. Girls enrolment in primary education is higher than that of Boys but the former is subjected to high degree of fluctuations.

METHODOLOGY

Towards the end of the objectives and hypotheses, the following methodology is adopted:
SAMPLE DESIGN

Towards the fulfillment of the objectives and hypotheses, 160 sample respondents are selected from the primary education of Potti Sriramulu Nellore District, Andhra Pradesh mostly by adhering to the principle of stratified random sampling. For the study of drop outs and its determinants 160 sample respondents are selected from the parents of the children who are drop outs. Thus the total sample base is 160.

SOURCES OF DATA

The present study is based on both primary and secondary sources of information. The secondary sources of data is included with the reports of District Educational Officer, District Planning Board, Census reports, and the reports of Sarva Siksha Abhiyan (SSA) implemented in Potti Sriramulu Nellore District.

The primary data are collected directly from the respondents by administering a pre-designed questionnaire/schedule.

PERIOD OF THE STUDY

For the calculation of equity and efficiency data for 7 years from the year 2002 to 2008 are used. For the examination of the problems like drop outs and repetition, the necessary data were collected from the respondents selected during the year 2007-08.

SCOPE OF THE STUDY

The present study includes only primary education in Potti Sriramulu Nellore District. To calculate equity and efficiency both private and public owned schools are examined. High School education does not come under the purview of the present study.
TECHNIQUES USED

Quantitative and Qualitative Techniques used

For the purpose of the present study quantitative techniques including the coefficient of correlation, percentages, frequency distribution are employed. In addition, the Pyramid rates are used as a measure of system efficiency. For primary schools pyramid rates are calculated by taking the number of pupils in grade 7 as a ratio of the students in grade 1. In the present study a continuous pyramid is constructed.

\[
\text{PYR} = \frac{\text{Grade 7 enrollment}}{\text{Grade 1 enrollment}}
\]

The lower the pyramid rate, the higher the rate of attrition. Efficiency is also measured using an efficiency index. In the case output is measured using the number of pupils completing a level of schooling and input by the actual number of pupil years; that is,

\[
E = \frac{\text{Actual number of pupil years (input)}}{\text{School completers X normal length of schooling (output)}}
\]

Maximum efficiency will be indicated where the index is 1: a higher index reflects a greater level of inefficiency. An index of 1, for example shows that all pupils have completed primary school within the expected time period whereas an index of 2 shows that two school places must be provided for each graduate pupil (there by doubling the cost of producing a graduate).
To test the significance of the relationship between qualitative variables, Spearman's Rank Correlation and Chi-Square Statistics are used.

\[ r = \frac{6 \sum d^2}{n (n^2 - 1)} - 1 \]

Where \( r \) = Spearman's rank correlation coefficient

\[ \begin{align*}
\Sigma (O_i - E_i)^2 \\
\sum E_i
\end{align*} \]

\( \chi^2 \) = \chi-square statistic

\( O_i \) = observed frequencies of the ith class

\( E_i \) = expected frequencies of the ith class