Chapter 6

Conclusion and Suggestions
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Education is by all count the most crucial factor in the process of economic development. It is universally recognised as a central component of human capital. It represents both consumption and investment. On the one hand, it is valued for its present benefit, on the other hand, it helps to create income in the future by providing educated workers with skill and knowledge that enables them to increase their productive capacities and thus receive higher earnings.

Moreover, as education increases more equitably, poverty and inequality reduces and this promotes economic growth. Education builds human capabilities which are important for individual to reflect, make choices, seek a voice in the society and enjoy a better life. The studies have shown that in the field of education, investment in elementary education yields highest rate of return as compared to secondary and higher education. The recognition of this fact created awareness on the need to focus upon literacy and elementary education not simply as a matter of social justice but more to promote economic growth, social welfare and social stability.

India has begun its journey towards Universal Elementary Education (UEE) much before the international commitments and affirmations of World Conference on Education in Jomtein (1990) and World Education Forum at Dakar in 2000. India made constitutional amendment to provide free and compulsory education to all children up to age of 14 nearly 60 years ago. National Policies on Education in 1968, 1986 and 1992 (revised) reiterated the resolve to achieve UEE.

Several central level initiatives have been in operation since early 1980 While the design of these policies/projects varies substantially, all of them address the objectives and strategies of the National Policy on Education (NPE) 1986. Some of the major centrally sponsored scheme were Operation Blackboard (1987) for improving the physical resources in schools, Teacher Education Scheme (1987) for teacher training, Mid-Day Meal Scheme(1995) to enhance nutritional status of students and the District Primary Education Programme (DPEP) 1994 for achieving universal primary education.
Besides these there are various state specific schemes which are externally aided programmes. They are: Andhra Pradesh Primary Education Programme (APPEP) launched in 1987 with the assistance from Overseas Development Bank (ODA), Shiksha Karmi Project and Lok Jumbish Project) launched in 1987 and 1992 respectively in Rajasthan with the assistance from Swedish International Development Authority (SIDA). Bihar Education Project was launched in 1991 and supported by United Nations Children Emergency Fund (UNICEF) and in Uttar Pradesh Basic Education Programme (UPBEP) was started in 1993 and supported by World Bank’s International Development Agency. All these schemes together aimed at achieving elusive goal of UEE. Furthermore, many gender specific programmes such as National Programme for Education of Girls at Elementary Level (NPEGEL), Kasturba Gandhi Balika Vidyalaya (KGBVS) and Mahila Samakhya (MS) were initiated by the government for binging girls to school and holding them there until they complete their elementary education.

Sarva Shiksha Abhiyan (SSA) a landmark programme for achieving UEE was launched in 2001-02. Central government started SSA as an umbrella programme, embracing the entire existing programme in it. Recently, the Right to Children to Free and Compulsory Education Act (Right to Education Act) was passed by Indian parliament on 27th August, 2009 which came into force on 1st April, 2010 providing free and compulsory education to all children in the age group of 6-14. With the law backing the Centre’s nationwide scheme SSA, Human Resource Minister believed that all out of school children would now be able to attend school and the long cherished goal of UEE will be achieved.

Subsequent to these initiatives India made massive progress in terms of increased number of schools, students and teachers in elementary education but the goal which was expected to be achieved by 1960, has remained elusive even now. Despite the continued efforts made at national and state level the universalisation of free and compulsory education has not so far been achieved in full. Inspite of aggregate improvement in education level in India, glaring disparities in elementary education continue to exist. Disparities amongst and within states continue to pose biggest challenge for the policy maker and educationist. Although, progress is remarkable in economically and educationally backward states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh, Andhra Pradesh and West Bengal and Gross
Enrolment Ratio (GER) is exceeding 100 per cent in all these states, still there is huge gender and social gap in all the states more particularly in educationally backward states.

Though there is significant increase in the enrolment and GER at primary level is above 100 per cent in almost all the selected states but GER at upper primary level it is still not 100 per cent which means children drop out without completing their elementary level of education. Even in enrolment ratio there is large difference in GER and Net Enrolment Ratio (NER). NER is more accurate and regarded as an ideal indicator of enrolment. But NER is comparatively low in all the states and GER exceeding hundred per cent often show overage and underage children. For instance GER of West Bengal was 102.99 in the year 2002-03 but NER was less, only 89 per cent during the same period. In addition to it, gender disparity in enrolment ratio at primary and upper primary level is prevalent despite of several female orientated initiatives taken by the government.

Apart from enrolment, lower attendance is another area of concern. There are large variations in attendance rates of students at the state level. On the one hand there is Kerala and Himachal Pradesh where more than 90 per cent of children were attending school, on the other hand, in educationally laggard states such as Rajasthan, Bihar, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh and West Bengal less than 90 per cent of students were found attending school.

Unlike the enrolment ratio which exceeded 100 per cent, the learning skills amongst students are not very encouraging. A sizable number of children dropped out from school without completing their eight years of schooling and those who are somehow able to complete schooling, their ability in reading, writing and mathematical calculations is very poor. It is revealed by an independent survey conducted by PRATHAM that learning achievement amongst the children at primary level is very low. At the state level learning achievement is very low in the states of Bihar, Uttar Pradesh, Rajasthan and West Bengal. In Uttar Pradesh only 44 per cent of children of standard V could read standard second II text and 56 per cent could not. Similarly around 75 percent of children in Uttar Pradesh could not solve simple division that children in class II are expected to solve. Only 25 per cent of students were able to perform division and 30.8 percent could do subtraction. In other educationally backward states condition is similar. Even in states like Kerala and
Himachal Pradesh, level of learning amongst students was not satisfactory. In Kerala and Himachal Pradesh, only 76.1 per cent and 77.4 per cent of students of class V could read standard second text respectively. Only 39.5 and 27.3 per cent of students in class V in Kerala and Himachal Pradesh could do subtraction. The learning achievement of students of class VIII students is also poor. It seems that as children moves towards higher grades, their performance does not improve rather deteriorates.

Hence, despite significant efforts, all is not well with the educational system in India particularly in elementary education. It is not only that many children do not have access to proper schooling facilities, but the internal efficiency of the educational system is also very poor. This is reflected in high proportion of children leaving the school without completing their elementary cycle of education and low learning achievement amongst those who continue to stay in the system. This low level of learning achievement point almost directly to the deficiencies in the teaching process adopted across the country. The quality of schooling and learning ability of students generally depends on two parameters namely, on the teachers’ effort and basic infrastructural facilities in schools.

Coming to the infrastructure, it is revealed in the study that the primary and upper primary schooling facilities have increased at all India level to cover all small and un-served habitation in remote and rural areas. At all India level the Compound Annual Growth Rate of (CAGR) both primary and upper primary school was higher in post SSA period (period II) as compared to period I. The primary schools increased at a CAGR of 1.76 per cent in period I to 2.17 per cent in period II and upper primary schools from 3.62 per cent to 4.63 per cent during the same period.

The study found that though the number of schools has increased to a great extent but increase in school could not accommodate all children of school going age. In few States numbers of primary schools declined in post SSA Period. For instance in Bihar CAGR of schools was 1.00 per cent in period I, it declined to -1.1 per cent in period II. In Madhya Pradesh and West Bengal it declined from 4.59 per cent and 1.25 per cent in period I to 2.14 per cent and 0.94 per cent in period II respectively. At upper level also number of school declined in post SSA period. For instance, in Bihar CAGR of upper primary school declined from 2.91 per cent in period I to 1.40 per cent in period II and in West Bengal and Kerala, CAGR of upper primary school was negative in both the period (i.e. period I and period II). It is quite worrying that the
school going age population are increasing in educationally laggard states, but the decline in number of schools may pose problem of access to schooling for these children.

Apart from the building, basic facilities in schools seemed to be a major problem faced by many of the schools of the states. For instance, in Bihar and Rajasthan, only 34.3 per cent and 34.4 per cent of primary schools had common toilets. In Madhya Pradesh, Andhra Pradesh and Kerala more than 50 per cent of primary schools had common toilets in 2009-10. In Uttar Pradesh and West Bengal, proportion of such schools was 39.4 and 74.4 per cent respectively during the same year. In Himachal Pradesh proportion of such schools was lowest, only 28.1 per cent during the same year. In case of separate toilets for girls, Rajasthan has highest proportion of primary schools (79.5 per cent) with separate toilets for girls followed by Uttar Pradesh (64.5 per cent). In Andhra Pradesh, West Bengal and Himachal Pradesh more than 35 per cent of primary schools had separate toilets for girls. In Bihar and Madhya Pradesh, proportion of such schools was only 21.4 per cent and 27.2 per cent respectively. Kerala had 44.5 per cent of primary schools with separate toilets. Drinking water facility and toilets are the critical infrastructure that must be provided in every school, still in India many primary schools are not endowed with even such basic facilities.

As far as condition of teachers is concerned, it is revealed in the study that number of teachers has increased significantly in India during the last two decade particularly at the upper primary level. The CAGR of teachers at primary level increased from 2.04 per cent in period I to 2.31 in period II, and at upper primary level CAGR increased from 2.40 percent to 3.13 per cent during the same period. Despite the fact that number of teachers has increased, this increase has not kept pace with the growth of enrolment and at the state level; there was significant variation in the provision of teachers. The growth in number of teacher in Bihar in the decade of 1990 was slow and uneven. CAGR in the number of teachers at primary level in Bihar was 2.60 per cent in period I, it declined to 0.74 per cent in period II. In Madhya Pradesh and Rajasthan CAGR of teachers declined from 4.43 per cent and 2.60 in period I to 2.38 per cent and 2.17 per cent in period II respectively. At upper level also growth rate of teachers declined in the states. In Bihar, Madhya Pradesh and Uttar Pradesh CAGR of teachers at upper primary level declined from 3.36 per cent,
3.53 per cent and 1.06 per cent in period I to 0.55 per cent, 3.37 per cent and -1.19 per cent respectively in period II. In West Bengal and Kerala, CAGR of teachers at upper primary level was negative in both the period (i.e. period I and period II).

It is found in the study that there is acute shortage of teachers in Bihar and Uttar Pradesh so much that in many schools each teacher is in charge of more than 100 children. The proportion of such schools is 16 per cent and 13 per cent respectively. Pupil Teacher Ratio in Bihar and Uttar Pradesh at Primary level is the highest in the world 80 and 67 and PTR of Himachal Pradesh is lowest and comparable to what found in UK (17) and USA (14). At Upper Primary level Pupil Teacher Ratio is highest in Uttar Pradesh (78), and second highest is in Bihar (53). It is also found that in five states namely, Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and Andhra Pradesh percentage of single teacher schools at primary level are high.

The study revealed that these days, Para-teachers have been appointed to fill vacancies left by regular full-time teachers in the schools. But substituting regular teachers with Para - teachers is in general detrimental to the quality of education and the effectiveness of schools as these Para-teachers lack sufficient training and the requisite qualification and are appointed at salaries far below those paid to permanent teachers. These low quality teachers, affects the learning achievement of students and lead to early dropout from the school without completing their elementary cycle.

It is found in the study that over the years, retention rate has increased and dropout rate has decreased considerably at all India level and in almost all the states. Dropout rate at primary stage in India was 41.96 per cent in the year 1991-92; it came down to 40.7 per cent in 2000-01. Dropout amongst boys and girls declined from 40.31 per cent and 44.26 in 1991-92 to 39.7 per cent and 41.9 per cent respectively in 2000-01. During period II total dropout declined from 39.0 per cent in 2001-02 to 28.86 per cent in 2009-10. It was observed that while the dropout rates amongst girls was higher than boys till the year of 2001-02, this trend got reversed showing lower dropout rate for girls than for boys at primary level. Dropout rate amongst boys and girls declined from 38.4 per cent and 39.9 per cent in 2001-02 to 30.25 per cent and 27.25 per cent respectively in 2009-10. During period I, the dropout rate at elementary stage declined from 69.37 per cent to in 1991-92 to 53.67 per cent in 2000-01. Dropout rate amongst boys and girls at elementary stage declined from 68.0 per cent
and 56.8 per cent in 1991-92 to 52.9 per cent and 57.9 per cent respectively in 2000-01. During period II, dropout rate at elementary stage came down from 54.65 per cent in 2001-02 to 42.39 per cent in 2000-10. Dropout rate amongst boys and girls at elementary stage declined from 52.91 per cent and 56.92 per cent in 2001-02 to 40.59 per cent and 44.39 per cent respectively in 2009-10.

At the state level, in Bihar the dropout rate declined from 64.38 per cent in 1991-92 to 59.55 per cent in 2000-01 that is by around 4.83 per cent. Similarly, in Madhya Pradesh, Rajasthan and Andhra Pradesh dropout rate declined to 26.69 per cent, 55.31 and 41.49 per cent respectively. But the two states namely Uttar Pradesh and West Bengal performed poorly in reducing the dropout rate during the pre SSA period. Amongst the educationally laggard states, Madhya Pradesh was the only state where dropout rate was below the national average (26.69 per cent). Comparing dropout rate of these states with national average, it was found that dropout rate in three states namely Bihar, Rajasthan and Uttar Pradesh is much higher than the national average. In the states of Andhra Pradesh, West Bengal and Madhya Pradesh dropout rate is below the national average.

It was also found in the study that the incidence of dropout is very high at elementary level. Large number of children tends to dropout at elementary level as compared to primary level. Dropout rate of the children of 6-14 age groups is highest in Bihar. The dropout rate was as high as 75.03 per cent in Bihar, 55.32 per cent in Madhya Pradesh and 64.62 per cent in Rajasthan. In Uttar Pradesh, Andhra Pradesh and West Bengal the corresponding figure stood at 61.62 per cent, 65.74 per cent and 66.01 per cent respectively. Even in period II dropout rate in all the states is very high and Bihar has the highest dropout rate of 66.02 per cent at elementary stage. In period II Madhya Pradesh was the only state, which managed to reduce the dropout rate lower than the national average of 42.39 per cent and second lowest dropout rate was in West Bengal Pradesh, 41.29 per cent.

Though dropout rates at the elementary level have decreased over the recent years, still it is very high with 42.39 per cent of children dropping out from the school in the year 2009-10, without completing 8 years of schooling.

There are several reasons for dropout in India. The most common was that the ‘child not interested in studies’. According to NSSO 64th round, 34.30 per cent of
children dropped out from school due to this reason. The second major reason was 'Financial Constraint' as 23.80 per cent of children left school due to this.

It has been proved by studies that literacy and development are closely related with each other and there is correlation between the two. So in order to achieve economic growth and development, states must try to raise literacy level and for this, they must reduce early dropout from the school and try to provide quality elementary education to the children up to 6 to 14 year age group. For this a higher rate of public expenditure on education in general and elementary education in particular will be required. But it has been found in the study that both the centre and the states are not investing adequate financial resources to provide quality education for all as reflected in the trend of financial allocations made for elementary education in annual as well as Five Years Plans.

Public expenditure on education is essential for realising the educational goals and for the progress of education. Government of India has recognised this crucial role of education in development of country. But, despite the recommendation of Kothari Commission to spend 6 per cent of GNP on education, pattern of allocation of resources on education remained far from satisfactory. It has been noticed that countries such as, France, Germany and USA have shown their strong consistency in public spending (close to 6 per cent of their GNP) and few developing countries are also devoting high proportion their GNP on education. However, in India, public expenditure on education as a per cent of GDP has declined. It decreased steeply from above 4 per cent in 1999-00 to 3.98 per cent of GDP in 2009-10.

The decline in expenditure on education may be attributed to the series of economic reform measures initiated by government of India in 1991. These measures had serious implications for social sector, as it led to drastic cut in public subsidies and development expenditure particularly on social services. This expenditure compression trickled down to public expenditure on education including elementary education. It has been observed that in 1990-91 all the states devoted higher share of their NSDP on education but thereafter expenditure of all the states on education as a proportion of their NSDP declined. This reduction in expenditure might be due to Structural Adjustment Programme (SAP) adopted by the states after the launch of economic reforms measures by government of India in 1990. Even in expenditure by the states, variation in spending pattern has been observed in educationally backward
and developed states. Himachal Pradesh, an educationally developed state devoted more on expenditure on education and elementary education. On the other hand, educationally poor states like Rajasthan, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh and West Bengal devoted very low proportion of NSDP on education. Even amongst educationally backward states variation in spending pattern was observed and Bihar devoted higher share of its income on education particularly on elementary education in spite of its being economically and educationally poor state.

Further, it has been observed that even after the launch of SSA, expenditure on education by the states has not increased. It is due to the fact that in recent years, in centre-state financing, the share of central government is increasing and that of state government decreasing because central government has started assuming greater responsibility on the expenditure on education. A large proportion of central spending on education is rooted through elementary education in the form of grants in aid to the states through centrally sponsored scheme. It is noticed that state government’s share has increased but in non-plan expenditure. During 1991-92 more than 90 per cent of the revenue expenditure was of non-plan in nature in the states of Bihar, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, West Bengal and Kerala. Though in the year 2009-10 share of non-plan expenditure on elementary education declined in few states, still it was very high. Almost entire fund under non-plan expenditure is spent on teachers’ salary, negligible amounts is left for other items such as incentives, infrastructure and so on. The inadequate plan expenditure and above 90 per cent of non-plan expenditure spent on salaries, explain very poor condition of educational development in the states.

Further, it is found in the study that the National Policy on Education (1986), the government of India, had recommended that at least 50 per cent of the total expenditure on education be allocated to elementary education. While many states allocated nearly or about 50 per cent of total education expenditure on elementary education, there are few states which are still far behind. Amongst the selected states those who have made nearly or above 50 per cent allocation on elementary education are Bihar, Madhya Pradesh, Rajasthan and Himachal Pradesh but in the states of Uttar Pradesh, Andhra Pradesh, West Bengal and Kerala, expenditure on elementary education was less than 50 per cent in the year 1991-92. It increased from 43.92 per cent in 1991-92 to 56.96 per cent in 2009-10 in Uttar Pradesh but in the states of
Andhra Pradesh, West Bengal and Kerala, it could not reach to 50 per cent of total education expenditure. Kerala has achieved almost universal retention in elementary education, so decline in expenditure on elementary education does not have much effect in Kerala but decline in elementary education expenditure in other states will affect the universalisation of elementary education.

In addition to this, the study found that per student expenditure on elementary education at current prices has increased several times but in real terms it declined. The CAGR of per student expenditure on elementary education is higher for all the states at current prices but at constant price it is much lower. CAGR of per student expenditure at current prices since 1991-92 to 2009-10 in Bihar and Madhya Pradesh was 6.55 per cent and 7.32 per cent respectively whereas at constant prices it was only 0.81 per cent and 1.55 per cent respectively. Similarly CAGR of per student expenditure at elementary level at current price in Rajasthan and Uttar Pradesh stood at 8.10 per cent and 6.34 per cent during 1991-92 to 2009-10 whereas at constant prices it was only 2.28 per cent and 0.62 per cent during the same period. CAGR of per student expenditure at elementary level at current price in Andhra Pradesh and West Bengal stood at 10.98 per cent and 11.22 per cent during 1991-92 to 2009-10 whereas at constant prices it was only 5.00 per cent and 5.23 per cent during the same period. CAGR of per student expenditure at current price in Kerala and Himachal Pradesh stood at 11.56 per cent and 14.19 per cent during 1991-92 to 2009-10 whereas at constant prices it was only 5.55 per cent and 8.05 per cent during the same period.

Though the monetary costs or even the physical resources do not necessarily describe the real or intrinsic quality of education – the abilities and skill imparted to the pupils, still, unit cost of education reflects at least to some extent the quality of education, the availability of physical inputs, and teachers to the pupils, etc. Hence, decreasing or stagnant per student expenditure in India shows the deterioration in the quality and standards of education, leading to higher pupil-teacher ratio, overcrowded classrooms, lack of limited facilitates like furniture and teacher-learning materials etc.

It is revealed in the study that elementary education sector is receiving foreign aids also which are considered as additional source of fund for education. Though the total magnitude of external funding is meager still their share is supposed to be important for vital areas such as in service training and school infrastructure because
very large proportion of non-plan expenditure go for the salaries of teachers and very little is left with the states for new development.

The study estimated correlation coefficient to analyse the association between public expenditure and educational attainment as well as educational infrastructure development at all India level and in the selected states. The enrolment at elementary level is taken as the indicator of educational attainment and number of schools and number of teachers at elementary level are treated as educational infrastructure. In the empirical study, result showed that there is positive correlation between the public expenditure and educational attainment as well as educational infrastructure development.

The result at all India level shows that there is very strong and positive relationship between public expenditure and enrolment and correlation coefficient comes out to be 0.914 which is statistically significant as the calculated t-value for the correlation coefficient test is 9.28 which is much higher than the tabulated t-value of 2.57 at 1 per cent level of significance with 17 degree of freedom. The result of correlation coefficient between public expenditure and enrolment at elementary level has led us to conclude that with the rise in public expenditure on elementary education, enrolment has also increased in India. Public expenditure raises enrolment by many ways - by providing incentives in the form of free textbook, uniforms, scholarships and nutritional support like Mid-Day Meal. All these together boast the enrolment of children in the school.

The study also analyses the relationship between public expenditure and growth in the number of schools at elementary level. Since the first step in increasing access and to improve enrolment at primary and upper primary schooling is to create enough schools and classrooms and hiring as well as recruiting enough teachers, expenditure should be incurred on creation of physical indicators like improved access (more schools, more rooms and improved facilities like drinking water facility and sanitation facility in schools). The correlation between public expenditure and number of schools in India is also positive and correlation coefficient is 0.945 which is significant at 1 per cent level of significance. On the basis of the estimate of correlation coefficient between public expenditure and number of schools, it is confirmed that public expenditure has led to the improvement in elementary schools in the country. *Hence, the result rejects second hypothesis that there is no significant
relationship between public expenditure and the growth in number of schools at elementary level.

The real objective of education expenditure is to improve learning achievement of the students. The learning skills of students in turns depend on the quality of education and on the teachers. For imparting quality education Pupil Teacher Ratio (PTR) should be low and trained teachers should be appointed. The effect of PTR will depend on the increase in number of teachers employed relative to enrolment. As long as rate of adding new teachers keeps pace with the rate of growth in enrolment, the PTR remains the same. But if the number of teachers has not kept pace with rising enrolment, then clearly the quality of education imparted will be affected adversely. So a preferred outcome of expenditure in the education sector should be a falling PTR till a stable class size is reached in order to maintain quality of education.

The correlation between public expenditure and number of teachers is strong in India and correlation coefficient comes out to be 0.958 which is statistically significant at 1 per cent level of significance. On the basis of the result of correlation coefficient which is strong, it can be concluded that the increased expenditure in India has led to the appointment of additional teachers at elementary level. Hence, the result leads us to reject third hypothesis that there is no significant relationship between public expenditure and the growth in number of teachers at elementary level.

In the state of Bihar, the analysis of the nature of association between the public expenditure at elementary level and enrolment indicated an expected positive relationship. The study shows very strong and positive correlation between public expenditure and enrolment in Bihar and correlation coefficient is 0.859 which is significant at 1 per cent level of significance. The result of correlation coefficient between public expenditure of the state and enrolment at elementary level has led us to conclude that with the rise in public expenditure of the state, enrolment has also increased in the state of Bihar. Hence, on the basis of the result we reject first hypothesis that there is no significant relationship between public expenditure and the enrolment at elementary level.

The correlation coefficient between public expenditure and number of schools in Bihar is also positive 0.751 and significant at 1 per cent level of significance. This
result has led us to reject our second hypothesis that there is no significant relationship between public expenditure of the state and the growth in number of schools at elementary level. On the basis of the estimate of correlation coefficient between public expenditure of the state and number of schools, it can be easily inferred that public expenditure has led to the improvement in the elementary schools in the state of Bihar but not as much as at the all India level.

The correlation coefficient between public expenditure and number of teachers is moderate 0.575 in Bihar and significant at 1 per cent level of significance as the calculated t-value for the correlation coefficient comes out to be 2.89 which is higher than the tabulated t-value of 2.57. Hence, the result directs us to reject the third hypothesis that there is no significant relationship between public expenditure and the growth in number of teachers at elementary level. Though, the correlation coefficient is positive in Bihar, it is not strong. On the basis of the result of correlation coefficient which is not very strong, it can be concluded that the increased expenditure in Bihar has not led to the appointment of additional teachers in the states. The state has largely depended on contract teachers instead of permanent teachers. This is evident from the data which shows that the PTR in Bihar at primary level was 80 in 2009-10, amongst the highest in the world. The DPEP (2001) also revealed that the problem of PTR is serious in three states- Bihar, Uttar Pradesh and West Bengal.

In Madhya Pradesh also there is very strong and positive correlation between public expenditure and enrolment and correlation coefficient comes out to be 0.725 which is significant at 1 per cent level of significance. The result confirms that public expenditure has led to improvement in enrolment at elementary level in Madhya Pradesh. Here also the result rejects first hypothesis that there is no significant relationship between public expenditure and the enrolment at elementary level.

The public expenditure and number of schools are also positively correlated in Madhya Pradesh and the correlation coefficient between two variables is 0.765 which is significant at 1 per cent level of significance showing that with increased expenditure, number of school has also increased. Hence, on the basis of this result, we reject the second hypothesis that there is no significant relationship between public expenditure of and the growth in number of schools at elementary level. On the basis of the test of correlation coefficient between public expenditure of the state and
number of schools, it can be said that public expenditure has led to the significant improvement in the elementary schools in the state of Madhya Pradesh but still it is less than at the all India level.

Similarly, correlation coefficient between public expenditure and number of teachers is found to be strong in Madhya Pradesh and correlation coefficient is 0.761 which is significant at 1 per cent level of significance. This result rejects third hypothesis that there is no positive and significant relationship between public expenditure of the state and the growth in number of teachers at elementary level. On the basis of the result of correlation coefficient between public expenditure of the state and number of teachers, it can be easily inferred that public expenditure has led to the appointment of new teachers in the state of Madhya Pradesh but the growth in teachers does not match with the growth in enrolment which resulted in high PTR (at 1:41) at primary level in the state. The Right to Education Act mandates PTR of 1:30 for all schools in India.

Rajasthan, another educationally laggard state, also shows positive correlation between public expenditure and enrolment at elementary level and correlation coefficient is 0.660 which is significant at 1 per cent level of significance. On the basis of the result in can be easily concluded that with the sustained efforts like enrolment drives and campaigns, distribution of free textbooks, school uniform, Mid-Day Meal etc., the enrolment has increased in all the states including Rajasthan. Hence, we reject our first null hypothesis that there is no significant relationship between public expenditure of the state and enrolment at elementary level.

The correlation between public expenditure and number of schools is also strong and positive in Rajasthan and correlation coefficient comes out to be 0.874 which is statistically significant at 1 per cent level of significance showing that with the rise in public expenditure on education schooling facilities has increased in the state. Hence, on the basis of this result, we reject our second hypothesis that there is no significant relationship between public expenditure of the state and the growth in number of schools at elementary level.

The relationship between public expenditure and number of teachers is also high and positive in Rajasthan and correlation coefficient emerged out to be 0.933 which is also significant at 1 per cent level of significance. The result has led us to
reject third hypothesis that there is no significant relationship between public expenditure and the growth in number of teachers at elementary level. On the basis of the result of correlation coefficient between public expenditure of the state and number of teachers, it can be concluded that public expenditure has led to the appointment of new teachers in the state of Rajasthan, still PTR was as high as 44 at primary level in 2009-10.

In Uttar Pradesh also the examination of the nature of association between the public expenditure at elementary level and enrolment presented an expected positive relationship and correlation coefficient comes out to be 0.854 which is significant at 1 per cent level of significance showing that public expenditure and enrolment goes in the same direction that is with the increase in public expenditure at elementary level, enrolment has also increased in the state. Hence, the result leads us to reject our first null hypothesis that there is no significant relationship between public expenditure and the enrolment at elementary level.

Similarly, an analysis of relationship between public expenditure at elementary level and number of schools showed expected strong and positive correlation in Uttar Pradesh and correlation coefficient is 0.882 which is significant at 1 per cent level of significance leading us to reject our second null hypothesis that there is no significant relationship between public expenditure and the growth in number of schools at elementary level.

The correlation coefficient between public expenditure and number of teachers emerged out to be 0.576 which is moderate and significant 1 per cent level of significance. This result directs us to reject our third hypothesis that there is no significant relationship between public expenditure of the state and the growth in number of teachers at elementary level. On the basis of the estimate of correlation coefficient between public expenditure of the state and number of teachers, it can be concluded that public expenditure has led to the appointment of new teachers in the state of Uttar Pradesh but this has not improved the shortage of teachers in the state which resulted in a high PTR of 1:67 at primary level in the state, which is second highest after the state of Bihar.

In Andhra Pradesh the coefficient of correlation between public expenditure and enrolment is positive but very low (0.396) and statistically significant as
calculated t-value for the correlation coefficient comes out to be 1.77 which is higher than the tabulated t-value of 1.33 at 10 per cent level of significance. Hence, we reject first null hypothesis that there is no significant relationship between public expenditure and the enrolment at elementary level. The low correlation coefficient in Andhra Pradesh may be due the fact that child population has declined here more rapidly than in other northern states, hence, the enrolment of the school going children did not increase in the same way as expenditure has increased in the state.

The correlation coefficient between public expenditure and number of schools is strong and positive 0.917 and statistically significant at 1 per cent level of significance. This directs us to reject our second null hypothesis that there is no significant relationship between public expenditure and the growth in number of schools at elementary level. The result of correlation coefficient between public expenditure of the state and number of schools has led us to conclude that public expenditure has led to the improvement in the elementary schools in Andhra Pradesh more significantly than in other educationally laggard states.

Similarly, the correlation between public expenditure and number of teachers is also strong and positive and correlation coefficient is 0.894 which is significant at 1 per cent level of significance. The result indicates that in Andhra Pradesh funds have been incurred in employing more teachers at elementary level which helped in bringing down the PTR at 1:32 at primary level in 2009-10 (which is close to the norms of RTE Act 2009). Hence, on the basis of the result, we reject third null hypothesis that there is no significant relationship between public expenditure and the growth in number of teachers at elementary level.

In West Bengal there is very low but positive correlation between public expenditure and enrolment (0.348) which is significant as the calculated t-value for the correlation coefficient is 1.53 which is higher than the tabulated t-value of 1.33 at 10 per cent level of significance. Hence, we reject first null hypothesis that there is no significant relationship between public expenditure and the enrolment at elementary level.

In case of West Bengal correlation coefficient between the enrolment and expenditure is not very high. There are three possible reasons which can explain this result. Firstly, one important factor is the demand side factor which may have much
greater impact on the outcome than the supply side factors. It means that expenditure does not alone affect enrolment in schools. There are several other factors also which affect the enrolment of student in schools. There is a need to look at the demand side factors that affect enrolment of children in the school. It has been revealed by the NSSO 64th round that the major reason for non-enrolment or dropout was interest related factor (Child not interested) as 34.30 per cent of children dropped out from school due to this reason in 2007-08. The second major reason which forced children to leave school was ‘Financial Constraint’ and 23.80 percent of children left school due to this reason during the same year. This confirms that interest related factors rather than economic factors are more important in explaining non-enrolment and dropout amongst children.

This does not mean that state has no role to take part in expanding the educational system. The state has to deal with the interest-related factors in more innovative ways; merely an increase in state funding may not be enough. State government’s spending on education has to be accompanied by other programmes to address non-monetary constraint that people face in their decision to send children in school. Public expenditure has to be directed towards inducing the demand for elementary education. For instance, education-based welfare programmes such as mid-Day Meals and improvement in the quality of schools may be demand-inducing.

Secondly, indicator like enrolment also depends on the rate of growth of population. If the rate is low even a low rate of growth of expenditure may influence the outcome much more substantially, as seen in the case of Kerala and Himachal Pradesh. Thirdly, the efficiency of expenditure also affects outcome. The efficiency of expenditure may be different across the states.

The correlation coefficient between public expenditure and number of schools merged out to be positive (0.648) and significant at 1 per cent level of significance. This directs us to reject our second null hypothesis that there is no significant relationship between public expenditure and the growth in number of schools at elementary level. This result confirmed that in the state of West Bengal expenditure is been incurred on opening new schools, but the growth in school has not been substantial to accommodate all the school going age children.
The correlation coefficient between public expenditure and number of teachers again comes out to be low 0.338 which is statistically significant as the calculated t-value for the correlation coefficient test is 1.48 which is higher than the tabulated t-value of 1.33 at 10 per cent level of significance. Hence, on the basis of the result, we accept our third hypothesis that there is no significant relationship between public expenditure and the growth in number of teachers at elementary level.

The low correlation between public expenditure and number of teachers indicates that in west Bengal growth in teachers has not been in the way growth in enrolment has occurred. As per the Report of District Primary Education Programme (DPEP, 2001) the problem of PTR is serious in three states, namely Bihar, Uttar Pradesh and West Bengal. Hence, immediate attention is needed as far as recruitment of teachers is concerned. It has been observed that in the absence of adequate funds and due to poor fiscal health states have largely appointed teachers on ad-hoc basis. But, appointment of these contract teachers at primary and upper primary schools will definitely have adverse impact on the quality of education being imparted in the state because these teachers are less qualified and most of them have no pre service training.

In Kerala the test of the nature of association between the public expenditure at elementary level and enrolment presented negative relationship and correlation coefficient is also very low -0.497 which is statistically significant at 5 per cent level of significance. The result directs us to reject our first null hypothesis that there is no significant relationship between public expenditure and the enrolment at elementary level.

Similarly, correlation between the public expenditure at elementary level and number of schools is also negative in Kerala and correlation coefficient is very low -0.388 but statistically significant at 10 per cent level of significance. This result directs us to reject our second null hypothesis that there is no significant relationship between public expenditure and the growth in number of schools at elementary level.

Correlation between public expenditure and number of teachers is also negative and correlation coefficient comes out to be -0.896 in Kerala which is statistically significant 1 per cent level of significance. On the basis of the result, we
reject the third hypothesis that there is no significant relationship between expenditure and the growth in number of teachers at elementary level.

In Kerala, the calculation of correlation coefficient shows a low degree of negative relationship between public expenditure and enrolment (between public expenditure and number of schools and number of teachers also). It means that as expenditure on elementary education increased, enrolment did not increase in the state. But low growth in enrolment ratio in Kerala is due to decline in fertility rate which resulted in decline in school age population.

Apart from fertility decline, the poor quality of teaching in government-funded schools and the resultant migration to private unaided English-medium schools is significant in accounting for decline in enrolments. The retention of students in government-funded schools can be sustained only by improving the quality of school education.

In Himachal Pradesh the analysis of the nature of association between the public expenditure at elementary level and enrolment indicated positive relationship but with a very low correlation coefficient 0.014 which is insignificant. It means that as expenditure increased, enrolment did not increase in the state. But low growth in enrolment in Himachal Pradesh is due to the decline in fertility rate which resulted in decline in child population. As a result of this enrolment in elementary school also came down. This result directs us to accept the first null hypothesis that there is no significant relationship between public expenditure and the enrolment at elementary level.

The correlation coefficient between public expenditure and number of schools emerged out to be strong and positive 0.956 which is significant at 1 per cent level of significance. This result rejects second null hypothesis that there is no significant relationship between public expenditure and the growth in number of schools at elementary level.

Similarly, the correlation coefficient between public expenditure and number of teachers is also strong and positive 0.946 which is significant at 1 per cent level of significance. Hence, the result directs us to reject our third null hypothesis that there is no significant relationship between public expenditure and the growth in number of teachers at elementary level.
This result shows that in Himachal Pradesh funds have been devoted on employing more teachers at elementary level in order to reduce the Pupil Teacher Ratio. Secondary data suggests that growth in child population in Himachal Pradesh has slowed down. As a result of decline in population of children, one can expect a decline in the number of children enrolled in primary or elementary schools. According to Selected Educational Statistics, the number of students enrolled in elementary school declined from 1129777 in 1999-00 to 1036117 in 2009-10. But, the number of teachers appointed at elementary level increased from 36739 to 64698 during the same year. This resulted in a fall in PTR at primary level in Himachal Pradesh from 23 in 1999-00 to 15 in 2009-10 and at upper-primary level from 16 to 13 during the same year.

Briefly, on the basis of the above results we can easily conclude that there is positive correlation between the expenditure and educational attainment as well as educational infrastructure development in almost all the selected states except Kerala. Moreover, the correlation coefficient of all parameters is very strong at all India level as compared to the states. This shows that there is huge inter-state disparity as far as progress of elementary education across the state is concerned. However, the statistical analysis confirmed that the nexus between public expenditure on elementary education and the indicators of educational outcome and infrastructural development at elementary level is indeed strong. Hence, the pace of educational development could be accelerated by increasing recourse base for education and particularly for elementary education. However, the study found that inspite of so much funds devoted to education, particularly elementary education this is not sufficient to meet the target of UEE.

In the year 2001-02, SSA has been introduced to provide additional finance to achieve the target of UEE. The government of India launched the SSA as a first nationwide programme for realising the goal of UEE. Central government started SSA as an umbrella programme, embracing the entire existing programme in it. It aimed at achieving universal primary education by 2007 and universal elementary education by 2010. Since its inception significant progress has been made in elementary education.

SSA was initiated to provide additional finances over and above the existing state expenditures for elementary education to invest in various components of education infrastructure, quality improvement and capacity building. Expenditures
under SSA are based on a centre-state sharing ratio. The financial assistance under SSA was based on long term sharing arrangement according to which centre was to meet 85 per cent and the remaining 15 per cent by the state government during the Ninth Five Year Plan. During the Tenth Plan the sharing pattern would change to 75 per cent by the centre and 25 per cent by the state governments and 50:50 sharing thereafter between the centre and the state governments.

However, the study revealed that states were not able to contribute their share under SSA. The low contribution of the states on SSA is due to the fact that the norms of SSA of 50:50 sharing pattern put burden on the poorer states which find the sharing norms difficult due to their poor fiscal health. Due to rising fiscal deficit states find it difficult to contribute their share under SSA and over the years, states seem to be struggling with finding additional resources for their plan expenditures. The most recent challenge to financing elementary education in India is posed by the Planning Commission’s decision to change the financing arrangements for SSA. Planning Commission has taken the decision to change the shares that the states need to provide under SSA to 50 per cent of total outlays with the view that the states have enough capacity to provide increased resources for the elementary education sector. Since education is in the concurrent subject with state government spending majority of share on education, many states have raised voice showing their inability to mobilise funds. Besides low share, expenditure under SSA also faces inefficiency in utilisation of funds by the states. States are not able to utilise funds on time because central government often not releases adequate funds and also delays in transferring the funds to states.

It is important to note here that expenditure on education in absolute numbers might have been increased but as a proportion of state income and in real terms it has declined which is very serious state of affair. As enrolment rises, expenditure of the government should rise to retain the children in school and to reduce dropout rates but from our analysis it has not come out. One of the major problems identified in this regard was that the state funds are not forthcoming or remain stagnant. Apart from their poor fiscal health, the discouraging trend in spending pattern by all the states even after 2000-01 is also due to the fact that after the initiation of SSA central government has taken on a greater share of accountability for the achievement of UEE which has resulted in lesser burden on the states. SSA funding had to be considered as a method
to reduce the financial pressure on the districts and on the states than as the sufficient allocation to achieve the goal of UEE. But is has been observed that SSA has created as dependency syndrome amongst states and as a result states’ own plan allocation grew slowly and stagnated or declined in real terms and in terms of NSDP. Bulk of the plan expenditure in the states comes from the centrally sponsored schemes, now from SSA.

Suggestions

Inspite of various initiatives taken by the Government of India, goal of universalisation of elementary education cannot be achieved. The education system in India is beset with the problems of inequities and disparities. While some the states are near the goal of UEE, others are lagging behind. Though, there has been substantial quantitative expansion in elementary education in India, but the progress in elementary education across the states is far from satisfactory. Based on the findings, the present study concludes by putting forward some of the suggestions that may ensure the achievement of elusive goal of UEE.

1. Regular Checking of Absentees of children:

Enrolments targets which are to be achieved should be closely monitored by the concerned local authorities by recording the data once in every month. In order to control absenteeism amongst children and to boast enrolment regular checks of absent children at lower classes may also be done.

2. Providing Scholarship to the Poor Children:

Unlike the progress in enrolment during the last two decades, the trends in retention and quality are not very hopeful. Though most of the states of India have done well in enrolling more and more children, inability of schools in retaining the children has continued to be a serious problem. Government should provide scholarship to the poor school going children in addition to the provision of all the free facilities in the school. This will encourage enrolment and retention of children in schools, as parents can’t afford essential items required for education due to poverty.

3. Providing Incentives to Girl Student to Reduce Gender Gap and Dropout:

Gender gap in elementary education is declining overtime and girls’ enrolment to total enrolment is increasing, still it is found to be low in certain states. Though dropout
rate has declined, it is still high at upper primary level for boys as well as girls. But dropout rate is higher amongst girls due to several reasons. Although the gap is declining, still it is persisting. Thus, concerted efforts are needed to check dropout rates at upper primary level for all children particularly amongst girls. For this besides providing free education, other incentives like uniform and free books should be provided to all girl students. In addition, appointment of sufficient number of female teachers will develop the confidence amongst parents and enhance girls’ enrolment.

4. Emphasising Adult Literacy:

Since from the study it has come out that main reason for dropout amongst student was disinterest of parents and children. In order to make attendance cent per cent and to reduce dropout parents need to be literate and understand the importance of education. Hence, education of parents should be given more importance, for this the adult literacy should be emphasised.

5. Providing Free Education to all children:

Though government of India has resolved to provide free and compulsory education to all children, still households have to pay for their children’s education. Households spend their incomes on items such as tuition fees, books, stationery, school uniforms transport and so on. According to Tilak (2006), 25 per cent of children attending schools do not receive free elementary education. So the cost of schooling is also one of the reasons for poor parents in withdrawing their children from schools. Hence, government should take determined efforts in providing free education to all children rather than only mentioning it in the drafts.

6. Providing Combined Secondary School Facilities:

Though access to schooling has improved to a great extent, still schooling facilities seems to be inadequate. Primary schooling facilities need to be provided within every habitation rather than at 1 or 1.5 km distance. In fact it would be better to provide good elementary (primary and upper primary) school facilities, and even combined secondary school facilities, rather than just providing primary school or part of it.

7. Enhancing Basic Facilities in Schools:

Apart from the building that can be used in all weather, the schools need to have certain basic facilities. Availability of drinking water facility and toilets are the basic
amenities which should be available in every school. However, the condition of these essential facilities is found to be far from satisfactory. Hence, it is imperative that every school must be equipped with these essential services so that the children are not deprived of these necessary amenities.

8. Ensuring Effective Teaching and Accountability of Teachers:

The learning skills amongst the student are found to be low at the primary and upper primary level. Evaluation studies have repeatedly revealed that the ability of students in reading, writing and mathematical calculation is very poor. This reflects amongst other things, the inability of teachers to explain even the simple concepts in a manner that is understandable to students and the type of education being imparted is hardly able to improve the learning levels of the children. Hence, it is high time that attention should be paid to improve quality in education and to ensure that effective teaching is done in the class rooms. Accountability of school teachers should be mandatory and they should not be burdened with non-teaching responsibilities as far as possible, so that they could focus on teaching activities properly.

9. Enhancing Provision of Teachers Training:

The shortage of qualified and trained teachers will have adverse effect on quality of education in the long run. All the states should be strongly encouraged to recruit qualified and trained teachers in their cadre of regular teachers. The appointment of Para-teachers should be avoided and if not possible, there should be provision of proper training of these Para-teachers so that quality of teaching can improve and learning achievement amongst children get enhanced.

10. Need for Modification in Sharing Mechanism:

It is found in the study that states have contributed low share under SSA financing. The low contribution of the states on SSA is due to the fact that after the 10th Five Year Plan pattern of fund sharing for SSA between centre and states has been changed and from 75:25 sharing ratio it reached to 50:50 sharing ratio. The norms of SSA of 50:50 sharing pattern put burden on the poorer states which find the sharing norms difficult due to their poor fiscal health. This sharing mechanism should be changed and should be in accordance with the state’s capacity to bear the financial responsibility. In addition, some of the educationally backward states require more
resources as compared to educationally better off states, so funds should be disbursed taking into account these things. Hence, there is a need to review the sharing formula, especially the nature of uniformity of the shares across states that are at different levels of educational development and fiscal health and adopt a differential formula that burdens economically and educationally laggard states less.

11. Timely Disbursement of Resources from Centre to States:

Besides, low share by the states, expenditure under SSA also faces inefficiency in utilisation of funds by the states. States are not able to utilise funds on time because Government of India often delays in transferring the funds to states. Hence, it is suggested that central government should release fund on time so that various programme can be implemented on time.

12. Reducing Dependency on SSA Funds:

Moreover, it has been found in the study that that SSA has created as dependency syndrome amongst states and as a result states’ own plan allocation grew gradually and stagnated or declined in real terms. SSA funding had to be considered as a method to reduce the financial burden on the districts and the states than as the adequate allocation to accomplish the goal of UEE. It has been observed that bulk of the plan expenditure in the states comes from the centrally sponsored schemes, now from SSA. Efforts are needed to augment funds from the states rather than only depending on SSA funding.

13. Reducing Non-Plan Expenditure:

Plan expenditure is generally meant for development purposes (new programmes, projects, schemes, new schools, new buildings and new teachers), while non-plan expenditure is designed for the maintenance of the system. Plan expenditure on education is relatively small in size and a huge proportion of expenditure on education is of non-plan in nature. Under non-plan expenditure almost entire fund is spent on teachers’ salary, negligible amounts is left for other items such as stipends, infrastructure and so on. The inadequate plan expenditure and above 90 per cent of non-plan expenditure spent on salaries, describe very sad state of affairs of educational development in the states. This situation must be changed and non-plan expenditure must be reduced and plan expenditure should be increased if quality of schooling is to be improved.
14. Increasing Total Expenditure on Education in Terms of GDP:

The intra-sectoral allocation of resources in education in India indicates an irregular emphasis on not only elementary education, but also on other levels of education. It has been observed that increase in resources to elementary education was possible due to severe cuts in resources for other level of education (Secondary and Tertiary). The well-known feature of the education sector is complementarities of three levels of education which are sequentially connected namely elementary education, high/higher secondary education and college and university education. It is self-evident that working of whole system gets crippled when one level, especially elementary education, which is the base of the whole system, is kept weak. The cycle of low access, equity and quality starts from here affecting in turn the other two higher level of education. Hence, the pattern of intra-sectoral allocation need to be improved and government should increase total expenditure on education as a per cent of its GDP so that each level of education can get equal share and there will be no need to cut the expenditure of one level of education to finance the other level of education.

At last, it has been increasingly realised that the government has accorded high priority to UEE. But, given the failure on the part of the central and the state government to meet the goal of imparting universal elementary education, community involvement is essential. For achieving high quality of education community participation is important. Community provides not only physical and human facilities but also put pressures on the teachers to achieve high quality of education. There are examples of successful primary education in the states of Kerala and Himachal Pradesh where involvement of community has helped in achieving the goal of UEE.

The community participation is not up to the mark in educationally laggard states of India as compared to states like Tamil Nadu, Kerala and Himachal Pradesh. The bodies such as Village Education Committees (VECs), Parent Teacher Associations (PTAs) and School Management Committees (SMCs) should be better involved in management and bringing improvement in learning process. Parents and teachers interaction will ensure positive impact on enrolment, attendance and learning outcome of the students. This will help in reducing dropout rate from schools which in turn will result in universalisation of elementary education.