Journal of Educational Planning and Administration

Volume XXVII No. 1 January 2013

National University of
Educational Planning and Administration
17-B, Sri Aurobindo Marg, New Delhi 110016

ISSN 0971-3859

Annual Subscription

	Within India	*Outside India* (By Airmail)
Individuals	₹ 150	US $ 60
Institutions	₹ 350	US $ 85

Annual Subscription commences with *January* and ends with *October* every year. NUEPA offers 20% discount on subscription for three years and above

Advertisement Tariff (For one issue)

Full Page	₹ 2000	US $ 100
Half Page	₹ 1100	US $ 055

Bank draft may be sent to the Deputy Publication Officer, NUEPA in the name of the *National University of Educational Planning and Administration* payable at *New Delhi.*

Published by the Registrar, National University of Educational Planning and Administration, 17-B, Sri Aurobindo Marg, New Delhi–110016 and printed by the Publication Unit, NUEPA at M/s. Anil Offset & Packaging, New Delhi–110060.

JOURNAL OF EDUCATIONAL PLANNING AND ADMINISTRATION

Vol. XXVII No. 1 (January 2013)

CONTENTS

ARTICLES

RESEARCH NOTES/COMMUNICATIONS

BOOK REVIEWS

Errata/Note

It may be noted that the copyright of the article titled, "The Great Expansion of Higher Education in BRIC Countries" by Martin Carnoy, P. Loyalka, R. Dossani, I. Froumin, Jandhyala Tilak, and W. Rong) published in the Journal (Vol. XXVI No. 4 October 2012, pp. 535-65) lies with the Stanford University.

Journal of Educational Planning and Administration
Volume XXVII, No. 1, January 2013, pp. 5-14

Education for a Changing World[$]

Prabhat Patnaik[*]

There would be little disagreement over the fact that there has been a universal tendency in the recent period to "commoditize" education, to see centres of education as places where students come as "buyers" to purchase this commodity, called education, at prices that increasingly reflect the earning capacity which the possession of this commodity gives them. The privatization of education, which means handing this sector over to private profit-making entities, the desire to attract direct foreign investment, and such like moves which are afoot in our country, are simply a reflection of this tendency. Likewise, the so-called "striving for excellence" that our leading policy-makers in the education sector often talk about, amounts to nothing other than making this commodity, "education", that is produced in India, internationally competitive. And the obsession in the upper echelons of the government with how many Indian institutions figure in the top 200 listed by, say, *The Times Higher Educational Supplement,* springs from this perception of education as a "commodity": it is analogous to a ranking of cars, or of countries' "credit-ratings".

I

The commoditization of education has a number of major implications. Let us discuss here only the academic (or, more generally, intellectual) implications of commoditization; and at *seriatim*. Education becomes a commodity only when the person into whom this education is injected has also become a commodity, which does not just mean that such a person obtains a job on the market. A job market for the educated has been there for a long time, but commoditization of education and the educated is a more recent phenomenon and means something more.

Things do not become commodities merely because they are sold on the market (even a centrally-planned economy may, and in the past did, use the market for distributing consumer goods); *they do so only when salability on the market becomes their sole defining characteristic*. In Marx's language, a thing becomes a commodity when it becomes a pure exchange value for its seller, not a use value any longer. The person who is a commodity, by virtue of which fact alone does he or she become the embodiment of a commodity called education, is conditioned, therefore to derive no intrinsic satisfaction either from the

[$] Revised version of the Keynote address delivered at the International Conference of the Comparative Education Society of India 2012 on 'Education for a Changing World' held at the University of Jammu, Jammu (10-12 October 2012).

[*] Centre for Economic Studies and Policy, Jawaharlal Nehru University, New Delhi-110067
E-mail: prabhatptnk@yahoo.co.in

education imbibed, or from the work at which he or she is employed, *other than the access to commodities that this work ensures*, i.e. the amount of income it fetches. Education, in short, ceases to be a means of acquiring knowledge, enlightenment or pleasure; it becomes a commodity whose imbibing increases access to other commodities. Commoditization of education, therefore, changes the entire meaning of education.

This point is often not appreciated. Public discussions on the relative merits of State-funded educational institutions versus private profit-making institutions, or on the necessity of supplementing State-funded institutions with private ones, usually assume that a homogeneous thing called education is provided in either case. This is not true. The outsourcing of education by the State to private profit-making institutions entails simultaneously a basic change in the nature of that which is being outsourced.

The second implication follows from this. A commodity by its nature is a given, "closed" object, packaged and compact. When education becomes a commodity, its objective cannot be to arouse questions in the student's mind, or to activate the student to think, for that would become a self-defeating act on the part of the commodity called education (leading to a possible rejection of the very package itself); it must be precisely the opposite, to dull the student's mind into accepting what is being offered. The so-called "striving for excellence" in this universe is really concerned *with a comparison between packages*, which package has more matter in it, which package has more up-to-date matter in it, and so on; it is not a comparison between educational institutions or systems, on the criteria of which one arouses the student's curiosity more, which one stimulates the student's creativity more, which one encourages the student to a greater extent to question the received package and to think for himself or herself. An education system geared to producing education as a commodity necessarily leads therefore to a destruction of originality, creativity and inquisitiveness. And since without these qualities there can be no advance in knowledge, such an education system necessarily produces mediocrity.

There is a related matter of importance here. One often comes across government leaders and education policy-makers asking students to devote themselves to "studies" and to abjure protests of any kind. To be sure, if students are being used by unscrupulous elements to launch protests that further their own private agendas, i.e., if students are being turned into mere cannon-fodder for others, then they should be asked to exercise caution. But then the call to them should be to think hard, and to think for themselves, before embarking on protests; it should not be to eschew protests altogether. If eschewing protests was a virtue that the students always had to emulate, then India's anti-colonial struggle would never have taken off; indeed, it was none other than Gandhiji himself who had asked students to boycott "studies" and to come out to join the freedom struggle.

The call to students to concentrate on "studies" is motivated not just by a desire to produce conformism, which, of course, is always useful for the ruling classes, it also aims to make better commodities of them, to make them into persons who have ingested to a greater extent the packages called "education" given to them. The process of making them into better commodities, however, is *ipso facto* a process of destroying their originality, creativity and self-assertion, a process of beating them into shape as mediocre devourers of these packages dished out to them as "education".

The third implication of commoditization is a kind of homogenization of "education". If education has a different purpose, related to the society in which it is being imparted, then the content of it is bound to be affected by the nature of that society and its problems. But if

education is a commodity, and that, too, a commodity that competes with other similar commodities on the global market, then it ceases to have any links with the society in which it is imparted. An economics education in India then ceases to be distinguishable from an economics education in the United States, notwithstanding the fact that India, unlike the U.S., is characterized by millions of peasants and agricultural labourers, and also the fact that there is a spate of peasant suicides in India over the last decade and a half. Discovering the roots of peasant distress that drives them to suicide then becomes a matter largely outside the purview of the education system, except, of course, to the extent that Harvard or Stanford or Oxford may happen to get interested in the matter.

Again the irony of the situation lies in the fact that if this notion of education had been adhered to, then no educated Indian in colonial India would have cared to read Dadabhai Naoroji or R.C. Dutt who laid bare the exploitative nature of the colonial rule, and hence, no anti-colonial struggle could have taken off. Commoditization of education which denies the social character of education, necessarily establishes the intellectual hegemony of the advanced capitalist world over third world societies. The homogenization of education it produces is conducive to the intellectual hegemony of imperialism.

A question may be raised here. Even if education is accepted as having a social character in the case of the social sciences, surely matters are different in the case of natural sciences. Why should physics or chemistry or mathematics be any different in Harvard or Oxford from what they are in Delhi or Jadavpur? The point here, however, relates not to the specific contents but to the problems emphasized. In the case of the social sciences, the content of what is taught at, say, Harvard, as causing underdevelopment, would be different from what is taught in India. But in the case of the natural sciences, even though the discussion of the same problem may entail covering the same contents, the problems emphasized would be different. The problems in natural sciences emphasized, say, in Harvard, would have to be different from those emphasized in India. J.D. Bernal, the renowned British scientist, used to feel strongly that what needed to be taught as natural science in India should be different from what was taught in Britain.

The fourth major implication of commoditization is to do-away as far as possible with the social-sciences and the humanities. These subjects, as already suggested, tend to elude easy homogenization. Their links to the societies in which they are being taught are not easy to obliterate; these links, or rather their absence in the event of homogenization, keep intruding into the consciousness of both the students and the teachers and become a source of discomfort for everyone engaged in the act of exchange of a homogenized package called education. The process of commoditization of education, therefore, is invariably associated with a downgrading of these disciplines.

This has been a striking feature of the thinking of education policy-makers in India in recent years. The present education minister, notwithstanding his own background in the humanities, has questioned the relevance of humanities, and by extension of social sciences, in an education system oriented towards "development". The education minister in the NDA government had very similar views, and the then UGC Chairman had even publicly stated that subjects like Political Science should have no place in university curricula. Interestingly, the same person had suggested that astrology, and training for priesthood, should be included in curricula, which clearly shows that the criterion for inclusion in the curriculum according to him should be the "marketability" of a subject. Lest this is thought to be an obsession only of the education officials of the Hindutva camp, who typically tend to be

science-trained (which the afore-mentioned UGC Chairman was), the UPA II education minister's repeating the same theme should clarify that the issue of commoditization goes deeper: it is linked to the neo-liberal development trajectory. It is significant that a former Chief Minister of Andhra Pradesh, a great votary of IT development in his state at that time, had questioned the usefulness of teaching history as a subject in universities. The malady of disliking humanities and social sciences, in short, is widespread, and related to the current trajectory of capitalist development, unleashed by neo-liberalism, of which the commoditization of education is an integral part.

The last point to focus on is precisely that commoditization of education implies that the content of education must be determined by market demand. Humanities and social sciences are to be shunned not only because they produce students with the potential for asking uncomfortable questions, students with the possibility of mounting a resistance against such commoditization, but also because these disciplines are not as "marketable" as the others, when "marketability" is defined mainly in terms of employability by globalized capital. Commoditization, in short, twists the entire education system into producing foot soldiers for the enterprise of globalized capital.

Everything about the education system is judged according to the degree to which it is successful in doing so. All other objectives of the education system that used to be commonly emphasized not long ago, such as its role in producing civilized human beings, its role in developing a humane society, its role in 'nation-building', its role in ensuring that the hard-earned rights and freedom of the people are not snatched away from them (or what is called using a concept of Antonio Gramsci, its role in producing the "organic intellectuals of the people"), recede to the background; all that matters is that the products of the education system must meet the demands of globalized capital, must be marketable as far as globalized capital is concerned. They must satisfy the requirement of being commodities.

II

In contrast to "education-as-a-commodity", it may be apt to suggest an alternative perception of education, namely "education as a quest for freedom". Since such a quest necessarily entails a transcendence of the "given" conditions, education on this perception involves a continuous transcendence of the "given" in the quest for freedom. This transcendence has both a personal and a social dimension. At a personal level it entails the negation of a "closure" of oneself (the very opposite of a commoditization of oneself that necessarily entails "closure"), an opening up of oneself to explore one's potential and a striving to realize it. But it also entails a negation of the "closure" of oneself in a different sense, viz. an opening up of oneself *to the conditions of others around oneself*.

This is not just because the quest for freedom cannot be confined to the prospects and possibilities open to an isolated atomized individual: one cannot be free if others around one are not. Karl Marx had once remarked that a nation can not be free if it oppresses other nations. Likewise, an individual cannot be free if the individual oppresses, or is complicit, through silence, in the oppression of other individuals. The quest for individual freedom, therefore, necessarily means the quest for a socio-economic order where others too are free.

This idea of the necessity of going beyond oneself even for achieving one's own objective goes against a basic tenet of classical political economy. Adam Smith, notwithstanding his

opposition to Mandeville's idea of "private vice" producing "public virtue", had propounded something analogous: each atomistic individual ensconced in his or her pursuit of self-interest, nonetheless ensures in the aggregate the achievement of social progress. A benign social outcome in short emerges from the pursuit by each of an entirely self-centred agenda. The idea of the realization of an individual's own private agenda, in this case of emancipation, having to concern itself with the condition of others, therefore, is foreign to the Smithian conception, and hence, by implication, that of the classical political economy.

There are, however, two basic problems with the Smithian conception. First, the individual, under the socio-economic order that Smith was examining, namely capitalism, is constrained to act in particular ways, the alternative to his or her not doing so being a displacement, at immense cost to himself or herself, from the position in that order that the individual occupies. The individual, in short, is alienated within the system, not a free agent to act as he or she likes, but one through whom the immanent tendencies of the system work themselves out. Even the capitalist is not free to act as he or she likes. There is a Darwinian struggle among capitalists forcing them to act in certain ways, e.g. accumulating capital, whether they like it or not (whence Marx's remark that the capitalist is merely "capital personified"). Secondly, the outcome of the functioning of the order is not benign as Smith had envisaged but oppressive: it produces wealth at pole with poverty at another, which entails not only the alienation of both who experience wealth as well as those who experience poverty, but also the impossibility of anyone within the system realizing his or her potential.

The quest for freedom, therefore, must entail a collective intervention in the socio-economic order in a direction where individuals are not its prisoners but its masters in their collectivity, i.e., in what one may call a "democratic" direction. They are not the cogs in the order but the order is for them, shaped according to their will, in a way that advances their quest for freedom. "Education-as-a-quest-for-freedom", therefore, entails going beyond the "given conditions" both at the personal level and also at the social level. It entails an opening of the mind not only to one's own condition but to the human condition in general, for achieving not only one's own freedom but human freedom in general, which is a condition for one's own freedom.

Education, of course, has always played this role, of enabling a transcendence of the "given", throughout human history, for otherwise mankind would never have had a history. The natural sciences, for instance, by discovering the laws of nature, make possible the use of those laws for an improvement in the material conditions of life, i.e., for a transcendence of the "given" material conditions of life; and education, by disseminating the understanding of those laws, leads to a realization of these possibilities. The social sciences likewise attempt to understand society and its movement, with the aim of consciously breaking out from the "given" conditions of social existence; and education disseminates this understanding to make such a breaking out possible.

The "given" conditions of social existence, and the understanding of these conditions at any time, which is disseminated through education, that seeks to change them, may themselves, of course, be influenced by the changing conditions of *material life*. But that is a matter which need not concern us here. The point is that education throughout history has played this role of enabling a going beyond of the "given"; by disseminating understanding, it has led to a realization of the possibilities of breaking out of the "given" conditions.

But, historically, it has played this particular role among many others, including, for instance, legitimizing feudal privileges, inequality and hierarchy. This has meant that transcending the "given" conditions, has not been informed by any *conscious* quest for human emancipation in this world and in this life, as distinct from some afterlife. In the current epoch, however, education must play this role, of transcending the "given" conditions, *in a very conscious manner*; since this epoch is characterized by the assumption that human emancipation through conscious collective human praxis is not only possible but has also come on the historical agenda. It is this assumption which underlies not only socialism, but democracy itself; and the pervasive acceptance of democracy as a desirable institution of political governance amounts to a widespread, if implicit, acceptance of this assumption. Education in the current epoch, therefore, must consciously play the role of transcending the "given" conditions, informed by the project of emancipation, i.e., in the direction of democratic advance.

To say this is nothing new. Indeed, all the objectives of an education system mentioned earlier as being commonly emphasized in the pre-commoditization phase, ultimately boil down to this particular role of education, of enabling a transcendence of the "given" conditions, informed by a quest for human emancipation: "nation-building", "developing a humane society", "defending the rights and the freedom of the people", "making persons 'civilized' in the sense of being sensitive to the needs of the others", are all components of what an education system, that must play this overarching role as emphasized, would anyway seek to achieve.

For education to play this role, however, it must be based on a questioning of the "given". Transcendence of the "given" is impossible without a critical stance towards the "given"; and such a critical stance entails questioning. Everything must be subjected to a radical critique; and education must make this happen.

This perception of what education should do is in obvious conflict with the commoditization of education. Let us highlight only two instances of this conflict. First, commoditization, as we have already seen, gives out a package or a capsule called "education" which necessarily seeks to close the minds of the students. It is a means of perpetuating the "given" rather than transcending the "given". Any perpetuation of the "given" breeds stagnation, and "closure", hence, is anti-emancipation in general. But a perpetuation of the "given" in a situation where that "given" entails pervasive hunger, malnutrition and acute material deprivation, constitutes an absolute negation of the project of emancipation. Inculcating a questioning mind in students, which commoditization of education seeks to negate, is essential, therefore, not only for individual creativity and the individual's quest for self-realization, which is a necessary component of human emancipation, but also for bringing about social change that can create the material basis of collective emancipation. Commoditization, in other words, does not just destroy creativity; it is essentially conservative, trapping society within its "given" inequities and its "given" barriers to the emancipation project.

Secondly, commoditization is necessarily associated with individualization. The imbiber of the commodity called education, who is himself or herself a commodity, and whose criterion of self-fulfillment consists in the magnitude of commodities over which he or she acquires command, is an individual. This individual's concern is only with himself or herself and that too only in terms of the magnitude of commodities he or she comes to command. He or she is deliberately insulated from any sensitivity towards the needs of others, or any

sympathy towards the pain of others. This insulation is bad enough in itself, for it becomes a source of alienation of the individual. But when we are talking about a society like ours with a millennia-old legacy of institutionalized inequality, exclusion and discrimination, in the form of the caste-system, such insulation caused by the commoditization of education can have extremely serious consequences.

In an unequal society, the institutionalization of merely *formal* equality will have the effect of perpetuating the prevailing inequality. Affirmative action, introduced through a public education system, can be a counter to this; but if the education system is privatized, as a necessary accompaniment of commoditization, then the scope for affirmative action gets truncated, as we are witnessing in India. We, therefore, revert back to an education system that caters essentially to an upper-caste clientele. When we add to this the fact that the education itself that is imparted to this clientele is also meant only to serve their personal interests, i.e. that such education treats them as, and confirms them in the role of, self-serving individuals, their insensitivity and caste prejudice become further reinforced; and the entire education system then becomes utterly antithetical to democracy and the project of human emancipation. Commoditization of education, in short, has serious implicit social consequences which act in the direction of perpetuating the inequity and oppression of the caste system.

This may appear intriguing at first sight. Commoditization after all is introduced at the behest of international finance capital, which is supposed to be a modern force that is expected to destroy the traditional institutions and attitudes of a caste-based feudal order; it turns out, however, that it has the effect of buttressing these very traditional institutions and attitudes. A peculiar convergence develops between the interests of the most modern agency of capitalism, viz. international finance capital, and those of the defenders and votaries of the most traditional caste-based feudal order.

All this not without such an evidence. We do personally come across students, who are otherwise "excellent" in their "studies", having downright casteist attitudes. And it is well-attested that casteist attitudes prevail in many of our institutions of higher learning which make it to the list of top institutions of the world. What is more, even among students in such institutions who are not themselves "casteist", and who, if pressed on the point, would explicitly object to such attitudes, there is so much of a drive for personal advance that they have neither the desire nor the time for combating such attitudes. Commoditization of education, in other words, has converted large numbers of students in our "excellent" institutions of higher education, into persons who are either infected by or indifferent to the prevailing casteist attitudes and prejudices.

By the conception of such an education we do not consider such persons "educated", no matter how "well-trained", how formally intelligent, and how "well-skilled" they may be. If the role of education is to transcend the "given" conditions, including the "given" human consciousness, informed by the agenda of human emancipation, which entails a democratic transformation of society, then an acceptance of casteist attitudes, whether by commission or by omission, becomes tantamount to an educational void. Combating casteism, communalism, patriarchy and socio-economic inequalities must become an essential component of education. And no matter how good the students produced by the education system are as commodities, how internationally competitive they may be, they would still be considered uneducated by this criterion, since commodities by their very nature lack the will to combat regressive social attitudes.

The point raised here must be distinguished from another suggestion often made that students must be taught "values" in our institutions of higher learning, which at the moment they do not imbibe in such institutions. Former President Kalam even called for "spirituality" to become a part of the curriculum, to be introduced to students in institutions of higher learning.

These suggestions are, so to say, *simpliste* for at least three reasons. First, they amount only to saying that the commodity called education should be covered in wholesome wrapping paper, called "values" or "spirituality". As long as the logic of commoditization of education prevails, having some lectures on "values" or "spirituality" will make little difference to it. Just as lectures on "corporate social responsibility" do not alter the logic of capitalism and its basic tendencies to squeeze workers and dispossess petty producers, i.e., to appropriate surplus value and to expropriate petty property, likewise having some lectures on "values" or "spirituality" will not change the logic of commoditization of education, with all its attendant tendencies and implications that we have discussed earlier. The basic need is to overcome the logic of commoditization itself, not to add to it, in some eclectic fashion, some additional training in "values" or "spirituality".

The second reason why this suggestion is *simpliste* lies in the fact that training in "values" and "spirituality" may well become an additional means of closing minds, of preventing rational questioning (for such questions may be seen as transgressing "values" or "spiritualility"). If the "values" entail "respect for elders" then questioning some positions taken by senior faculty members will be frowned upon as being contrary to our "values", and so on.

And thirdly, "values" and "spirituality" may be a means for the backdoor entry of *Hindutva.* Propagating "values" and "spirituality" may well go against a secular education which is essential for a democratic advance. The need, in short, is to remove education from the baneful effects of commoditization, and not to open up the possibility of reinforcing the conservative consequences of commoditization by adding to them some training in "values" and 'spirituality".

To say that education must be oriented towards democratic advance, rather than being commoditized, is not to suggest that we should not be producing doctors, engineers and other skilled personnel for holding down jobs of various kinds. It is to make two basic points: first, the imparting of skills is not synonymous with education, so that providing training for all these jobs should not constitute the sole purpose of the education system; and secondly, the imparting of skills must be embedded within an overall system of providing education that is oriented towards democratic advance. When Gramsci talked of "organic intellectuals", his concept of "intellectuals" had incorporated, not just those belonging to social sciences or liberal arts disciplines, but all skilled personnel as well. The purpose of education must be to produce "intellectuals" in the Gramscian sense who carry forward the democratic movement of society.

III

Then, a practical question. The fact that education is being commoditized, is a consequence of the logic of neo-liberal capitalism. Globalization of capital, as it reduces the nation-State to subservience, into an entity that must accept its demands, naturally rejects an education system that is oriented towards "nation-building". As globalized capital moves

all over the world in search of profitable avenues of investment, it naturally wants an army of homogenized foot-soldiers everywhere who can cater to its needs; and for this, it needs an education system that is homogenized across the world. Precisely because it is globalized it wants an army of educated personnel who are detached from their "national" settings and contexts, and hence, an education system everywhere that is detached from its "national setting", from the social milieu where it is located.

The fact that commoditization of education is a fall-out of the neo-liberal policies which are being driven everywhere by globalized capital, implies, of course, that the period of hegemony of globalized capital is also a period of devaluation of *thought.* An education system, detached from its social moorings, unconcerned with its social context, impervious to the need for transcending the "given" conditions in the society where it is located, for movement in a democratic direction, is incapable, so to say, of producing any great worthwhile ideas (except to the extent that such ideas are produced *despite it, in opposition to it, and run counter to what the education system inculcates*), no matter how high such a system is ranked in international league-tables. It is not surprising that an outstanding efflorescence of thought occurred in India in the late nineteenth and early twentieth centuries when the nation was in the throes of an anti-colonial struggle and when many dropped out of, or went beyond the formal confines of, the education system erected by the British colonial rulers.

The practical question that arises is: if commoditization of education is driven by the hegemony of globalized capital, especially of international finance capital, then can it be overcome until this hegemony itself is overcome? Is it worth struggling for a democratization of education, as opposed to a commoditization of education in a world where the hegemony of international finance capital remains intact?

Fortunately, however, it seems that the need for launching such a struggle does not depend upon the answer to this question. Some may believe that even within the hegemony of international finance capital, there can be room for an education system that does not commoditize education, in which case they should have no hesitation anyway to launching a struggle against the commoditization of education. Others may believe that the struggle against commoditization of education cannot succeed until the hegemony of international finance capital is overcome, in which case, however, for them this struggle itself becomes a means of overcoming this hegemony, a part of the overall struggle that needs to be joined. Hence, in either case, there should be no compunctions about struggling against the commoditization of education.

IV

On the theme question of this seminar "Education for a Changing World" there can be two possible answers, as to what constitutes appropriate education for a changing world? One possible answer is that an education system for a changing world is one which caters to a world that is changing in the direction of consolidating the hegemony of international finance capital. This view holds that commoditization of education is precisely the education needed today for a changing world. The other answer developed in this paper sees an education system that believes *in changing the world* as the appropriate education system *for a changing world.* Such an education system must be one that believes in changing the

world in the direction of egalitarianism and democracy, and generally, towards human emancipation. It must combat the commoditization of education, and hence, for overcoming the hegemony of international finance capital that is the driving force behind this commoditization.

A struggle for the realization of the second concept of education may appear at first sight to be a daunting task. But the crisis that has overtaken world capitalism is once more raising basic questions about the desirability of the social structures within which people find themselves. It is drawing attention to the fact that these structures are flawed and are, hence, incapable of serving the needs of human beings in quest of emancipation. The time, therefore, is propitious for pressing for a realization of the second concept of education, whence it follows that this is also an appropriate time for launching a struggle against the commoditization of education.

Journal of Educational Planning and Administration
Volume XXVII, No. 1, January 2013, pp. 15-31

Bridging the Teacher Gap with ODL Teacher Education Resource Centres

— A Model for India

P. Vijayalakshmi Pandit*

Abstract

Teachers are the shapers of the modern world. They play a vital role in transforming the children into responsible global citizens. Educated citizens are the agents of change for a better world. Realizing the power of education on development of individual and development of a country, "Achieve Universal Primary Education" (UPE) is taken as the second goal of UN Millennium Development Goals 2000. In reality, the supply of qualified teachers is not meeting the demand in different regions and countries to realize this goal. According to the UNESCO projections a total of 10.3 million teachers are needed in order to achieve UPE by 2015. The two-thirds of world's teacher gap is in certain Sub-Saharan, African and Arab States. These statistics reflect the need for strategies for developing innovative teaching/learning methods and models to revamp teacher development with commitment and investment. ICT enabled Open Distance Learning (ODL) can play a major role in development of qualified teachers worldwide. The objective of this paper is to assess the status and reasons for teacher gap world over, especially in under-developed and developing countries. To examine the need and relevance of innovative ICT enabled O.D.L. approach for teacher education and proposing models like network of Teacher Education Resource Centres (TERCs) for teacher development for India and other developing and under-developed countries to scale up the professional development of teachers.

* Prof. G. Ram Reddy Research Academy of Distance Education (GRADE), Prof. G. Ram Reddy Marg, Road No. 46, Jubilee Hills, Hyderabad-500033, Andhra Pradesh.
E-mail: p.vijayalakshmipandit@gmail.com

Teacher Gap

As envisaged in UN Millennium Development Goals (UNMDGs), the countries of the world are committed to reaching the second goal; "Achieve Universal Primary Education (UPE)" by 2015. In order to achieve this first goal, countries need to ensure that sufficient school places are provided, enough teachers for quality instruction are employed and school systems function effectively. Many of the countries that are challenged to reach UPE are also facing population growth, which further increases the pressure to expand school systems and teaching forces at different levels. The UNESCO Institute of Statistics (UIS) on "Projecting the Global Demand for Teachers: Meeting the Goal of Universal Primary Education by 2015" (Information Sheet No. 3 & 6) throws light on the region-wise details of the teacher gap worldwide. According to UNESCO forecasts, a global total of 10.3 million teachers should be recruited by 2015.

The UIS has identified those countries that need to expand their teaching forces in order to be able to enroll all primary school-age children by 2015. This applies to approximately one-half of the world's countries, 96 out of 195, according to UIS figures (Table 1). In total, these 96 countries will need at least 1.9 million more teachers in classrooms by 2015 than in 2007 (8.4 million) in order to provide UPE of good quality.

Sub-Saharan Africa has by far the greatest need for additional teachers, as presented in Figure 1. Three out of four countries (27 out of 45 countries) in the region face a significant teacher gap. In these 27 countries, 2.6 million teachers were employed in 2007. The number of primary teachers needs to grow to 3.7 million in the eight years remaining to fulfil "Education for All" (EFA) commitment, indicating a gap of 1.2 million. For every two teachers teaching in 2007, there must be three in 2015. Budgets for teacher salaries will have to grow by 50%, relative to levels reported in 2007.

The Arab States, as well as South and West Asia, also face primary teacher gaps. The Arab States region will need 282 thousands additional primary teachers in classrooms, while countries in South and West Asia will require 240 thousands. Considering the current size of the teaching force in these regions, the gaps are moderate in comparison to Sub-Saharan Africa.

TABLE 1

Teacher Gap

Current and projected teacher stock and increases needed by 2015, by region

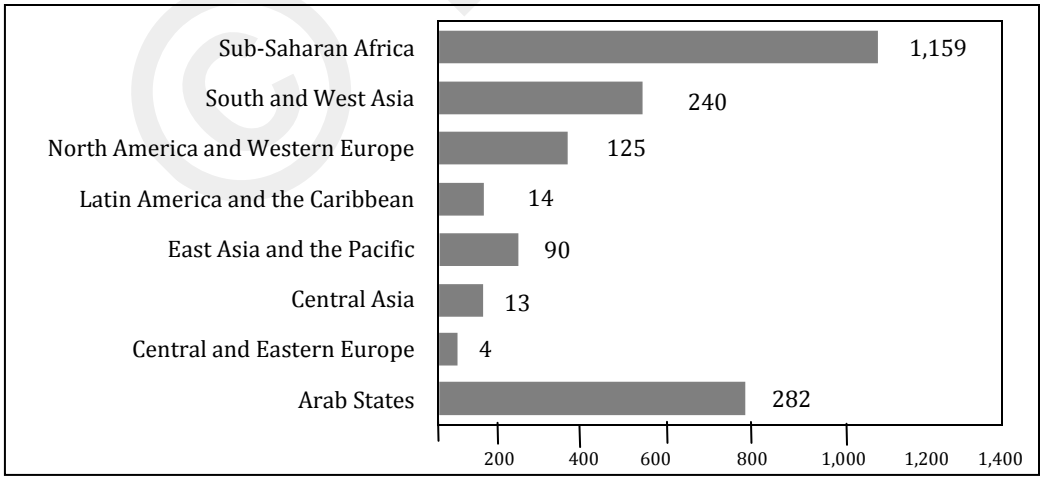
Region	*All Countries*		*Countries that need to expand*				
	Current teacher stock 2007 (in thousands)	*Number of countries*	*Current teacher stock 2007 (in thousands)*	*Projected teacher stocks required to meet goal by 2015*	*Difference in teacher stocks (in thousands)*	*Number of countries with moderate or minor teacher gap*	*Number of countries with severe teacher gap*
Arab States	1,959	20	1,503	1,785	282	11	4
Central and Eastern Europe	1,214	20	399	403	4	7	0
Central Asia	318	9	206	219	13	4	0
East Asia and the Pacific	9,961	29	1,031	1,122	90	10	4
Latin America and the Caribbean	2,905	39	435	450	14	11	0
North America and Western Europe	3,718	24	2,132	2,257	125	7	0
South and West Asia	4,949	9	925	1,165	240	1	2
Sub-Saharan Africa	2,822	45	2,573	3,732	1,159	8	27
World	27,847	195	9,205	11,133	1,928	59	37

Source: UNESCO Institute of Statistics Information Sheet No. 3.

FIGURE 1

Teacher Shortages

Increase in teacher stocks needed by 2015, by region

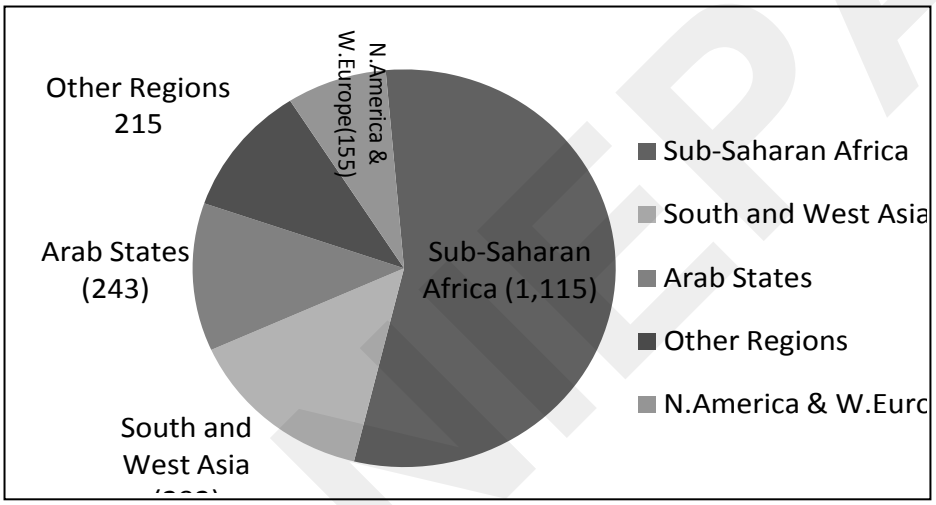


Source: UNESCO Institute of statistics information Sheet No. 3.

As per the UIS forecast worked out in 2009, (Information Sheet-6), 'The Global Demand for Primary Teachers – 2011 Update" in 2009, 112 out of 208 countries (54%) needed to further increase the size of their primary teaching workforce due to growing number of students, whereas 96 countries (46%) can potentially reduce their workforce. In total, the 112 expanding countries will need at least 2 million more teachers in classrooms by 2015 than in 2009 to provide quality primary education for all.

FIGURE 2

Number of Additional Primary Teachers needed to reach UPE, 2009 (in thousand)



Source: UNESCO Institute for Statistics (2011).

TABLE 2

Countries with severe teacher gaps, by region

Arab States	Djibouti, Palestinian Autonomous Territories, Sudan and Yemen
East Asia and the Pacific	Cook Islands, Nauru, Papua New Guinea and Timor-Leste
South and West Asia	Afghanistan and Bangladesh
Sub-Saharan Africa	Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Kenya, Liberia, Malawi, Mali, Mozambique, Niger, Rwanda, Senegal, Somalia, Tanzania, Togo and Uganda

UNESCO Institute of Statistics (UIS) in its report on "Projecting the Global Demand for Teachers: Meeting the Goal of Universal Primary Education by 2015" observed:

"One way to judge the challenges ahead is by considering progress that has been made since the EFA Summit in Dakar in 2000. Eight countries have been able to expand their teaching force between 1999 and 2007 at an even higher rate than required to achieve the UPE goal. They include: Benin, Burundi, Cameroon, Congo, Guinea, Liberia, Mozambique and Senegal. However, most of the countries with severe teacher gaps will fall short of the goal if current trends continue.

Even more problematic is that a number of countries have clearly fallen behind in the aim to attain the UPE goal. Between 1999 and 2007, the expansion rates for primary teaching force in Uganda, Côte d'Ivoire, Eritrea and Kenya were not even one-third of what is required to achieve UPE by 2015.

The number of teachers needed in classrooms by 2015 is referred to as the "stock" of teachers. But when planning to expand or maintain teacher stocks, policymakers must also consider the number of teachers leaving the profession. Teachers retire, change professions, switch education levels or leave the classroom to assume administrative duties. To fully evaluate future needs for teachers and the challenges to mobilize sufficient number of motivated and trained recruits, policymakers must examine the projected flows in and out of the profession. According to UIS estimates provided, 1.3 million teachers will need to be recruited every year between 2007 and 2015 amounting to a global total of 10.3 million over the eight-year period. These figures are based on the needs associated with attrition and UPE-related expansion in countries that have not yet achieved the goal and those that have. Recruitment needs in the latter are solely linked to attrition.

Of the 10.3 million teachers needed, 8.1 million will be deployed to maintain the current capacity of education systems (i.e. compensate for attrition). About 2.2 million recruits will be needed to expand education systems in order to achieve UPE. This reflects the massive investment which is required by governments".

Teacher Gap: Indian Scene

India faces a massive crunch of teachers, at both the school and university levels. Indian government has put in place educational reforms - at the primary level with the Right to Education (RTE) Act. Teachers are the key to the RTE Act. According to Human Resource Development Ministry, Government of India data, the country needs over 1.2 million teachers at the school level. To implement RTE Act, India needs trained teachers, which is a major challenge. The Right of Children to Free and Compulsory Education Act (the RTE Act), makes the state responsible for ensuring the education of all children between 6 and 14 years of age. It pegs the teacher student ratio at 1:30. However, the reality is otherwise. India has one of the lowest ratio of teachers, at one teacher per 40 students in primary schools. Quality of teachers was the main concern even if quantity is addressed. Nearly 19 per cent of the total primary schools in India are single teacher schools catering to nearly 12 per cent of the total enrolment in primary classes. Again 16.29 per cent schools still do not have two teachers (UNICEF/India/2006). The other problem areas are:

- inadequate school infrastructure;
- non-availability of teachers in remote rural, hilly and tribal areas;
- high teacher absenteeism;
- large-scale teacher vacancies, and
- inadequate allocation of resources on education to meet the expenditure.

Issues in World's Teacher Gap

Some of the issues emerged and questions raised in the discussions and deliberations of 'World Forum' on 'Education for All' in Jomtien in 1990 and Dakar Senegal (2000) reflect the crisis of teacher education even after two decades. The issues emerged are:

- Are there enough individuals interested in embracing teacher as career?
- What attracts candidates to this teacher profession?
- Do they have desired qualifications?
- What are the policies and choices of countries for attaining the goal of development of adequate teachers?
- What structures and mechanisms and process are adopted?
- What kind of support and opportunities are available to teachers in beginning and for continuous training to make teacher education more professional?

There was agreement among the participants that 'positive image' that reflects about teachers in many countries is one attraction. Many women and men prefer teacher career for reasons like fixed suitable timings, stability and a status in a civil society. But the problems identified in teacher career: low salaries, heavy workload, poor working environment, lack of continuous training and support, gender and ethnic biases and disparities in working conditions in rural urban areas are the reasons for teacher career getting diluted and less attractive leading to the world's teacher gap. Further, the low investments by governments on education reflects the lack of seriousness of Governments and International Organisations on the issues leading to the crisis of teacher education leaving a wide gap in the demand and supply of teachers to achieve the national and international goals set for Universal Primary Education.

On the other hand, the interesting observation is the emerging new trends and demands of the teachers and the potential learners of 21st Century looking for alternate flexible learning and skill training opportunities for their capacity building and livelihood, which has direct impact on the curriculum, course design, development and mode of delivery and learner support. This implies the need for innovative reforms and restructuring the 'Education System' and 'Teacher Education' in particular to be in tune with the changing society and educational demands.

Emerging New Demands of 21st Century Learners

In ever-changing global socio-economic, educational and job cultures and contexts, the learners of 21st Century definitely have different types of educational aspirations and demands. This applies to learners of any school level, territory and professional level programmes and 'Teacher Education' is no exception which, in fact, needs constant up-gradation of teaching/learning technologies and skills in this emerging world of Information and Communication Technologies (ICTs). It is essential to frame the policies, adopting new innovative strategies and models by the governments for upgrading the capacities and skills of the teacher community to meet the demands of the 21st Century learners. Providing educational services from anywhere at any time has become a motto in this Internet, Web-based world of job markets. To be in tune with emerging trends of service/job demands and learners' aspirations, appropriate learner-friendly learning technologies and resources for education, training from any place at any time has become a necessity. ICTs enabled audio

video CDs, interactive multi-media e-learning course material, online courses/programmes, have been replacing conventional methods of teaching/learning in all spheres of education; especially in school and college education to meet the increasing demand and enrolments. Revamping 'Teacher Education' with appropriate curriculum, content and models for professional development of teachers in large scale is a big challenge before governments. The emerging ICT enabled open/distance teaching/learning culture will solve this problem provided the governments utilize the O.D.L. system innovatively.

The new ICTs are the cause and effect for this situation of global educational demands and supply markets. The countries that delay their educational policies, approaches in adopting ICT based ODL strategies to meet the educational demands, may lag behind and become obsolete. Technology Mediated Open Distance Education (Tech MODE) strategies and models have been gaining popularity because ICT based flexible teaching/learning strategies reach the unreached clientele groups through network systems and promote independent learning through learner-friendly print, audio/video and internet , online based interactive multi-media teaching/learning with learner support systems involving human element: facilitators/counsellors/tutors.

Asha Kanwar (2011) in an interview with 'Digital Learning Journal' observed–

> *"*Many *countries have elaborated ICT policies but we need ICT in Education policies and clear implementation strategies, if we wish to optimize the benefits of technology. There has to be a holistic approach which will incorporate training for teachers and a radical change in pedagogic practice".*
>
> *"The Commonwealth of Learning, we do work with governments and institutions in 46 of the 54 Commonwealth Member States at all levels of the educational spectrum– in the formal sector, our focus is on teacher education, open schooling at the secondary level and improving the quality of distance higher education through the use of ICTs. In the non-formal sector we support the use of technologies for skill development".*

Tech-Mode Strategies for Teacher Education

Some of the Tech-Mode strategies emerged and adopted successfully for teacher education are worth mentioning like: Teacher e-Education (TeE) in China, Interactive Radio Instruction for in-service teachers in South Africa, Community Radio for school and teacher education and using cell phone to enhance teacher education.

(a) Teachers e-Education (TeE) in China:

Towards 'Life-long Learning' framework for teacher professional development, China has made continuing efforts through' Teacher e-Education (TeE) Lifelong Learning system. Teacher e-Education (TeE) in China, a new concept and a new approach which enable providing Lifelong Learning opportunities for teachers with support of ICT. Teacher e-Education has emerged in the area of educational technology and has become a major requirement for teacher professional competence as well as a pre-requisite step into the Lifelong Learning system. For the promotion of TeE, a special group called National Steering Committee for Teacher e-Education (NSCTeE) was established drawing experts from the field of educational technology and information technology as members.

This Committee suggested the following measures for implementation of TeE in 2001:

1. Speeding up the construction of infrastructure for TeE.
2. Speeding up the development of learning resources for TeE.
3. Enhancing the quality of pre-service education programmes on information technology and educational technology.
4. Exploring new models of teacher education and instructional management in the context of e-Education through research based efforts.
5. Enhancing the leadership, management and evaluation in the process of TeE.

Considerable number of projects have been initiated by local Governments in China towards e-Education like Regional Teacher Education Centres in different provinces, there have been more than 50 online programmes dedicated for teachers' continuing education. In China, according to the rules of K 12 teachers, it is the right as well as the obligation for 10 million teachers to step into the Lifelong Learning system, as a realistic option for using ICTs to facilitate teachers' Lifelong Learning. It has become obligation for the teachers to develop their capabilities in ICT application and also bring students into era of e-Education which has become a critical element for teachers' continuing learning as well as their professional development.

(b) Interactive Radio Instruction for In-service Teachers

An evaluation of Distance Education Programme for teachers of the University of Writwater and Johannesburg supporting the teaching of English using "Interactive Radio Instruction" was done by Adilia Silvia (2001-2003). The programme evaluated was the South African Radio Learning Programme, which used the interactive radio as a basis for both teachers and learner development at school and classroom levels. In addition, the programme provided in-service training for teachers and classroom support based on Open Learning principles. The study also investigated whether the programme had provided a vehicle for community empowerment at the individual, organizational and community levels as per Zimmerman's (2000) Model of Empowerment. On the basis of data collected it was concluded that:

Teachers reported benefits in terms of improved classroom management, teaching practices and they were also empowered through Interactive Radio.

(c) Community Radio for School and Teacher Education

Community Radio (CR), the mass medium which can be utilized for local community development purposes, has got great potential for educational communication and awareness building among the specified community of an area. A number of developing countries are utilizing the C.R. for school and adult education and for development activities of a community. Commonwealth of Learning (COL), through Commonwealth Educational Media Centre for Asia (CEMCA), is helping and supporting the installation of C.R. and by conducting workshops on C.R. operation and preparation of programmes. Community Radio, if utilized in a creative approach , is a highly potential medium for training and capacity building of pre-service, primary and in-service teachers of a specific geographical community; remote/hilly terrain.

(d) Using Cell Phones to enhance teacher learning

Terry B (2009) presented a paper in environmental education in SITE (Society for Information Technology & Teacher Education) International Conference at Charleston, SC, USA March 2, 2009. Her study focused on how action-learning-sets helped pre-service teachers (PST) to use cell phones to augment their developing pedagogy. The school based, action learning sets consisted of groups of pre-service teachers allotted to the five schools that participated in the study. For six weeks, the PSTs worked in Paris to teach a class for two hours per week. During this period, the PSTs had access to cell phones that had inbuilt cameras, excel, word, audio recording, video recording, internet and e-mail features. These cell phones were used to support and inform the teaching of an environment education unit. The findings indicated that the action learning sets provided a vehicle for sustained and targeted professional growth. The phone provided evidences of its growth as well as record of teaching dilemmas that arose. SMS messages were used as a support tool before and after teaching.

A number of countries are utilizing cell phones, virtual environment, video conferencing, web based internet media for enhancing pre-service teachers' professional identity, field placements, improving teachers' perceptions etc.

UPE and Open Schools

The successful effort to meet the goal of UNMDGs (2000), i.e., "Achieve Universal Primary Education" has shown considerable increase in enrolment in primary education and this has led to increase in potential secondary school students world over putting pressure on secondary schools and teacher demand.

'Open Schools' came into existence as an alternate solution to meet the demand of Primary and Secondary School Education in developing countries. Open Schools established on the same concept and principles of Open Distance Learning, are providing open access and flexible teaching/learning methodologies to school drop-outs and other students that include young mothers, working adults who are willingly opting for 'Open School' system to acquire skills, knowledge and to improve their livelihood.

In India and other developing countries without 'Open Schools', it will not be possible to accommodate the secondary surge through the conventional provision of secondary schooling, skill training and adult education in classrooms in public institutions. Open schools should be seen as catalysts for integrating all elements of schooling into an 'Educational Ecosystem' fit for the 21st century (Daniel, 2010). 'Open Schooling' is a particularly promising alternative that can also be integrated with 'teacher education' institutions with ICT mediated O.D.L. approaches to make them more cost-effective and cost-efficient continuous in-service teacher training centres. An integrated approach also holds the promise of providing education that is better adapted to the needs of the 21st century. It can remove the unhelpful distinction between formal and non-formal education; build a bridge between knowledge acquisition and skill development; and has the potential to reduce the inequalities of access that blight conventional provision in most countries. Governments must encourage alternative approaches, particularly providers that can deliver quality learning at scale with low costs.

The advent of 'Open Schools' prompted the international organizations like Commonwealth of Learning (COL) to initiate capacity building programmes/workshops to train educators, administrators, policy makers of different countries in development and operation of Open Schools. 'Open School' system paved the way for the need for optimum utilization of the material and manpower resources. The existing teachers of conventional schools need to be oriented and trained in ICT skills, design and development of Self-Instructional Course Material (print, audio/visual material) for Open School children and provide support. Involvement of teacher/counselor, "Human Element" for considerable time for facilitating effective learning is essential in Open Schools. Unlike conventional face-to-face classroom, the teacher counselors of Open School need to understand the concept of ODL and require specific skills to facilitate and support the students of 'Open Schools' to negotiate with the print audio/video material to come out successfully.

Creation of Open Education Resources (OERs) for Teacher Development

Most of the learning materials are now developed in digital formats, even though they may eventually reach students in the form of printed materials. Holding materials electronically has three advantages: they are easy to move around; they can be readily adapted and revised; and can be converted to e-Learning formats when online learning becomes a possibility.

Further, there is a growing movement, inspired by the ideal that knowledge is the commonwealth of humankind, to create a global intellectual commons in which learning materials are shared. This movement involves many thousands of teachers, at all levels, creating Open Educational Resources (OERs).

The William and Flora Hewlett Foundation, which has supported various OER projects in higher education, is now supporting similar work in Open Schools through a programme that combines the professional development of teachers with the development of OERs. For example, 20 sets of self-instructional learning materials on the secondary curriculum have been produced in six developing countries: Botswana, Lesotho, Namibia, Seychelles, Trinidad & Tobago and Zambia.

This material is suitable for use both in open and conventional schools and permits open schools to offer current and new subjects through both print and online teaching. The programme also created a pool of one hundred trained and experienced master teachers, who now train other teachers in their countries and support online materials development. These master teachers have been trained in the use of the Commonwealth of Learning's instructional design template and have the skills to develop learning materials collaboratively online through a common Learning Management System (LMS), thus creating a new network of expertise in developing countries.

Creating Integrated Quality Learning Environment for Teacher Education

The Governments world over require to adopt a multipronged approach to meet the requirement of quality teachers of primary and secondary education by creating

complementary, alternative and integrated learning environments with suitable quality material and manpower resources to prepare the teachers of 21st Century to meet the classroom based teaching and Open Schools. The Teacher Education curriculum and training need to integrate the concept and skills of classroom as well as ODL systems. John Daniel (2010) felt the need for creation of a 21st Century Educational Ecosystem that integrates Conventional School System with Open Schooling, Teacher Education and Communities. He observed that, *"The creation and expansion of Mega-Schools (Open Schools) which combine distance learning with community support have a proven track record of increasing access at scale"*. John Daniel in his latest book 'Mega Schools', Technology and Teachers, Achieving 'Education for All' has quoted examples of Open Schools and teacher education programmes operating at scale in the world.

Status and Initiatives on Teacher Development in India

The Education Commission (1964-66) submitted a comprehensive report, which served as a basis for establishing a uniform national structure of education covering all stages and aspects of education. It emphasized the necessity of professional preparation of teachers for qualitative improvement of education. Recognizing teacher education as a distinct academic discipline of higher studies different from pedagogy, it suggested establishing schools of education in certain universities, starting of extension programmes, increase in the duration of training of teachers, opening of comprehensive colleges, exchange of teacher educators, and revision and revitalization of courses of study. The commission laid stressed on the importance of practice teaching and in-service education. It recommended allocation of more funds for teacher preparation, better salaries and improved service conditions for teachers and their educators to attract competent people to the profession. As a result, the non-statutory National Council for Teacher Education (NCTE) was set up in 1974 by a resolution of the Government of India and was located in the National Council for Educational Research and Training (NCERT). It brought out its first curriculum framework in 1978. Later in 1993 the statutory NCTE was established by an Act of Parliament.

As a statutory body responsible for the coordination and maintenance of standards in teacher education, NCTE issued a Curriculum Framework for Quality Teacher Education in 1998. Before issuing it, the Council sought and ensured a national consensus in its favour. This is a comprehensive document that deals with almost all aspects of teacher education.

Its salient features were:

* Increased duration and multiple models of teacher education;
* Updating of theoretical and practical components of teacher education by giving new orientation and adding new inputs to the existing programmes;
* Emphasis on developing professionalism, commitment, competencies and performance skills;
* Optimal utilization of the potentialities of community, university and Information and Communication Technology (ICT) for preparation of teachers;
* Making provisions for preparation of teachers for the neglected sections of society; and
* Suggesting alternative educational programmes for teachers of gifted children, teachers of senior secondary schools and specialized programme of education for teacher educators.

Its recommendations were implemented but the qualified teachers' gap remained. The globalization, liberalization, privatization and Information and Communication Technology (ICT) brought new pressures on the education system in terms of curriculum, pedagogy, teachers' skills, methodology of teaching integrating ICTs. The changes in the society put new demands on "teacher education". Preparing the students for 21st Century made the teaching community to bring about new learning skills: 'learning to learn', 'learning to do', 'learning to live together, and 'self-directed learning' to cope with the demands of Knowledge Society and Knowledge Economy. All these changes demand a fresh look at 'Teacher Education'.

The agenda, before the NCTE is to revamp 'Teacher Education' or 'Professional Development of teachers' to face the new challenges. To realize this, the important NCTE decisions are:

* To create all necessary needed resource core and use these for institutional planning with mid-term appraisal for quality improvement of the Teacher Education Institutions (TEIs);
* To promote and strengthen action research and faculty research projects; and
* To make its teacher education programme(s) more and more school-based, vibrant and collaborative between schools and the TEIs.

Drawbacks of Teacher Education in India

- Teacher education programmes are essentially institution-based.
- Their students (teachers) need to be exposed more and more to the realities of school and community, internship, practice of teaching, practical activities and supplementary educational activities need to be better planned and organized more systematically.
- In certain areas, the supply of teachers far exceeds the demand while in others, there is acute shortage and unqualified teachers are working under different names.
- The manpower planning is practically absent in teacher education.
- The curriculum, pedagogy and evaluation of teacher education need improvement and radical transformation and reformation.

Initiatives to Bridge the Teacher Gap in India

While the literacy rate of the country has reported a sharp increase from 18.39% in 1950-51 to 74.04% in 2011, nearly 304 million people in the age group 7 years and above are still illiterate in the country. 42 million children in the age-group 6-14 years do not attend school. High drop-out rates, low level of achievement, low participation of children from disadvantaged sections of society are the major problems. Approximately 16.64 per cent villages of the country do not have facilities of primary schooling. There are other problem areas such as inadequate school infrastructure, non-availability of teachers in remote rural, hilly and tribal areas, high teacher absenteeism, large scale teacher vacancies, and inadequate allocation of resources on education to meet the expenditure.

The average Pupil Teacher Ratio for All India is 1:42. Though enrolment rates have shot up, there has not been a corresponding increase in the number of teachers.

To overcome the problem of teacher shortage and teacher absenteeism, the "para teacher" scheme has been introduced in India. Para teachers are generally members of the same community in which they teach, and therefore, share many of the experiences and cultural practices of their students, including their primary languages and cultural practices. In India, the state of Rajasthan has successfully overcome the problem of both teacher shortage and teacher absenteeism through these para teachers under the 'Shiksha Karmi Project' which is also the origin of para teacher scheme in the country. India at present has more than 500 thousand para teachers in different states.

UNICEF 'Global Campaign for Education – more teachers needed' project, developed the "quality package" to demonstrate on schools. The key activities for delivering the Quality Package are: (i) delineating quality in four key areas: school and classroom environment, teaching-learning processes, teacher support, school and community linkages; (ii) evaluating each school's situation to understand and develop plans on how best to reinforce school effectiveness and enhance student learning; (iii) curriculum development, teacher support and training, and strengthening community involvement; and (iv) developing a child-friendly environment by advocating for child-centred teaching-learning processes, creation of a school government and maintaining high hygiene and sanitation and safety standards.

The District Information System in Education (DISE), a UNICEF-supported initiative, has emerged as the official computerized database for monitoring key education indicators (gross/net enrolment, school infrastructure, teachers) – covering 539 districts across India in 2005. The gravity of the problem of 'teacher gap' in India requires a multipronged approach integrating the contributions of all international bodies like UNESCO, UNICEF, the Non-governmental Organizations (NGOs) and local teacher community and people to create the models for teacher development. The national/state and local governments need to intervene with suitable policies and action plans to realize teacher development models suitable for Indian conditions.

Net-work of Teacher Education Resource Centres (NTERCs): A Model for India

For India, being a developing country with huge population and continuous demand for qualified teachers, there is need for flexible, cost-effective creating Lifelong Learning Environments that is ICT enable ODL model for teacher education; a net work of teaching/learning resource centres which are flexible in terms of access, space and time that facilitate continuous lifelong learning and training for teachers of pre-service as well as throughout their career. In addition to the existing teacher education colleges, there is need to create a nation-wide network of "Teacher Education Resource Centres (TERCs)" in collaboration and partnership with well established B.Ed. colleges and national, international organizations like NCTE, COL, UNESCO, UNICEF, Non-Government Organizations and local teacher community. The TERCs will have ICT mediated Open Distance Learning (O.D.L) teaching/learning material resources printed and audio-video media and facilitators/counsellors to counsel and train the pre-service and in-service teachers, thus creating a continuous lifelong learning environment to the teachers.

The Network of Teacher Education Resource Centres (NTERCs): Model is proposed to scale up the development of teachers through a three staged 'Teacher Development

Approach' by creating ICTs mediated Open Distance Learning (O.D.L.) Teacher Education resource centres. The proposed Three Stages of Teacher Development Approach are:

Stage – I Pre-Service teachers' development
Stage – II In-service teachers' development
State – III Continuous training or Lifelong learning for teachers

Creation of the three types of Teacher Education Resource Centres in each Mandal of a district is a pre-requisite for this model. They are:

- Primary School Teacher Education Resource Centres (PSTERCs)
- Secondary and Higher Education School Teacher Education Resource Centres (SSTERCs)
- Lifelong Learning (L3) Teacher Education Resource Centres (L3TERCs)

These centres will have Self-Instructional Material (SIM) print and electronic media and internet based e-learning and Open Education Resources (OERs) for teacher education that promote mostly **self-directed learning** with facilitators (Teacher Trainers) depending upon the stage of Teacher Development as detailed below. The qualified, committed, retired teachers can be appointed as consultants or counsellors in Teacher Education Resource Centres.

Stage - I

Pre-Service Training

Potential teacher candidates with required basic educational qualification need to be exposed to the fundamental aspects of Teacher Education, (qualities, skills and commitment as a teacher) through the self-instructional/self-directed learning modules of print, Audio-video modules of materials for Pre-service teacher training in Teacher Education Resource Centres (PSTERCs)

↓

Potential candidates with preliminary training in these centres after requisite qualifications and screening will get recruited as teachers in Primary Schools (with I to V classes).

Stage - II

In-Service Classroom Training

The teachers recruited into Primary Schools undergo in-service classroom based training preferably in the same schools with ICTs mediated Open Distance Learning (O.D.L.) teacher training modules and A/V resources under the guidance of trained Resource Persons (teacher trainers) drawn from Secondary School Teacher Education Resource Centres (SSTERCs).

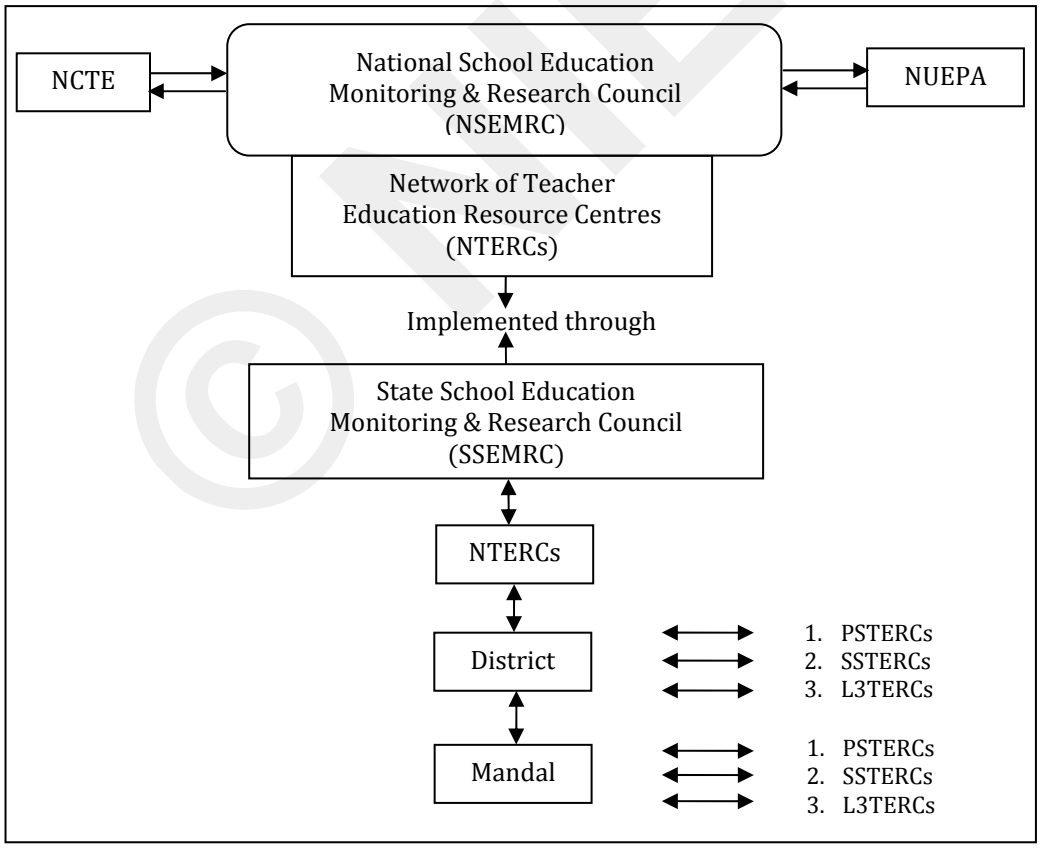
↓

In-service Trained Primary Teachers through proper Screening Test and orientation/retraining get promoted as teachers of secondary and senior/higher secondary schools.

Stage – III Continuous Up-gradation or Life Long Learning of Teachers	Teachers of Secondary and Higher Secondary Schools need to upgrade their skills throughout their career through Lifelong Learning (L3) Teacher Education Resource Centres (L3TERCs) that provide material and manpower resources to support them for continuous upgradation/updating their knowledge and skills through self-directed learning.

The pool of the O.D.L. teaching/learning resources in different languages and the trained teachers with different linguistic and cultural background becomes a common national resource contributing for professional development of teachers. Demographic factors like, population, geographical distances, language and other cultural aspects have to be considered while planning and creating the network of these TERCs from mandal levels to districts, towns and cities. The TERCs with print, audio/video learning materials libraries will provide for the facility to borrow or hire purchase the ODL print/audio/video material by the teacher candidates and teacher trainers and also provide for face-to-face interaction and training with experts facilitating the use of online/e-learning materials.

Diagrammatic Representation of the proposed NTERCs model for India



Conclusion

To address the crisis of teacher gap, the countries world over need to revisit, the entire policies and process of 'School Education System and Teacher Education Training along with concerned curricula, content and methodology of teaching/learning. This has got implication for the development of curriculum, content and methodology and models of teacher training for professional development of teachers relevant to knowledge society and knowledge economy. The Government of India, other developing and under-developed countries need to take appropriate policy decisions with commitment to work out innovative models that are cost-effective, flexible in terms of access to the teachers to course material and training at any time anywhere to scale up the development of teachers. As the existing conventional method of teacher development approach cannot meet the quantity of qualifies teachers. Indian government keeping in view the less resources and huge teacher gap, need to take appropriate policy decisions to plan and to invest profusely on creating a nation-wide network of 'Teacher Education Resource Centres' (TERCs) by integrating B.Ed. Colleges, Conventional Schools and Open Schools to facilitate pre-service and in-service teacher education/training to scale up professional development of teachers. To bridge the teacher gap in India, an autonomous body at national level; 'National School Education Monitoring & Research Council' (NSEMRC) and at state level; 'State School Education Monitoring & Research Council' (SSEMRC) may be established in collaboration with 'National Council for Teacher Education' (NCTE) and 'National University of Educational Planning and Administration' (NUEPA) to frame the policies, modalities, to monitor and to control the proposed network of 'Teacher Education Resource Centres' **(**TERCs).

References

Adilia Silv, "Open Learning Educational Development and Empowerment: A theory-Based Evaluation using a logical model", wpeg.wits.ac.za/…/case_studies/B_case_study_ Adilia_completed_ Evaluation.pdf.

Bill No. XIX-C of (2010): The Right of Children to Free and Compulsory Education (Amendment) Bill, As passed by the Rajya Sabha on 24th April, 2012; http://www.wbsed.gov.in/wbsed/ readwrite/0601116.pdf

Caroline Dyer, (1996) Edinburg papers in south Asian Studies, "The Improvement of Primary School Quality in India**:** Successes and Failures of Operation Blackboard" *www.csas.ed.ac.uk/__data/assets/pdf_file/0009/.../WP04_DYER.pdf*

Daniel, S. J., (2010): Addressing the Successes and Failures of the Campaign for Universal Primary Education, www.col.org/resources/speeches/2010presentations/

Digital Learning Journal (2010 January), "Expanding Human Learning Through Technology", India, digitallearning.eletsonline.com/expanding-human-learning

Govida, R, Josephine, Y, (October 2004) UNESCO, IIEP, "Para Teachers in India – A Review" NIEPA, New Delhi, ww.unesco.org/iiep/eng/research/basic/PDF/teachers5.pdf

India. Page 1 of 7. Education statistics: India. *"UNICEF, Division of Policy and Practice, Statistics and Monitoring Section",* www.childinfo.org, May 2008; www.childinfo.org/ files/ROSA_India.pdf

Jomtien, Thailand (1990), Dakar, Senegal (2000), *Report on "World Forum on Education for All",* en.wikipedia.org/wiki/Education_For_All.

Saurav Shukla**,** Teacher Shortage, Could Hamper Universal Education Goal,

Teacher Education: Background, *teachersity.org/resource.php? cat_id=8&content_ id=85*

UNESCO (2008): *"Education for All by 2015: Will we make it?",* EFA Global Monitoring Report, unesdoc.unesco.org/images/0015/001547/154743e.pdf

UNESCO, Institute of Statistics — Information Sheet No. 3. *"Projecting the Global Demand for Teachers: Meeting the Goal of Universal Primary Education by 2015"* UNESCO, Institute of Statistics-Information sheet No.6. *"The Global Demand for Primary Teachers–2011 Update", www.uis.unesco.org/Education/.../IS6-2011-Teachers-EN6.pdf*

UNICEF, "Global Campaign for Education — more teachers needed — UNICEF/India/2006" *www.unicef.org/india/education_1551.htm*

United Nations Development Programme: *"The Millennium Development Goals – Eight Goals for 2015";* http://www.undp.org/content/undp/en/home/mdgoverview.html

www.topnews.in/teacher-shortage 09/04/2010

www.unesco.org/education/wtd2009/infosheet_No3.pdf

Zhu Zhiting & Gu Xiaoqing (Educating Educators: June 2007): "An e-Education approach to Teacher Professional Development in China" – *Asia Digital Learning Magazine*, November 2011. digitallearning.eletsonline.com/tag/asia/

NATIONAL UNIVERSITY OF EDUCATIONAL PLANNING AND ADMINISTRATION

(Declared by the GOI under Section 3 of the UGC Act, 1956)
17-B Sri Aurobindo Marg, New Delhi-110016
Web: www.nuepa.org

ADMISSION NOTICE 2013-14

(i) M.Phil. Programme
(ii) Ph.D. Programme
(iii) Part-time Ph. D. Programme

The National University of Educational Planning and Administration (NUEPA), is engaged in capacity building and research in educational policy, planning and administration. NUEPA, which is fully funded by the Ministry of Human Resource Development, Government of India, offers M.Phil., Ph. D. and Part-time Ph. D. programmes in educational policy, planning and administration from a broader inter-disciplinary social science perspective. The research programmes of NUEPA cover all levels and types of education from both national and international development perspectives. NUEPA invites applications from eligible candidates for admission to its M.Phil., Ph.D. and Part-time Ph.D. programmes for the year 2013-14. While selecting the candidates for admission, NUEPA will follow all mandatory provisions in the reservation policy of the Government of India. Admissions to M.Phil., Ph.D. and Part-time Ph.D. programmes will be made purely on the basis of merit following the prescribed criteria of the University.

Fellowships

Selected candidates for the M.Phil. shall be offered stipend and those selected for Ph.D. shall be offered a fellowship at par with UGC rates. The NET qualified candidates, who have been awarded Junior Research Fellowship by the UGC and who fulfil the required qualifications, are encouraged to apply.

Eligibility Criteria

Full-time Programmes

(a) A candidate seeking admission to the M.Phil. and Ph.D. programmes shall have a minimum of 55% marks (50% marks for SC/ST candidates and Persons with Disabilities) or its equivalent grade in Master's Degree in social sciences and allied disciplines from a recognized university. Candidates possessing Master's degree in other areas may also be considered if he/she has teaching experience or experience of working in the area of educational policy, planning and administration. (b) A candidate seeking admission to Ph.D. programme shall have an M.Phil. degree in an area closely related to educational planning and administration and/or exceptionally brilliant academic record coupled with publications of high quality. (c) M.Phil. graduates of NUEPA will be eligible for admission to the Ph.D. Programme after due scrutiny by a Selection/Admission Committee, if they obtain a FGPA of 6 or above on the ten point scale.

Part-time Programme

A candidate seeking admission to Part-time Ph.D. programme is required to meet the following criteria: (i) Should possess the educational qualifications as mentioned in Para (a) above; (ii) Currently, should be in full-time employment;(iii) Should be a senior level educational functionary with a minimum of five years work experience in teaching, educational planning and administration.

Mode of Selection

The University reserves the right to decide the number of seats to be filled in the year 2012-13; the criteria for screening of applications; and the selection procedure of candidates for admission to its M.Phil. and Ph.D. programmes. The mode of selection of candidates will be as under:

Initial short-listing of applications will be carried out on the basis of relevance and quality of the brief write-up (in the prescribed format) in the proposed area of research to be submitted along with the application form. Short-listed candidates will be required to appear in a written test and those qualifying in written test will be subjected to personal interviews to assess their motivation and potential leading to final short-listing and preparation of panel of selected candidates, in order of merit.

How to Apply

Candidates may apply in the prescribed form for admission to M.Phil. and Ph.D. programmes of the University along with three copies of the brief write-up (in the prescribed format) on the proposed research topic of a contemporary issue within the broad framework of educational policy, planning and administration. For further details, please refer to the M.Phil.-Ph.D. Prospectus, 2013-14 of the University.

The application form and the Prospectus can be obtained from NUEPA by remitting a sum of Rs.200/- (Rs.100/- for SC/ST candidates) by demand draft in favour of Registrar, NUEPA, payable at New Delhi if required by Post or purchased in person. The Prospectus can also be downloaded from our website: www.nuepa.org and demand draft of Rs.200/- (Rs.100/- for SC/ST candidates) should be attached with the application at the time of submission to NUEPA.

Last Date of Applications

Application should reach the Registrar, NUEPA, 17-B, Sri Aurobindo Marg, New Delhi-110016 on or before **10 May 2013**. For further details, please visit our website **www.nuepa.org**

Registrar

Journal of Educational Planning and Administration
Volume XXVII, No. 1, January 2013, pp. 33-49

Human Development of Major States in India During the period 1993-94 to 2004-05

A. Vamsi Krushna*

Abstract

This paper empirically examines convergence of human development index and its components across 15 major states of India during the period 1993-94 to 2004-05. Based on the median human development index change values the 15 major states are grouped into two groups such as high and low human development group states. Unconditional beta convergence and sigma convergence techniques have been applied for the human development indicators to observe the nature of convergence or divergence of human development indicators among the three groups of states (including total states). Interesting results have emerged from these analyses. All the groups of states have shown divergence nature in Average Monthly Per Capita Expenditure (AMPCE) indicator. The performance of states in the human development area is highlighted in such a way that along with HDI all its remaining human development indicators viz., ISR, Life Expectancy, Adult Literacy and Schooling converge for all the three groups of states during the study period. The most important conclusion drawn from both unconditional beta and sigma convergence analyses is that the low human development group of states rate of convergence is more than that of high human development group of states in more HDI indicators.

* Dr. No. 4-51-16, Lawsons Bay Colony, Visakhapatnam-530017, Andhra Pradesh.
E-mail: avkrushna@gmail.com

Introduction

The concept of human development has been developed by a number of economists, prominent among whom are Dr. Mahbub-ul-Haq and Nobel Laureate Dr. Amartya Sen. Explaining the concept of human development, Prof. Amartya Sen writes, the process of *widening people's choices and the level of well-being they achieve are* the core of the notion of human development. But regardless of the level of development, the three essential choices for people are to lead a long and healthy life, to acquire knowledge and to have access to the resources needed for a decent standard of living.

Two things must be noted in regard to human development index (HDI). First, it measures *relative* and not *absolute* level of human development. Second, the focus of human development is on the *goals* or *ends* of development which are (1) long and healthy life; (2) the level of knowledge; and (3) a decent standard of living and not on real per capita income alone. In fact, human development index is a composite measure of well-being based on life expectancy; literacy level; and real per capita income. It is important to note that human development index attempts to make ranking of different countries on a scale of 0 (lowest human development) to 1 (the highest human development) (Ahuja, 2004).

Studies on Human Development in India

Nirvikar Singh et al (2003) observed that human development indices do not show the same increase in regional inequality and India's record with respect to inequality in the post-reform period is not bad, with respect to potential problems of growing regional disparities. Noorbakhsh (2003) analysed regional disparities amongst major states in India to find out if they are on a convergence or further divergence course and compared human development and poverty indices for various states in India and investigated if there has been any reduction in disparities over a decade. He observed that regional inequalities in India, initially high in the 1980s, have not been reduced significantly after a decade and there is little evidence to suggest that any convergence of B type or of J type is taking place amongst the states in India which shows divergence rather than convergence. Rajarshi (2004) found that the main cause of rising regional disparity in the immediate post-reform period has been the slowering down of the worse-off states and acceleration of the better-off states. Purusottam Nayak (2005) concluded that Indian economy, in spite of being a fast growing developing economy and pursuing the policy of globalization since early eighties, has not been able to achieve much on account of human development and welfare.

Ghosh (2006) evaluated the performance of the 15 major states on human development during the period 1981-2001. He found that convergence has occurred in the case of human development indicators during his study period and also concluded that social sector expenditure has had more effect in reducing regional disparities in human development indicators. Deolalikar (2007), however, concluded that though India achieved tremendous improvement in primary education since its independence, it lags behind in other human development dimensions, especially health and also stated further that different dimensions of human development are strongly inter-related. The existence of strong synergies among the different components of human development means that integrated and simultaneous action on all the dimensions of human development will be very cost-effective.

Ajit and Arbenser (2009), based on the concept of stochastic convergence, employed two widely acclaimed panel unit tests, viz., the Levin-Lin-Chu (LLC) and Im-Pesaran-Shin (IPS) panel unit root tests to assess the convergence hypothesis issue in Human Development Indicator for six different world regions. The authors found that empirical results based on these two tests are somewhat mixed: while the LLC results generally found evidence of convergence (at least based on HDI deviations from the average of each region), the results based on LLC and the IPS panel unit root for the group-leader model do not find any evidence of convergence. Further the authors expressed that these results are not entirely surprising, given the heterogeneity of institutional, social and economic structures of countries in a region and the outcome as a result. Finally, the authors suggested the scope for further research in this area as "it is quite possible that individual components of HDI could converge at least in the regional context and this requires further study".

Roy and Bhattacharjee (2009) examined the issue of convergence of human development among major Indian States using State-wise decennial data for HDI (1981-91 to 1991-01). They observed that the low HDI states were growing faster than the high HDI states. However, at the same time dispersion of their cross-sectional HDI is not decreasing over time. This is a trend which implies the absence of (sigma) convergence in HDI over time among the Indian states.

In this context, this papers objective is to study the presence or absence of convergence of human development indicators for the 15 major states of India during the period 1993-94 to 2004-05.

Theoretical Juxtaposition of Convergence

The concept of convergence is basically derived from neo-classical model of economic growth by Solow (1956) and Swan (1956). Their model predicts that rate of saving is positively related to the growth in output per worker and the growth rate of labour force is negatively related to the growth in output per worker after accounting for the rate of technological progress and the rate of depreciation of capital. The model further predicts that the country, with lower per capita capital stock and therefore lower per capita income, will grow at a faster rate. This would result into convergence of their per capita income levels as well as the growth rates which are assumed to be the same in the long run. This phenomenon is due to the diminishing marginal productivity assumption in the model (Rekha Mehta and Rakesh Kumar, 2008).

Types of Convergence

Convergence/Divergence phenomenon can be analysed with the help of three well defined statistical hypotheses, namely, s convergence; absolute b convergence; and conditional b convergence formulated by Barro (1991) and Barro and Sala-i-Martin (1992).

Unconditional Convergence

At the heart of the Solow model is the prediction of *convergence,* but the notion of convergence comes in several flavours. The strongest prediction, and therefore, the one that is potentially the easiest to refute, is called *unconditional convergence*. Suppose that countries, in the long run, have no tendency to display differences in the rates of technical

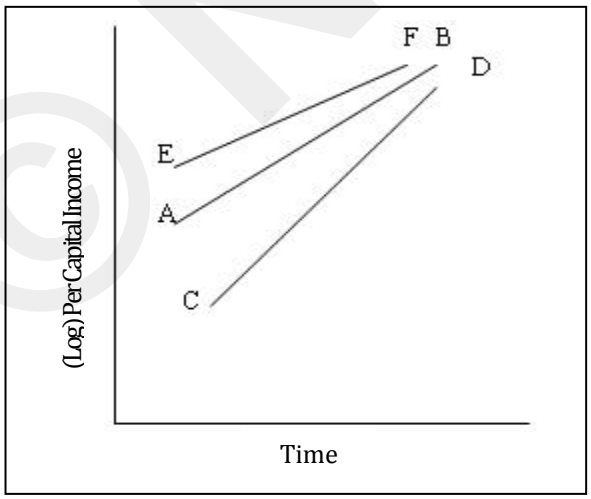
progress, savings, population growth and capital depreciation. In such a case, the Solow model predicts that in *all* countries, capital per efficiency unit of labour converges to the common value k^*, and this will happen irrespective of the initial sate of each of these economies, as measured by their starting levels of per capita income (or equivalently, their per capita capital stock). What are assumed to be the same are exogenous parameters of the model, but not the initial level of the capital stock or per capita income.

The claim of convergence is then based on the analysis for the Solow model is that in the face of similar parameters governing the evolution of the economy, *history in the sense of different initial conditions does not matter.* Plot the logarithm of income against time, so that a constant rate of growth (such as that experienced in the steady state) appears as a straight line (See Figure-1). The line *AB* plots the time path of (log) per capita income at the steady state, where income per efficiency unit of labour is precisely at the level generated by k^* . The path CD represents a country that starts below the steady-state level per efficiency unit. According to the Solow model, this country will initially display a rate of growth that *exceeds* the steady-state level, and its time path of (log) per capita income will move asymptotically toward the AB line as shown. Over time, its growth rate will decelerate to the steady-state level.

Likewise, a country that starts off above the steady state, say at E, will experience a *lower* rate of growth, because its time path EF of (log) income flattens out to converge to the line AB from above. At least, that is what the hypothesis has to say.

Convergence, then, is indicated by a strong negative relationship between growth rates of per capita income and the initial value of per capita income (Debraj Ray, 2007).

FIGURE 1
Unconditional Convergence



The first crude test of the 'new' growth theory is to see whether or not poor countries do grow faster than rich ones, or, in other words, to see whether there is an inverse relation between the growth of output (or output per head) and the *initial* level of *per capita* income.

If there is, this would provide support for the neoclassical model. If there is not, this would support the new growth theory's assertion that the marginal product of capital does not decline. The equation to be estimated is

$$g_i = a + b_1 (PCY)_i$$

Where 'g_i' is the average growth of output per head of country I over a number of years and PCY_i is its initial level of *per capita* income. A significantly negative estimate of b_1 would be evidence of **unconditional convergence** or **beta (β) convergence** as it is called in the literature; that is, poor countries growing faster than rich without allowing for any other economic, social or political differences between countries. The estimate of b_1 is not significantly negative; in fact it is invariably positive, indicating divergence (Thirlwall, A.P, 2003).

Conditional Convergence

For economies which differ in their steady states, Barro suggested the possibility of conditional convergence, which means that the farther away the economy is from its steady state, the faster it should grow. The typical equation for a cross-country growth regression is of the following form:

$$\frac{1}{T}\ln(y_n / y_{oi}) = \alpha + \beta \ln(y_{oi}) + \gamma x_i + \varepsilon_i$$

The dependent variable is the annual growth rate of per capita income (y) over the period (o, T) for country 'i', and the explanatory variables are log y_{oi}, y_{oi} being initial level of per capita income, and x_i, where x_i is a set of variables that are supposed to determine country i's steady state level of per capita income and ε_i the disturbance term for country 'i'. For conditional convergence to hold, the estimate of β should be significantly negative (Barro, 1991).

Convergence Theory

'Sigma' convergence measures the dispersion of real GDP per capita (in constant prices) between regions or countries based on standard deviation of the cross-section series. When the standard deviation is falling (rising) over time, the differences of GDP per capita between regions or countries in absolute terms gradually decrease (increase) and convergence (divergence) is approached. If standard deviation does not show any clear tendency but instead, increases or decreases successively, then a mixed process of convergence and divergence is realized. A different way of measuring the 'sigma' convergence is to use the coefficient of variation which results by dividing the standard deviation with the mean of the sample. The coefficient of variation is a measure of relative variability and is expressed usually, as percentage and not via the units of data in which is referred. If the coefficient of variation decreases over time we have convergence, otherwise we have divergence (Tsagkanos et al. 2006). Generally, this approach is useful because it helps at once examine the convergence at absolute level and study this hypothesis diachronically.

Limitations of the Study

The selection of the time period is based on the availability of data on human development indicators. The Government of India first published its National Human Development Report, 2001 in 2002. As the study is focused on post-reform period, i.e. after 1991, the state-wise human development reports are not published regularly. The latest state human development report is published by the Govt. of Andhra Pradesh, Hyderabad in 2008 as "Andhra Pradesh Human Development Report–2007". In this report the selected major states data for the human development index and its sub-components are available for the two periods of 1993-94 and 2004-05. Hence, the study is confined to the period 1993-94 to 2004-05. Moreover, as the data available for only two periods, here the study is confined to unconditional convergence or beta (β) convergence and Sigma Convergence.

Data Sources

Human Development Index and its components values and growth of employment for the selected states have been taken from Andhra Pradesh Human Development Report, 2007 published by Govt. of Andhra Pradesh and Centre for Economic and Social Studies, Hyderabad in 2008.

Methodology

To examine the convergence behaviour of the 15 major states with respect to human development index and its sub-components, regression technique has been applied. To compute growth rate for human development index and its sum-components during the period 1993-94 to 2004-05, annual average growth rates have been calculated.

State-wise Human Development Index (HDI) Values

The methodology used to calculate state level human development index is taken from "*Andhra Pradesh Human Development Report, 2007*". The indicators used for three dimensions of human development are:

- *Decent standard of living*: Average Monthly Per Capita Expenditure (AMPCE);
- *A Long and healthy life*: Infant Survival Rate (ISR) and Life Expectancy (LE); and
- *Knowledge*: Adult Literacy (AL) (15+age) and School Attendance Rate of Children (6-14 years).

The goal posts for the indicators have been fixed at absolute levels to permit inter-temporal comparisons of HDI (See Table 1).

TABLE 1
Goal Posts for State Level HDI

S. No.	*Indicator*	*Minimum*	*Maximum*
1.	Average Monthly Per Capita Expenditure at 1993-94 Prices (Rs.)	100	1500
2.	Adult Literacy Rate (15+age)	0	100
3.	School Attendance Rate (of Children 6-14 Years)	0	100
4.	Infant Survival Rate (Per 1000)	850	1000
5.	Life Expectancy	25	80

Source: Andhra Pradesh Human Development Report, 2007.

The weights used for combining the two subcomponents of health and education are taken from the National Human Development Report (NHDR) of India.

$$HDI_j = 1/3\sum l_{ij}$$

Where, l_1 : Normalised Index of Average MPCE
l_2 : Normalised Composite Indicator on Educational attainment, defined
l_2 = $\{(2/3*l_{21}) + (1/3*l_{22})\}$ where
l_{21} is Normalised Index of Adult Literacy Rate (15years+) and
l_{22} is Normalised Index of Schooling Attendance Rate (6-14 years)
l_3 : Normalised Composite Indicator on Health Attainment, defined as
l_3 = $\{(2/3*l_{31}) + (1/3*l_{32})\}$, where,
l_{31} is Normalized Index of Infant Survival Rate (15+) and
l_{32} is Normalized Index of Life Expectancy.

The Infant Survival Rate (ISR) is defined as 1000 minus Infant Mortality Rate (IMR).

It has been observed that Kerala occupied first rank in 1993-94 by attaining 0.621 HDI value. Punjab is at second place by registering 0.518 HDI value. Maharashtra, Tamil Nadu and Haryana are subsequently standing at 3rd, 4th and 5th positions by attaining 0.499, 0.481 and 0.470 HDI values respectively. Bihar is considered as the worst performer; it received last position by having 0.349 HDI value. Orissa followed it with 0.360 HDI value and got 14th place. Uttar Pradesh, Madhya Pradesh and Rajasthan are at 13th, 12th and 11th places by registering HDI values of 0.363, 0.369 and 0.391 respectively.

In 2004-05 HDI values also, Kerala retained its supreme position by recording 0.673 HDI value. Punjab also maintained its second best rank with 0.588 HDI value. 3rd, 4th and 5th places are attained by Tamil Nadu (0.586), Maharashtra (0.570) and Haryana (0.558) states respectively. Bihar (0.441) once again continued as the worst performer in this category and received last position. Madhya Pradesh (0.452) is the second least performer and placed at 14th spot. Orissa (0.453), Rajasthan (0.463) and Uttar Pradesh (0.476) succeeded it by getting 13th, 12th and 11th positions respectively.

As far as total period ranks are taken into account some interesting results are obtained. Some states which achieved top places in 1993-94 and 2004-05 ranks slipped down to bottom places such as Kerala and Punjab. Quite oppositely those states which are termed as worst performers in the case of 1993-94 and 2004-05 ranks have shown impressive progress and climbed up to mountain such as Uttar Pradesh, Orissa and Bihar. Uttar Pradesh achieved top position by enhancing 0.113 HDI value points from 1993-94 to 2004-05. Second position is obtained by Tamil Nadu by increasing 0.105 HDI value points. Orissa (0.093), Bihar (0.092) and West Bengal (0.091) are consequently reported to have received 3rd, 4th and 5th positions respectively. It is very surprising and distressing to note that Kerala state (0.052) has turned out to be the slowest HDI value increasing state from 1993-94 to 2004-05. Next to it, Punjab (0.070) has been noticed and placed at 14th position. Maharashtra (0.071), Rajasthan (0.072) and Gujarat (0.073) states are at the 13th, 12th and 11th places states in terms of increase in HDI value is considered (See Table 2).

TABLE 2

States HDI Ranks during the Years 1993-94 and 2004-05

Sl. No.	*Name of the State*	*HDI Values*		*HDI Values Change*	*Ranks*		*Ranks for HDI Values Change*
		1993-94	*2004-05*		*1993-94*	*2004-05*	
1.	Andhra Pradesh	0.415	0.503	0.088	10	10	6
2.	Assam	0.429	0.509	0.080	9	9	9
3.	Bihar	0.349	0.441	0.092	15	15	4
4.	Gujarat	0.462	0.535	0.073	6	6	11
5.	Haryana	0.470	0.558	0.088	5	5	7
6.	Karnataka	0.448	0.526	0.078	7	8	10
7.	Kerala	0.621	0.673	0.052	1	1	15
8.	Madhya Pradesh	0.369	0.452	0.083	12	14	8
9.	Maharashtra	0.499	0.570	0.071	3	4	13
10.	Orissa	0.360	0.453	0.093	14	13	3
11.	Punjab	0.518	0.588	0.070	2	2	14
12.	Rajasthan	0.391	0.463	0.072	11	12	12
13.	Tamil Nadu	0.481	0.586	0.105	4	3	2
14.	Uttar Pradesh	0.363	0.476	0.113	13	11	1
15.	West Bengal	0.442	0.533	0.091	8	7	5

Source: Andhra Pradesh Human Development Report, 2007.

To empirically examine the convergence nature of human development index and its components, the 15 states are grouped into two groups by considering median value of change in human development index value such as: 1) High Human Development (HHD) Group States; and 2) Low Human Development (LHD) Group States (See Table 3).

TABLE 3

Classification of States based on Median Value of Change in Human Development Index Value

Category	*States*
High Human Development (HHD) Group States	Andhra Pradesh, Bihar, Haryana, Orissa, Tamil Nadu, Uttar Pradesh, West Bengal
Low Human Development (LHD) Group States	Assam, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Rajasthan

The study empirically tested on unconditional beta convergence and sigma convergence for human development indicators during the study period. This is examined for the two groups of states and for total states in this section.

Unconditional β Convergence Analysis Results

The nature of convergence or divergence of human development components gives an idea that in the course of time whether the low human development group states are able to catch up with the high human development states or not.

To examine the presence or absence of Unconditional β Convergence, regression technique has been carried out. The functional form of the equation is:

$$Y_i = \alpha + \beta X_i + u_i$$

Where Y_i = Dependent Variable
α = Intercept of the regression equation
β = Slope of the regression equation
X_i = Independent Variable
u_i = Error term of the regression equation which distributes normally and independently as zero mean and constant variance.

AMPCE, ISR, LE, AL, SCHOOLING and HDI annual average growth rates are taken as dependent variables and regressed on the initial year log value i.e., 1993-94 log value of each variable which is chosen as independent variable with respect to each individual variable. The presence or absence of the unconditional beta convergence has been decided by the sign of the beta coefficient. If the sign is negative, it exhibits the nature of convergence and *vice versa.*

To compute annual average growth rate of a variable between the period t and t-τ, the following formula is used.

$$[\ln (X_{i,t}) - \ln (X_{i,t-\tau})] / T$$

Where $\ln (X_{i,t})$ = natural logarithm of a variable at time 't'
$\ln (X_{i,t-\tau})$ = natural logarithm of a variable at time 't-τ'
T = length of the time period

Component-wise human development indicators unconditional β convergence analysis results for the two groups of states as well as for total states group are presented below (See Table 4).

TABLE 4
Unconditional β Convergence Results

Model	*(Y GR) $Y = \beta_0 + \beta_1 (X\ LN_{1993-94})$*							
Coefficients	*β_0*	*t (β_0)*	*Sig t (β_0)*	*β_1*	*t (β_1)*	*Sig t (β_1)*	*R^2*	*F*
			AMPCE					
High HD Group States	-0.184	-0.943	0.389	0.036	1.009	0.359	0.169	1.017
Low HD Group States	-0.713	-0.275	0.793	0.162	0.344	0.743	0.019	0.118
Total States	-0.110	-0.874	0.398	0.023	0.984	0.343	0.069	0.969
			ISR					
High HD Group States	0.030	1.790	0.133	-0.000	-1.629	0.164	0.347	2.655
Low HD Group States	0.015	1.959	0.098	-0.000	-1.781	0.125	0.346	3.173
Total States	0.031	3.638	0.003	-0.000	-3.408	0.005	0.472	11.611
			Life Expectancy					
High HD Group States	0.084	1.057	0.339	-0.019	-0.979	0.373	0.161	0.958
Low HD Group States	0.068	3.633	0.011	-0.015	-3.420	0.014	0.661	11.700
Total States	0.080	2.917	0.012	-0.018	-2.734	0.017	0.365	7.476
			Adult Literacy					
High HD Group States	0.088	4.711	0.005	-0.019	-3.874	0.012	0.750	15.005
Low HD Group States	0.098	7.503	0.000	-0.021	-6.529	0.001	0.877	42.627
Total States	0.094	10.070	0.000	-0.020	-8.558	0.000	0.849	73.234
			Schooling					
High HD Group States	0.094	1.967	0.106	-0.018	-1.610	0.168	0.342	2.593
Low HD Group States	0.205	14.166	0.000	-0.045	-13.289	0.000	0.967	176.585
Total States	0.160	6.477	0.000	-0.034	-5.881	0.000	0.727	34.581
			HDI					
High HD Group States	0.002	0.352	0.739	-0.018	-3.330	0.021	0.689	11.091
Low HD Group States	-0.002	-1.329	0.232	-0.018	-11.976	0.000	0.960	143.427
Total States	-0.003	-1.238	0.238	-0.022	-6.837	0.000	0.782	46.751

Average Monthly Per Capita Expenditure (AMPCE)

The positive sign of the beta coefficient indicates divergence nature among the two groups of states and as well as total states. The beta coefficient is not statistically significant for both High and Low Human Development group of states and also for total states group. Regarding the rate of divergence is concerned, the Low Human Development states group (16.2) noticed more divergence than High Human Development states group (3.6). This model explains 16.9 per cent variation of growth in AMPCE for High Human Development states, only 1.9 per cent variation for Low Human Development states and 6.9 per cent variation is explained for total states group.

Infant Survival Rate (ISR)

From the results, it can be observed that the total states and both High and Low Human Development states are converged is indicated by the negative sign of their beta coefficients respectively. Only total states group beta coefficient is statistically significant at 1 per cent level and the remaining two groups of states beta coefficients are found to be not statistically significant. The Low Human Development states group (178.1) is witnessed as more convergence than its counterpart High Human Development states group (179.0). 34.7 per cent of variation of growth in ISR is explained by this model for High Human Development states group, 34.6 per cent variation for Low Human Development states group and 47.2 per cent variation for total states group.

Life Expectancy (LE)

Convergence nature has been confirmed in Life Expectancy by the negative sign of the beta coefficients for total states and for both High and Low Human Development states group. Regarding the significance of the beta coefficients are concerned, Low Human Development states group and Total States group beta coefficients are statistically significant at 5 per cent level and the High Human Development states beta coefficient is not significant. The rate of convergence is more in High Human Development states group (1.9) when compared to Low Human Development states group (1.5). 66.1 per cent of variation of growth in LE for Low Human Development states group is explained by this model. For total states group 36.5 per cent of variation of growth in LE is explained. Only 16.1 per cent of variation is explained for High Human Development states group.

Adult Literacy (AL)

The negative sign of beta coefficient for all the groups of states exhibited the convergence nature. The beta coefficient of the High Human Development states group is statistically significant at 5 per cent, Low Human Development states group and total states group coefficients are statistically significant at 1 per cent respectively. The rate of convergence is more in Low Human Development states group (2.1) than High Human Development states group (1.9). From this model, the percentage variation of growth in adult literacy for High, Low Human Development states and Total States groups are explained as 75, 87.7 and 84.9 respectively.

Schooling

The beta coefficients' negative sign represented convergence nature for both High and Low Human Development and also for total states group. The beta coefficient of the Low Human Development states group and total states are statistically significant at 1 per cent level and the High Human Development states group beta coefficient is found to be not statistically significant. Low Human Development states group (4.5) is seen to be more converged than High Human Development states group (1.8) in terms of rate of convergence. 96.7 per cent of variation of growth in schooling is explained by this model for Low Human Development states group; 72.7 per cent for total states group; and only 34.2 per cent for High Human Development states group.

Human Development Index Values (HDI)

As per the sign of the beta coefficient, all the three groups of states conveyed convergence nature. The beta coefficient of High Human Development states group is statistically significant at 5 per cent level and the Low Human Development states group and total states group beta coefficients are found to be statistically significant at 1 per cent level. Surprisingly, both high and low human development states groups are having similar convergence rates. For Low Human Development states group 96 per cent of variation of growth in HDI values is explained by this model. This model explained 78.2 and 68.9 per cent of variation of growth in HDI values for Total States and High Human Development states groups respectively.

Sigma Convergence Analysis Results

The sigma convergence analysis has been tested by applying Coefficient of Variation (CV) to examine the presence or absence of sigma convergence during the study period for high, low human development and total states. The decrease in CV overtime exhibits the convergence nature and vice versa. The results of sigma convergence analysis are presented below (See Table-5).

The formula for calculating CV is as follows:

$$\text{Coefficient of Variation (CV)} = \frac{\text{Standard Deviation (SD)}}{\text{Mean}} \text{ X } 100$$

AMPCE

The sigma convergence results display divergence in all the group of states with regard to AMPCE indicator as the CV increased from 1993-94 to 2004-05. The rate of increase in divergence is more in Low Human Development (8.62) states group when compared with High Human Development (8.23) states group.

ISR

Convergence nature is observed from the sigma convergence results as CV declined from 1993-94 to 2004-05 in all the group of states in the case of ISR. The rate of reduction in CV is negligible and almost all equal in both High (0.32) and Low (0.30) Human Development groups of states.

Life Expectancy

On this indicator also convergence nature has been observed in all the group of states during the study period. But the rate of decrease in CV is more in Low Human Development (1.73) states group when compared with High Human Development (0.36) states group.

TABLE 5
Sigma Convergence Results

States Group	*AMPCE (Rs.)*		*ISR*		*Life Expectancy in Years*		*Adult Literacy*		*Schooling*		*HDI*	
	1993-94	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*
Coefficient of Variation												
High Human Development States	13.46	21.70	1.85	1.53	4.85	4.50	19.21	14.96	14.60	11.75	13.35	10.73
Low Human Development States	14.76	23.37	2.23	1.93	9.71	7.99	27.29	19.58	15.05	7.28	17.08	13.25
Total States	14.98	23.15	2.28	1.71	7.78	6.37	25.38	18.56	15.36	9.52	16.51	12.21

Adult Literacy

The decrease in CV from 1993-94 to 2004-05 in all the group of states indicates the convergence nature in adult literacy indicator. The rate of reduction in CV is found to be more in Low Human Development (7.71) group of states when compared with High Human Development (4.25) group of states.

Schooling

The CV shows declining trend from 1993-94 to 2004-05 which thus exhibits the convergence nature in all the group of states. Low Human Development (7.77) group of states witnessed more reduction in CV during the study period when compared with High Human Development (2.85) group of states.

HDI

All the groups of states show convergence nature in terms of decline in CV from 1993-94 to 2004-05. The rate of reduction in CV is noticed more in Low Human Development (3.83) group of states when compared with High Human Development (2.62) group of states.

Summary

Based on the median human development index change values the selected 15 states are grouped into two groups such as high human development group states and low human development group states. High human development states are – Andhra Pradesh, Bihar, Haryana, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal – and low human development states are – Assam, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab and Rajasthan.

Unconditional beta convergence technique has been applied for the human development indicators to observe the nature of convergence or divergence of human development indicators among the three groups of states. Interesting results have been seen to have emerged from this analysis. All the groups of states are shown to be of divergence nature in AMPCE indicator. The performance of states in the human development area is highlighted in such a way that along with HDI all its remaining human development indicators are found to have converged for all the three group of states during the study period. Further, the sigma convergence test is also applied to examine the results of unconditional beta convergence. Sigma convergence results also reveal the same results as obtained from unconditional beta convergence.

From the above unconditional beta convergence and sigma convergence analysis results, it can be found that divergence nature is examined in the case of AMPCE indicator. It shows that the inequalities between high and low human development groups of states are found to have been increasing during the study period. In the remaining components of HDI along with HDI indicator shows convergence nature from the unconditional beta convergence as well as sigma convergence results. This shows that the low human development group of states are able to catch up with the high human development group of states during the study period. Further, the most important conclusion drawn from both unconditional beta and sigma convergence analyses is that the low human development group of states' rate of convergence is more than that of high human development group of states in more HDI indicators.

References

Ahuja, H.L (2004): Modern Economics, S. Chand & Company Ltd., New Delhi, Chapter 39, pp: 561-577.

Ajit, D. and Lawrence Arbenser (2009): "Convergence in Human Development Levels across Regions – An Empirical Investigation: 1975-2005", The Indian Economic Journal, Vol. 57, No. 2, July-September, pp: 143-155.

Andhra Pradesh Human Development Report – 2007, Published by Government of Andhra Pradesh & Centre for Economic and Social Studies, Hyderabad, 2008.

Anil B. Deolalikar (2007): "Human Development in India: Past Trends and Future Challenges", ASARC Working Paper, September, (17).

Barro, R. (1991): "Economic Growth in a Cross-Section of Countries", *Quarterly Journal of Economics*, Vol. 106, pp: 407-443.

Barro, R.J. and Sala-i-Martin, Xavier (1992): "Convergence", *Journal of Political Economy*, Vol. 100, No. 2, pp: 223-251.

Debraj Ray (2007): Development Economics, Oxford University Press, New Delhi, Chapter 3, pp: 47-98.

Hiranmoy Roy and Kaushik Bhattacharjee (2009): "Convergence of Human Development across Indian States" IGIDR Proceedings/Project Reports Series – PP-062-22 available at http://www.igidr.ac.in/pdf/publication/PP-062-22.pdf

Madhusudhan Ghosh (2006): "Economic Growth and Human Development in Indian States", Economic and Political Weekly, Vol. XLI, No. 30, July29-August 4, pp: 3321-3329.

Majumdar, Rajarshi (2004): "Human Development in India: Regional Pattern and Policy Issues", available at http://mpra.ub.uni-muenchen.de/4821/

Nirvikar Singh et al (2003): "Regional Inequality in India: A Fresh Outlook", Economic and Political Weekly, Vol. 38, No. 11, March 15-21, pp: 1069-1073.

Noorbakhsh (2003): "Human Development and Regional Disparities in India", available at www.gla.ac.uk/media/media_22245_en.pdf

Purusottam Nayak (2005): "A Human Development Approach to the Status of Development in North East India", available at http://129.3.20.41/cps/get/papers/0509/0509003.pdf

Rekha Mehta and Rakesh Kumar (2008): "Regional Divergence in Per Capita Income Across Indian States: An Analysis Based on New Series 1999-2000", 91st Annual Conference Volume – Part-I, The Indian Economic Association, 27th-29th December, Mohan Lal Sukhadia University, Udaipur, Rajasthan, pp: 219-228.

Thirlwall, A.P. (2003): Growth and Development – With Special Reference to Developing Economies, Palgrave MacMillan, Hampshire, Chapter 4, pp: 126-188.

APPENDIX

TABLE 1

Values of HDI and HDI Components
during the Years 1993-94 and 2004-05

State	*AMPCE (Rs.)*		*ISR*		*Life Expectancy in Years*		*Adult Literacy*		*Schooling*		*HDI*	
	1993-94	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*	*1993-94*	*2004-05*
Andhra Pradesh	224	261	930	947	61.8	63.9	41.5	50.9	65.9	87.6	0.415	0.503
Assam	226	277	911	934	55.7	59.9	66.3	74.8	75.5	87.1	0.429	0.509
Bihar	179	201	911	938	59.3	65.2	37.7	48.4	53.3	65.2	0.349	0.441
Gujarat	263	322	931	950	61.0	63.6	59.1	68.2	74.7	85.6	0.462	0.535
Haryana	275	344	927	958	63.4	67.0	53.4	64.9	77.2	87.2	0.470	0.558
Karnataka	218	255	935	957	62.5	64.4	51.0	61.8	73.3	88.3	0.448	0.526
Kerala	279	420	976	985	72.9	73.3	90.2	90.6	93.4	97.6	0.621	0.673
Madhya Pradesh	221	202	915	930	54.7	58.6	43.1	54.4	61.1	78.4	0.369	0.452
Maharashtra	210	304	949	962	64.8	68.3	63.0	72.9	82.4	89.1	0.499	0.570
Orissa	201	176	888	935	56.5	59.9	46.7	58.8	64.0	80.2	0.360	0.453
Punjab	316	374	946	958	67.2	70.9	56.7	68.5	80.2	89.0	0.518	0.588
Rajasthan	252	254	927	935	59.1	62.5	38.5	47.6	58.5	78.0	0.391	0.463
Tamil Nadu	218	294	932	969	63.3	68.4	61.3	70.7	82.4	96.1	0.481	0.586
Uttar Pradesh	216	278	900	927	56.8	63.8	42.8	52.2	60.6	77.5	0.363	0.476
West Bengal	235	274	925	952	62.1	67.7	60.7	67.5	67.9	82.9	0.442	0.533

Source: Andhra Pradesh Human Development Report, 2007.

TABLE 2

Growth Rates of Human Development Indicators

S. No.	*State*	*AMPCE*	*ISR*	*LE*	*AL*	*Schooling*	*HDI*
1.	Andhra Pradesh	0.013	0.002	0.003	0.017	0.024	0.016
2.	Assam	0.017	0.002	0.006	0.010	0.012	0.014
3.	Bihar	0.010	0.002	0.008	0.021	0.017	0.019
4.	Gujarat	0.017	0.002	0.003	0.012	0.011	0.012
5.	Haryana	0.019	0.003	0.005	0.016	0.010	0.014
6.	Karnataka	0.013	0.002	0.002	0.016	0.016	0.013
7.	Kerala	0.034	0.001	0.000	0.000	0.004	0.007
8.	Madhya Pradesh	-0.007	0.001	0.006	0.019	0.021	0.017
9.	Maharashtra	0.031	0.001	0.004	0.012	0.007	0.011
10.	Orissa	-0.011	0.004	0.005	0.019	0.019	0.019
11.	Punjab	0.014	0.001	0.004	0.016	0.009	0.011
12.	Rajasthan	0.001	0.001	0.005	0.018	0.024	0.014
13.	Tamil Nadu	0.025	0.003	0.006	0.012	0.013	0.016
14.	Uttar Pradesh	0.021	0.002	0.010	0.017	0.020	0.023
15.	West Bengal	0.013	0.002	0.007	0.009	0.017	0.016

Source: Computed from Appendix Table 1.

JOURNAL OF INDIAN ASSOCIATION OF SOCIAL SCIENCE INSTITUTIONS
(IASSI)

IASSI Quarterly: Contributions to Indian Social Science

Vol. 31 No. 1 January-March 2012

SUBSCRIPTION RATES

For India and SAARC Countries, including postage: Rs. 400/- for one year, Single copy Rs. 100/-. For other countries: US$ 75 per year or equivalent, including postage by surface mail.

Enquiries and Correspondence should be addressed to Editor, IASSI Quarterly, Room No. 76, I.I.P.A. Hostel, Indian Institute of Public Administration, Indraprastha Estate, New Delhi-110 002.

Tel: 2332 4581/2331 5284/2335 6834, Fax No.: 011-2331 5284, Website: www.iassi.org/www.iassi-ssis.org
E-mails: stiassi@bol.net.in; iassi79@yahoo.com

Journal of Educational Planning and Administration
Volume XXVII, No. 1, January 2013, pp. 51-70

An Economic Conceptualisation of Education

— Disciplinary Evolution and Policy Discourse[#]

Saumen Chattopadhyay[*]

Abstract

This paper seeks to explore how education has been conceptualised in economic theory, beginning with the mainstream neo-classical perspective and other critical and alternative perspectives, including screening theory, social choice approach, capability approach and Marxian perspective. Though conceptualisation of education in the human capital research programme has tended to dominate the discourse of policy making in education, this commodification of education has weakened the link between education and the society. The paper provides a critique of the human capital approach from a variety of perspectives to understand and appreciate the role education plays in fostering socio-economic development. Commodification of education has sought to influence designing of education policies within an overarching neo-liberal framework of an education market, and education reforms envisaged in India is not an exception. This paper makes an attempt to establish linkages among the various policy initiatives within the broader canvas of marketisation of education.

[*] Zakir Husain Centre for Educational Studies, School of Social Sciences, Jawaharlal Nehru University, New Delhi-110067. Email: saumen@mail.jnu.ac.in.

[#] This is a revised version of the paper presented at the Annual Conference of the Comparative Education Society of India (CESI) held at Jawaharlal Nehru University during 15-17 November, 2010.

Introduction

A meaningful analysis of education in the context of the prevailing social reality entails a study of education within the realm of social sciences. Among all the social science disciplines, sociology, psychology and history have been dominant in the basket of courses that are offered in the numerous education departments in India and abroad. Notwithstanding the fact that economists have taken interest in the economic analysis of education as exemplified by the number of Nobel Laureates who dealt with education directly and indirectly,[1] economics of education as a sub-discipline of economics does not feature prominently as an optional course offered in the economics department world over.[2] In the recent years, education is increasingly being viewed as central to the issues of development like, for examples, debates related to differences in productivity at the global level, income distribution, employment, generation of knowledge and an important aspect for achieving sustainable development. Policy making in education is now being informed mainly by the mainstream economic theory both in the developing as well as in the developed world. Whether it is governance, financing, regulation, managing global flows of skilled labour and knowledge, research and development expenditure, we need to invoke economics of education and/or knowledge to understand how education is conceived of in economic theory.

An economic analysis of education has become an imperative today to understand and analyse various aspects of the sector. Individuals need to spend resources both in terms of money and time to pursue education, or, undergo specific training for skill formation. Similarly, imparting education requires dedication of resources both by the private and the public sectors. Hence, the question how to ensure efficient and just utilisation of resources, both at the individual and institutional levels, needs to be addressed from the perspective of economic theory.

This paper seeks to provide a chronological overview of the major developments in economic theory to conceptualise education and their subsequent influence on education reform. As argued by Marginson (1997, p. 217)[3] that what sustains economics of education is not the "empirical realism of its analytical assumptions but the practical realism of the power-knowledge relationship between economics of education and government." In a way, this paper may be construed as a prelude to the study of economics of education which has to go beyond the conventional and dominant human capital approach as developed and advocated by the 'main-line' neo-classical economists. The paper also seeks to devote considerable space to the art of policy making in education because policies, in a way, reflect the theoretical underpinning of the concept of education in economic theory.

[1] Gary Becker and Theodore Schultz were awarded with the Nobel Prizes for their contribution related to human capital theory. Milton Friedman, Joseph Stiglitz, Amartya Sen all have contributed to our understanding of education in a broader sense.

[2] Health economics as an optional course seems to have gained more popularity in comparison. However, economists continue to do research on education related topics located within areas of labour economics, welfare economics, public finance and economic development.

[3] Marginson (1997) examines economics of education from the perspective of power-knowledge-economy in a Foucaldian framework of power-knowledge-economy.

In Section 2, the paper begins with human capital theory, followed by a discussion in Section 3, where education is related to growth. Section 4 takes a critical overview of the input-output approach to the study of an educational institution while Section 5 embarks on a critique of the entire human capital approach from various perspectives including the theory of screening and capability approach. Section 6 deals with the important question of classification of education as the starting point for discussion on education policy. How different is the market for education is the theme in Section 7 as policy prescriptions in the area of economics tend to be located in the overarching framework of the market. Section 8 gives a short account of the market oriented reforms followed by a discussion on economic rationale behind some of the policy initiatives, followed by a short discussion on globalisation and governance issues in Sections 10 and 11 to highlight the use of economic theory in various aspects of education policy reform in the context of India.

Education in Economic Theory: The Human Capital Approach

There has been a great divide in the way the economic theory has evolved as a discipline. The economists, in the tradition of the classical political economy (CPE), like Smith, Ricardo and Marx were all concerned with issues related to the broader issues of development and the questions they addressed revolved around the question of surplus, its generation, accumulation and distribution (Bharadwaj 1980). The rise to the dominance of the demand-supply analysis marked a sharp departure from the approach adopted in the CPE[4] in terms of markets for goods and services with emphasis on efficient allocation of resources.

In this neo-classical approach, expenditure on education is treated as a form of investment and the investors like students and the parents are assumed to be optimizing economic agents engaged in calculating costs and benefits operating under their respective constraints. However, the idea of investment in man could be traced to the mercantilists who emphasized on the importance of 'art and ingenuity' or skilled manpower (Bowman 1966: 103).[5]

Economics of education as a sub-discipline of the academic discipline called neo-classical economics emerged in the 1960s as a major field of study and research with the pioneering contributions made by Schultz (1961), and Becker (1961, 1964) with Denison (1962) and Mincer (1958) joining them to contribute to the advancement of the theory as well. In view of the fact that economic theory seeks to address the fundamental question of

[4] The demand-supply approach often called the neo-classical approach or even modern approach viewed an individual as an optimizing agent operating under constraint(s). The economy was viewed as comprising markets in goods and services and equilibrium in the market(s) would ensure efficient allocation of resources. Even the factors of production, labour and capital, are treated at par in this approach as income distribution is explained in terms of demand and supply of the respective factors ignoring the ownership of the means of production.

[5] However, Adam Smith was the first to characterize expenditure on education as investment expenditure by drawing analogies between men and machines which would contribute to the enhancement of skill and productivity of individuals and hence for the economy as a whole1. Marshall referred to socio-economics of 'talent wastage' but not explicitly to investment in man and Keynes's The General Theory made labour passive rather than an active agent (ibid: 108).

resource allocation both at the micro level like choice making by a rational individual student as well as at the macro level to deal with the important issues pertinent to employment, growth and development of a nation.

Becker (1964) formally gave shape to the sub-discipline of economics of education by incorporating education in the sphere of optimizing decision making of an individual. The human capital theory claims that expenditure on education should be classified as an investment and it should be treated at par with investment in physical capital[6]. A study of education could, therefore, be subject to the same formal neo-classical 'mathemetised' treatment of choice making in a perfect capital market. As an inevitable outcome, education as an investment was construed to be no different from the alternative options for investment faced by an individual as well as the nation. It was understood that education, in fact, all levels of education are not pure private goods as education generates positive externalities for the society. For the policy makers it meant that exclusive reliance on market to determine the optimum allocation of resources would lead to under-investment in education[7]. Generation of externalities by creating a gap between social demand and private demand was a clear case of market failure and hence the government is required to step in to bring down the cost of education through provision of subsidies to take the economy towards social optimum[8].

It also led to the realisation that there was a need to distinguish between private rate of return and social rate of return for guiding the level of investment in education at the micro as well as at the macro levels. However, estimation of social rates of return has remained a challenge because of the estimation problems encountered typically in the valuation of externalities[9]. The rate of return estimation provided a new criterion for social investment that resources are to be allocated to levels of education and years of schooling so as to equalize marginal, and social rate of return on educational investment and should not fall below the alternative investment avenues (Blaug 1976: 830). However, the concept of marginal when it comes to investment in education is meaningless[10]. Choices across the

6 Earlier, demand for education was treated more like a demand for consumption good which would depend on price (fees and associated expenses), income and 'tastes' (Blaug 1987). However there was a debate whether the entire expenditure could be treated as investment expenditure as education yields satisfaction as in the case of consumption good even beyond the period of study (Bowen 1968).

7 Positive externalities would result in participatory democratic decision making, better awareness of health and nutrition, possibly lowering of crime, fighting against injustice in the society, better awareness of rights and policy measures that are available. Externalities raise the social demand curve above the private demand curve. Since market equilibrium would consider the private demand rather than social demand, allocation of resources would be lower than what is desirable by the society as proxied by the social demand curve.

8 However, the mode of delivery of subsidies remains unaddressed in this framework which has now become a debatable matter in policy making, whether to channelise subsidies directly to the students, the intended beneficiaries with not much change required in pricing of education or to the institutions so that the prices could be lowered.

9 As externalities represent the case of missing markets, it is quite inevitable that the estimation is always fraught with serious methodological problems.

10 Whether to invest in education or not would involve expenditure for one full year at the minimum. It is difficult to conceive how could one invest in education at the margin, and how could one have all

different levels of education being guided by the rate of return approach are just not available to a student as they are in the capital market for an investor. There is, therefore, a need to exercise caution to assess all the major studies on estimation of rate of return from investment in education (for instance, Psacharopoulos 1973, 1994, 2004). A detailed critique of the rate of return approach based on Majumdar (1983) is given later in this paper.

Commodification of education and exclusive focus on market tended to ignore interconnections between education and society which led to the relegation of social issues of vital importance. The criticisms which are levelled against the two fundamental assumptions of neo-classical economics are also valid for the human capital theory. The assumptions are: one, economy is analytically a separate realm of society with no influence of politics and culture on the economy, and two, individuals act rationally to maximise utilities (Fitzsimons and Peters 1994). Since the entire expenditure on education cannot always be treated as investment expenditure but a combination of consumption and investment, rationality is context specific and individual specific. Further, preferences which are assumed to be exogenous in the formation of the demand theory are actually in practice largely endogenous in case of education as socio-cultural milieu along with economic factors in formation of preferences which precede choice making (Hogan 1997). Estimation of rate of return based on life time earnings and valuation of externalities remains highly vulnerable to the assumptions we made in case the estimates, both private and social, make sense for decision making.

Incorporating Education in Growth Theory: The human capital and endogenous growth theory

How variously education has been conceptualised in economic theory is best exemplified in the context of the evolution in the new growth theory. There have been attempts to explain economic growth across the nations in terms of factors of production like labour and capital which brought to the fore the role of education in the form of human capital and the role of knowledge in particular. During the first phase of growth theory, empirical studies (e.g., Denison 1962) found that growth in national income could not be explained exclusively by the growth in the two factors of production, labour and capital weighted by their respective shares in national income. 'Residual growth' defined as the portion of growth which could not be attributed to the growth of labour and capital was sought to be explained by the technological advancement alone. This was in the context of failure of the Solow type growth model to identify and explain the factors behind technological advancement and the sustained growth of a nation and divergence in growth among the nations (for example, Mankiw, Romer and Weil 1992)[11]. It was realized that the

the investment options in education particularly those options which are sequenced over time to an individual at any point of time (Majumdar 1983).

[11] Solow type growth model assumed constant returns to scale production function which implied diminishing marginal productivity of capital. In the wake of technological progress, it became difficult to reconcile this with the reality where technology continued to spur growth. Mankiw, Romer and Weil (1992) showed that the production function is consistent with factor shares of one-third for physical capital, raw labour and human capital. Eighty percent of the variation in the

simple production function analysis which treats labour as a homogenous entity over time was a gross underestimation of labour's contribution as with education and training, labour became more productive and differentiated as well in terms of skills or human capital embodied in the labour. Solow's model in which technology is assumed to be a pure public good, rather a public input (Romer 1990) would witness steady advancement under perfect competition as not in sync with the reality that people, who are essentially optimising agents, are involved in production of ideas or broadly speaking knowledge and its production entails resources and divergence in income growth among the nations. In response to these infirmities, there emerged a new brand of growth models known as endogenous growth models which basically sought to endogenise the technological advancement as an outcome of optimizing decision making of the individuals.

So, an important question which continues to pose challenge for the economists and the policy makers is what type of commodity knowledge is? Is it a private good or a public good or a sort of blend of the private and the public good? The answer would largely depend on the extent of exclusiveness which is a policy decision as patenting would exemplify[12].

Growth of knowledge could be conceived of as a by-product of economic activity or a separate sphere of production activity as argued by Arrow (1962) that an important source of technological progress is 'learning by doing'. Romer (1986) suggested a similar approach where the total factor productivity 'A' was made to depend on total capital stock. Romer argued that the size of the productive sector creates a positive network externality through the exchange of know-how or 'learning by doing' which raises productivity. Another strand in the literature is to model the accumulation of human capital rather than knowledge. Human capital can be narrowly conceived of as abilities, skills and knowledge of individual workers. Human capital is rival and excludable (Lucas 1988).

Romer's search for the origin of technology led him to probe economics of knowledge. Endogenisation is achieved by introducing the search for new ideas by the researchers who are interested in return from their investment in knowledge creation. Economics of ideas is different from economics of objects. Romer's concept of human capital is "literally a set of connections between neurons". Creation of ideas is a time consuming activity. Once produced it becomes a non-rival good. However, ideas or design differ from human capital such as the ability to add. Design is non-rival (at least cost of replication is small) but the ability to add is not as it is tied to a human object. Time and space constraint means that human capital embodied is rivalrous and thus excludable. Cost of replicating human capital is expenditure on education and training.

But merely focusing on human capital and its valuation would not suffice if the quality concern remains unaddressed. Hanushek and Kimko (2000) conclude that quality of labour

growth rates among a pretty large sample of countries could be explained by the differences in the growth these three factors. Role of factor accumulation and in particular the role of human capital is emphasized.

[12] Other than non-rivalry in consumption of a public good which is often a technical feature of the good, the attribute of non-excludability is often a policy variable. Policy can make a good excludable or non-excludable or it can determine the extent of excludability. Patenting of a particular piece of knowledge would make that good non-excludable. Similarly publication of an article containing new knowledge in an e-journal which allows download at free of cost makes that knowledge non-excludable.

force as measured by comparative tests of mathematics and scientific skills 'has a consistent, stable and strong relationship with economic growth'. Though the strength of the impact seems to be on the higher side, one needs to consider the fact that the impact of externalities on growth would be stronger, better is the quality of schooling (Hanushek and Wossmann 2010).

Input-output Relations in Education: The Relevance of an Educational Production Function

Input-output relations in education can be considered to be the second major strand in the development of human capital approach. The application of input-output analysis implies that an educational institute is similar to any other manufacturing unit or a factory as theorised in micro-economic theory and further an important corollary of this is that there exists a well-defined input-output relation in the provision of education. There have been attempts to propose production function for a university and estimate its cost efficiency and factor productivity (Lumsden 1974; Hanushesk 2003). Though achieving efficiency in resource use within the realm of an institution is often a desirable goal, stretching the argument too far creates confusions. For example, non-market output in education is measured by costs as in the case of government funded schools. If costs rise, with output remaining the same, efficiency is argued to have deteriorated. If costs fall as a result of improvement in efficiency, output is argued to have gone down (Marginson 1997: 216).

The problem, however, lies at a deeper level. Primarily, it is difficult to define input and output for an educational institution (Lumsden, 1974; Majumdar 1983). If students are the inputs, the successful students would constitute the output as well. A higher education institution (HEI) is essentially a multi-product firm with research and degrees both being considered as components of output. In addition to this, a university would also produce 'informational output' which consists in reporting the attributes and educational attainments of the students in terms of grades, a useful set of information to the employers to help them make rational choices to hire the kind of students they are looking for (Attiyeh 1974: 5; Stiglitz 1975). However, valuation of output as well as input would remain a formidable challenge. If researches funded by the universities are considered to be public goods, market valuation of that research becomes virtually impossible. In view of the wide variation in the quality of degrees and possibility of unemployment of graduates and its impact on the society because of moral values embodied in education, valuation of degrees poses same degree of challenge. Since students are the inputs, in this peculiar case the inputs themselves are the optimising decision making units (Majumdar 1983). This typical aspect is also called customer-input technology (Texeira *et al* 2004). Since, it is difficult to quantify education and it is more so in absence of a rigorous definition of quality of education, the application of production function is hardly tenable for an educational institution. There exist many combinations of inputs to produce a given quantity of output[13]. Often, it is argued

[13] Say, for example, in a private engineering college, the management may deploy one, two or any number of teachers to teach a particular batch in a particular programme or can stock any number of books in the library essentially with the objective of cost cutting at the expense of quality

in sharp contrast with production in a typical factory, higher the failure rate, better is the quality of education imparted. If efficiency cannot be precisely defined, the concepts of production and productivity remain, therefore, conceptually tenuous (Majumdar 1983). The fallacy of treating expenditure on education at par with investment in physical capital and using the criterion of rate of return for determining the levels of investment in education have been convincingly critiqued by Majumdar (1983) from a social choice perspective. Majumdar (1997) argues that economics of education suffers from what he called 'category mistakes'. Concepts used in economic theory like efficiency, rate of return, private as well as social, production function were applied to education under certain assumptions. However, assumptions over a period of time were left wayside and wider use of such concepts led to errors ending up with a study of education devoid of its true significance in terms of its implications for learning and society[14]. At a deeper level, whether an educational institution can indeed be considered as a business entity, Patnaik pleads for an alternative conception of education where '… higher education as an activity in which students and teachers are jointly engaged *on behalf of the people of a society*' (Patnaik 2007: 3–4, italics in original).

A Critique of the Human Capital Approach

Though, the neo-classical theory has come to dominate the landscape of economic theory today, alternatives approaches, or, a critique of the so-called mainstream thinking has provided not only different but more importantly, meaningful perspectives to the study of education. Education or skill development or in other words, human capital has always been an integral part of policy making at the national level because the questions of technology, equitable growth, or, development in general would revolve around the issue of education reform. This paper provides a brief account of four such approaches which seek to view the human capital theory critically and in the process enrich our understanding of education.

The Screening Hypothesis

The proponents of screening hypothesis (Spence 1973; Arrow 1973; Stiglitz 1975) advanced an alternative to the dominant human capital approach from a perspective that education augments productivity through skill formation. The advocates of screening hypothesis argue that education enhances productivity albeit through a different route. Education acts as a screening device which segregates the job seekers with varying levels of productivities. The employers suffer from information asymmetry with regard to the potential of the job seekers to contribute towards higher productivity once they are employed. However, successful completion of a programme, or, award of a degree may reveal that the candidate applied for the job, possesses desirable traits like diligence, tenacity and honesty which are valued by the employer. Since the link between education and productivity cannot be solely attributable to skill enhancing effect of education only,

(Chattopadhyay 2009). This is particularly the case when the quality of education and costs are positively related as it would be in the majority of cases as installation of better infrastructure and hiring of best minds and giving scholarships to the meritorious students entails higher expenditure.

[14] Marginson (1997) voices similar concern with regard to objects conjured up in the context of economics of education and applied in policy making.

demarcation of the relative contributions of the two theories to explain differentiation in income earnings becomes difficult[15]. Blaug (1989) put it categorically as:

> "Is it cognitive knowledge or effective behavioural traits that make educated workers valuable to employers? Is it believable that we can still ask such a question, knowing that the literature does not vouchsafe a firm answer?" (pp. 332).

The inability to come up with a convincing answer could be held as a major failure of economics of education.

The relative importance of human capital theory and education as a screening device in enhancing earnings can be resolved on the basis of the nature of information revealed. If it is general, then the employers are not looking for any specific skills but general attributes. If skill required is specific and can be acquired only via specific training, then the importance of education as a screening device loses its salience. The segmented or dual market hypothesis which categorises the labour market as structured and unstructured adds a new dimension to the debate.

Capability Approach

Sen's (2000) approach to development based on the notion of capability provides a credible opposition to the narrow approach to development adopted by the advocates of income growth. In view of the central role education plays in Sen's approach to development, this could be regarded as a critique of the narrow focus of the human capital approach. The primacy of education in Sen's approach to the concept of 'capability' and development led to a better understanding of the distinction between income growth and the broader concept of development. Role of education in economic development goes much beyond investment in education in raising productivity and eventually earnings. The salience of education should transcend the territory defined by the concept of human capital as education is intrinsically important for a person as an individual as well as a member of a society. Education is thus important both for individual freedom as well as social freedom as it not only enables a person to enjoy a life she has reason to value, she can now fight against oppression, exploitation and injustice and play an active role to transform the society. Unterhalter (2008) argues that education is 'untheorised' in Sen's approach in view of the fact that there are many kinds of schooling which tend to accentuate disparities in society, gender-wise and social category-wise and in the very teaching-learning process which makes schooling non-synonymous with education. Given that the focus is on inequality and heterogeneity in the societal relations there is a need to distinguish among forms and an outcome of education would also differ accordingly.

Social Choice Approach

In addition to a critique of the tenability of the concept of production function for an educational institution, Majumdar (1983) provided three distinct sets of arguments against the rate of return approach, the micro-macro argument, domain-distinction argument and

[15] Researchers used to follow often the so-called "two-thirds assumption" which says that two-thirds of the earnings differentials with different amounts of education should be attributed to the "pure effect of schooling" with the remaining to some blend of genetic endowment and social factors (Blaug 1976, pp. 842).

the collective choice approach to offer a comprehensive critique of the human capital approach which offers a new perspective to evaluate and decide on societal investment in education against the backdrop of heterogeneity in the structure of investment and the society. Investment in education is uniquely characterised by heterogeneity in the sense that there are two domains of investment, the individuals and the institutions which are governed by two sets of objectives; functions and time horizons though they are complementary in nature. There can arise a conflict between expected rate of return by a students and its eventual realisation at the macro level as the realized rate of return would be determined in the sphere of market based on the prevailing demand-supply conditions[16].

It is likely that a particular investment decision may affect different groups differently. Since aggregation of choices is problematic, deciding the quantum and the form of societal investment would pose a social choice problem as with the possible emergence of contradictions and paradoxes and subjectivity involved in inter-personal equity comparisons. While there is no clear-cut solution, sensitivity to such problems would help negotiate such conflicts of interest[17].

The Marxian critique of human capital theory

Bowles and Gintis (1975, 1976) recognize the contribution made by the human capital approach as labour ceases to be homogenous and social institutions required in the production of labour like family and school were brought under the purview, but ended up with a narrow perspective of schooling. Schooling plays an essential but indirect role; but an important role is that schooling plays a role in social reproduction which seeks to consolidate and perpetuate economic and social order. As articulated brilliantly by Bowles and Gintis (1976: 77-78) as follows, it is stated:

> "..the education system does much more than produce human capital. It segments the workforce, forstalls the development of working class consciousness, and legitimates economic inequality by providing an open, objective and ostensibly meritocratic mechanism for assigning individuals to unequal occupational positions".

In a capitalist system, labour is not a typical commodity where exchange is carried out at a mutually agreeable price. The exchange is unfair as the capitalists own the means of production. Fitzsimons and Peters (1994, pp. 253) put it thus; "Human capital theory is an impoverished notion of capital". Given the struggle of the labourers and their articulation in social relations, "..human capital is an abstract form of labour – a commodity – and not capital". Exclusive focus on exchange of commodities to understand how individuals are related is utterly inadequate if social relations based on ownership of means of production remain relegated.

[16] This problem is similar to the problem of identification of demand and supply in the estimation of rate of return calculation as discussed in Blaug (1976).

[17] Majumdar (1983, pp. 61-87) elucidates with various examples how aggregation of choice in a situation of conflicts can render policy making difficult. The human capital approach fails to unravel such problems mainly because of the fact that heterogeneity in investment in education is not recognised.

Classification of Education: What type of education is 'Good' Education?

It is not merely commodification of education by the mainstream economists, but what type of 'commodity' education is, has serious implications for policy making. While subjecting education to the market analysis, it is presumed that education is a commodity, precisely speaking, a marketable service which is not very different from any other good/service. Hence, mainstream economic theory, arguably, could as well be applied to the analysis of education which is synonymous with the delivery of a service. However, as argued earlier, all three levels of education cannot be treated at par. Primary education is generally regarded as a merit good which, therefore, cannot be subject to the market analysis and hence, consumer sovereignty in the form of choices of the buyers of education, students and parents should have no role in its provision. Instead, its provision should be determined by the state (Musgrave and Musgrave 1984) as it is a subject of paternalistic choices because the government is assumed to know better which good/service merits attention. The individual's decision in this regard is of little significance to the policy makers as a majority of the parents are likely to be myopic or short-sighted, risk averse, and may underestimate true valuation of education. With respect to higher education, the debate is not yet settled whether it should be regarded as a private good, a quasi-public good, or, a pure public good (Tilak, 2008; Bergan *et al* 2009; Marginson 2007; Chattopadhyay 2009). Going strictly by the neo-classical definition of public good which is characterized by non-rivalry and non-exclusivity, there are indeed strong elements of 'privateness' in higher education. There is rivalry in the admission process and in the award of certificates as only the successful students are awarded degrees. The brand value of the institutions of the reputed ones, further compound the problems of rivalry as higher education becomes a 'positional good' with a zero-sum game (Marginson 2007). Hence, higher education can better be described as a mixed good (or a quasi-public good) as it turns out to be essentially a private good with strong 'publicness' in the form of positive externalities. Marginson (2004) argued that Samuelson's approach to classify a good as inherently public or private is inappropriate. From a normative point of view, what the policy makers should seek to achieve is to enhance the extent of 'publicness' and make the growth process more inclusive (Chattopadhyay 2009). Therefore, it is generally accepted that policy making in higher education is intricately linked with the question of how do we define and classify higher education. For example, truly speaking, knowledge as one major component of a higher educational institute could be regarded as a public good as it is non-rival in consumption and exclusion though feasible but not desirable[18]. However, as discussed earlier, if knowledge produced by the privately funded institution is made free, the cost of knowledge production cannot be recovered and sustains the tempo of investment in knowledge[19]. The issue of public-private participation in higher education, extent of subsidisation, regulation and

[18] The university is being urged to regard sale of knowledge to the industry and patenting as an alternative source of revenue generation. For a publicly funded university, research output is argued to be made available free to the society and not at a price.

[19] Since primary education has been argued to be a merit good, we need not invoke the concept of market for primary education. Higher education being a quasi-public good, the neo-liberals advocate for a regulated market. The important question is one to deal with the extent of intervention.

funding of research are all in a way linked to this debate of how higher education should be classified.

Market for Education

Objects of knowledge are constructed using concepts within the two paradigms of economics of education, the human capital approach and the input-output approach which requires government intervention (Marginson 1997) in the form of budgetary policy, funding of grants, loans, planning and management of educational institutions, accountability of managers, etc. Human capital theory provides a rationale for the government education programmes and a normative setting for equalization of education opportunities. This theory was adopted by the international agencies like OECD, UNESCO and the World Bank.

Education policy world over is increasingly being determined within the framework of neo-liberal approach which argues in favour of setting up of a regulated market. It is an imperative therefore, to understand the specific features of an education market to locate the sources of market failure so as to address the issue of government intervention in the market for higher education[20]. The market for higher education fails on various counts to guarantee an efficient allocation of resources. Not only the market is an imperfect one because of the differentiated nature of the quality of education delivered, education generates positive externalities leading to a sub-optimal provision of education[21]. With focus on efficiency in the market sphere, the question of rectifying an unequal distribution of resources remains unaddressed. Education leads to social mobility and social cohesion, the provision of which should be guided by social demand rather than by market demand which is essentially determined by the prevailing income distribution. From a broader perspective, market failure provides a rationale for the government to intervene in the market by reducing the price of education through subsidisation. Subsidies can be given directly to the institution to lower fees or to the students in the form of vouchers (or even scholarships). Since education is an 'experience good' (Teixeira *et al* 2004) in the sense that it is difficult for the students to ascertain the quality of education while they seek admission to the institutions, their decisions to choose courses and institutions would remain imperfect as they suffer from information asymmetry[22]. Not only limited freedom of the students to alter their choices of courses and institutions, as and when they want to, it is expensive in terms of time and money as well. Scope for exercising consumer sovereignty is further limited by the fact that merit comes first in the admission process and not ability to pay unless seats are up

[20] Since primary education has been argued to be a merit good, we need not invoke the concept of market for primary education. Higher education being a quasi-public good, the neo-liberals advocate for a regulated market. The important question is one to deal with the extent of intervention.

[21] While school education is generally regarded as a merit good, higher education is best described as a quasi-public good as higher education can be made excludable through policy intervention and hence consumption is made rival due to limited number of seats in a higher education institute.

[22] Quality and usefulness of education imparted are experienced as the students go through the process of education and even it would go beyond much after the formal completion of the studies. Technically, this is often referred to as information asymmetry as it is difficult to ascertain the true quality of education when the students take admission in an institution to pursue a programme.

for sale (Chattopadhyay 2009). Limited scope for exit by the providers restricts the scope for competition.

Further, the nature of competition in the market for education is characterized by S-competition (selection based) rather than E-competition (efficiency based) (Glennerster 1991:1270). This is because both the students (and parents) as well as the institutions choose the students and the teachers to produce good quality education in presence of competition as the good students and the worthy teachers choose their institutions for their academic engagement[23]. This leads to an accentuation of hierarchy in ranking of the institutions as the best of the institutions are adequately funded to attract the best minds to produce quality output to remain at the top of the ranking table (Winston 1999). This weakens the efficacy of competition to achieve the goal of imparting quality education as opposed to the desirability of competition to achieve efficiency and quality in a typical consumption goods market. We discuss below some of the policy measures being mooted and are in the process of being implemented in India. The apparent dominance of mainline economics as evident in the neo-liberal approach to education reform among the policy makers and the thinkers makes the reform measures being guided by the market logic.

Market oriented reforms

In general, imparting education is viewed as an exchange in a market for education and therefore, an analysis of delivery of education could be subject to the economic logic as it is applied to the study of market of any other consumable good or service. Commodification of education (particularly in case of higher education) in economic theory has led the policy makers who subscribe to the approach of the neo-liberals to repose faith on market and its ability to achieve efficiency and quality through competition at the economy level and at the level of the institute through governance reform[24]. This argument is further bolstered by the economic logic of allowing the consumers (students) and the producers (the institutions) to enjoy sovereignty to the extent possible in the sphere of market. The question is how much freedom can we give to the students to choose the courses and the institutions of their choice and to the education providers to determine the prices of their offerings which are better not treated as typical commodities in a highly unequal world. For example, access to higher education in particular should also be subject to the criterion of eligibility or merit rather than ability to pay (Teixeira *et al* 2004; Chattopadhyay 2009). As discussed earlier, the concepts of competition, efficiency and quality are rather nebulous in the case of education. With regard to the issue of quality, a degree certificate, which is often merely a piece of paper, cannot capture its true quality if the producers were allowed to make profit, covertly or overtly through taking recourse to unfair means. True education goes much beyond the concept of 'credentialism'. What is meant by 'quality' in education and how to assess it have remained debatable issues. A majority of the private providers, mostly with no repute, have abused the absence of a production function in the delivery of education, have

[23] This is different from a typical text-book concept of competition where the quality of inputs remains the same and it is in the realm of technology that the same inputs churn out different quality of outputs.

[24] Adjusting for quality, efficiency can be defined as the ratio between outputs to inputs (Massy, 2004, pp. 21).

ended up delivering sub-standard quality of education which has turned education merely to the award of a certificate (Chattopadhyay 2009)[25]. As discussed above in the context of input-output analysis, it is difficult to envisage a well-defined input-output relationship in the form of a production function for an educational institution. The commercially motivated institutions would often minimise cost through unscrupulous means leading to the delivery of poor quality education. Once quality is compromised, education fails to be a screening device. This apparent failure of educational qualification is one possible reason behind mismatch between supply and demand for skills and often over-education as students keep on trying to acquire degrees to signal their worth to the prospective employers (Kapur and Mehta 2012).

From the perspective of knowledge creation and its dissemination, role of competition is rather ambiguous. The firms per force dedicate resources for the creation of knowledge to produce differentiated product in order to survive the stiff competition through exercising control over price. Schumpeter's theory of 'creative destruction' brought to the fore the role of innovation and technology towards making of profit under competitive conditions. At the same time, pricing of knowledge through patenting restricts use of knowledge for the welfare of the general masses (Schumpeter 1943, pp. 83). In the discussion of an evolutionary process of a capitalist economy, he identifies the impetus for capitalist evolution comes from, '..new consumers' goods, the new methods of production or transportation, the new markets,..'.

However, the growing popularity of an open access system of softwares seems to defy economic logic along with increasing instances of collaborations and formation of networks across the borders exemplify cooperation rather than competition (Marginson 2007)

Economic Rationale behind recent policy initiatives in Education

Rationale behind several policy initiatives mooted or which are in the process of implementation in the Indian context reeks of neo-liberal smell. Some of the major forms are encouraging entry of the private providers, promotion of public-private partnership (PPP) in new ventures, infusing private participation in publicly funded institutions like outsourcing and privatisation of non-core activities, installation of corporate managerial practices in governing the public funded institutions to enhance responsiveness in its articulation to demand and supply and need of the clients (i.e., the students). To facilitate the entire process of privatisation, the next step would be to set up a regulatory authority in higher education, along with a grievance redressal mechanism or setting up of a tribunal, encouraging participation of foreign education providers, making accreditation mandatory and encourage ranking of institutions of higher education, exploring alternative modes of funding education and even an alternative mechanism for disbursal of subsidies such as through voucher to build up a competitive ambience to simulate a market like situation (Chattopadhyay 2007).

The rationale behind PPP is basically based on two arguments. First, the private sector is more efficient in use of resources and delivery of quality education than the public sector

[25] In absence of a well-defined production function between the inputs and output and substitutability among the inputs, if the objective is to make profit or reasonable surplus, there will be a tendency to cut costs which can adversely affect quality and fleece students as they do not have the option of exit. For education, quality requires better quality inputs, i.e., infrastructure and faculty.

and, secondly, fiscal stringency would not allow the government to dedicate adequate resources necessary for expansion of the sector. The first one is based on an understanding that input-output relationship is valid and applicable for an educational institution and hence, through proper policy measures, efficiency and quality can be realised. Further, quasi-public good nature of higher education by highlighting the extent of 'privateness' tends to support PPP at least in the professional education. This bolsters the arguments of the neo-liberals who consider the fiscal constraint to be sacrosanct in deciding the budgetary allocations for education. There can be many different forms of public-private partnerships and the outcome of such a blend would depend on the kind of partnership arrangement they enter into and the nature of ownership and objective of the private sector. To allow profit making in the absence of a substantial gain in cost reduction through efficiency would either raise the pricing of education or the government financial support or a mixture of two but it is different from the unbridled growth of the private sector with poor credibility. It is now being felt why the private sector (or corporate type) should be interested in investment on a large scale in education unless they are allowed to make reasonable amount of profit. A very big question before the policy makers today is how to amalgamate judiciously the private and the public sector without much of a compromise with the three objectives envisaged in the 11th Five Year Plan: expansion, inclusion and exclusion[26] which remain valid even after the initiation of the 12th Five Year Plan.

Education vouchers are being advocated by a certain section of the policy makers because not only does it give freedom to the students to choose institutions and the courses, this mode of funding generates competition and, at the same time, subsidies are channelized to the individuals. It is argued that the parents are liberated to choose the right kind of school for their wards instead of settling for low cost, low quality schools per force due to income constraint. Arguably, education vouchers would also enable the government to achieve better targeting of subsidies. Low cost schooling is also being advocated in the name of economizing resources under the assumption that quality of education would remain unchanged even if the teachers are not remunerated at par with their counterparts.

The government is contemplating of a regulatory authority in the form of National Commission for Higher Education and Research (NCHER) to develop a regulated market for the higher education sector[27]. This would, arguably, help overcome the problem of multiple regulatory authorities with overlapping functions, ensure transparency and uniformity, reduce political interference and regulate standards. However, the problems associated with marketisation of higher education would largely remain. Setting up of a Tribunal in higher education seeks to address the grievances of the students studying primarily in privately funded institutions. The need arises because education market lacks intense competition due to restricted mobility of the students and education is an 'experience good' which makes students suffer from information asymmetry at the time of choice of their courses and

[26] It is often argued whether all the three objectives can be pursued together or there exists a trade-off among them. Privatisation of any kind will compromise with inclusiveness. There is a big question mark whether excellence in education can be achieved through increasing private participation.

[27] The National Knowledge Commission also advocated for a regulatory authority (Independent Regulatory Authority for Higher Education, i.e., IRAHE). The rationale given by the Yash Pal Committee Report in favour of setting up of the NCHER is somewhat different.

institutions (as discussed earlier)[28]. The institutions are now to be accredited compulsorily even within the country to facilitate informed choice making which is central to sovereignty and competition (Bill on Accreditation). However, the concept of quality of education as used in the process of accreditation and ranking may not address in all probability, the university specific mandate to serve the society or in other words the university-society linkages. This would also interfere with autonomy of the institution to pursue its objectives if the institutions participate in ranking[29]. In effect, a highly differentiated market for education is being created which would in turn create a differentiated and hierarchical society. It is possible that the market elements would continue to gain strength which may deter imparting of value based inclusive education as teaching-learning process becomes more like exchange in a market, the students become investors and the teachers become merely service providers.

Globalisation and Higher Education

Higher education can be argued to be a typical global public good where benefits are broadly available across populations on a global scale as well as within countries and the benefits are intergenerational. Since higher education is highly networked and internationalised, globalisation contributes to an enhancement of benefits and costs associated with it. The public-private dynamics assume a new dimension in the global context. The private goods in higher education cease to be rivalrous and excludable at the global level as the benefits cross over the national boundaries mainly in the form of dissemination of knowledge generated in the university, international recognition of degrees and collaborations amongst the interested groups of scholars and university departments, cross-cultural exchange and augmented international understanding and tolerance (Marginson 2007: 209). Braindrain of faculty and students would affect the developing world while the developed world stands to gain as students and faculty assemble at the best of the universities. Public and private sectors are inter-dependent as the global public goods like recognition generate private goods as foreign degrees are valued in many nations. If foreign degrees are valued more in the job market of some of the developing nations, there would be corresponding devaluation of degrees given by the national universities. So globalisation enhances both private and public good aspects of higher education. Here again, policy plays a role in determining the mix. It is in this context that the rationale behind allowing the entry of the foreign providers needs to be examined. If the argument for fostering competition as it is in the neo-liberal framework of GATS, there are enough reasons why India should be circumspect before allowing the foreign education providers to operate in India in view of the three objectives of expansion, inclusion and excellence as envisaged in the 11th Five Year Plan? (Tilak 2008, 2011; Chattopadhyay 2010)[30].

[28] This leads to the failure of the students to anticipate the quality of education and in the process, often get duped being forced to succumb to arbitrary hiking of fees and other unscrupulous measures leading to a fall in the quality of education (Chattopadhyay 2009).

[29] The extent of funding, both from the government as well as from the private sources may also depend on accreditation and ranking.

[30] However, if the main objective is to foster cooperation in the realm of knowledge generation and its dissemination, there seems to be a case for partnership with the reputed foreign providers.

Governance reform and the new public management

With the promotion of market, the neo-liberals would argue that the government funded institutions are to be reformed to ensure meaningful participation in the market to achieve efficiency, responsiveness to the forces of demand and supply and autonomy, academic and financial, to deliver quality education. The idea is to enforce corporate managerial practices even in the government funded institutions so that the inherent weaknesses of these institutions are effectively negotiated and they function more like privately funded institutions and reap efficiency gains. In a world as envisaged by the mainstream economists, the individuals are mainly driven by the self-interest and respond to economic incentives, possible manifestations of what is called principal-agent problem becomes crucial. The teachers are assumed to be driven by self-interest (and in presence of information asymmetry) which is not in synchrony with the larger social objective of the institutions, for example their aversion to teach and deliver in absence of a proper monitoring by the head of the institution or the government. Once, there is a compromise with the teaching-learning process, the quality of education will surely plummet. Governance reform is often guided by the main tenets of public choice theory which is based on the assumption that an individual, irrespective of socio-political-cultural context, is *homo-economicus*[31]. Procedural reforms are being initiated as the budget for education is curtailed in the name of fiscal crunch. Promotion of the teachers has been made contingent on earning of points (API system) as the issues regarding accountability and autonomy are being discussed at all levels. Already there are signs of subversive practices as obsession with quantification cannot guarantee delivery of quality education. This kind of governance reform based on the principle of new public management would undermine teaching as a profession as autonomy and trust are undermined and accountability and monitoring are highlighted (Olssen *et al* 2004: 186-187).

Concluding remarks: looking beyond 'Commodification'

Commodification of education in mainstream economic theory has informed policy making in education even in the context of a developing country like India. This paper sought to offer a comprehensive critique of the neo-classical conceptualisation of education from various perspectives. This attempt is expected to serve as a warning to use economic concepts to design policies at a time when the dominance of the neo-liberal approach in the line of the mainline economics seems overwhelming. With the changing society, ever changing process of knowledge creation and in view of ongoing pursuit for building up a just society where human beings realize their potential, policy makers have a daunting task ahead. In a world which is being increasingly dominated by economic logic, it is a challenge how do we design policies in a highly differentiated society and yet we do not compromise with values education signifies and its role in nation building. The application of neo-liberal thinking seeks to treat the teachers' activity at par with that of workers who are remunerated in commensurate with their quantifiable product, students as investors and the

[31] In India, now the teachers' output or contribution is being subject to scrutiny. Recently, the Jawaharlal Nehru University has been subject to performance audit by the Comptroller and Auditor General (CAG) to assess the role and contribution of the university in terms of its mandate.

University as a factory. Achieving efficiency, so coveted a concept to the economist, would turn out to be costly for the society and would impede the process of inclusive growth. There is a need to explore the interface between economics of education and other social science disciplines to contribute towards making of a humane and context specific education policy rather than one policy suits all kinds of approaches. The economists have a challenge: how to infuse societal concern in economic policy making and begin the process of de-commodification of education.

References

Arrow, K (1973): Higher Education as a Filter, *Journal of Public Economics*, 2(3) 19 (23).

Arrow, Kenneth J. (1962): The Economic Implications of Learning by Doing', *Review of Economic Studies,* 29 (June): 155-73.

Attiyeh, Richard (1974): Survey of the Issues, in Lumsden, Keith, G. ed. "*Efficiency in Universities: The La Paz Papers*, (Amsterdam, London: Elsevier Scientific Publishing Company).

Becker, Gary (1964): *Human Capital: A Theoretical Analysis with special reference to Education*, (New YORK: Columbia University Press).

Bergan, Sjur, Raphael Guarga, Eva Ergon-park, José Dias Sobrinho, Rajesh Tandon, and J.B.G. Tilak (2009): *Public Responsibility for Higher Education*, World Conference on Higher Education 2009, UNESCO.

Bharadwaj, Krishna (1986): Classical Political Economy and Rise to Dominance of Supply and demand Theories, Universities Press: Madras.

Blaug, Mark (1976): The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey", *Journal of Economic Literature*, Vol. 14, No. 3 September: 827-855.

Blaug, Mark (1989): Review of Economics of Education: Research and Studies, George Psacharopoulos (ed) Oxford: Pergamon Press. 1987. *Journal of Human Resources*, XXIV (2), Spring: 331-5.

Blaug, Mark ed. (1968): *Economics of Education Selected Readings, 1 and 2*, Penguin Books, (Middlesex, England).

Bowles, Samuel and Herbert Gintis (1975): The Problem with Human Capital Theory, A Marxian Critique', *The American Economic Review,* Volume 65, Issue 2, Papers and proceedings of the eighty-seventh annual meeting of the American Economic Association (May, 1975): 74-82.

Bowles, Samuel and Herbert Gintis (1976): *Schooling in Capitalist America*, New York: Basic Books.

Bowman, M. J. (1966): The Human Investment Revolution in Economic Thought" in Blaug, M. ed. (1968), *Economics of Education, Selected Readings, 1 and 2*, Penguin Books, (Middlesex, England).

Chattopadhyay, S. (2010): An Elitist and Flawed Approach towards Higher Education, *Economic & Political Weekly, May 1, Vol XLV, No. 18.*

Chattopadhyay, Saumen (2007): Exploring Alternative Sources of Financing Higher Education in India", *Economic & Political Weekly*, 20 October: 4251-259.

Chattopadhyay, Saumen (2009): The Market in Higher Education: Concern for Equity and Quality, *The Economic and Political Weekly*, July 18: 53-61.

Denison, E.F. (1962): *The Sources of Economic Growth in the United States and the Alternatives before us*, Committee for Economic Development, New York.

Fitzimons, Patrick and Michael Peters (1994): Human Capital Theory and the Industry Training Strategy in New Zealand, *Journal of Educational Policy*, 9 (3) 245-66 (appeared in Marshall, J and Michael Peters edited Education Policy, An Elgar Reference Collection, Cheltanham, UK.

Glennerster, Howard, (1991): Quasi-markets for Education?, *Economic Journal*, 101 (408), September : 1268-76.

Hanushek and W ssmann, L (2010): Education and economic growth Brewer, D J and McEwan, P J ed. (2010) *Economics of Education*, Elsevier and Academic Press.

Hanushek E. A. (ed.) (2003): *The Economics of Schooling and School Quality,* Vol I and II, An Elgar Reference Collection, Cheltanham, UK: Edward Elgar.

Hanushek E. A. and Kimko D. D. (2000): Schooling, Labour Force quality, and the growth of nations, *American Economic Review* 90(5) : 1184-1208.

Hogan, David (1997): The Social Economy of Parent Choice and the Contract State, in Glyn Davis, Barbara Sullivan and Anna Yeatman (eds.) *The New Contractualism?*, Chapter 9, South Melbourne: Macmillan Education Australia Pty Ltd.: 119-36.

Kapur, Devesh and Mehta, Pratap Bhanu (2012): Higher education in Basu, Kaushik and Maertens Annemie (ed.) *The New Oxford Companion to Economics in India*, Volume I, Oxford University Press: New Delhi.

Lucas, Robert, E. Jr. (1988): On the Mechanics of Economic Development', *Journal of Monetary Economics*, July, 22(1): 3-42.

Lumsden, Keith G ed. (1974): *Efficiency in Universities: The La Paz Papers*, Elsevier Scientific Publishing Company, Amsterdam.

Majumdar, Tapas (1983): *Investments in Education and Social Choice* (Cambridge: Cambridge University Press).

Majumdar, Tapas (1997): Economics of Indian Education for the next Century, *Indian Economic Journal*, 45(4), April-June: 39-48.

Mankiw, G. D. Romer and D. Weil (1992): A Contribution to the Empirics of Economic Growth', *Quarterly Journal of Economics*, 107: 407-37.

Marginson, Simon (2007): Five Somersaults in Enschede: Rethinking Public/Private in Higher Education for the Global Era, in Enders, J. and Jongbloed, B (ed.) *Public-Private Dynamics in Higher Education: Expectations, Developments and Outcomes*, Transaction Publishers: New Brunswick, USA.

Marginson, Simon (2009): The Limits of Market reform in Higher Education, paper presented at Tohoku University, 29 January.

Marginson, Simon, (1997): Subjects and subjugation: The Economics of Education as a power knowledge, Discourse: Studies in the Cultural Politics of Education, 18(2), August: 215-227.

McMohan, Walter W. (2004): The Social and External Benefits of Education, Johnes, G. and Johnes, J. (ed) *International Handbook on the Economics of Education*, Edward Elgar.

Mincer, Jacob (1970): The Distribution of Labor Incomes: A Survey. With Special reference to the human capital approach, *Journal of Economic Literature*, VIII (1), March: 1-26.

Musgrave, Richard A and Peggy Musgrave (1984): *Public Finance in Theory and Practice*, Fourth Edition (New Delhi: McGraw-Hill Book Company).

Olssen, M., Codd, J. and Anne-Marie O'Neill (2004): *Education Policy, Globalization, Citizenship and Democracy*, (London, Sage Publications).

Patnaik, Prabhat (2007): Alternative Perspectives on Higher Education", *Social Scientist*, 35(11-12) November – December: 3-14.

Psacharopoulos, G. (1973): *Returns to Education*. New York: American Elsevier.

Psacharopoulos, G. (1994): 'Returns to Investment in Education: A Global Update', *World Development* 22:9: 1325-43.

Psacharopoulos, G. and H.A. Patrinos (2004): Human Capital and Rates of Return in G. Johnes, and J. Johnes (eds.), *International Handbook on the Economics of Education*. UK: Edward-Elgar.

Romer, Paul J (1990): Endogenous Technological Change", *Journal of Political Economy*, Vol. 98, no. 5: S71-S101.

Romer, Paul M. (1986): Increasing Returns and Long-Run Growth' *Journal of Political Economy*, October, 94(5): 1002-37.

Schultz, T (1961): Investment in Human Capital, *American Economic Review*, 51: 1-17.

Schumpeter, J. A. (1943): *Capitalism, Socialism, and Democracy*, New York: Harper and Brothers.

Sen, Amartya (2000): *Development as Freedom* (Delhi: Oxford University Press).

Spence, M A (1973): Job Market Signaling, *Quarterly Journal of Economics*, 87: 355-74.

Stiglitz, Joseph E (1975): The Theory of "Screening", Education, and the Distribution of Income, *The American Economic Review*, Vol. 65, No. 3 (June.,): 283-300.

Teixeira, P *et al* ed. (2004): *Markets in Higher Education, Rhetoric or Reality*, Kluwer Academic Publishers, Dordrecht/Boston/London.

Tilak, J. B. G. (2008): Transition from Higher Education as a Public Good to Higher Education as a Private Good: The Saga of Indian Experience, *Journal of Asian Public Policy*, 1(2) July: 220-34.

Tilak, Jandhyala B.G. (2011): *Trade in Higher Education: The Role of the General Agreement on Trade in Services (GATS)*, UNESCO: International Institute for Educational Planning, 95, Paris.

Unterhalter, Elaine (2008): The capability approach and gendered education: some issues of operationalisation in the context of the HIV/AIDs epidemic in South Africa in Comim, F., M. Qizilbash and S. Alkire, ed. The Capability Approach: Concepts, Measures and Applications, Cambridge University Press, Cambridge.

Winston, Gordon C (1999): Subsidies, Hierarchy and Peers: The Awkward Economics of Higher Education, *The Journal of Economic Perspectives*, Vol. 13, No. 1 (Winter): 13-36.

Journal of Educational Planning and Administration
Volume XXVII, No. 1, January 2013, pp. 71-100

RESEARCH NOTES/COMMUNICATIONS

Quality Education Model

—Modeling School System for Achieving Equitable Quality in India

N. Mythili*

Abstract

Reforms in school education and concern for quality have been the focus for some time in India. Stakeholders need a common understanding of the system and notion of quality to work with the system coherently. A model that succinctly captures this essence and is made useable by all stakeholders is the need of the hour. In this direction, 'Quality Education Model' (QEM) was conceptualized using research based factors and established practices. It was vetted in the field with various stakeholders. Feedbacks were used to strengthen and stabilize the model. Results indicate that methodology used to build QEM is appropriate. Using QEM, stakeholders from within the system were able to understand systems perspective easily and visualize the utility of the model and apply it in their context. An intellectual abstraction of the nature of QEM can be learnt by stakeholders who are from outside the system to build systems perspective.

* 11, 2nd Stage, 6th Main, 6th Cross, Postal Colony, Sanjayanagar, Bangalore-560094, Karnataka.
Email: mythili@azimpremjifoundation.org

Journey of Educational Reform Movement in India

A nationwide school improvement programme was undertaken through Sarva Shikshana Abhiyan (SSA) in the year 2000, long after Operation Black Board scheme in 1988. With RTE Act, 2009, the entire framework of SSA was revised as "SSA-Towards a Rights Based Framework" (MHRD, 2010). This was a significant shift by the State as it owned up the responsibility of providing free and compulsory elementary education for all with equitable quality. Rastriya Madhyamika Shikshana Abhiyan (RMSA), another centrally sponsored programme has begun since 2008 towards universalizing secondary education (MHRD 2008). The challenge is to dramatically improve access, equity and quality of secondary education simultaneously (World Bank, 2009). However, education system in India has not yet reached a stage where educational change can be discussed in terms of decentralization of curriculum and system-wide changes in terms of structures, processes and defining educational outcomes by stakeholders. Therefore, movement is one of removing barriers for schooling and educational stagnation through reform measures. In all these reforms, the focus is on improving the system for achieving equitable quality of education.

Concern for quality by all stakeholders is clearly visible. However, it does not mean the same for all and at all times. Being interdisciplinary in nature, education is open to a variety of approaches, methods and techniques which has implications for working towards quality. Various studies were reviewed in depth (Mythili, 2000; Barrett et.al., 2006; Centre for Development Studies,1999; Chapman and Adams, 2002; Filmer, 2004; Govinda and Bandhopadhyay, 2008; Maurice, 2004; Quality Council of India (nd); MHRD, 2010; United Nations, 2005; Wrigley 2003; Kumar, Krishna, 2010; Sarangapani, Padma, 2010; Velaskar, Padma, 2010; Pappu and D.Vasanta, 2010). The review revealed that any definition of quality would delimit its scope and purpose. There are different perspectives to understand quality which can be broadly classified as pedagogic, economic, organisational, systemic, sociological and political philosophy. Indicators of quality are conceptualized on these perspectives (refer to Table 1).

Need for the study

Need has been derived from understanding the necessity as felt by the stakeholders from the field as well as from a review of research literature.

Felt Need by different stakeholders

The meaning of quality education has always been elusive for most of the stakeholders from within and outside the education system. It has been variously used and even loosely interpreted on different occasions depending on the situation and need. A lack of clarity about one's role in the education system is adding to the confusion. Hence, it is important for all stakeholders to have a common understanding of the education system as well as its outcomes in order to understand the meaning of quality.

Review of Research Literature

Relevant studies and models have been chosen for review, even though the entire gamut of research studies can be considered. They are Ohio State model for Quality[1], Oregon Quality Education Model[2] School Effectiveness model (Shereen, 2000); Education System model (John Stone, 1981; Roy Carr-Hill and Olav Mangnussen,1973); School Effectiveness model (Renoylds,1994); Creemer's Comprehensive School Effectiveness model (Teddlie and Renoylds, 2000; Creemers and Reezigt (nd); Kyriakides Leonidas, 2008); Theoretical model of US education system from Oaks (Kaplan David and Elliot, 1997); Framework for Quality (United Nations, 2005; UNICEF,2000); Escuela Nueva model of Latin America[3]; Integrating Sub-systems of Education Systems for Successful Education Reforms (Datnow et. al., 2006); Development and Testing of a School Improvement model (Leithwood, Tantzi and Hopkins (2006); Contextual factors for School Improvement (Hechuan, et.al., 2007); SSA Framework of India (MHRD, 2000; MHRD 2010); RMSA Framework for secondary education system (MHRD, 2008); Sarva Shikshana Abhiyan (2010); Process of school effectiveness (Wrigley,2003); School model (Heneveld and Criag, 1996).

TABLE 1

Multiple Perspectives of Quality and their Indicators

Pedagogic	Quality as Achievement Quality as Educational Outcomes
Economic	Quality as Efficiency
Organizational	Quality as Availability Quality as Adequacy Quality as Improvement Quality as Effectiveness Quality as Event Management Quality as Accountability
Systems approach	Quality as Change / system development Quality as collaboration and Partnership
Sociological	Quality as community participation and partnership Quality as Local Characteristics Quality as Pupil Characteristics Quality as Awareness Quality as Relevance Quality as Equity and Equality[4] Quality as Access to schooling and education
Political philosophy	Quality as intent of Education Function Quality as Equity and Equality

(Table 1 is the revised version of Mythili, 2000).

[1] http://www.eric.ed.gov/PDFS/ED396419.pdf
[2] http://www.ode.state.or.us/sfda/qualityed/docs/origqemreport1999.pdf.
[3] http://www.equip123.net/jeid/articles/7/Colbert-EscuelaNueva.pdf
[4] Equity and equality can be found in both sociological as well as political philosophy approach.

A discussion on inputs and outputs (Winch, Christopher, 2010); Reviews on NCERT Quality Monitoring Tools (Nooronha, Anjali (2010), Education Development Index (Little W, Angela (2010), Advancement of Educational Performance through Teacher Support (Clarle, Prema, 2010), UNICEF-Quality Tool Kit (Banerji, Rukmini, 2010), Karnataka State Quality Assurance Organisation (Verghese, 2010); and Annual Status of Education Report (Jha, Jotsna, 2010).

A summary of the findings from the review of research literature reveals that models from international contexts are found to be more when compared to Indian context. By and large, little distinction is made between general frameworks and models in these studies with the exception of Creemers and Leithwood. If it is school effectiveness model, it loses sight of the significant influence by the larger education system above it and the local contextual milieu. Outcomes in all these studies are mostly limited to student performance in school subjects or labour market demands in terms of skills. In Indian context, empirical research studies, tools and discussions on conceptual issues are more and rare to find conceptual models. So far the attempt in the form of descriptive frameworks has been made in SSA framework referring to quality dimensions in Indian context or developing quality indicators such as ADEPTS and Quality Monitoring Tools.

Research Gap

Existing studies throw little light in understanding the entire education system in a holistic way. Rarely attempts have been made to develop a system level model referring to a nation's education system in general and also in Indian education system. A model that succinctly represents the essence of all the details of a system and its aspirations is very important. Descriptive frameworks like SSA and RMSA do not fulfil this need which is very critical for systemic reforms at all levels in the school education system. Hence, there is a need to develop a model for quality for education system in India. Present study serves as a means to provide a support for government's efforts to fulfil the aims of schooling in India.

Objective of the Study

1. To build a conceptual model for Indian school system.
2. To vet the model in the field and examine the methodology adopted for its conceptualization.
3. To examine the relevance and utility of the model with various stakeholders of school system.

Methodology

There are two principles in modeling a system, namely: (a) it should contain all significant factors covering a range of values and properly reflect their actual behavior; and (b) It should exclude all insignificant and irrelevant factors (Clyton and Radcliffe, 1996). This has been used in the present study.

The exercise of model building is carried out in two phases, namely, building a conceptual model and vetting the model in the field. In this section, the methodology used to build the conceptual model is described (section 4.1). As the methodology used to vet the

model varied significantly across different stakeholders, it is described along with the discussion of vetting process separately for different stakeholders.

Steps designed for building the conceptual model for school system in Indian Context

1. Four criteria are used to build a conceptual model for education system. They are:
   a. Causality of factors with outcomes.
   b. Assigning weightage and a place holder for each factor in the model.
   c. Grouping of factors based on similarity of relationship between factors.
   d. Outcomes that hold together all the sub-systems and factors in the model.
2. Open Systems theory was used as a theoretical basis to build the conceptual model for school system.
3. Boundary for the system was identified as 10 years of schooling. Education was treated as a system and environment in which it exists and functions was considered as context. Hence, clear differentiation between system and environment was sought to be established.
4. Major sub-systems were identified. They are macro sub-system or national/state level, meso sub system or district level, and micro sub system or school level.
5. Factors used to construct the model were selected using a combination of three methods, *viz.,* (a) research based factors which contribute to student outcomes were selected; and (b) taking cognizance of well established practices in the system in terms of institutional structures, programmes, interventions, etc.
6. Broadened the scope of outcome indicators to extend beyond testing student's cognitive skills to address affective and psycho-motor domains using National Curriculum Framework, 2005 (MHRD-NCERT 2005) and SSA Framework (MHRD, 2010). Education for All (EFA) goal is also to capture the system-wide outcomes (United Nations, 2005).
7. A fixed placeholder was assigned to every selected factor depending on the degree of abstractness of the factor with reference to outcomes.
8. These factors were grouped together based on similarity of relationship between factors forming a group.
9. These groups of factors were arranged in appropriate places on the basis of its degree of abstractness within the six aspects of the model such as two inputs, processes, outcomes, context and student characteristics.
10. Based on the four criteria mentioned above, a mapping exercise was carried out for the chosen factors by conceptualizing relationship between factors with a suitable rationale to build the conceptual model[5].
11. All the identified factors are covered in SSA framework (MHRD 2000; MHRD 2010) and RMSA framework (MHRD 2008). Hence, these two are considered as primary documents that represent the entire review of researches to identify the factors for model building. Hence, no separate mention is made about the research based evidence for each factor.

[5] Details of mapping exercise are voluminous and hence refrained from presenting it here.

12. Important sub-factors that contribute to the completeness of a factor were identified and listed under each factor.

Quality Education Model – A Description

Open systems theory is used as theoretical framework for QEM. Systems exist in all aspects of our world. Systems are often complex and difficult to understand as a whole. Systems are influenced by environment outside and in turn influence the environment. They often have a number of sub-systems with various relationships to one another (see Figure 1a). Sub-systems themselves also consist of micro systems within them (see Figure 1b).

Figure 1a ⟶ Sub-systems

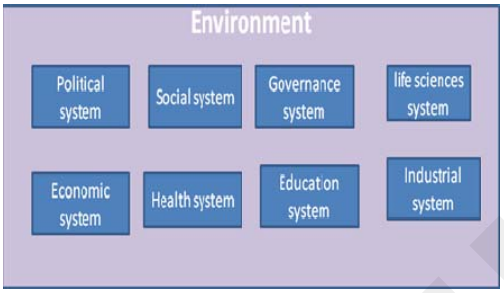
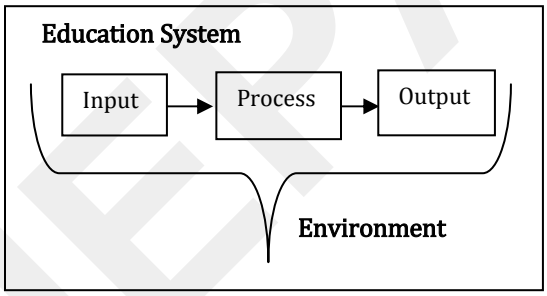


Figure 1b ⟶ Micro-systems



One of the approaches to study Open system is inputs, processes, and outputs and environment in which it exists and functions. Open systems interact with other systems outside of themselves.

There are four underlying concepts that help to study and understand any social system or open system. They are *Specialization, Grouping, Co-ordination and Emergent Properties*. *Specialization* refers to parts of a system that are divided into smaller components allowing more specialized concentration on each component. *Grouping* refers to the method of avoiding greater complexity with increasing specialization by way of bringing together the related disciplines or sub-disciplines. Coordination implies synchronization of interactions among various groups. *Emergent properties* refer to recognizing and understanding the developing or changing properties of a system[6].

Whole-Part Relationship in Systems Approach

Van Bertalanffy[7] describes the whole-part relationship in systems theory. With respect to the whole, parts are seen as sub-systems. With respect to the parts, whole is seen as super-system. A study of the super system implies the study of total input and total output without specific attention to processes and details within the sub-systems. At higher level, there is more abstraction when compared to lower levels. Therefore, in the approach where super-systems are studied, it is of very less importance to study the micro-processes. Hence, process is considered as a black box. However, when sub-systems are studied, the notion of

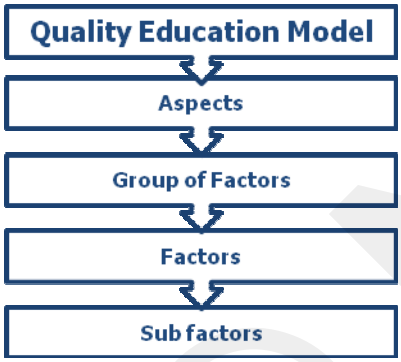
[6] http:// silvae.cfr.washington.edu/ecosystem-management/systems.html.
[7] http://pespmc1.vub.ac.be/sysappr.html.

black box withers away as there is a scope to study the processes within these sub-systems in a detailed manner.

In analytic approach or lower view wherein parts are studied, simple linear cause-effect relationships are considered. In synthesis or higher view wherein whole is studied, complex network of inter-dependencies are studied and understood by a common purpose. Both these are important for understanding the system. This two-way relationship can be understood using downward causation and upward causation. In upward causation, laws governing the parts cause the behaviour of the whole. In downward causation, laws governing the whole cause the behaviour of the parts. When we say that the whole is more than the sum of its parts, 'more' refers to the higher level of laws which make the parts function in a way that does not follow from the lower level laws.

With this theoretical background, conceptually constructed model named as 'Quality Education Model' (QEM), the focus of this study is explained. Basic structure of Quality Education Model has four layers such as aspects, group of factors, factors and sub-factors (see Figure 2).

FIGURE 2 — Basic Structure of QEM



QEM: It is an attempt to explain the formal education system comprehensively and holistically using systems perspective by referring to relationships between various factors and outcomes in the education system.

Aspect: An aspect is a specialized major component indicating a broad functional area within the system in QEM. There can be many functional areas interconnected to each other in a system.

Group of Factors (GOF): Refer to specialized area of significant importance within an aspect. It is constructed by grouping factors which have similarity of characteristics and causality of relationships. It helps to construct a holistic view of the model.

Factors: Refer to the clearly defined areas of operation contributing to the particular details of the Group of factors to which it belongs.

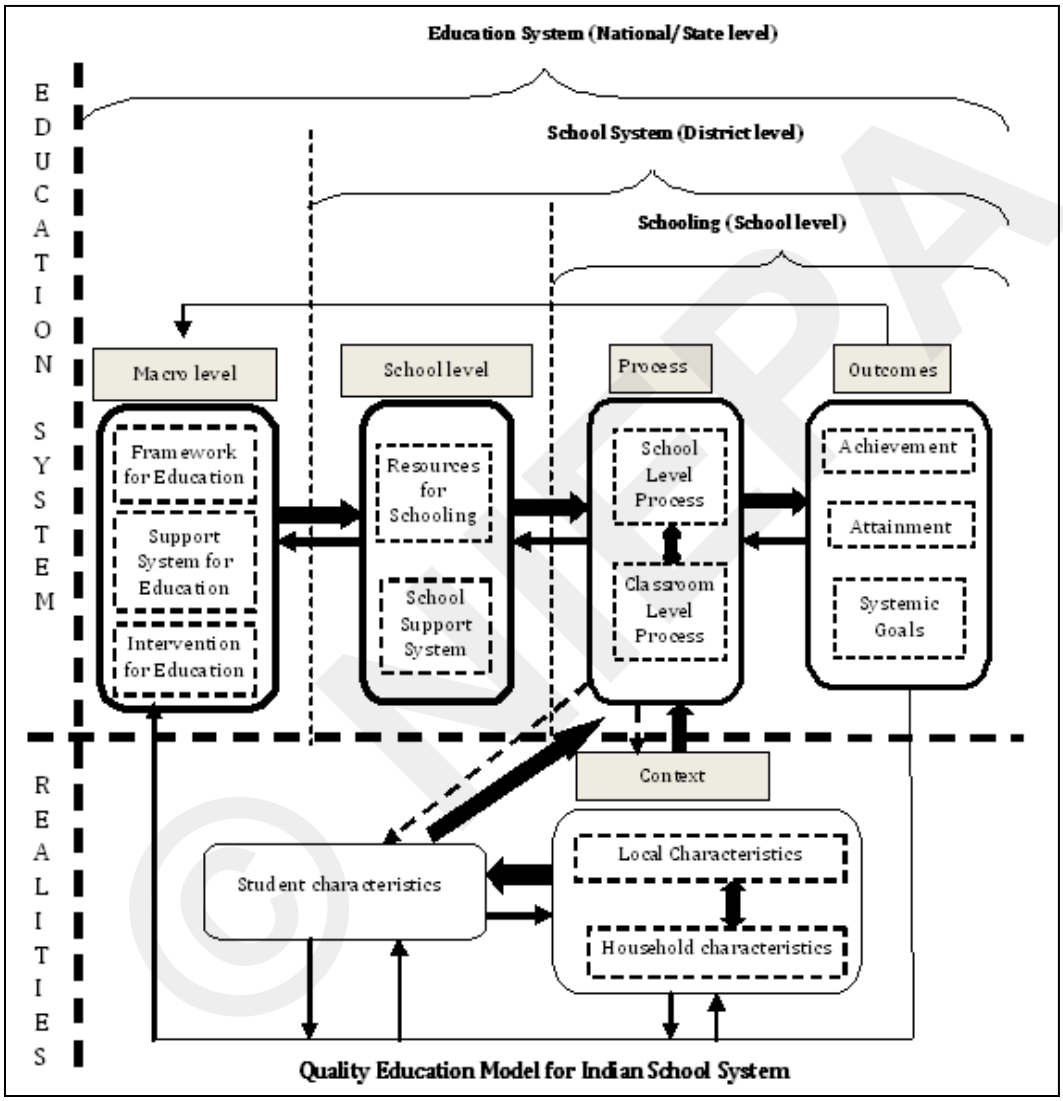
Sub-Factors: Explain the factor completely.

QEM – A Bird's Eye View

In the Bird's Eye View level, Quality Education Model (QEM) is described at group of factors level to get a holistic view referring to sub-systems and relationship between different aspects of the super-system. (See Figure 3)

FIGURE 3

Quality Education Model



QEM has two parts to *viz.,* education system and realities. Input, process and outcome aspects of the model form education system whereas context and student characteristics form realities that lie outside the education system and that we need to be taking cognizance of. While the former refers to the system, the later refers to the environment around.

Three sub-systems are conceptualized in QEM. They are 'Education System' at the macro or national (or state) level; 'School System' at the meso or district level; and 'Schooling' at the micro or single school level. The rationale for this division is that all policies,

interventions and processes that are envisioned at the macro level get translated into action at the district level. Hence, abstract education system at the national level being concretized at the district level is school system. School is considered as the primary focus and hence, it is the unit of study and analysis in QEM. So, the third level refers to school wherein schooling is studied. For all these three levels, student characteristics and context are to be taken cognizance of which are outside the system.

Underlying principles in the construction of QEM are:

- School is at the centre of the model. All other aspects of the system are meant in support to achieve the desired educational outcomes.
- Outcomes selected in the construction of the model are purely utilitarian in nature having a broader scope *viz.,* for schooling, life and society.
- Outcomes chosen in the model drive the nature and type of processes and inputs.
- The model attempts to study and understand the education system from systems perspective.

There are six aspects in QEM *viz.,* macro level input, school level input, process, outcomes, context and student characteristics. *Macro Level Inputs* are those broad-based abstract inputs given to the education system by the State. *School Level Inputs* are abstract macro inputs translated into tangible inputs for schools. *Process* is a place where schooling happens. It contains those factors that can be controlled by the actors in the school. *Context* is the reality that we need to take cognizance of for the education system to function. *Student Characteristics* are those features that a student brings into the school on his/her entry into the system from the context which are to be taken cognizance of. *Outcomes* refer to the tangible and subtle learning outcomes of students as well as that of education system as a result of schooling. These outcomes are derived from Aims of Education as discussed in NCF 2005 (NCERT-MHRD, 2005), SSA (MHRD, 2000; MHRD 2010) and EFA goals (United Nations, 2005).

There is a close relationship between all six aspects in the model. Abstract inputs from macro level flow as tangible school level inputs for schools as represented by the thick forward arrow. These school level inputs are utilized in the school wherein there is an intense interaction between physical materials and individuals are predominantly seen in the form of transformation of resources and support into actions and events in the school, i.e. process. The thick forward arrow from school level inputs to process indicates this. School level Inputs translating into events and actions for the schooling process have a specific aim in view to be achieved. These are represented in the form of outcomes. The thick forward arrow from process to outcomes indicates this relationship. However, the relationship between process and outcome is not linear. The process is influenced by various other extraneous factors or environment as indicated in the model. Broadly, these are represented as context and student characteristics. These extraneous factors from the environment or context significantly influence the process. Processes in turn influence the environment in unique ways (represented by dotted arrows). In short, process, i.e., the school is connected to every other aspect in the model. Hence, this forms the hub of the entire education system to which every other aspect of the system is connected directly or indirectly.

There is a feedback loop clearly reflecting the use of systems approach in the study. The arrows starting from macro level input do not end at reaching outcomes but come back to

form a loop in various ways. Outcomes influence the macro level input directly. Outcomes also influence the macro level input through different layers of the education system. Outcomes influence the macro level Input through the context and student characteristics in several ways. Therefore, outcome is the funnel through which all the backward arrows to macro level Input get addressed in the model. The backward arrows from process to context and from process to student characteristics have no meaning devoid of being linked to outcomes. Hence, even though there may seem to be relationships between process and context, process and student characteristics, the relationships assume significance only in the context of outcomes. Therefore, a distinguishing feature which differentiates QEM from the rest of the models is that it is driven by outcomes. All aspects in the model are informed by outcomes, a deviation from the normally accepted approach wherein inputs drive the outputs. Hence, all aspects are also related and connected to outcome directly or indirectly. There are three types of outcomes. They are: (a) Achievement for students and teachers in the school; (b) Attainment for student, school and society; and (c) Systemic goals school, society and nation at large.

In addition to the backward and forward arrows used mostly in the model, double-sided arrow is also used in two places *viz.,* (a) between school level process and classroom level process; and (b) between local characteristics and household characteristics. Even though it is true that there are relationships between groups of factors within every aspect in the model, the purpose of using double-arrow being used specifically in these two places is to highlight the importance of *significance of relationship* between them and on the outcomes.

The model recognizes the centrality of the learner by giving a special place by not subsuming within the context. The centrality of the learner is further upheld in terms of addressing 'socio-emotional space' exclusively for children at the school level process as it is the right of every child for schooling and 'Effective Learning time' in the classroom level process and achievement and attainment as outcome meant for students. Hence, student is the primary stakeholder of the education system. Since the model is outcome driven, all the processes and inputs are aligned to give emphasis for student. The centrality of the learner is strengthened further by the fact that SSA's revised framework based on RTE Act 2009, emphasizes the child's rights as essential to be addressed and implemented by the education system.

In the next step, model is presented at the factor level (see Figure 4). See appendix 1 for QEM at sub-factor level.

Vetting the Quality Education Model in the field with various stakeholders

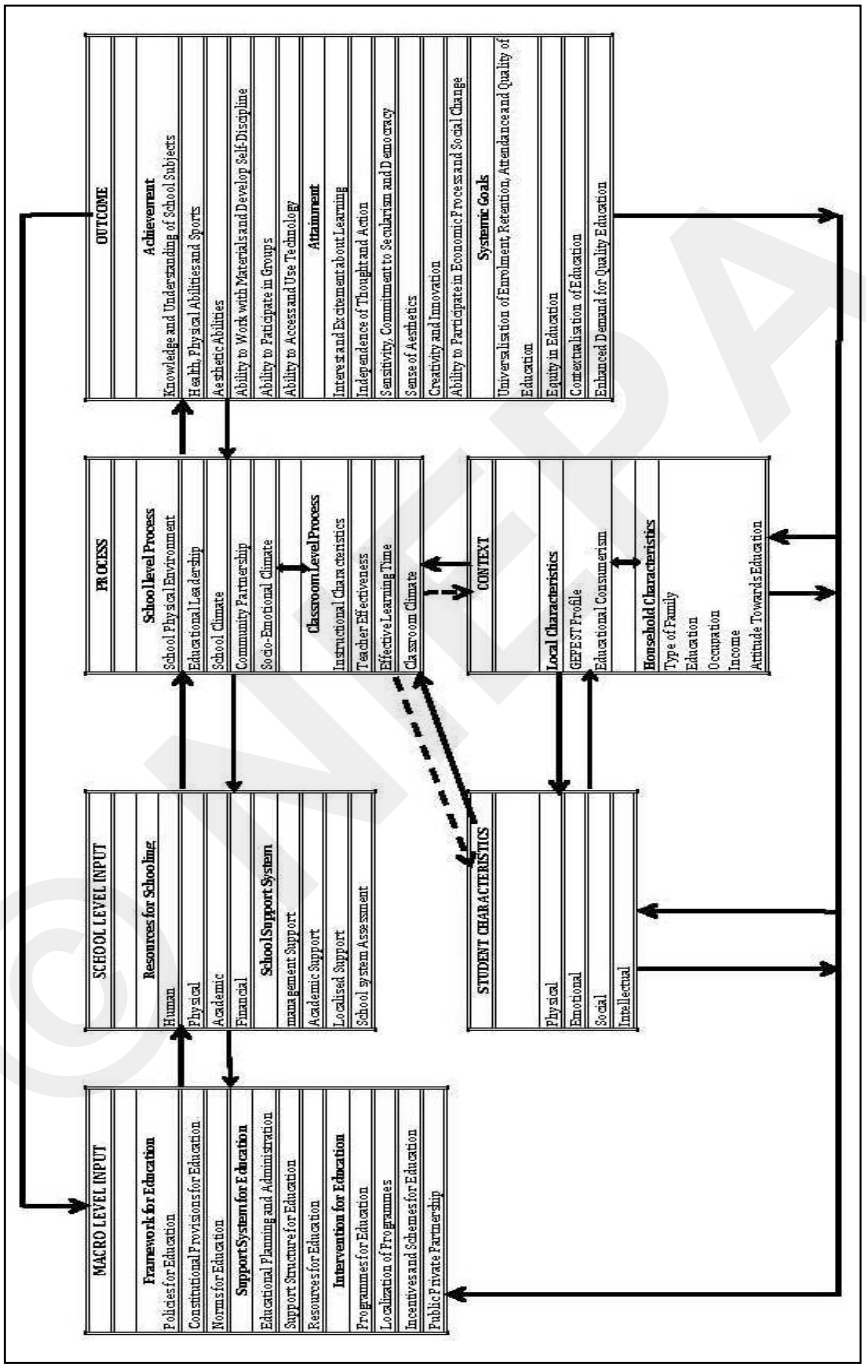
After conceptualizing the model, it was shared with stakeholders who are working from within and outside the education system as a part of vetting the model for its strengthening.

In vetting the model, the focus was on examining for the methodology adopted for its construction, utility and relevance of model for a variety of stakeholders. This approach is different from that of testing the significance of relationship between factors and outcomes that is normally for building the model as factors selected are already research based factors and are also from well established practices in Indian context. Hence, methodology conceptualized in building the model was vetted to validate the model. Various ways were

FIGURE 4

QEM at Factor Level

QUALITY EDUCATION MODEL



used to vet the model depending on the nature and functions of these stakeholders who are working from within or outside the education system. They are:

1. Facilitations on Quality Education Model (QEM), Block Resource Persons (BRPs) from four different districts of Karnataka and then seeking their reviews and comments through School Leadership Development Programme (SLDP).
2. A self-learning work-book was developed for learning the basics of QEM and was administered to two batches of SLDP participants who are BRPs.
3. Workshops on QEM for stakeholders working from outside the system.
4. Applying QEM to address the problems in their school contexts in SSA sponsored project at Koppal –"A Change a Month" by way of developing diagnostic framework and using QEM as the basis for intervention.
5. Method adopted to conceptualize and build the model in the field in "The Attunement Programme" (TAP me).
6. Sharing QEM in advance and seeking reviews and comments from academicians.

Analysis of data obtained from vetting the model is broadly divided into two categories, *viz.,* analysis of data collected from stakeholders working from within and outside the system.

Vetting the Model with stakeholders who are working from within the education system

The model was shared with a variety of stakeholders. So, the process and analysis of vetting the model is discussed here separately. There are five broad themes, *viz.,* description of the stakeholder, sample, process of QEM transaction, analysis of data and interpretation. Depending on the nature of stakeholder, sometimes the analysis and interpretation changes to the process adopted for study; or the process adopted to use feedback for strengthening QEM ; or analysis and revision of the model.

Vetting the model with Block Resource Persons (BRPs) of School Leadership Development Programme (SLDP)

56 BRPs from 4 districts of Karnataka were selected. QEM was facilitated by designing the facilitation module consisting of various activities and methods to learn QEM and study outcomes in detail.

Analysis of data and revision of QEM

During the facilitation of QEM, the necessity was evidenced to clean up macro level input and school level input of the model due to the following reasons:

- To distinguish clearly between abstractness of macro level inputs and tangibility of school level inputs.
- To remove the overlaps and confusions that arose in participants, especially at the factor level in macro level input and school level input.
- To formulate the group of factors precisely and distinguish them from factors clearly in both the aspects.
- To identify all necessary factors and sub-factors in these two aspects.

As a result, three sub-systems (or levels of education system) got clearly defined. In the model, coverage from macro level input to outcomes was called education system. All factors in this aspect were named using the term 'education' such as support system for education, framework for education, intervention for education, to represent functioning at national/state level. Coverage from school level input to outcomes was called school system referring to the district level. The reason being all programmes, policies, and educational administration and management formulated in abstract form at the national/state level get translated into action at district level to reach every school. Consequently, factors in the school level input were named using the term school such as school support system and resources for schooling. This method clearly distinguishes between factors used at macro level inputs and at school level input implying differing degree of abstractness that has helped in overcoming the repetition of factors. From process to outcomes is conceptualized as the third/micro level where factors and group of factors refer to schooling. Single school is the focus here. The term `education system' used in the model delimits itself to 10 years of schooling. The factors in the context aspect also got strengthened with additional factors such as educational, cultural, demographic and geographic milieu and attitude for education.

Even at the sub-factor level, the model was cleaned up and strengthened the conceptualization of outcomes for elementary and secondary level of schooling in terms of: (a) achievement as outcome refer to elementary school stage; (b) attainment as outcome refer to secondary school stage; (c) systemic goals are common both for elementary and secondary school stages with the exception of contextualization of education which may not be applicable for secondary school stage; and d) school support system at the school level input is derived from support system for education from macro level inputs. So, as the model was examined and revised, sub-factors and component levels were also stabilized.

In the next step, relationship between aspects and feedback mechanism as represented by arrows was also examined. Importance of the feedback loop from outcomes to context and student characteristics emerged clearly. Any feedback from the funnel of outcomes is critical for quality and has lasting significance rather than intermediary influences from process to context and student characteristics, even though the latter is not to be undermined. Precisely for this reason, feedback from process to context and to student characteristics is represented by dotted arrows whereas feedback from outcomes to context and student characteristics is represented by line arrows. Also, it is more likely that feedback coming from outcomes feeds into policy revision and programme formulation to benefit the ultimate stakeholder—the student. Therefore, even though there are important intermediary outcomes resulting from a number of processes happening in the system, they serve as inputs to achieve the ultimate outcome. For example, teacher development is a process outcome and is critical for quality. However, it has to act as input for student outcomes, lest it should defeat the purpose. Hence, ultimate outcomes are upheld and recognized in QEM. Through this process, outcome holds together all the sub-systems and factors in the model - a criterion chosen for model building is ascertained.

A significant implication of the above logic is that every factor chosen for model building has a definite placeholder with due weightage. The natural fallout of this is that factors which interact with each other more intensely come together to form a group of factors or a mega variable. Hence, in building QEM at the system level, group of factors is a new conceptualization. It is imperative that groups of factors are grouped into an aspect based on

the relationship with each other and also based on causality with outcomes. Hence, rest of the criteria used for model building is upheld.

Revised version of the model was presented once again to SLDP participants after 3 months to ascertain the completeness of building the model in all respects. Discussions and presentations with participants revealed that revised version of the model in terms of adding, organizing and grouping of factors helped in removing earlier confusions.

Vetting the model with Block Resource Persons (BRPs) of School Leadership Development Programme (SLDP) by creating and using self-learning work book

To a group of 25 SLDP participants who are BRPs a self-learning work book on QEM was developed in Kannada by the author and was administered to these participants. 50 per cent of the participants returned these books and out of which 50 per cent of participants had attempted to use it. Feedback received from these participants was used to revise the workbook and prepare the final version. Intention of the workbook was to enable anyone who is working with the education system to get acquainted with the system. Based on the feedback, workbook was revised and final version was prepared. One of the important outcomes is that characteristics and critical attributes of all the six aspects of QEM were conceptualized.

Vetting the model with Education functionaries of Koppal district's school system

24 education functionaries from 4 taluks of Koppal district used QEM. From each of the four taluks, two schools were selected with HM from each school along with one teacher, one CRP and One BRP. Sample was purposively selected by DDPI and DyPC of Koppal district based on their performance to carry out a project in their schools under SSA project "A change a month". This was a unique way of vetting the model to test its relevance, utility and significance among grass-root level functionaries in rural government schools in one of the most backward districts in Karnataka.

A BRP participant from SLDP facilitated QEM. Later, it was applied to the project in the form of developing a diagnostic framework to address problems in their schools. The focus was on how to apply the knowledge of QEM. The process by which diagnostic framework was co-created by participants of Koppal workshop, researcher and SLDP facilitator.

Steps followed in applying QEM to address the problems of a school are explained

School: Chilavadagi HPS, Koppal Taluk, Koppal District;
Teacher: Uma Shettar; Head Teacher: Ambuja

1. SWOT Analysis for the school

Strengths (within the COI of the school and are achieved to a great degree) • Universalisation of Enrolment • Availability of teachers • Academic facility • Infrastructure facility • Programmes by government • A functional and co-operative SDMC	Weaknesses (within the COI of the school and can be addressed) • Irregularity in attendance • Lower levels of learning • Attitude of teachers • Indifferent attitude of parents
Opportunities (outside the COI having scope to work with) • To convenience parents with the help of SDMC • Remedial teaching • Changing the attitudes of teachers	Threats (outside the COI of the school having no scope to work with) • Indifferent attitude of parents • Blind belief • Celebration of festivals and village gatherings and celebrations

(Circle of Influence–COI).

Problem selected: Irregularity in Attendance of students

2. Proof of Evidence for irregularity in attendance

Evidence from Records	Evidence apart from Official Records	Other Sources
Attendance Register	Record maintained by the school based on attendance register stating reasons for absenteeism.	Observation made by teachers and students

(If no evidence is found, the perceived weakness is dropped and another weakness is selected for intervention).

3. Defining the problem/area of improvement

Irregularity in attendance: the child who is enrolled to the school does not come to the school every day but absents sporadically. The criterion to be called irregular attendance is that in a week, the child does not come for two or more days.

4. Listing out the causes

Indifference of parents, blind belief, celebration of festivals at home and in the village, problems of girl students, disinterest in learning by students, attitude of teachers, disinteresting teaching methods and processes, weak relationship of parents and teachers, professional commitment, teacher absenteeism, preference to traditional/main occupation in the family, poverty, seeing the lack of utilitarian value for education by parents, child labour, parents informing teachers about taking their children to fields during particular season of sowing and harvesting of crops.

5. Classifying and grouping of causes

Four categories emerged. They are: Community related causes; teacher related causes; student related causes; and school related causes

6. Identifying the critical causes (using 5 Ws i.e. asking 'WHY' five times to get into the root of the problem)

Applying Pareto's 80-20 rule to step 4, key or most probable causes arrived are highlighted in yellow. (80 per cent of problems are because of 20 per cent of causes).

Community	Students	School/teacher	Critical (most important) causes
Indifferent Attitude of parents ↓ Illiteracy ↓ Poverty ↓ Profit motive/utilitarian value for living ↓ No importance attached to schooling and learning by parents	Girls attaining puberty ↓ Lack of separate toilets ↓ Disinterest in learning ↓ Lack of attention to personal problems of students	No patience ↓ No respect for others' opinion (students and parents, community) ↓ Lack of effective communication (with community and parents) ↓ No recognition to problems suffered by children ↓ Careless for the child when it approached the teacher personally	No importance attached to schooling and learning by parents Lack of attention to personal problems of students Careless for the child when it approached the teacher personally

7. Draw up a plan for addressing the challenge

1. In which factor/s do these critical causes find their place in QEM? So, while planning, look for interrelationships between sub-factor chosen using the QEM.
2. Select two or three outcomes of QEM relevant to planned action and work towards achieving these while addressing the problem.

Critical Causes identified	Place holder in QEM – factor	Relationship with QEM envisaged
No importance attached to schooling and learning by parents	Context – household characteristics (attitude of parents)	Learning of school subjects
Lack of attention to personal problems of students by school/teachers	Socio-emotional space in the school level process	Interest and excitement in learning of school subjects
Very less attention paid to the child when it approaches the teacher	Socio-emotional space in the school level process	Interest and excitement in learning of school subjects

8. Look for the broad areas of interventions using QEM to ascertain for one's own COI

a) school level process wherein teachers can give more individual attention to students and hence with the COI of the school and teachers.
b) in the context wherein teachers work on the attitude of parents for schooling and is within the COI of the school.

9. It was left to the teachers to plan and implement actions to reduce absenteeism for their school context

Analysis of Data and Interpretation

An intellectual abstraction of a system was used by participants to develop a diagnostic framework to address problems, recognizing the boundary of their COI, nature of their role and by placing the identified factors/causes in a perspective using QEM. This diagnostic exercise enabled the stakeholders to analyse the problem in a holistic way using downward and upward causation for planning actions and solutions. They were able to identify the causes to be having multiple dimensions such as those from within system and those from outside the system showing that a continuous and close interaction between education system and context is critical for the success of schooling. It is one of the ways to recognize that stakeholders from within the system are able to recognise the complexity of systems phenomena as multi-dimensional.

Vetting the model with education functionaries such as DIET faculty and retired education officers and a high school teacher

The sample consisted of 6 DIET faculty, one high school teacher from demonstration school, Regional Institute of Education (RIE) Mysore and 4 retired education officers. QEM and its concept note was shared along with stakeholders in advance and sought for a suitable date to hold discussions and review. The discussions were held. Comments were studied and incorporated if found relevant.

Analysis of the Data and Revision of the Model

A suggestion was to go beyond NCF 2005 as outcomes must not restrict to NCF alone. After due study and analysis, the decision was that though these outcomes are based on NCF 2005, they encompass larger goals of education. Another suggestion was to come up with a framework to address quality as it is missing in the model. This had already been covered in a different form such as discussion on multiple perspectives on quality. (Refer to section 1 for details in the present paper).

Utility of the model as understood by different stakeholders from within the system:

1. Organization of factors helps to understand the school system in a systematic way.
2. It broadens our understanding about the system.
3. To identify one's own role and functional position vis-à-vis that of others in the system.
4. To recognize the boundary of one's Circle of Influence (COI).
5. It enables all stakeholders to have a common understanding about the system that helps bringing alignment in one's roles and functions with that of others in the system.
6. QEM provides a direction for actions by providing hints for critical areas of improvement.
7. It provides a systems perspective for understanding various dimensions of quality.
8. Knowledge of QEM enables to see one's challenges as stakeholder in a broader framework of operation and hence look for ways to expand his/her Circle of Influence (COI).
9. To see student performance beyond marks and grades in school subjects.
10. Student performance does not depend on students and their context alone but also on various other factors from within the system.
11. Koppal's experiment was an attempt to show that application of the model can be designed to address problems.

Vetting QEM with education functionaries who are working from outside the education system

Various ways were used to vet the model viz., facilitation, workshops and discussion and review depending on the nature and type of stakeholder/s.

Vetting the model with participants of 'TAP me' programme

A total of 56 participants from four of partnering institutions learnt QEM through an induction programme 'TAP me' (The Attunement Programme, me) conducted by Azim Premji Foundation. Three batches of induction were conducted with 2 days per each batch.

The revised version of the model was used as the basis. Participants built the model themselves inductively using their prior knowledge about the system. Participants did this exercise in groups. A detailed description of the design of facilitation on QEM is given below:

a) Participants were introduced to systems approach by bringing out the distinction between industrial approach and open systems approach.

b) Participants enumerated as many components as possible about the system and grouped them using suitable logic. Grouping exercise was repeated iteratively to arrive at a few broad categories. Each category was named. Discussions around the logic of grouping and its naming process were held in plenary at every step of model building.

c) Another alternative model i.e., QEM (at the group of factor level) constructed by the researcher was presented to the group. Participants compared their own constructed models and QEM with specific reference to logic used for grouping and comprehensiveness through discussions. This exercise was done both for education system and the context within which education system exists.

d) Participants recognized with due deliberations and questioning that student who is the primary stakeholder was a major missing theme in their exercises and included in their models.

e) In the next step, outcome as proposed in QEM was presented. Participants compared it with another set of outcomes they had earlier derived in a different session on aims of education.

f) Participants derived the relationship between all six aspects of the model and used arrows to describe the same. They compared it with QEM. They analyzed the importance of different types of arrows used in QEM.

g) Participants were to choose between the two models – their own constructed ones and QEM- after due deliberations, discussions and logic for its comprehensiveness.

Analysis of Data

In the process of building the model, participants covered most of the components. Iterative processes of grouping these components matched considerably with that of QEM. Similarities were observed between the model constructed by participants and QEM. They are: different levels of school system were identified, *viz.,* national level, state level, district level and school level. Factors were placed into larger baskets or aspects such as inputs, processes, outputs and context by many groups using open systems approach. Process was clearly identified to be located for the school and rest of the system to work for it. Aims of education derived by participants in earlier sessions matched nearly with achievements and attainments as outcomes listed in QEM. Selection and grouping of factors especially on macro level input and school level input, context and outcomes closely resembled QEM. Some of the common factors such as policy, programmes, institutional structures in the system, resources, school supporting structures such as DIET, BRC, CRC, SDMC, PRIs were identified and placed under appropriate group of factors by most participants. Factors such as community participation, school physical environment, educational leadership in the school level process was another important area of congruency. Teacher influence and TLMs were also identified in process aspect. Almost all factors listed in QEM for context were also listed by participants.

On comparing the QEM with their own constructed models, observations made by participants are: Almost all factors that have been covered in QEM, have also been covered in our model. Even though placement of factors within aspects is similar, they vary in some cases because a different logic was used. Confusions that still persisted in our models are not

present in QEM. Student was not a key focus area in our exercise whereas in QEM, it is a key focus area. Generally, all groups observed that the alternative model i.e., QEM presented to them is more comprehensive.

The process steps used in 'TAP me' to build the model nearly resembled the methodology used in building QEM. Prominent among them are: building the model iteratively by grouping factors identifying coherency between factors and logic for grouping; deriving outcomes from NCF, 2005. delineating boundary between education system and context; identifying different sub-systems such as national, state, district, school; and assigning fixed position for factors in their models.

One of the important observations was that participants of `TAP me' were able to list additional details for some factors such as various programmes reflecting that QEM had the scope to include these additional details. These additional details can be included in the last layer of the model, namely, Details[8].

The process used in modeling a system both by researcher and `TAP me'. Participants get an impetus as it resembles the common steps generally used in such exercises although there are no pre-ordained steps in building a model for a system which are:

- To identify the coherent elements of the system and define the principles of coherence.
- To identify the control mechanisms by which systems maintain their coherence and the value ranges within which these operate.
- The delineation of the system boundary, the systems boundary defines the inputs and outputs to the system.
- Identification of sub systems or super systems of the system. (Source: Clyton and Radcliffe, 1996, chapter 2, pp. 20).

Interpretation of analysis

The method followed in 'TAP me' shows that it is possible to develop systems perspective in stakeholders. An exercise of intellectual abstraction like model building of a system can be developed even among prostitioners inductively and then deduce the abstraction of a complex system. This method can be effectively used to understand the system by functionaries who work from outside the system. It can be considered as a proof of concept to conceptualize and build QEM.

Workshops for participants from NGOs and Azim Premji Foundation

Nature of participants who participated in workshops differed significantly among four groups. In the first group, participants were mainly researchers. In the second and third groups, participants were from diverse backgrounds, such as from education sector and also from non-education sector such as other social sectors and corporate sectors. The fourth group, participants were mostly from academics and pedagogy background working on teaching-learning process, curriculum development for schools, teacher effectiveness, working on B.Ed. curriculum, developing workbooks and textbooks, tools for assessment, teacher competency frameworks, experience in teaching, school administration and so on.

[8] In the present paper, model up to sub-factor level is presented. There are two more layers viz., components and details which are not discussed in this paper.

Altogether 54 participants from four workshops engaged with QEM in different ways. Each workshop was designed separately keeping the nature and type of participants in view.

Process of designing and transacting QEM through these workshops included the visits to school for understanding and conceptualization of the model, importance of choosing particular factors, recognizing all stakeholders of the system and identifying their place in the system, recognizing the common area for all stakeholders to focus and meaning of factors used in the model. The workshops varied from one day to three days depending on the nature of participants and their role in utilizing the model in the overall implementation of several developmental programmes undertaken by Azim Premji Foundation.

Analysis and Interpretation of the Data

Researchers and practitioners from these four groups learnt as well as examined the model for relevance, utility and research rigor. Several questions were raised to seek clarifications on the work done ranging from historical context for its development to theoretical basis for QEM, its purpose, reasons for referring it as a model and not as framework, relevance of using input-process-output, and reason for focusing on the entire system rather than just classroom processes, use of best practices versus factors in the model and so on. These questions have been answered to the best abilities of the researcher. (Section on QEM description in this paper addresses many of these questions).

Critique of the Model by Academicians as a Method of Vetting the model

QEM was shared with six academicians as stakeholders who were outsider-insider experts to education system and sought for their review and comments. Comments and suggestions received were mostly on the theoretical underpinnings for the model. Questions raised were answered wherever possible. Other questions and feedback were considered and studied to strengthen the model for its conceptual clarity. One of the important critiques was on use of Benathy's three lenses used as theoretical background. The second lens i.e. structure – function lens received more criticism as functionalist approach is not recognized to be appropriate anymore. Suggestions were to read and understand neo-functionalist approach, and probe more. Another observation was that by using this lens, it would not be possible to address the factor of power which is critical in study and understanding of the system.

On examining and reading literature on systems theory, distinction between modeling the system and model for a system was clearly understood and used in QEM. Modeling the system means representing the system as close to the reality as possible recognizing all its complexities whereas model for the system refers to visualizing an ideal for the system. Modeling the system was decided to be the work actually carried out and not model for the system. This helped to take cognizance of the power structures influencing the system in terms of studying institutions at all layers of the system including teacher associations, SDMC federations and SDMC networks. Hence, Benathy's systems theory for education was given up and general systems theory was adopted.

A comparative study of analysis and interpretation between stakeholders from within and outside the education system

It was easy for the stakeholders working from within the system to understand the model, its utility and also exploring the possibilities of applying the model for solving problems when compared to those who are working from outside the system. It was observed that those working from outside the system operate from a limited exposure to the system (excluding academicians) when compared to those who work from within the system. They were also new to the system coming from other developmental sectors such as watershed, health, rural development or from corporate sectors, or with a heavy focus on classroom pedagogical processes. There was also inadequate understanding of systems perspective as well as larger societal context and related challenges within which the education system functions. In other words, there was a lack of experience of the complexity of education system phenomena to understand the system holistically. They were able to analytically understand some parts of the system from the purview of exposure but not the synthesis view of system as a whole.

Through a process of build, compare and contrast, systems perspective was attempted to be developed in stakeholders who were from outside the system. In some other cases, stakeholders outside the system (also from within the system) learnt the model from a facilitator before examining it for its relevance, applicability or usefulness. In this way, QEM was tested for its methodological approach, comprehensiveness of coverage and relevance in different areas of work by a variety of stakeholders.

Different stakeholders visualizing the utilitarian value for the model in different ways implies that: (a) model had relevance to them; and (b) that they could identify themselves with it as education functionaries working from within the system. Even though the degree and intent of utility varied across different types of stakeholders, the fact that it was seen as representing the education system by most of them implies that an intellectual exercise of modeling the system is closer to reality. Application of the model can be contextual, generalized or need based for multiple stakeholders as evidenced from Koppal's experiment. Hence, the QEM allows for flexibility, use and interpretation in various ways. For example, (a) BRP in SLDP compared QEM to a healthy Human body and thereby visualized how their school should be; and (b) participants in Koppal district used QEM for bringing about change in their school contexts by developing diagnostic technique. Systems thinking advocate a full range of purposes valuing diversity of perspectives over any particular interpretation of a system (Clyton and Radcliffe, 1996). Therefore, utility of model was visualized in multiple ways according to various stakeholders is a proof to this.

While outside functionaries understand the system better in order to work with the system effectively, the inside functionaries develop a common understanding about the system and use the model to apply in multiple ways in their contexts to address issues and challenges.

An important observation made by BRPs is that QEM describes the system but does not show the way to solve the problems. This was a shift from that of academicians whose focus was more on the intrinsic value of the model that goes beyond the utility in terms of problem solving to encompass a broader purpose to be achieved such as knowledge construction, basis for perspective building on school system, etc.

Practitioners seeing the model as a tool for solving problems have a limited scope for it lacks the holistic understanding of the situation which is the primary intention of QEM to be developed in stakeholders. In short, to develop a systems perspective that broadens the knowledge base of stakeholders to address their problems in a holistic way is a transformative approach for achieving quality which is the very purpose of QEM. In this direction, there can be series of developmental programmes across all levels of school system in the district that help all education functionaries to build a common perspective and understanding to work effectively.

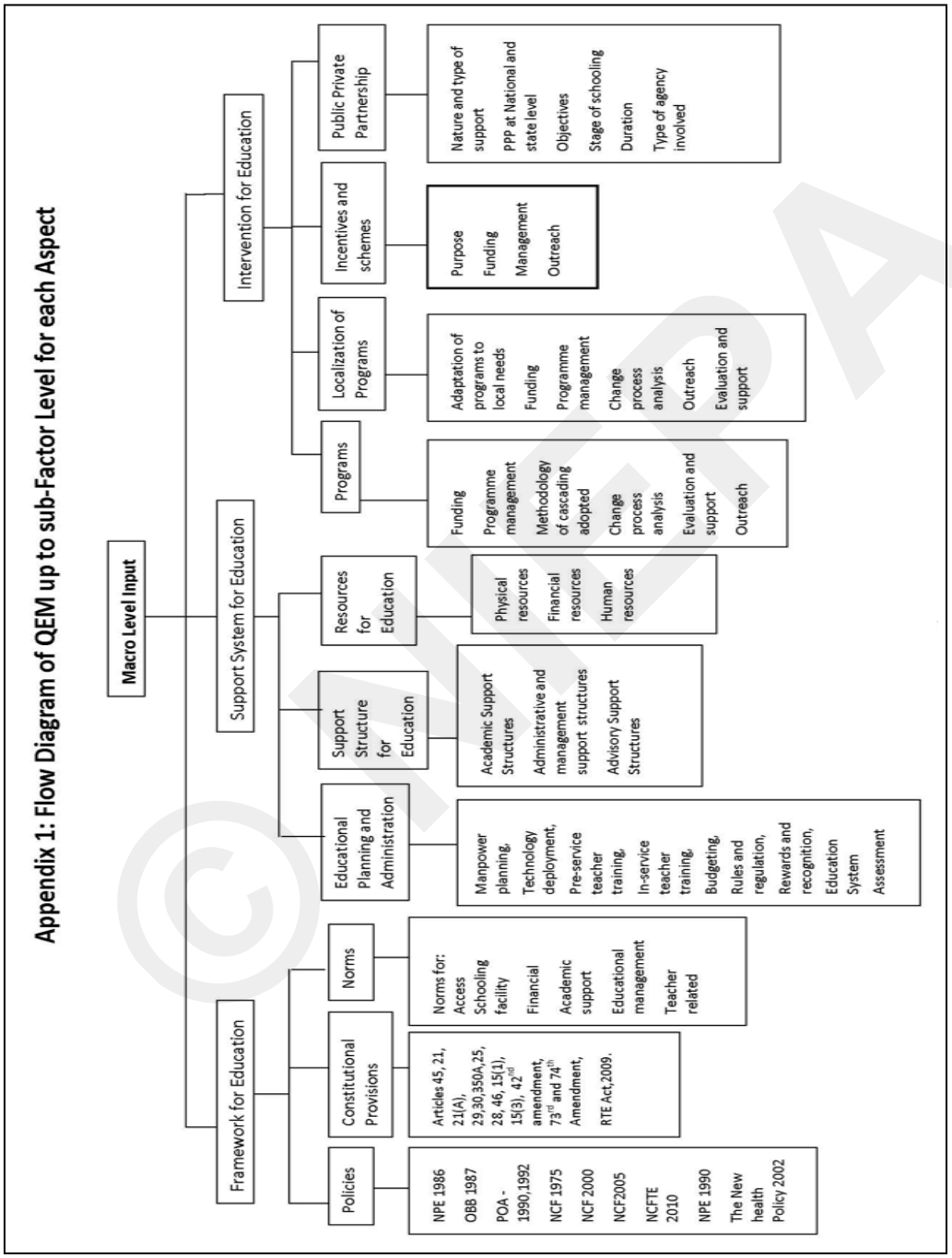
Summary and Conclusions

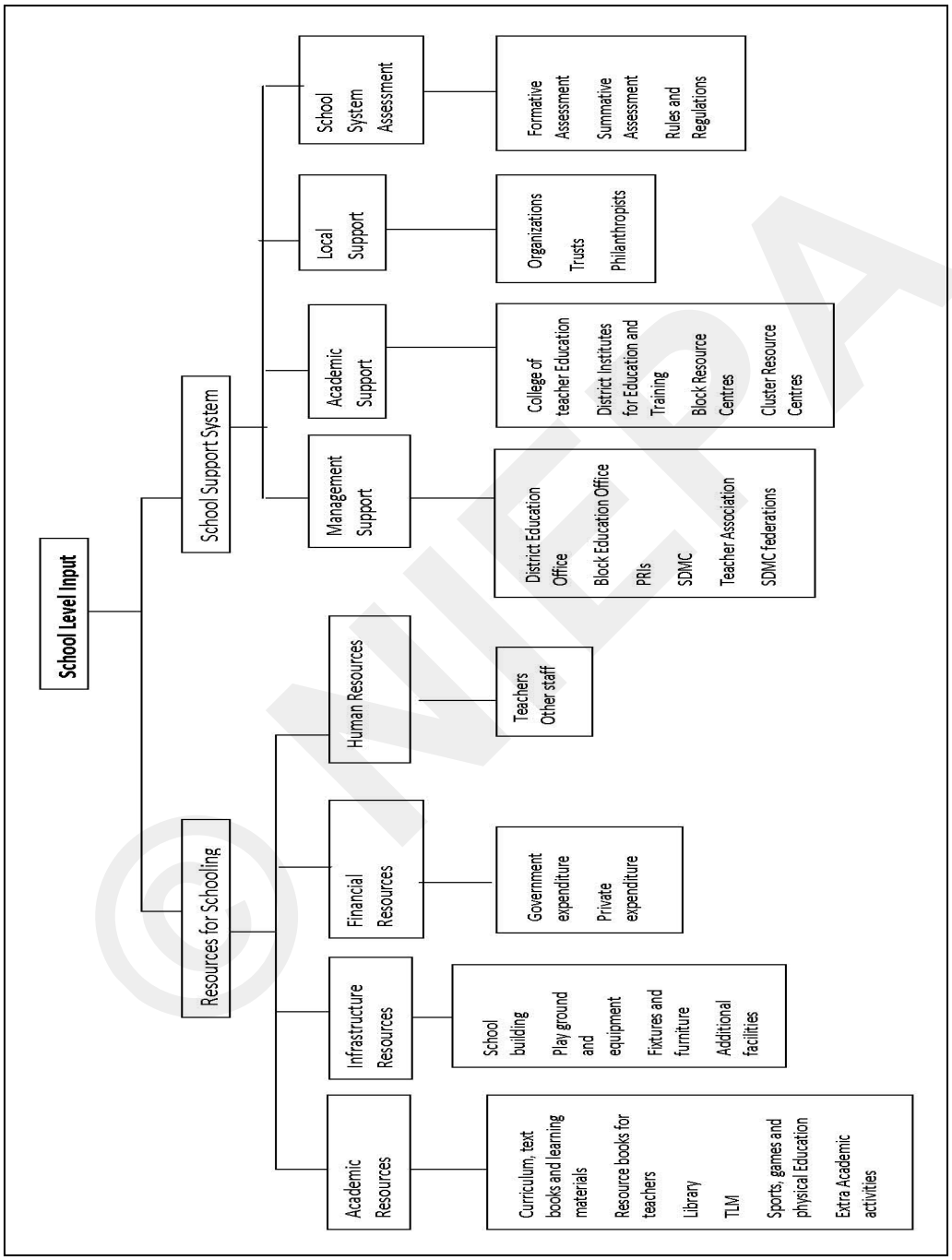
State has owned up the responsibility to provide equitable quality of education for all children freely through RTE Act, 2009 and a series of reforms in education system. Present study attempts to develop QEM that succinctly captures and provides support to achieve its goal. In Indian context, QEM is the first attempt in the area of modeling school system. It has used both conceptualisation and vetting as methodology. A variety of stakeholders from within and outside the education system have been considered to validate the model.

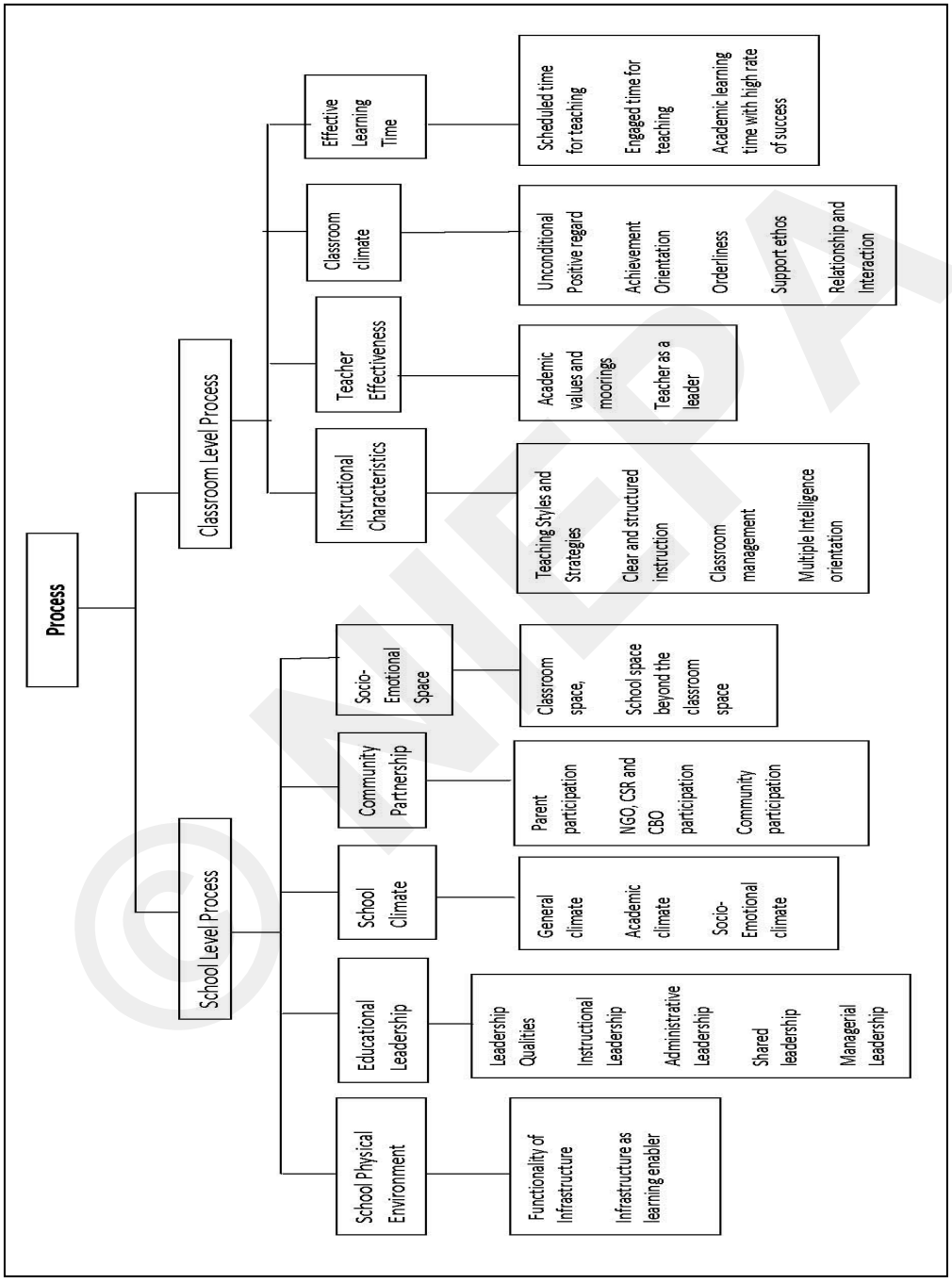
The approach followed in QEM is significantly different from that used in Creemers's 'comprehensive school effectiveness model' which is often quoted. QEM was vetted for the appropriateness of methodology adopted whereas school effectiveness model was vetted for ascertaining the causality of factors and student achievements.

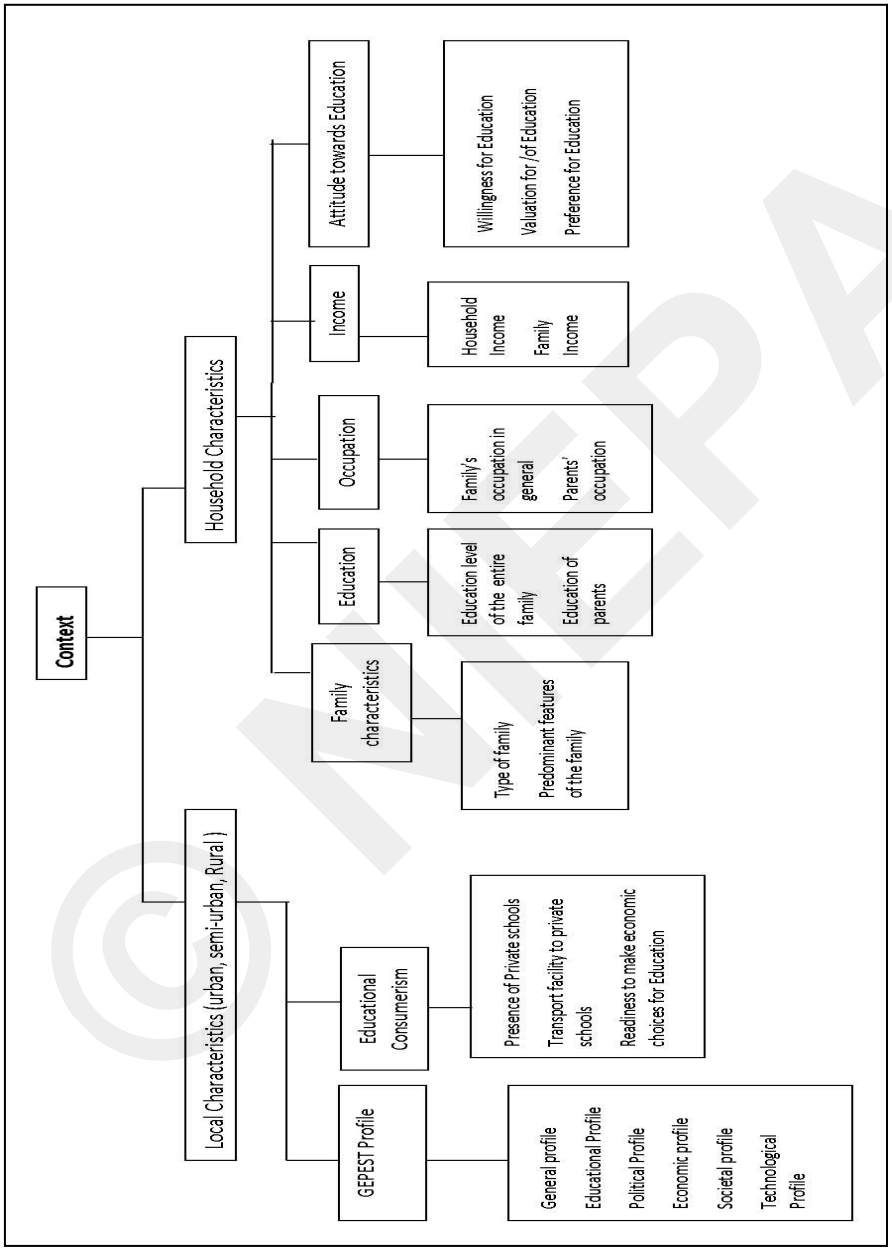
Study showed that all stakeholders were able to see the point of convergence of all their efforts as process *i.e.,* the school in QEM, from wherever they operated to achieve outcomes. QEM was perceived differently as the intent and expectation varied between short-term problem-solving to long-term knowledge construction for bringing reforms in the system. A significant aspect of vetting the model with diverse stakeholders ascertained that QEM is a powerful means to bring about a common understanding of the system and develop systems perspective for its stakeholders. All stakeholders were able to recognize their functional position in the system using QEM. Therefore, notion of quality in QEM implies that all stakeholders work from their respective functional positions with school as the common focus to achieve ultimate outcomes using systems perspective.

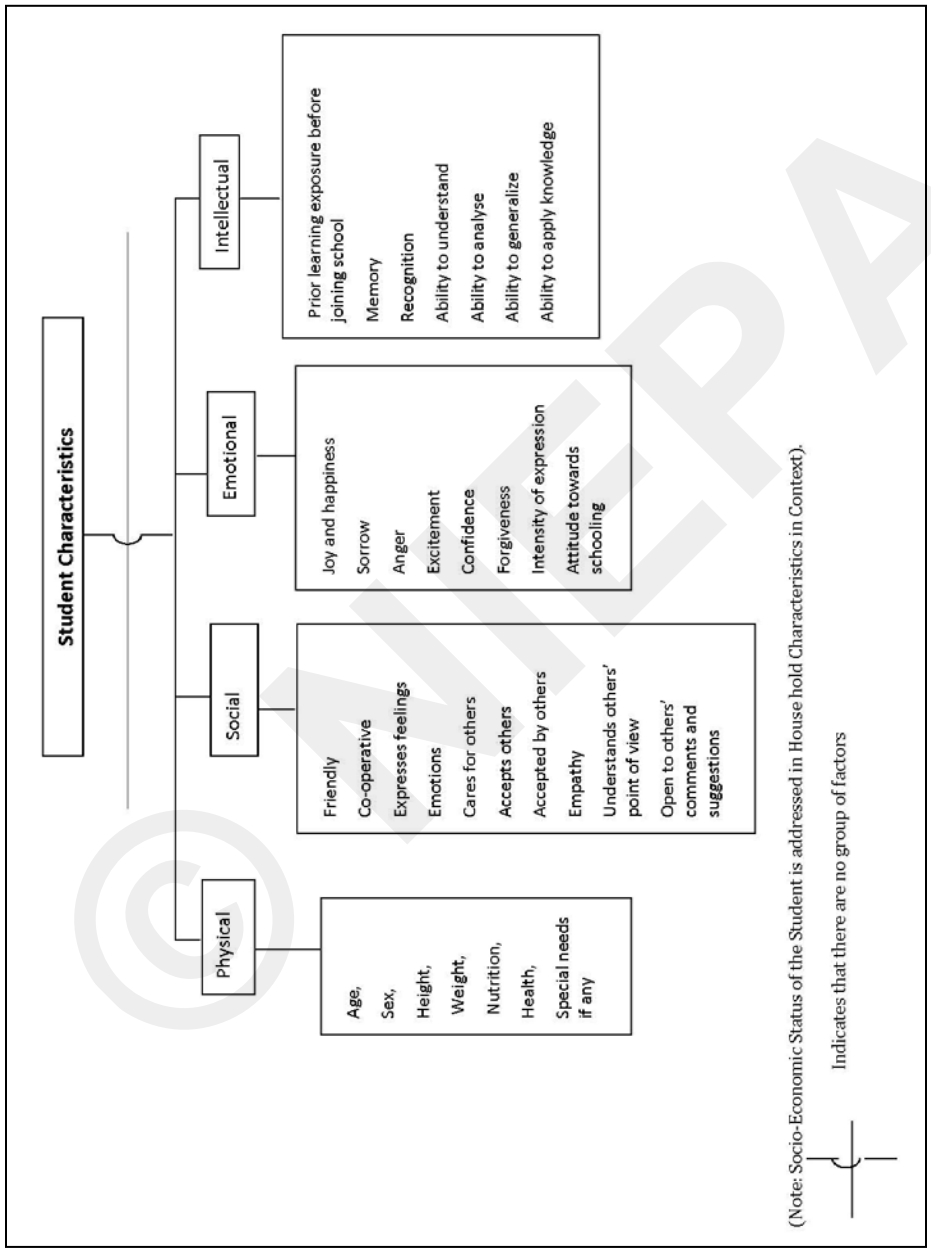
QEM enabled stakeholders to recognize the complexity of the system as having multi-dimensional phenomena and address micro level issues and challenges in a meaningful way without neglecting macro perspective and vice versa. Hence, there is a holy mix of downward and upward causation in addressing the issues which is unique to systems theory.


Appendix 1: Flow Diagram of QEM up to sub-Factor Level for each Aspect
Macro Level Input
Framework for Education
Policies
NPE 1986
OBB 1987
POA - 1990,1992
NCF 1975
NCF 2000
NCF2005
NCFTE 2010
NPE 1990
The New health Policy 2002
Constitutional Provisions
Articles 45, 21, 21(A), 29,30,350A,25, 28, 46, 15(1), 15(3), 42nd amendment, 73rd and 74th Amendment,
RTE Act,2009.
Norms
Norms for:
Access
Schooling facility
Financial
Academic support
Educational management
Teacher related
Support System for Education
Educational Planning and Administration
Manpower planning,
Technology deployment,
Pre-service teacher training,
In-service teacher training,
Budgeting,
Rules and regulation,
Rewards and recognition,
Education System Assessment
Support Structure for Education
Academic Support Structures
Administrative and management support structures
Advisory Support Structures
Resources for Education
Physical resources
Financial resources
Human resources
Intervention for Education
Programs
Funding
Programme management
Methodology of cascading adopted
Change process analysis
Evaluation and support
Outreach
Localization of Programs
Adaptation of programs to local needs
Funding
Programme management
Change process analysis
Outreach
Evaluation and support
Incentives and schemes
Purpose
Funding
Management
Outreach
Public Private Partnership
Nature and type of support
PPP at National and state level
Objectives
Stage of schooling
Duration
Type of agency involved


School Level Input
Resources for Schooling
Academic Resources
Curriculum, text books and learning materials
Resource books for teachers
Library
TLM
Sports, games and physical Education
Extra Academic activities
Infrastructure Resources
School building
Play ground and equipment
Fixtures and furniture
Additional facilities
Financial Resources
Government expenditure
Private expenditure
Human Resources
Teachers
Other staff
School Support System
Management Support
District Education Office
Block Education Office
PRIs
SDMC
Teacher Association
SDMC federations
Academic Support
College of teacher Education
District Institutes for Education and Training
Block Resource Centres
Cluster Resource Centres
Local Support
Organizations
Trusts
Philanthropists
School System Assessment
Formative Assessment
Summative Assessment
Rules and Regulations


Process
Classroom Level Process
Instructional Characteristics
Teaching Styles and Strategies
Clear and structured instruction
Classroom management
Multiple Intelligence orientation
Teacher Effectiveness
Academic values and moorings
Teacher as a leader
Classroom climate
Unconditional Positive regard
Achievement Orientation
Orderliness
Support ethos
Relationship and Interaction
Effective Learning Time
Scheduled time for teaching
Engaged time for teaching
Academic learning time with high rate of success
School Level Process
Socio-Emotional Space
Classroom space,
School space beyond the classroom space
Community Partnership
Parent participation
NGO, CSR and CBO participation
Community participation
School Climate
General climate
Academic climate
Socio-Emotional climate
Educational Leadership
Leadership Qualities
Instructional Leadership
Administrative Leadership
Shared leadership
Managerial Leadership
School Physical Environment
Functionality of Infrastructure
Infrastructure as learning enabler


Context
Household Characteristics
Attitude towards Education
Willingness for Education
Valuation for /of Education
Preference for Education
Income
Household Income
Family Income
Occupation
Family's occupation in general
Parents' occupation
Education
Education level of the entire family
Education of parents
Family characteristics
Type of family
Predominant features of the family
Local Characteristics (urban, semi-urban, Rural)
Educational Consumerism
Presence of Private schools
Transport facility to private schools
Readiness to make economic choices for Education
GEPEST Profile
General profile
Educational Profile
Political Profile
Economic profile
Societal profile
Technological Profile


Student Characteristics
Physical
Social
Emotional
Intellectual
Age,
Sex,
Height,
Weight,
Nutrition,
Health,
Special needs if any
Friendly
Co-operative
Expresses feelings
Emotions
Cares for others
Accepts others
Accepted by others
Empathy
Understands others' point of view
Open to others' comments and suggestions
Joy and happiness
Sorrow
Anger
Excitement
Confidence
Forgiveness
Intensity of expression
Attitude towards schooling
Prior learning exposure before joining school
Memory
Recognition
Ability to understand
Ability to analyse
Ability to generalize
Ability to apply knowledge
(Note: Socio-Economic Status of the Student is addressed in House hold Characteristics in Context).
Indicates that there are no group of factors

References

Banerji, Rukmini (2010): UNICEF Tool Kit. *Contemporary Education Dialogue*, Vol. 7(1), pp. 130 - 133.

Barrett *et.al.,* (2006): *The Concept of Quality in Education:* A Review of International Literature on the Concept of Quality in Education. *Edqual working paper No.3.* UK: University of Bristol.

Boissiere, Maurice (2004): *Determinants of Primary Education Outcomes in Developing Countries.* World Bank: Washington.

Centre for Development Studies (1999): *Quality of School Education in Kerala*: Dimensions and Determinants. Centre for Development Studies: Kerala.

Chapman, David and Don Adams (2002): *The Quality of Education: Dimensions and Strategies.* In Bray Mark (ed) (2002): *Education in Developing Asia*, vol. 1-5. University of Hong Kong: Asia Development Bank and Comparative Educational research Centre.

Clarke, Prema (2010): Advancement of Educational Performance through Teacher Support (ADEPTS). *Contemporary Education Dialogue*, Vol. 7(1), pp. 139-143.

Clyton, M.H., Antony and Nicholas Radcliffe (1996): *Sustainability – A Systems Approach.* West View Press: Boulder.

Creemers P.M. Bert and Gerry J Reezigt (n.d): *The Concept of Vision in Educational Effectiveness Theory and Research.* GION, Institute for Educational Research, University of Groningen. Netherlands.
(http://www.highreliability.co.uk/Files/Downloads/School_effectiveness/BCGR1998.pdf).

Datnow, Amanda *et.al.,* (2006): *Integrating Educational Systems for Successful Reforms in Diverse Contexts*. New York: Cambridge University Press.

Filmer, Deon (2004). If You Build Will They Come? – School Availability and School Enrolment in 21 poor Countries. *Policy Research Working Paper 3340*. The World Bank Development research Group. Washington: The World Bank.

Govinda and Bandyopadhyay (2008): *Access to Elementary Education in India – Country Analytical Review*. India: CREATE – NUEPA.

Heneveld, Ward and Helen Criag (1996): *Schools Count*. World Bank Technical Paper. No. 303. Washington D.C.: The World Bank.

Hechuan Sun, Bert P.M. Creemers and Rob de Jong (2007): Contextual Factors and Effective School Improvement. *School Effectiveness and School Improvement*, Vol. 18(1), pp. 93-122.

Jha, Jotsna (2010). Annual Status of Education Report. *Contemporary Education Dialogue*, Vol. 7(1), pp. 134-138.

John Stone, James (1981): *Indicators of Education System*. Paris: UNESCO-IIEP.

Kaplan David and Elliott (1997): A model based approach to validating education indicators using multi-level structural equation model. *Journal of Educational and Behavioural Statistics,* vol. 22(3). pp. 323-347).

Kumar, Krishna (2000): Quality in Education: Competing Concepts. *Contemporary Education Dialogue*, Vol. 7(1), pp. 7-18.

Leithwood, Kenneth, Doris Tantzi and Charry Mc Elheron Hopkins (2006): The Development and Testing of a School Improvement Model. *School Effectiveness and School Improvement,* Vol 17(4). pp.441-464.

Kyriakides Leonidas (2008): Testing the Validity of the Comprehensive Model of Educational Effectiveness: A Step Towards the Development of a Dynamic Model of Effectiveness. *School Effectiveness and Improvement,* 19(4). pp. 429-446.

Little W.Angela (2010): Education Development Index. *Contemporary Education Dialogue*, Vol. 7(1), pp. 118-123.

MHRD (2000): *Sarva Shikhana Abhiyan*. GOI-India.

MHRD (2008): *Framework for Rastriya Madhymika Shikhana Abiyan,* GOI-India.

MHRD (2010): *Sarva Shiksha Abhiyan: Framework of Implementation.* GOI-India.

MHRD-NCERT (2005): *National Curriculum Framework*. NCERT: India.

Mythili, N. (2000): *Determinants of Quality of Schooling in Rural Primary Schools in Karnataka.* Unpublished Thesis, Institute for Social and Economic Change – Bangalore and Mysore University: Mysore.

Noronha, Anjali (2010): NCERT Quality Monitoring Formats. *Contemporary Education Dialogue*, Vol. 7(1), pp. 124-129.

Papu, Rekha and D. Vasanta (2010): Education Quality and Social Inequity- Reflecting on the Link, *Contemporary Education Dialogue*, Vol. 7(1), pp. 94 -117.

Quality Council of India (n.d.): *Quality In School Education.* Institute for Studies in Industrial Development: New Delhi.

Renoylds, David (1994): School Effectiveness and Quality Education. In peter Ribbins and Elizabeth Burridge (ed). *Improving Education: Promoting Quality in Schools.* London: Cassell.

Maurice, Boissiere (2004): *Determinants of Primary Education Outcomes in Developing Countries.* Washington: The World bank operations and Evaluation Department, World Bank.

Roy Carr-Hill and Olav Mangnussen (1973): *Indicators of Performance of Education Systems.* Paris: Organisation for Economic Co-Operation and Development (OECD).

Sarangapani, Padma (2010): Quality Concerns: National and Extra National Dimensions. *Contemporary Education Dialogue*, Vol. 7(1), pp. 7-18.

Sarva Shikshana Abhiyan (2010): *Progress Overview of Research*. New Delhi: Education Council of India (2010).

Shereens, Jaap (2000): *Improving School Effectiveness*. Paris: UNESCO-IIEP.

Teddlie Charles and David Renoylds (2000): *The International Handbook of School Effectiveness Research*", London: Falmer Press, (Pages 285 to 288).

The World Bank (2009): *Secondary Education: Universalizing Opportunity,* World Bank- Human development Unit South Asia Region: Washington.

United Nations (2005): EFA *Global Monitoring Report – Education for All – The Quality Imperative,* United Nations: New York.

Clyton M.H. Anthony, Nicholas Radcliffe (1996): *Sustainability – A Systems Approach*" A West View Press, A division of Harper Collins: Boulder. (Chapter: 2).

UNICEF (2000): *Defining Quality in Education.* UNICEF: New York.

Valsekar, Padma (2010): Quality and Inequality in Indian Education: Some Critical Policy Concerns. *Contemporary Education Dialogue*, Vol. 7(1), pp. 58-93.

Verghese, N.V. (2010): Karnataka School Quality Assessment. *Contemporary Education Dialogue*, Vol. 7(1), pp. 144-148.

Wrigley, Terry (2003): Is School Effectiveness anti Democratic? *British Journal of Educational Studies.* 51 (2), pp. 89-112.

Winch, Christopher (2010): The Dialectic of Inputs and Outputs. *Contemporary Education Dialogue*, Vol. 7(1), pp. 7-18.

Journal of Educational Planning and Administration
Volume XXVII, No. 1, January 2013, pp. 101-115

RESEARCH NOTES/COMMUNICATIONS

Regional Imbalance in Teacher Education in India

— An Analysis of Eastern Region including North Eastern States

Niradhar Dey *

Abstract

India is a vast country with a variety of cultures, languages, costumes, habitations, religions and many more. Irrespective of the innumerable diversities, continuous care has been taken to maintain unity in diversities. Still then, it has felt in many spheres, that some regions and some people are not included in the mainstream of the society, may it be economically, socially, educationally and politically. The present paper speaks about teacher education in India with special reference to Eastern India including North East States. The history of Teacher Education in India is very old and rich. Since its independence a continuous discussion and development has been taking place in Teacher Education. The National Council for Teacher Education (NCTE), State Council of Educational Research and Training (SCERT) of different States and the State Governments are responsible for developing and maintaining regional balance in Teacher Education.

If we compare the recognition of teacher education institutes in region wise like Eastern India including North East states, Western, Northern, Southern and Central India the very fact will come to the front that the Eastern India including the North East states like Odisha, WB, Assam, Tripura, Nagaland, Manipur, Mizoram, Meghalaya, Arunachal Pradesh, Sikkim, and A&N Islands which together share 14.8 per cent of the total population in India (Census, 2011) and required additional 30.18 per cent of teachers till 2017 but occupy only 3.75 per cent B.Ed, 3.53 per cent D.Ed./CT/DIET and 2.74 per cent M.Ed. teaching institutes of the total Teacher Education institutes existing in the country. The position of Central and Western India is also imbalanced though it is not so acute. But the Northern and the Southern India are in a very comfortable position. They are having more number of Teacher Education Institutes with comparison to their population share, enrolment, and requirement of teachers which is a clear example of regional imbalance. From last ten years, it has been closely observed that the students in Eastern India are compelled to rush to get a B.Ed. degree in the neighbouring states. It is very pathetic to mention as to what difficulties they are facing in outstates in the form of languages, finance and harassment by the self-financing college management. More than 65 per cent of Teacher Education Institutes have been recognised by NCTE in the last five years i.e. 2005-2010 and another 35 per cent colleges had opened before 2005, still then the Eastern Region students are facing a high problem to get a teacher education degree. In this context it should be realised that, it is high time to maintain a good balance of Teacher Education otherwise it will be a crucial problem in future which will be very difficult to address. Proper care should be taken by MHRD, Govt. of India, State Govt., SCERT's and NCTE to resolve this issue and to maintain a balance situation.

* School of Education, Indira Gandhi National Open University (IGNOU), Maidan Garhi, New Delhi-68
E-mail: niradhar@ignou.ac.in

Introduction

"*Teachers are literally the arbiters of a nation's destiny. It may sound a truism, but it still needs to be stressed that the teacher is the key to any educational reconstruction*"— Humayun Kabir. 'Teachers' influence is everlasting. They shape the destiny of future citizens. The history of teacher education in India is as old as the history of Indian education itself. Education of teachers must have been born in India in 2500 B.C. The history of teacher education in India may be divided into five parts, i.e. Ancient and Medieval Period (2500 B.C. - 500 B.C.), Buddhist Period (500 B.C. – 1200 A.D.), Muslim Period (1200 A.D. – 1700 A.D.), British Period (1700 A.D. – 1947 A.D.) and Teacher Education in Independent India (Since 1947 to till date). The shape and function of teacher education in Ancient and Buddhist period was different in nature. It was more religious, value based and having some unique practices. Teacher education in Muslim period was also not fulfilling the need of the contemporary society. It was also with a religious base and there was no concept of formal education. The changes were realised in Teacher education at the time of British period. Though the Britishers practised some discrimination policy in teacher education still then few teacher education institutions had been established in different parts of the country. Different committees and commissions in British period have stressed on teacher education, which becomes more clear while going through the literatures of Bentinck's Resolution – 1835, Wood's Despatch – 1854, Stanley's Despatch – 1859, Hunter Commission – 1882, Education Policy – 1904, Sadler Commission – 1917, Hartog Committee – 1929 and Sargent Report – 1944.

A new era of Teacher Education started just after independence. An indigenous and global shape has been given to Indian Teacher Education. University Education Commission 1948-49, Secondary Education Commission 1952-53, Education Commission 1964-66, National Policy on Education 1986 and Revised National Policy on Education 1992 have discussed Teacher Education and tried to give it a modern shape. The central and state agencies like National Council for Teacher Education (NCTE), State Council of Educational Research and Training (SCERT), MHRD Govt. of India, State Education Departments, Distance Education Council (DEC) and the Universities are taking sole responsibilities of Teacher Education in India. But it has been felt that somewhere they have failed to maintain the balance in teacher education both in quantity and quality.

Rationale of the Study

India is a vast country with varieties of culture, tradition, language, style of living and much diversity. Continuous care has been taken to maintain unity in diversities but intra and inter regional imbalances are felt in different areas of Indian life; may it be economically, socially, politically and educationally. In this study, the regional imbalances in teacher education, specially the quantitative development of Teacher Education has been discussed with much though full details. The situation of teacher education and its development in our country is not uniform. Though imbalances are the natural process but when the differences are so large it becomes a crucial problem for the society. If we go through the expansion of teacher education in the country, we can clearly visualise the large imbalances in inter and intra regions. The main controlling body of teacher education in India is NCTE at central level and SCERT at State level. The main objectives of the NCTE are to achieve planned and

co-ordinated development of the teacher education system throughout the country, regulation and proper maintenance of Norms and Standards in the Teacher Education system and the matters connected therewith. But it is worthwhile to note that in the functioning of NCTE, no proper planning has been adopted to recognize the Teacher Education institutes and permission for opening of new colleges.

Geography, growth in enrolment at school stage, requirement of teachers and population parameter have not been taken into consideration when to permit for opening of a new teacher education institute. A tremendous growth of teacher education institutes has been witnessed in the last one decade. But the growth is not uniform in state-wise, population-wise, students' enrolment, and region-wise. As a result, in some regions, students are not getting a seat to do a degree in teacher education and in other region, seats are laying vacant as students are not available to do the course. It has been realised that the students of one region migrate to do a degree to other region and face many difficulties like language, finance and different types of harassments by the self-financing college management. Original residence (domicile) is also another issue which creates a problem to admit the migrated students from one state to another; as a result a number of seats in teacher education are sometime reported to be lying vacant. Realising this fact, an attempt has been made in this study to study the regional imbalances in teacher education in India with special reference to Eastern Region including North East States.

Statement of the Problem

"Regional Imbalance in Teacher Education in India: An analysis of Eastern Region including North East States"

Operational Definition of the Terms Used

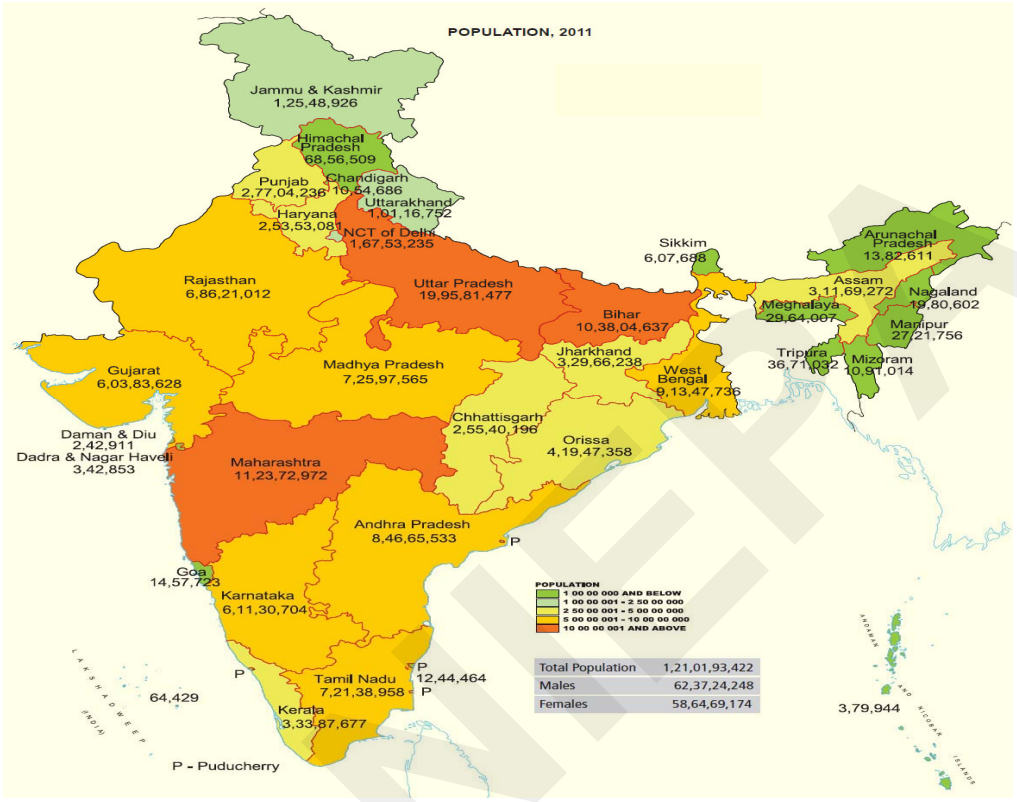
Teacher Education Institute means the institutes which impart education/training and prepare teachers (pre-service and in-service) by offering the courses like D.Ed/CT, B.Ed, M.Ed. and other higher courses in education.

The word Regional Imbalance used in this study may be defined as "The facilities of teacher education provided to each region of our country……and the disparities felt in inter and intra region".

The regions defined in this study with the states are as follows:

1. **Eastern Region including North East States:** Odisha, West Bengal, Assam, Tripura, Nagaland, Manipur, Mizoram, Meghalaya, Arunachal Pradesh, Sikkim and A&N Islands.
2. **Western Region:** Maharashtra, Gujarat, Goa and Daman & Diu.
3. **Northern Region:** Punjab, Rajasthan, U.P. Delhi, H.P. Haryana, Chandigarh, Uttarakhand and Bihar.
4. **Southern Region**: Tamilnadu, Pondicherry, Karnataka, Andhra Pradesh, Kerala and Lakshadweep.
5. **Central India**: Jharkhand, Chhattisgarh and Madhya Pradesh.

(Note – data of Jammu & Kashmir and Dadra & Nagar Haveli is not available)



Map – 01 (States and Population in India, Census 2011)

Objectives of the Study

The study has been undertaken, taking the following objectives in mind:

1. To study the number of Teacher Education institutes existing in India before 2005 and during 2005 to 2010.
2. To compare the number of Teacher Education institutes in Region and State-wise.
3. To compare Teacher Education institutes in Region and State-wise with population parameter, growth in enrolment in school education, literacy rate, and additional requirement of teachers for future time..
4. To find out the causes and put forth the suggestions for removing regional imbalance in Teacher Education and urgent requirement of teacher education institutes for present and in future context.

Population of the Study

All the Teacher Education institutes including institutes running through distance education in India, those offering the programmes like D.Ed. and/ B.Ed. and/ M.Ed. are the

population of the study. No sample has been drawn for conducting the work. All the units of the population have been taken into consideration.

Methodology of the Study

Descriptive Survey method has been used to conduct the work. The study has been conducted with secondary data.

Data Collection

The study has been conducted taking the web based information. No specific tool has been used to collect the data. The website of NCTE (http://www.ncte-india.org/), Census Survey of India (http://censusindia.gov.in/), District Information System for Education, DISE (http://www.dise.in/), and Ministry of Human Resource Development (MHRD), India (http://mhrd.gov.in/) have been used to collect the information of Teacher Education institutes, population distribution, report of school education MHRD, literacy of India, enrolment and additional requirement of teachers.

Statistical Techniques Used

As most of the data are in frequencies, for its better analysis, simple descriptive statistics like percentage and Measures of Central Tendency have been used for analysing the facts and drawing the conclusions.

Analysis and Interpretation of Data

For better analysis and interpretation, the data gathered from the websites have been placed in different tables and also highlighted by using the figures. After that it has been descriptively analysed and conclusions have been drawn.

Table 1, revealed that in our country, till the year 2010, 5834 B.Ed. colleges has established out of which 2034 (34.86%) colleges were established before 2005 and 3800 (65.14%) colleges had established during the last five years i.e. 2005 – 2010. The highest numbers of colleges were in Uttar Pradesh (1063) and the less numbers of colleges were found in most of the states in North East and the Union Territories. The other leading States where more numbers of B.Ed. colleges had existed like Tamilnadu (662), Andhra Pradesh (571), Haryana (436), Karnataka (409) and Maharashtra (387). Beside North East States and the Union Territories, Odisha is the only state where the B.Ed. colleges had very less (16) and only three colleges had been established in last five years. All the Teacher Education Institutes in Odisha were Govt. In most of the States more than 65 per cent colleges had been established in last five years and only 30 – 35 per cent colleges had been established since independence to 2005.

TABLE 1

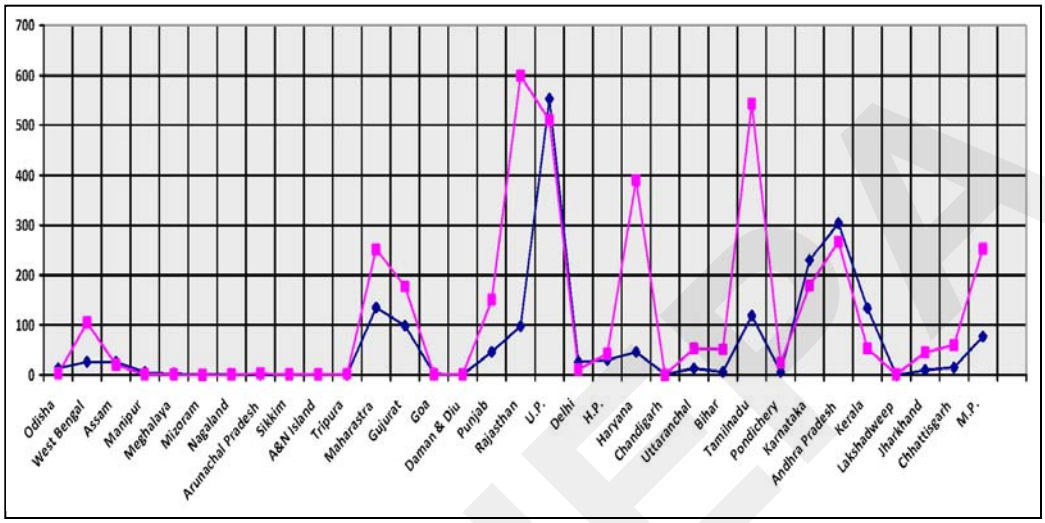
Establishment of B.Ed. Colleges in different States in India

States	*Total*	*Before 2005*	*%*	*2005 - 2010*	*%*
Orissa	16	13	81.25	3	18.75
West Bengal	131	26	19.85	105	80.15
Assam	46	26	56.52	20	43.48
Manipur	6	5	83.33	1	16.67
Meghalaya	4	3	75	1	25
Mizoram	1	1	100	0	0
Nagaland	3	2	66.67	1	33.33
Arunachal Pradesh	4	1	25	3	75
Sikkim	3	2	66.67	1	33.33
A&N Island	2	1	50	1	50
Tripura	3	1	33.33	2	66.67
Maharashtra	387	135	34.88	252	65.12
Gujarat	276	99	35.87	177	64.13
Goa	4	3	75	1	25
Daman & Diu	2	1	50	1	50
Punjab	196	46	23.47	150	76.53
Rajasthan	697	98	14.06	599	85.94
U.P.	1063	553	52.02	510	47.98
Delhi	37	26	70.27	11	29.73
H.P.	72	30	41.67	42	58.33
Haryana	436	46	10.55	390	89.45
Chandigarh	2	2	100	0	0
Uttaranchal	66	13	19.69	53	80.31
Bihar	57	6	9.09	51	86.96
Tamilnadu	662	119	17.98	543	82.02
Pondicherry	30	6	20	24	80
Karnataka	409	230	56.23	179	43.77
Andhra Pradesh	571	304	53.24	267	46.76
Kerala	187	134	71.66	53	28.34
Lakshadweep	1	0	0	1	100
Jharkhand	55	10	18.18	45	81.81
Chhattisgarh	75	15	20	60	80
M.P.	330	77	23.33	253	76.67
India	5834	2034	34.86	3800	65.14

Source: NCTE, India

FIGURE 1

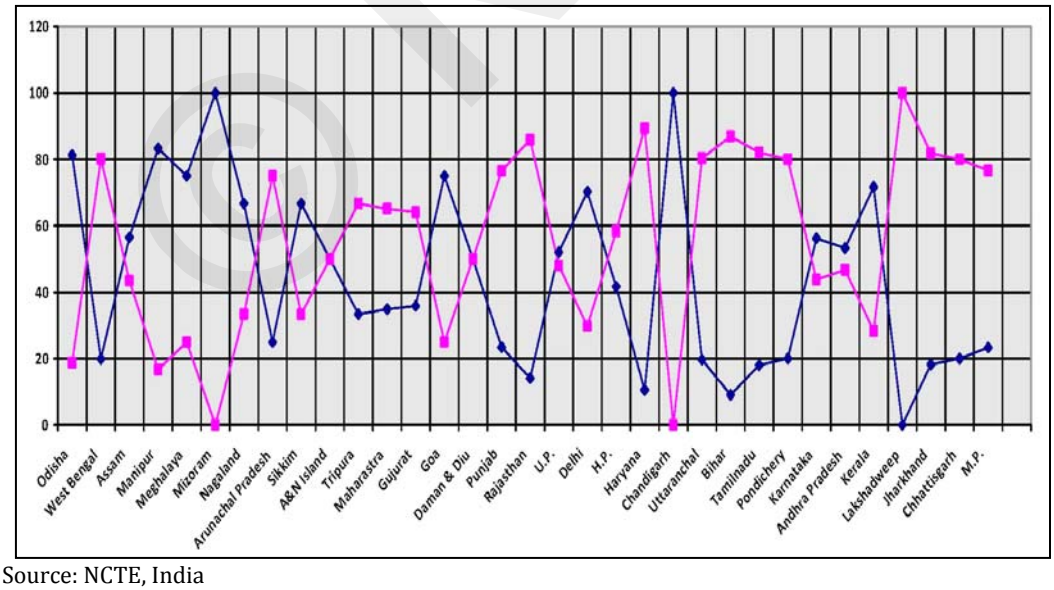
Teacher Education Institutes (B.Ed.) in different States in India
(Figures are in number) (Before 2005 and 2005-2010)



Source: NCTE, India

FIGURE 2

Teacher Education Institutions (B.Ed.) in different States of India
(Figures are in Percentage) (Before 2005 and 2005-2010)



Source: NCTE, India

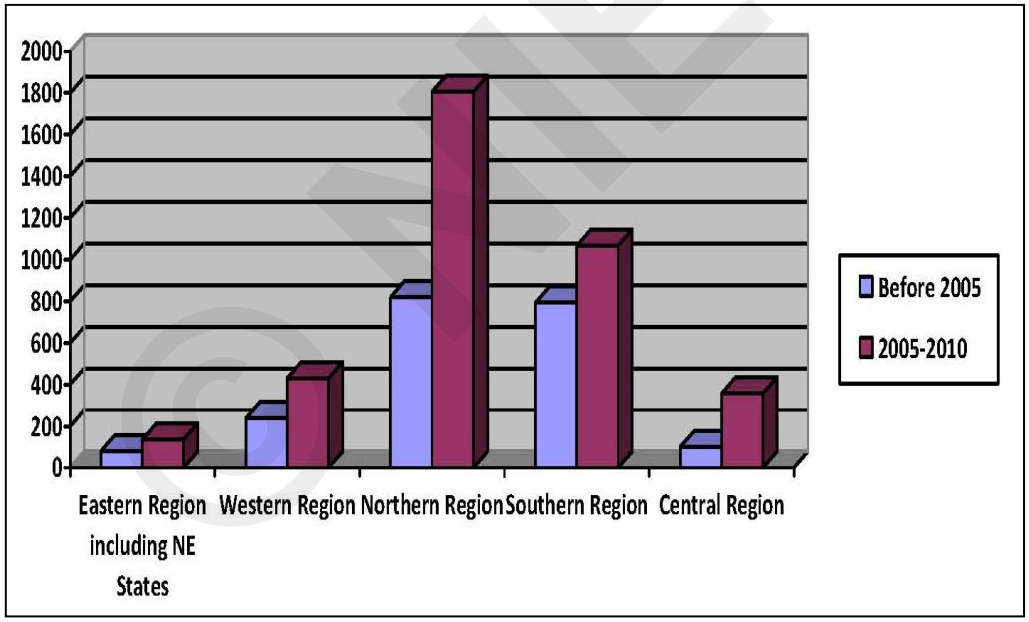
TABLE 2

Region wise Teacher Education Institutes (B.Ed.)

Region	*Before 2005*	*2005 - 2010*	*Total*	*%*
Eastern Region Including North East States	81	138	219	3.75
Western Region	238	431	669	11.47
Northern Region	820	1806	2626	45
Southern Region	793	1067	1860	31.88
Central Region	102	358	460	7.88
Total	2034	3800	5834	100

FIGURE 3

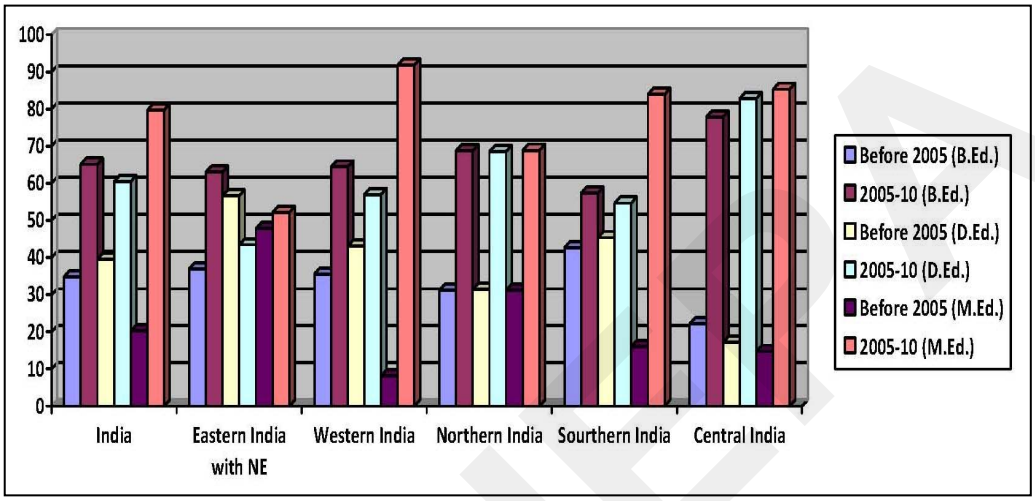
Region wise B.Ed. Colleges



Source: NCTE, India

FIGURE 4

India and Region-wise data of Teacher Education Institutions
(Figures are in percentages)



(Source: NCTE, India)

Table 2 and Figure 3 show region-wise B.Ed. colleges in India. Data revealed that the highest numbers of B.Ed. colleges were in Northern India (2626; 45%), in which 820 colleges had been established before 2005 and 1806 colleges have been established during the last five years. Second highest number of colleges were in Southern India (1860; 31.88%) whereas the lowest number of colleges were in Eastern India including North East States (219; 3.75%).

TABLE 3

India and Region-wise B.Ed./D.Ed./M.Ed. Colleges
(Figures are in percentage)

Regions	*Before 05 (B.Ed.)*	*2005-10 (B.Ed.)*	*Before 05 (D.Ed.)*	*2005-10 (D.Ed.)*	*Before 05 (M.Ed.)*	*2005-10 (M.Ed.)*
India	34.86	65.14	39.58	60.42	20.24	79.76
Eastern India	36.98	63.02	56.59	43.41	47.83	52.17
Western India	35.58	64.42	43.04	56.96	8.18	91.82
Northern India	31.23	68.77	31.46	68.54	31.16	68.84
Southern India	42.63	57.37	45.36	54.64	16.07	83.93
Central India	22.17	77.83	17.19	82.81	14.71	85.29

Table 3 and Figure 4, show India and region-wise data related to B.Ed., D.Ed. and M.Ed. colleges. Data reveals that in Central India around 80 per cent of Teacher Education

Institutions have been established in the last five years. In other regions, more than 60 per cent colleges have been established in the last five years. With comparison to B.Ed. and D.Ed. institutes, more M.Ed. teaching institutions have been established in the last five years.

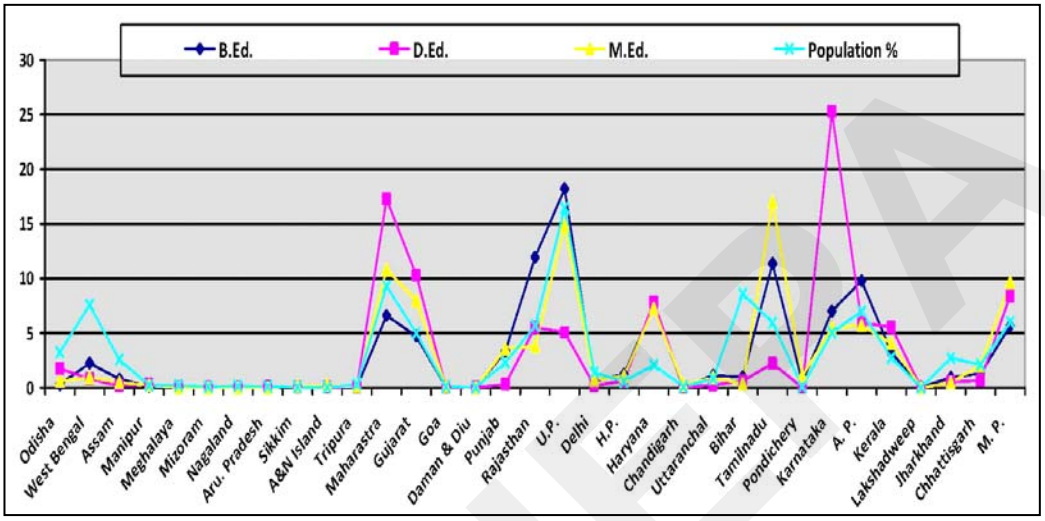
TABLE 4

National share of B.Ed/D.Ed/M.Ed institutes with Population, Literacy rate, Growth of Enrolment, and Additional Requirement of Teachers

States	*B.Ed.*	*D.Ed.*	*M.Ed.*	*Pop. % (2011)*	*Enrolment % (2010-11)*		*Lit. % (2011)*	*Additional Demand for Teachers (2012-2017)*	
					Rural	*Urban*			*%*
Orissa	0.27	1.76	0.60	3.47	91.25	67.14	73.5	43456	2.51
West Bengal	2.25	0.8	0.95	7.55	94.07	86.88	77.1	258586	14.95
Assam	0.79	0.19	0.48	2.58	79.88	77.43	73.2	182407	10.55
Manipur	0.1	0.3	0.24	0.22	43.53	20.89	79.8	-	-
Meghalaya	0.07	0.08	0.00	0.24	54.81	28.19	75.5	17568	1.02
Mizoram	0.02	0.05	0.00	0.09	82.28	41.11	91.6	-	-
Nagaland	0.05	0.08	0.00	0.16	59.39	19.48	80.1	-	-
Aru. Pradesh	0.07	0.11	0.00	0.11	86.78	59.72	67	6615	0.38
Sikkim	0.05	0.05	0.12	0.05	85.44	52.57	82.2	-	-
A&N Island	0.03	0.03	0.24	0.03	86.84	68.65	86.3	3227	0.19
Tripura	0.05	0.08	0.12	0.3	95.12	69.20	87.8	10013	0.58
Maharashtra	6.63	17.27	10.83	9.29	65.07	20.80	82.9	161690	9.35
Gujarat	4.73	10.29	7.98	4.99	87.33	37.54	79.3	166774	9.64
Goa	0.07	0.03	0.12	0.12	34.89	18.53	87.4	4681	0.27
Daman & Diu	0.03	0.03	0.00	0.02	71.95	41.42	87.1	1035	0.06
Punjab	3.36	0.33	3.57	2.29	81.24	41.76	76.7	27017	1.56
Rajasthan	11.95	5.52	3.81	5.67	67.88	24.46	67.1	170117	9.84
U.P.	18.22	5.08	14.88	16.49	66.46	24.66	69.7	-	-
Delhi	0.63	0.19	0.71	1.38	70.11	58.32	86.3	31870	1.84
H.P.	1.23	0.63	1.07	0.57	77.46	29.49	83.8	30258	1.75
Haryana	7.47	7.85	7.26	2.09	70.11	33.19	76.6	-	-
Chandigarh	0.03	0.05	0.24	0.09	90.57	63.88	86.4	7867	0.45
Uttaranchal	1.13	0.25	0.95	0.84	66.31	23.11	79.6	18721	1.08
Bihar	0.98	0.6	0.36	8.58	99.58	98.24	63.8	156251	9.04
Tamilnadu	11.35	2.22	17.02	5.96	58.76	22.16	80.3	-	-
Pondicherry	0.51	0.03	1.07	0.1	46.91	31.80	86.5	4754	0.27
Karnataka	7.01	25.25	5.48	5.05	79.40	27.92	75.6	-	-
Andhra Pradesh	9.79	5.96	5.71	7	72.07	23.81	67.7	-	-
Kerala	3.21	5.57	4.05	2.76	32.26	24.96	93.9	61901	3.58
Lakshadweep	0.02	0	0.00	0.01	100	00.00	92.3	198	0.01
Jharkhand	0.94	0.52	0.48	2.72	91.11	50.08	67.6	85379	4.94
Chhattisgarh	1.29	0.66	2.02	2.11	89.58	45.28	71	60792	3.52
M.P.	5.66	8.4	9.64	6	83.48	26.79	70.6	218144	12.61
Total					78.14	35.07	74.04	1729321	

(Source: NCTE India, Census 2011, and DISE 2010-11)
NB: Data of some of the States are not available for additional requirement of teachers)

FIGURE 5
Percentage of B.Ed./D.Ed./M.Ed. Institutes with comparison to population percentage



Source: NCTE, India, Census 2011, and DISE 2010-11.

Table 4 and Figure 5 represent the state-wise percentage of B.Ed./D.Ed./M.Ed. institutes with comparison to population percentage, literacy rate, growth of enrolment in school education, and projected additional demand of teachers till 2017. Data revealed that the states like Punjab, Rajasthan, U.P., H.P., Haryana, Uttarakhand, Tamilnadu, Karnataka, Andhra Pradesh and Kerala were having more number of Teacher Education institutes with comparison to their national population share. As an example, Haryana is having the population of 2.09 per cent but it is enjoying the existence of more than 7 per cent of teacher education institutes. The population share of Tamil Nadu is 5.96 per cent but it enjoying more than 11 per cent of teacher education institutes; accordingly Rajasthan is having 5.67 per cent of population share but is enjoying around 12 per cent of teacher education institutes and Andhra Pradesh is enjoying 10 per cent of teacher education institutes whereas their population share is 7 per cent. On the other side, the states like Odisha, West Bengal, Assam, Maharashtra, Bihar and Jharkhand were having very less number of teacher education institutes with comparison to their national population share. The population share of Odisha, W.B. and Bihar is respectively 3.47, 7.55 and 8.58 per cent whereas their share of teacher education institutes were 0.27, 2.25 and 0.98 per cent. It clearly signifies how the regional imbalance is prevailing in Teacher Education. Where there is a major share of population, definitely it requires more teachers for school education for the students; on the contrary, in many institutions especially in Haryana, Andhra Pradesh, Tamil Nadu, Rajasthan, teachers' positions are lying vacant because of opening of more number of institutes with comparison to their requirements.

Growth of enrolment in school education and subsequently requirements of additional teachers for the coming days are also other concerns for maintaining a well balance in establishing new teacher education institutions. The states like; Odisha, WB, Assam, Bihar,

Jharkhand, Mizoram, Arunachal Pradesh, Sikkim, Tripura have observed high enrolment in school education and many untrained teachers doing the teaching work, both in Govt. and Private sector that require huge trained teachers for the coming days but comparatively exist less number of teacher education institutions. For catering the growing enrolment and to avail the additional requirement of teachers, there is the need of opening of teacher education institutes in this reason. Here growth of enrolment in school education is another parameter to plan establishing more teachers' training institutes in that region/states. On all grounds, may be population, enrolment, and additional requirement of teachers, Eastern and North East region needs more teacher training institutes.

TABLE 5

Region-wise Teacher Education Institutes with Population Percentage, Literacy Rate, Enrolment and Requirement of Additional Teachers (Figures are in percentage)

Regions	*B.Ed.*	*D.Ed.*	*M.Ed.*	*Population %*	*Literature %*	*Enrolment %*	*Additional Teachers Requirements (2012-17)*	
								%
Eastern India With N.E.	3.75	3.53	2.74	14.8	79.46	65.94	521872	30.18
Western India	11.47	27.54	18.93	14.42	84.18	47.19	334180	19.32
Northern India	45.01	20.45	32.86	38	76.67	66.68	443136	25.62
Southern India	31.88	38.93	33.33	20.88	82.72	43.34	66853	3.87
Central India	7.88	9.55	12.14	10.83	69.73	64.39	364315	21.07

(Enrolment % includes only govt. schools in rural and urban areas)

Source: NCTE India, Census 2011, and DISE 2010-11

NB: Data related to the requirement of additional teachers in some states has not been available.

FIGURE 6

Region-wise Teacher Education Institutes with Population, Literacy Rate, Enrolment and Additional Requirement Requirement of Teachers (Figures are in percentage)

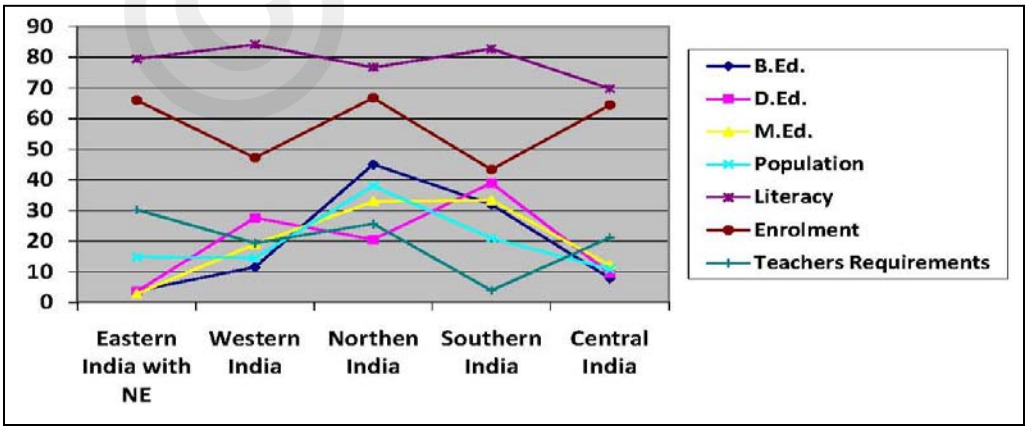


Table 5 and Figure 6 show region-wise B.Ed, D.Ed and M.Ed institutes with their population percentage, literacy rate, enrolment and additional requirements of teachers. Data revealed that the region of Eastern India covers 14.8 per cent of population, literacy rate around 80 per cent, and average enrolment of around 66 per cent but their share of Teacher Education Institutes was just 3.5 per cent. If we consider the requirements of teachers for coming days till 2017 it clearly shows that it may cover 30 per cent of total national requirement of teachers. The situation of Central India was also not so good; they were occupying around 8 per cent of institutes whereas their population share was 11 per cent and they require another 20 per cent of additional teachers for coming five years (2012-17). Western India was also suffering a little bit. On the other hand the Southern and Northern Regions were in a comfortable position, their population shares was respectively 20.88 and 38 per cent, but they were occupying around 32 and 45 per cent of Teacher Education Institutes. The Eastern Region was the most neglected area in India so far as Teacher Education Institutes are concerned which needs to resolve the issue soon.

Discussion of the Result and Conclusion

Till the year 2010 a total of 10,327 Teacher Education Institutes had existed in India, which included 5,834 (56.49%) B.Ed., 3653 (35.37%) D.Ed. and 840 (8.13%) M.Ed. teaching institutes. Out of 10,327 Teacher Education Institutes, 3650 (35.34%) institutes had been established before 2005 and rest 6,677 (64.66%) institutes have been established in the last five years i.e. 2005 – 2010. It clarified that the Teacher Education Institutes established in 58 years after independence were comparatively very few than the Institutes developed in the last five years. No doubt it has solved some of the problems of requirement of trained teachers due to the huge expansion of school education in India. But, on the other side, it has created large differences and imbalance in States and Region-wise. The Regional Imbalance in Teacher Education is clearly visible in the data given above. Some States were in a better position and they were enjoying more colleges though their national population share is very less; on the other side, the States like Odisha, West Bengal, Bihar, Jharkhand, Assam had been neglected a lot. The most neglected region in respect of Teacher Education is the Eastern Region including the North Eastern States. They occupied only 371 (3.59%) institutes whereas their share of national population according to 2011 Census was 14.8 per cent and they require another additional teacher of 30.18 per cent in coming five years. Specifically, some States can be given example for regional imbalance in Teacher Education. The State of Odisha was having only 85 (0.82%) Teacher Education Institutes whereas their population share was 3.47 per cent. The State West Bengal was having 168 (1.63%) Teacher Education Institutes whereas its population share was 7.55 per cent. Another State, Bihar can be taken as an example, where the population percentage was 8.58 and only 82 (0.79%) Teacher Education Institutes were there. The States like Haryana, Tamil Nadu, U.P., Rajasthan, Karnataka and Andhra Pradesh were having more Teacher Education Institutions with comparison to their national population share and requirements. The Southern and the Northern Regions were in a very comfortable position and most of the students' migrations happened to this region. If we analyse the growing enrolment in school education in different States, it becomes clear that there will be the huge requirement of teachers for coming days.

As per Table 5, Eastern India including NE States require more than 30 per cent teachers in coming five years (2012-2017) and presently they have very less number of teacher education institutes. It signifies that a proper planning is required to establish teacher education institute. Because some students were not getting a chance to do a degree in Teacher Education, they were compelled to migrate to other Regions and States. It is worthwhile to note that the migrated students were facing a lot of problems in the form of language, finance, different types of harassment by the college management and many more. In the name of attendance, micro teaching, psychology practical, community awareness, class test, and assignment, etc, college management usually collects large amount from the migrated students and it is because of the imbalance in Teacher Education. So, it is high time to think over the issue and to do the needful and solve the problem as early as possible, otherwise, it will create many differences in the mind of countrymen.

Suggestions & Implications

1. State Government should be given proper care to the imbalanced region and new colleges should be opened, at least one college in each district.
2. Department of School and Mass Education should come forward with a suitable plan and NOC should be given to the private parties to open self-financing Teacher Education Institutes.
3. State SCERT's should take the initiation and give timely suggestions to State Government for opening of new Teacher Education Institutes in order to solve the students' problem, especially in Eastern Region like the State of Odisha, West Bengal and Bihar in Northern India.
4. State Universities of Imbalanced States should come with their proposal to State Govt. and UGC for opening of Teacher Education Institutes in UTD's and ask for financial assistance.
5. NCTE should maintain a good regional balance while giving permission for opening of new Teacher Education Institutes. They should follow a definite plan and procedure for giving permission and population parameter should be taken into consideration.
6. Regional offices of NCTE should work for maintaining balanced development among the States of its jurisdiction with respect to Teacher Education.
7. A regular visit should be made by the NCTE, SCERTs and the affiliating Universities to the Teacher Education Institutions so that the students feel free to discuss their difficulties.
8. More colleges should not be opened in the states where the college proportion is more than the population proportion and requirement of teachers. In the extreme geographical areas population parameters should not be taken into consideration for opening of new teacher education institutes like for the North East States.
9. Distance Education Council (DEC) should increase the number of seats in Teacher Education, especially in the states where the regular colleges are less with comparison to their population proportion. NCTE needs to be liberal in this context.
10. A holistic approach needs to be adopted for maintaining balance in Indian Teacher Education.
11. Future requirement (demand) of teachers which has been proposed by NCTE should be taken into consideration for opening new colleges.

12. Growth of enrolment in school education in different States should also be another parameter for affiliating teacher education institutions.

References

American Council on Education (1964): *The Improvement of Teacher Education*, Washington D.C.
Deighton, L. C. (1971): *Encyclopaedia of Education*. The McMillan Company and Free Press. Vol. II.
Govt. of India, Report of the Secondary Education Commission, (1953).
Govt. of India, Report of the University Education Commission (Radhakrishnan Commission, Vol. 1, 1949).
Gurrey, P. (1953): *Education and the Training of Teachers*. London: Lonmans Green & Co. Ltd.
Humayun, Kabir (1959): *A Programme of National Education for India*. Eastern Economist Pamphlet.
MHRD, Report of Education Commission, (1966): Govt. of India, New Delhi.
MHRD, Report of National Policy on Education, (1986): Govt. of India, New Delhi.
MHRD, Report of Revised National Policy on Education, (1992): Govt. of India, New Delhi.
Mukerjee S. N. (1957): *Education in India, Today and Tomorrow*, *Education in Modern India*.
NCTE (2009): Report of Demand and Supply in Teacher Education for Different States.
Nurullah and Naik (1951): *A History of Education in India*.
Rai, B. C. (1998): *History of Indian Education and Problems*. Prakash Kendra Publishing Co. Lucknow:
Rawat, P. L. (1999): *History of Indian Education*. Ram Prasad & Sons, Agra:
Saxena, N.R., Mishra, B.K. and Mohanty, R.K. (2006): *Teacher Education*. R. Lall Book Depot, Meerut:
Tibble, J. W. (1971): *Future of Teacher Education*. London: Routledge and Kagan Paul.
Website of Census Survey of Govt. of India, New Delhi, 2011 (http://censusindia.gov.in/)
Website of Education Britannica Online Encyclopaedia, 2011 (www.britannica.com)
Website of National Council for Teacher Education NCTE, New Delhi, 2011 (http://www.ncte-india.org./)
Website of University Education Commission, UGC, New Delhi: 2011 (www.ugc.ac.in)
Website of District Information System for Education, DISE, New Delhi (http://www.dise.in/)

INDIAN JOURNAL OF AGRICULTURAL ECONOMICS

(Organ of the Indian Society of Agricultural Economics)

Vol. 67 | **OCTOBER-DECEMBER 2012** | **No. 4**

CONTENTS

Annual Subscription Rates

Individual Membership Fee	:	Rs. 500.00; £ 50.00; $ 100.00.
Life Membership Fee	:	Rs. 5,000.00; £ 500.00; $ 1000.00.
Institutional Subscription	:	Rs. 1000.00; £ 75.00; $ 200.00.

Please address correspondence to the Hon. Secretary and Treasurer, The Indian Society of Agricultural Economics, C-104, First Floor, Sadguru Complex I, Near Vagheshwari, Gen. A.K. Vaidya Marg, Goregaon (East), Mumbai - 400 063 (India).

Telephone : 022-28493723; Fax : 091-022-28493724

email : isae@bom7.vsnl.net.in; isae@vsnl.com; website: www.isaeindia.org

Journal of Educational Planning and Administration
Volume XXVII, No. 1, January 2013, pp. 117-132

Book Reviews

THE WORLD BANK (2007): ***Education in Sierra Leone: Present Challenges, Future Opportunities,*** ISBN13:978-0-8213-6868-8, (Paperback) US $ 25, Pages 207.

The report is a part of the Africa Human Development Series brought out by the World Bank. Sierra Leone has been covered in the report. The report has been presented in an era wherein the country has emerged out in a post-conflict period characterized by a civil war between 1991 and 2002 in which fifty thousand citizens lost their lives besides a large scale destruction of physical infrastructure, jeopardizing the social and economic conditions of the country. The reconstruction and restoration process in the country has given due importance to the educational programmes with unprecedented surge in student enrolments as well as efforts to reconstruct the destroyed, damaged and abandoned schools in the country. This unexpected huge demand for education has emerged as a challenge for the policy makers in terms not only creating infrastructure but also catering to the manpower demands in terms of teachers etc. However, the demands have been plagiarized by the financial constraints in a country emerging from post-conflict situation, where the fulfilment of basic public distribution system occupied the highest priority over education. The war in the country which ended in January 2002 has posed several challenges in terms of security, economic reconstruction, restoration of public services and education. Significant growth in enrollment at primary levels was reported with a large portion of public expenditure allocated to education, while there are social and economic problems with poverty posing as a major challenge.

The Education Act 2004 of Sierra Leone is consistent with the internationally agreed upon MDGs on education in order to ensure that all children complete a full cycle of primary schooling and eliminate gender disparity by 2015.

The share of expenditure allocated to education stabilized at about 20 per cent during 2000-2004, the country has witnessed a rapid increase in student enrollment at all levels of schooling. The abolishment of fees for examination at the end of primary school has resulted in increase in large number of pass-outs. However, rural girls and children from poorest households in the Northern Region were found to be lagging behind, putting the Gross Completion Rate (GCR) at 65 per cent which is short of 35 per cent in order to reach the goal of 100 per cent. The country is facing a challenge in improving poor classroom conditions and still lacks sufficient learning materials and adequately qualified teachers. Sierra Leone is also struggling with the problem of governance and decentralized system of management for improving the education system as a whole.

Despite resource constraints and problems in certain regions of the country, Sierra Leone has embarked upon a sector-wide plan for the development of education sector and mobilized more financial resources for the education sector. The Ministry of Education, Science and Technology (MEST) has also taken up the process of preparing the plans;

however, the policy implications have not been worked out. The present report has taken cognizance of the plans — in terms of achievements, finances and action points and tried to spell out the policy implications for each and every sector. In this context, the contribution made by the report becomes more significant for Sierra Leone to make advancements in educational development in the country. The report has identified feasible scenarios which can be adopted for the development of education in Sierra Leone.

The report has been divided in to seven chapters. The first chapter elucidates the post-conflict situation and its recovery in Sierra Leone. In this chapter, a critical analysis of a variety of data has been dealt with taking into account the economic conditions of the country. The second chapter deals with the prevalent education system in the country as well as the enrollment of students at various levels of education covering GER, NER, AER and cohort access rate etc., covering also efficiency of student flow at various levels. The third chapter is very crucial as it has covered the learning environment and its outcomes giving due regard to school conditions and characteristics. This chapter also covers the teacher pupil ratios and role of teachers and the provision of in-service training available in the schools at various levels of education. Chapter four is very important in the sense that it deals with the expenditure and budget for managing education in the country. This covers budget allocation at various levels and funds emanating from external donors and their utilization. This chapter has also covered unit costs on education as well as estimated unit costs and policy implications.

The fifth chapter covers the entire gamut of disparities in the country across various levels and sectors of education. Importance has also been given to the regional disparities across the country, household expenditure as well as distribution of public expenditure. Governance and management has received importance and adequate treatment in the sixth chapter. The shift from centralized to decentralized governance, school, teacher and resource management has received due importance with the flow of information from bottom to top and vice versa. The importance of monitoring and evaluation mechanism has been adequately emphasized in the system of governance. The seventh chapter deals with building scenarios for implementation in the country in order to achieve the EFA goals. Four scenarios have been envisaged and each of the scenarios has estimated budget over a period of four to five years till the achievement of EFA goals by 2015. However, looking at the resource constraints and the feasibility of the scenarios, the country can adapt one of the best suited scenarios for development of education.

The crux of the report is that of proposition of scenarios for educational development in the country. As has been already stated, four scenarios were proposed in the report which has taken account all the important educational indicators as well as the legal framework of the country, commitments to the MDGs and EFA, strategic plans of development by the government, economic and societal needs and sustainability of the plans. Due importance has also been given to time frame and resources for adapting a viable scenario. The scenarios conceived after deliberating upon various educational and economic indicators in the report is noteworthy, as these models can help the country to plan and undertake the most optimal and result oriented scenario for implementation.

The first and foremost scenarios has taken into account the goals for achieving EFA goals, accordingly resources have been spelt out in this direction by emphasizing heavily on enhancing enrollment at post-primary levels, small class sizes with low teacher-pupil ratios, which in fact requires lots of resources as well as trained teachers as a result will require

huge funds and sustaining such a plan can be a big challenge as the financial gap in 2015 will be US$ 171 million. The second scenario has taken into account the current situation of the country and made suitable adjustments in the enrollment and transition rates without spending much on schools and teachers although it remained higher, as a result, the financial requirements have been minimized making the scenario achievable and sustainable as the financial gap will be only US$ 46 million. The third scenario has been termed as optimistic in the report as it has focused on low teacher pupil ratios and small class sizes and more governmental pre-primary schools etc and has adapted a combination of scenario one and two and the financial gap will be US $69 million. The fourth scenario presented in the report has taken into account some portions from scenario two and three and focused on efficiency of the system. This scenario has emphasized on reduction of repetition rates and unit costs on teachers with viable class sizes etc.; this scenario focused on allocation of more resources at the post primary levels; this scenario has a financial gap of US $57 million. Looking at the resource requirements and affordability of the country, the scenario two has the lowest financial requirements of US $46 million. The MEST can readjust some of its programmes and also perhaps can seek external assistance for attaining the goals of education in the country by adapting second scenario with US$ 46 million.

The report is very well conceived. It has taken into account the post-war reconstruction and restoration process in the country and adequately considered all parameters facilitating educational development in achieving goals of MDGs and EFA. Greater detailed treatment has been given to various educational data while dealing with the prevalent situation in the country, which has resulted in building feasible scenarios for the country.

Department of Training & Capacity Building in Education,
NUEPA, New Delhi-16

B.K. Panda
bkpanda@nuepa.org

BUNDY, Donald (2011)**:** ***Rethinking School Health: A Key Component of Education for All,*** The World Bank, Washington D.C., Pages xxviii+299, ISBN: 978-0-8213-7907-3 (Paperback), Price: $ 25.00

The present volume, Rethinking School Health: A Key Component of Education for All, a World Bank treatise edited by Donald Bundy, on the school health and nutritional programmes across the countries, is a succinct encapsulation of all the mandated issues on the topic. This book has been prepared by World Bank in response to a request from the International Advisory Panel (IAP) of Education for All (EFA). It has been organized in six chapters and there are 63 contributors drawn from 25 countries with different educational backgrounds. The overall theme of the book is that school offers a delivery platform for a range of interventions, including those that can address ill-health and hunger and that these interventions can contribute to the educational outcomes, including the goals of Education for All (EFA).

The book starts with revealing simple truth that school children are rarely mentioned in education sector plans. Typically, education plans focus on the familiar components of quality education: adequate classrooms, well trained teachers, appropriate learning materials. But this book argues that these investments, essential outcomes for delivering quality education will not result in effective educational outcomes, if children are sick and

hungry. Children who are hungry or sick cannot be able to complete basic education of good quality. In order to achieve the Millennium Development Goals (MDGs) and the goals of EFA by 2015, it is essential that all children, especially the poor ones and the girls, who suffer most from ill-health and hunger are healthy enough both to attend school and learn while being there. Because healthy children can learn better, complete their education in time. Therefore, to achieve the goals of EFA, this book posits that school health and nutritional programmes (SHNPs) can play an effective role. 'School Health and Nutrition' include the whole gamut of interventions that can be delivered from a school platform - which variously aim to improve health, enhance nutrition, alleviate hunger or prevent diseases and can provide social safety networks.

School health and nutrition programmes for children of school age are usually delivered through school system. These interventions are safe, simple and cost effective school based options by which education sector, with help from health sector can address the common health and nutrition conditions that affect school age children. Some of the most commonly used school based interventions and respective conditions that seek to avoid or prevent, include de worming and worm infections, bed nets and malaria, hand washing and bacterial infections, tooth brushing and dental carries, micro nutrients deficiency and food and hunger. These are very effective school based options for addressing the most common health and nutrition conditions. Some of these activities can be addressed by the teachers and educational staffs with a minimum training and with an oversight from health sector.

This book advocates that school health and nutrition programmes (SHNPs) can be undertaken owing to the convincing explanations of: (i) promoting gender equity and equality; (ii) enhancing capabilities of poor students; and (iii) achieving higher educational outcomes with lowest investments. In comparison to other programmes, the SHNPs yield better results, benefit more and can have additional effects on cognition and learning. An underlying theme throughout the book is the importance of life cycle approach for child developments and it argues that the programmes for school age children are part of continuum of supportive programmes starting from maternal and child health (MCH) during fetal development and infancy, followed by early child development (ECD) in early childhood, and finally school health and nutrition programmes as an integral component of education for all.

In fact, this policy is concomitant with World Bank education strategy which focuses on: (i) ensuring that children are ready to learn and enroll on time; (ii) keeping children in school and learning by enhancing attendance and reducing dropout rates; and (iii) improving learning at school by enhancing cognition and educational achievements. The book views that improvements in health and nutrition can contribute to this strategy, but they need to start early and support the child throughout the development.

This book further argues that it is in the interest of the education sector to encourage and promote the general sequences of MCH, ECD and SHNPs. Based on field data, the book reveals that in the high and middle income countries, the implementation of these programmes are near universal, where they are viewed as essential to long-term development of children. In low income countries, too, they are seeking to implement effective SHNPs, especially since World Education Forum, Dakar, 2000. In these countries there is a growing movement away from small, complex and medicalised programmes that principally benefit elite urban schools towards a focus on achieving the goals of EFA.

However, for effective implementation of the SHNPs, the book calls for more researches and field experiences to bridge the 'knowledge gap' on the topic, both in rich and low income countries. Further, for successful outcomes of these initiatives, the book advocates for: (i) modification of the existing programmes to address new priorities to suit the local needs; (ii) expansion of geographical coverage of the existing programmes to reach the poor and marginalized children; (iii) change of modalities from health based model to an education based model to utilize the network of schools as a more extensive delivery platform; (iv) dissemination of information, consultation with multiple stakeholders, implementers, enablers, community based organizations (CBOs), faith based organization (FBOs), local community, pupils, parents and teachers about importance and significance of SHNPs; (v) shifting of focus from public sector to private sector and civil society; (vi) fixing of target areas to reduce cost, facilitates management and optimal outcomes; (vii) recognition of the importance of SHNPs by the educational planners to shoulder the responsibility for implementation of these programmes; and (viii) focusing on multi sect oral approach as SHNPs relies on both health and education sector and, building up effective partnerships and networks at international, regional and national level to get critical information and technical knowledge about the programmes.

The book has also outlined that the FRESH (Focusing Resources on Effective School Health) framework launched at World Education Forum at Dakar, 2000 has identified four components (policy, school environment, education and service) of SHNPs. But these four components can be implemented effectively if it is supported by three strategic partnerships between: (i) The health sector and education sector, especially teachers and health workers; (ii) school and their respective communities; and (iii) pupils and other responsible for programme implementation. Besides the above, major donors, civil societies and private sectors, UN agencies can also provide vital support in technical, policy and budgetary fields with regards to successful implementation of SHNPs.

In spite of the above benefits of the SHNPs, the book warns about the necessary dangers in moving towards wider implementation of SHNPs. The use of schools as a delivery platform should not detract from their primary role of teaching and learning – that is, the delivery of heath and nutrition interventions should not function as tax on the education system which it is trying to help. Similarly, the potentially large increase in demand for education created by SHNPs interventions must be matched by a concomitant increase in the supply of quality education.

Basing on practical experiences, the book recognizes that the SHNPs as an important contributor to education achievements. Hence, the SHNPs should be viewed along side more traditional interventions – such as abolition of school fees, providing cash transfer, offering incentives or subsidies- as important components of the battery of responses that can contribute to increasing participation in education. At the end, the book admits that these interventions may not be relevant everywhere, but using schools to promote good health and avoid hunger may make a crucial contribution to education for all.

The present volume comprises six chapters. **Chapter one** of the book sets the scene and describes the historical contexts and setting out the issues of school health and nutritional programmes. It also provides the background on the development of school health and nutrition programmes in the context of education for all. **Chapter two** presents the evidence for the impacts of a range of health and nutritional interventions on major educational outcomes. This chapter with the help of facts and figures examines the evidence base that

justifies SHNPs, exploring first the evidence for the interaction between health and education and then why these are particularly relevant to educational effort to achieve education for all. **Chapter three** of the book takes an education sector view of how health and nutrition interventions intended to benefit education work in practice. **Chapter four** examines practical examples of how these interventions have been used as a component of actual SHNPs. Basing on practical experiences this chapter advocates relevant policy design on SHNPs to achieve the goals of education for all. **Chapter five** describes the partnerships that have developed to provide guidelines and support on designing and implementation of SHNPs. **Chapter six**, which is the final chapter of the book, summarizes the main conclusions of the review and identifies challenges and research issues going forward.

This edited volume is definitely a step forward in comprehending the much talked educational interventions in the form of SHNPs to achieve the goals of education for all by helping children to enroll on time, complete their education and realize their cognitive potential to learn. This is certainly a monumental piece of work in the field of health and educational planning. Overall, the book is an incomparable resource that has examined organic link between education and health and the importance of school health and school feeding programme in a comprehensive manner. This book will positively stimulate the minds of teachers, policy makers and legislators and those who are working in the fields of education, health and childhood management.

As far as methodology is concerned the use of case studies reflecting and discussing situations in cross-countries is commendable. The detection used by the contributors is clear and loud. The unfussiness of the language makes it painless to comprehend what the writers are saying. The manner in which the contributors have clearly put forward their ideas together in every chapter with series of sub-title is also commendable. This ploy brings about fluency and clarity in the book.

The editor has done a good job and deserves the credits of the readers for his invaluable endeavor. Definitely this book serves an important resource base for strategic educational planning and administration.

MPCJ College, Mayurbhanj Palace, Baripada, Mayurbhanj, Odisha-757001

Jayanta Parida
dr.jayanta.parida@gmail.com

GNANAKAN Ken (2011): ***Integrated Learning,*** New Delhi, Oxford University Press, ISBN 9780198074366; Pages 180 (hardbound), Price: $ 35.00

Several thinkers have focused on the importance of integrated learning in the development and empowerment of the individual. Going beyond the walls of the classroom and narrow technical learning into the school of life, integrating experience, skill and values into a holisitic vision of 'living learning' lies at the core of integrated learning. This approach has a formative influence on how one thinks, learns and lives. The book `Integrated Learning' is a critical account of the philosophical ideas of both Indian and Western thinkers who have made significant contributions to the concept and practice of education. The main theme of the book is, 'If life is integrated, education must be integrated'. The author explores selected works of these educational thinkers to reiterate that education is more than school,

classroom and textbooks and that learning is a lifelong process of evolution. To him, 'integrated learning' is an approach that should be adopted by all teachers and inculcated in each learner. He builds a strong case for adopting the path of 'integrated learning' and exposes the limitedness of equating schooling with learning.

The book begins with the famous quote of Mark Twain, "I have never let my schooling interfere with my education" to raise some foundational queries, such as: What is education? Why are we doing what are we doing? What kind of curriculum do we need to develop? What is their effect on students within their own local contexts? These questions are relevant, as the current education system suffers from the legacy of the conventional mode of teaching, a rigid classroom transaction based on the examination-centred approach and short-term job orientation. With excessive emphasis on jobs as the ultimate objective of education, educational outcomes are getting commodified and the education system, commercialized. It is in this context that the author draws from the works of prominent thinkers who have emphasized the need to transcend the conventional boundary of modern formal education in the pursuit of acquiring knowledge, skills and values to lead a meaningful and fulfilling life.

Drawing from the works of two prominent ancient thinkers, Plato and Confucius, the author contends that the goals of education are embedded in the ideals of society. While Plato, the Greek philosopher advocated the role of education in building a just social order through the holistic development of people in society, Confucius, the Chinese philosopher stressed the role of education in producing gentlemen through the transmission of integrated human virtues with implication for social transformation. Both Plato and Confucius stressed the close relationship between education and society and the significance of good values in education for establishing and maintaining an ideal social order.

The process of imparting good education starts with children's education. The book dwells extensively on the works of Pestalozzi, Froebel and Montessori in building a case for educating children in an integrated environment. Pestalozzi, the Swiss social reformer and Froebel, the German educationist and founder of the Kindergarten movement emphasized the significance of child-centred education in terms of distinct stages of physical and moral development by demonstrating the linkage between life and human action in the use of nursery rhymes in early childhood education. In line with Pestalozzi and Froebel, Montessori developed a new method of teaching and learning based on self-motivation and auto-education. In this way, all the three education thinkers advocated shifting the emphasis from teacher-centred education to child-centred education with due stress on self learning.

Children learn better from experience with examples from real life settings. To extend this plea, he quotes Dewey who underscored the need for a connection between what is taught in the classroom and its application in real life. He placed education within the community setting and advocated learning as a social process. As education is the means of social continuity of life, schools should fit into society and children's social activities should form the core of classroom transaction. Dewey's emphasis on the social influence of education is an extension of the arguments of Plato and Confucius.

The book further extends the argument of going beyond the classroom, by drawing upon the works of Whitehead who advocated that education is the acquisition of the art of utilization of knowledge against being reduced to the mere reception of 'inert ideas'. To him, education as a process has a 'rhythm' as knowledge flows sequentially through three distinct phases, — romance, precision and generalization. Modern formal education,

according to Whitehead, suffers from excessive specialization or precision and generates more 'inert ideas' than knowledge. He also contended that unless knowledge is generalized, it has the likelihood of becoming 'inert'.

Among the Indian thinkers, the book discusses the contributions of Rabindranath Tagore and Mahatma Gandhi at length to highlight the importance of integrated learning. Tagore, not only exposed the weaknesses of modern school education with the example of his own life journey from a school drop-out to a Nobel Laureate, but also demonstrated the model of an educational institution at Shantiniketan in West Bengal based on his philosophy and ideals. He advocated the principle of freedom of learning in the children's immediate environment and the total development of their personality, including the spiritual, physical and intellectual. One may relate his educational ideas to Gardner's theory of multiple intelligence. Like Tagore, Gardner stressed the need to shift focus from a 'mono intelligence' framework usually followed in schools to a 'multiple intelligence' framework. He identified seven types of intelligence and argued that individuals often vary in terms of their receptivity to these types of intelligence.

The book also discusses the works of important social reformers/thinkers like Mahatma Gandhi and Paulo Freire who talked about social transformation through education. While Gandhi stressed the role of education in achieving self-reliance or self-sufficiency, Freire talked about liberation from oppression through pedagogic means. Both advocated the role of education in social empowerment, reinforcing the radical definition, 'Education is that which liberates'. Gandhi's educational ideas in the form of 'Basic Education' or 'Nai Talim' proposes a model of integrated education with the ultimate objective of the all-round development of mind, body and soul. His emphasis on learning by doing and through craft is a radical departure from the literary mode of learning. His advocacy for the use of mother tongue in primary education and adopting craft as the means of learning are treated as important in the direction of self rule (*swaraj*) and self reliance (*swadeshi*).

The parallels of Gandhi's educational ideas can be seen in the works of Paulo Friere, a Brazilian educationist, who also spoke about liberation through education in the form of the Pedagogy of the Oppressed. According to Freire, education can play both subversive and transformative roles, depending on the nature and type of education being imparted in school. He termed the on-going conventional system of modern education as the banking system of education, in which a teacher plays the role of a depositor of information or knowledge into the minds of the students who act as passive receivers. He advocated the need for a critical pedagogy in the classroom in which the teacher and students are engaged in a meaningful dialogue, leading to conscientization of the learners. Freire, like other thinkers discussed in the book, stressed the need to go beyond conventional classroom teaching-learning. His innovative ideas, which influenced the concept and practice of adult education in various countries, especially developing countries like Brazil and Chile, are of great relevance to India.

The book makes for interesting and useful reading and debates the educational ideas of ten well known educationists and thinkers, related to the theme of integrated learning, stressing on its creative and holistic aspects. The book is repetitive at times, as it reproduces similar ideas of different thinkers to reinforce the principle of integrated learning, but does not go deep into the concepts. However, it will be a useful resource for students and practitioners interested in the philosophical and sociological foundations of education. The book is integrative in another sense too, as it has tried to integrate the ideas of thinkers from

different time zones (from the ancient to the modern), from different geographical regions and different disciplines. It has also tried to show how the whole world is integrated, even when we discuss the day to day problems of education in a particular context.

Department of Educational Policy, NUEPA
New Delhi-110016

Avinash Kumar Singh
aksingh90@nuepa.org

PANIKKAR N. and M. BHASKARAN NAIR (eds.) (2012): ***Globalization and Higher Education in India,*** Delhi, Pearson Education in South Africa/Darling Kindersley (India) Pvt. Ltd.; Pages: 271+xxxii (Hardbound), ISBN: 978-81-317-6166-8, Price: ₹ 799.

This edited volume contains twenty two chapters grouped into four parts on conceptual issues, knowledge society, privatization and public-private partnership (PPP), and international experience in that order. Even a glance at those chapters highlights the high quality scholarly works of twenty four contributors to this volume who themselves are academicians, researchers and administrators of long standing in the field of education from India as well from the neighbouring countries Pakistan, Singapore, Hong Kong, China and also from the US. The references, notes and further reading lists given practically at the end of each chapter bear testimony to this. Additionally, the editors have presented the main themes of all the chapters commendably in their introduction running into thirty two pages. Timely publication of the book is a meaningful addition to the on-going debate on globalization of higher education in India and the world over.

From a broader perspective, the catch words globalization, internationalization, privatization and marketization of higher education (tertiary education) in the context of knowledge-based economy hint at the initiation of the ' Global Academic Revolution' in contrast to the' Human Capital Revolution' in the early 1960s. The two revolutions in the span of half a century manifest the major transition in economic thinking from the 'Keynesian Welfarism' dominated by the preponderant role of the State as the architect of education policy both as a provider and as a regulator of the entire education sector when education was unquestionably viewed as a 'public good', to the 'laissez-faireism' of Adam Smith putting enormous faith on the 'invisible hand' of the market where education, particularly higher technical and professional education, as a 'private good; can be bought and sold like any other commodities. This emerging 'educated market' is more in the nature of an 'international market' as against the 'domestic market' in which education as a service can be traded internationally to increase a country's market share in the education industry.

This so-called global academic revolution in one sense has generated different and conflicting economic, social and political ideologies than those imbibed in the human capital revolution. And as a consequence, the two diametrically opposite scenarios/paradigms have emerged in the education domain confronting the state in devising a suitable education policy. It has given a new twist to the goals, objectives and mission of education, particularly tertiary education. The scholarly works of the contributors to this volume have dissected from various angles this turn around in economic thinking and offered some constructive policy initiatives, highlighting the shortcomings of the policy in making.

Authors of different chapters are skeptical about the way in which higher education is proposed to be expanded to serve the interests of the developing economies like India. The base of their skepticism is both theoretical, and ideological. Theoretically, their focus is on the phenomenon of level playing field both nationally and internationally. From the national point of view, it is argued that it would be better not to expect much from the expansion of tertiary education in the global context to address effectively the age-old lingering issue of access, equity, and quality because of the virtual lack of universal access to good quality elementary and secondary education "which is an essential precondition for achieving a level playing field to all segments in accessing higher education which necessarily has to be selective" (A. Vaidyanathan).

Internationally there is a vast chasm in the level playing arena between the established developed economies and the developing economies with regard to the standing of the tertiary education in all the areas, namely teaching, learning, research, knowledge, innovation, creativity, funding and governance. Chapters in Part 2 on knowledge society mainly focus on this aspect cautioning the Indian government to trade carefully to gain from the internationalization of higher education under GATS when trade in education is largely oligopolistic in nature where India has simply been a major exporter of students all these years. If there is any competition, it should be between equals as competition between unequals will be unhealthy, producing unhealthy results, claimed Tilak. The catching up may not be a smooth and easy path. The formulation of an education policy is a formidable task in the context of a virtual vacuum in the level playing field.

Ideologically their concern is with: (a) the contradictory aspects of the free market viz-a-viz democracy (Amit Bhaduri); (b) the phenomenon of globalization and the pursuit of neo-liberal policies undermining the 'nation- building' role of higher education (Prabhat Patnaik); (c) the insensitiveness of globalization to cultural ethos and national identity (K. C. Baiju); (d) the global needs and solutions outweighing national needs and problems (J.B.G. Tilak); (e) the challenges of globalization within a materialistic frame work incapacitating learners to actively engage in the life of the community and service to the community (A. Jamella Begum); (f) the purely 'instrumentalist' view of education diminishing the educational system's ability to perform an equally important role of enabling youth to acquire a broad-based background and knowledge of liberal education and basic and social sciences (A. Vaidyanathan); (g) the overemphasis on the economy and competitiveness driving the higher education system now when the need is much more holistic approach recognizing its social role; (h) the globalization creating tensions between the language of market and that of morality (Anne Hill); (i) the aggressive promotion of educational 'imperialism' under the dictates of the World Bank, WTO and GATS (Vijender Sharma); and (j) the change of the perception of the Indian judiciary on higher education (Ninan Koshy). But at the same time they are very well aware of the reality. This concern, in fact, draws our attention to the urgent need to "synthesize the 'global' and 'local' contexts in such a way as to strike a rational, just, and democratic society". To strike a balance, in itself, is a challenge.

Education reform agendas of different national bodies and commissions such as the Planning Commission, National Knowledge Commission (NKC), the Ministry of Human Resource Development (MHRD) and the Ministry of Trade and Commerce bring out clearly the government intention to privatize, commercialize and internationalize tertiary education through public-private partnership (PPP). The disconcerting feature of this partnership is minimizing the government funding and regulatory roles. The various issues of the

education sector boil down to public funding (investment) which has never been adequate irrespective of the economic health of the nation. Lack of commitment on the part of the government to invest 6% of GDP in education five decades after it was recommended by the Kothari Commission (1964-66) is a case in point. This is in quite contrast to the education policy of the two neighbouring countries—China and Singapore—where even during the periods of economic crises, financial provision to higher education not only not slashed but raised.

PPP is to be viewed in the context of education liberalization in the wake of economic liberalization which has brought to the surface the conflicting nature (trade-off) of the goals of access, equity, quality, and inclusion—the traditional equity-efficiency quandary. Globalization has reached an irreversible stage where levels of quality and skill to attain competitive global stature in a knowledge economy are paramount. Production of 'specialized' human capital is a key to actively participate in knowledge economy. At present India is an important player globally and by mid-century it is expected to be an economic power house. To reach that advanced stage of development we should have high levels of innovative, well-trained, socially oriented professionals. The focus on the production of 'specialized' human capital may also work as a cushion against the possible adverse impact of periodic economic crisis—a characteristic feature of the capitalistic model of development. The production of 'specialized' human capital is supposed to lend sustainability to economic growth which, in turn, generates enough economic opportunities to capture fully the advantages of demographic dividend.

All the three levels of education are plagued by poor quality which is the root cause of its perpetuation at the tertiary level. Its seeds are sown at the elementary level which have flowered at the secondary level and later afflicted the tertiary level. Such a substandard higher education system is incapable of nurturing a knowledge society. Indian higher education system is an 'infant' in this regard requiring all possible support and encouragement from the State to achieve a global quality standard. It cannot be totally left to the mercy of the Indian corporate sector and that of the GATS. Moreover, when corporations cater to global markets, multinationals use developing countries as locations for world market production, and the share of services in the international trade is on the rise, the demand for a homogeneous structure of higher education is increasing. In such a scenario, our priority should be ensuring good quality higher education for its citizens and not that of becoming an exporter of educational services (C.P. Chandrasekhar).

Thus, the expansion of higher education should be quality centric hence forward. The PPP should take note of this. The Indian corporate sector jointly with the government should carve out a partnership helpful in striking an appropriate balance between these conflicting goals. Having favoured the privatization/corporatization of higher education, the involvement of the corporate sector first and foremost should be altruistic rather than materialistic. The nation at this juncture expects an adherence to the philanthropic philosophy from this sector when education even as a tradable service differs from other tangible services/commodities. This partnership, in the production of quality human asset, unlike finance capital, should not reach a bail out stage in case the education industry is in trouble. We cannot go by the scientific philosophy of capitalism which does not consider crisis as an object of study in the case of education industry. Chapters on PPP and others in this volume offer this message. The critique of various bills and other initiatives constituting

a package of reforms of higher education aims at evolving a healthy PPP beneficial to the whole society.

Both China and Singapore were early birds in their efforts to internationalize their higher education systems much before higher education became a tradable service. The initiative came from the respective governments. State constantly played a proactive, pragmatic and strategic role in the development of tertiary education. As mentioned earlier, their higher education systems were fully protected against the danger of paucity of financial resources even during the periods of financial crisis faced by these countries. Laws and regulations played an important part in regulating domestic education market and also in promoting internationalism conferring more gains than losses. Their long term vision and clarity of goals have made their higher education more competitive globally. Some may argue that the two structural factors—China being a socialist country and Singapore having a tiny higher education sector to deal with—unlike India's large democracy with a large unmanageable higher education sector — might have shielded their systems from unbridled politicization, bureaucratization and even from unfair practices. However, this should not rob them of from the creditable work done. Suggestions offered by Samuel Paul in the chapter on 'internationalization of India's higher education deserve a close look'.

The real culprit in case of India is continuous under-financing of the education sector which has never been a priority sector and the net result is low quality educational institutions by and large. In our case, the quality goal even today has not received a rightful place in the policy saddled with three unachievable goals simultaneously, namely access, equity, and quality. Had we emulated the success story of Singapore based on the strategy of 'import first, export later' offering educational opportunities of global quality standard to local as well as non-local students, we would have successfully tapped our large domestic higher education market curbing the perpetuation of sizeable brain-drain.

The value of this volume lies in the selection of articles which have offered valuable insight into the different aspects of policy related issues related to tertiary education in the current scenario of globalization. Its careful reading by all concerned may serve as a guideline for them to contribute their mite to the formulation of a consensus education policy. This seems to be the need of the hour in light of the following unpalatable observation on the current Indian education scene made by Philip G. Altbach: "There is little evidence that India is seriously considering the lessons of the global academic environment or systematically creating an internationally competitive economy" ("The Global Academic Revolution" Journal of Educational Planning and Administration, October, 2011).

599, Fallen Leaf Circle, San Ramon, CA-94583
USA

K.R. Shah
krshah00@yahoo.com

CREEMERS, B.P.M. and KYRIAKIDES, L. (2012): **Improving Quality in Education – Dynamic Approaches to School Improvement.** London: Routledge Publishers, pages: 301, (Paperback); ISBN: 978-0-415-54874-8

The connection between educational effectiveness and school improvement has always been contested. Educational Effectiveness Research (EER) primarily focuses on the student achievement levels whereas School Improvement (SI) does not directly concentrate on the

student achievement levels per se, but more on the processes in classrooms and schools which, in turn, influences the student outcomes. Despite being two different orientations, there has been a productive merging of these traditions in the recent years. *Improving Quality in Education — Dynamic Approaches to School Improvement* by Creemers and Kyriakides is one such book that attempts to carve its niche in this direction. The book aims at demonstrating how the knowledge base of educational effectiveness research can be used for improvement purposes.

The book is meticulously divided into four parts and twelve chapters. Each part has its own significance and caters to the needs of both practitioners and academicians. The first part takes the reader to the background of research on school improvement and explores the relationship between school improvement and educational effectiveness research (EER) from a diachronic perspective. Drawing insights from extensively reviewed literature and across various disciplinary backgrounds, Creemers and Kyriakides argue that the dynamic model can be treated as the theoretical framework for establishing a theory driven and evidence based approach to school improvement.

From the very beginning of the book, the authors explicitly state that Dynamic Approach to School Improvement (DASI) works under the assumption that promotion of students' learning should be the ultimate aim of any improvement project. The proposed DASI is also based on the assumption that not all schools are equally effective, and, therefore, the same improvement strategy should not be used in order to help them improve their effectiveness (p.51). Thus, these are the two pre-requisites of the approach which play a pivotal role in executing it in the schools.

The essential feature that sets apart the dynamic model proposed in this book from all previous models is its attempt to look at qualitative characteristics of the factors (student, classroom, school, and system) and to provide a precise feedback of how the functioning of the factors can be improved. Each factor within the model is defined and measured using five dimensions — frequency, which is the quantitative way to measure the functioning of each effectiveness factor whereas the other four, i.e., the focus, stage, quality and differentiation examine the qualitative features at the system/school/classroom level. Thus, Creemers and Kyriakides attempt to provide a comprehensive model by incorporating both qualitative and quantitative dimensions.

In order to investigate this, several research studies across various countries, contexts and educational settings were undertaken, which forms the crux of the second part of the book. The authors addressed various contemporary school problems like improving student achievement, teacher professional development, preventing bullying and so forth using variety of research methods ranging from experimental methods to case studies. Thus, several empirical evidences were drawn to support the validity of the model.

The third part of the book provides guidelines on how they can use the proposed improvement approach and establish their own self-evaluation mechanisms. It aims to provide practical support to schools in order to build School-Self-Evaluation (SSE) mechanisms for school improvement. The authors suggest that the goals of SSE are to improve the quality of the organization and to improve teaching and learning. The authors make a very valid point by arguing that all school stakeholders should be involved in the evaluation of their school (p.161). Their argument is very much valid as it is an indisputable fact that any intervention can succeed only when all the stakeholders voluntarily participate in all the stages of the intervention.

The fourth and the final part examines the viability of the approach for designing system level interventions and also put forth the strengths and weaknesses of the approach. A very crucial point made by the authors at this juncture is that DASI cannot be applied in any school unless school stakeholders consider themselves as agents of change in their school setting (p.206).

The aim of the book, which lies in exploring the possibilities and strategies of using the dynamic model of educational effectiveness for school improvement purposes, has been achieved to a great extent. The proposed model seems to be comprehensive, validated, and also acknowledges the value of school culture. The beauty of the approach lies in its applicability to any context and educational setting.

However, some of the specific points made by the authors are not very convincing. To start with, it is reiterated again and again that DASI approach should be focussed on improving the functioning of the factors operating at the school level, thereby improving the teaching practice and promoting student learning and teaching outcomes. At this juncture, it is not very clear why the authors are laying the entire emphasis on school factors and why the classroom factors are not highlighted, though they also assume importance in school improvement. Moreover, in the proposed approach, the authors have brought the issue of the equity only sparingly and did not go in-depth into this dimension in terms of creating differential and competition amongst the students, which remains to be a very vital issue.

Nevertheless, *Improving Quality in Education — Dynamic Approaches to School Improvement* is a blend of both theory and empirically tested research studies and will be an interesting reading for policy makers, educators, researchers and school managers. Needless to mention, this is a must read for all those who are interested in bringing change in the school system.

Department of Educational Administration, NUEPA
New Delhi - 110016

V. Sucharita
sucharita@nuepa.org

ROBERTSON, Susan L.; Karen MUNDY, Antoni VERGER, Francine MENASHY (eds.): ***Public Private Partnerships in Education: New Actors and Modes of Governance in a Globalizing World.*** Cheltenham, UK: Edward Elgar, 2012, ISBN No. 978-0-87593-068-2; Pages 298 (hardbound).

Public private partnership (PPP) has become the mantra of development of the present days. It also has entered the sectors which had been areas of public monopoly for several decades, if not centuries. Education is one sector which had been confined to the exclusive jurisdiction of the state for long. With declining public budgets and declining private philanthropy, on the one hand, and the emergence of neo-liberal policies as dominant policies everywhere, on the other, governments began to look at non-traditional methods of mobilisation of non-state resources for education in many developing as well as advanced countries. Role of private sector in educational development in the form of providing private education has been found to be producing mixed effects, often negative effects on quality, equity, quantity and other dimensions of education, jeopardizing the well established noble goals of education. PPP is seen as a viable strategy in this regard that would minimize the

adverse effects of private sector and strengthen the desirable aspects of public sector, and governments began searching for innovative methods of PPPs in education. Some governments use the term PPP as a 'language game' to conceal their questionable preferences for privatisation of education.

There is no proper unique definition of PPP. However, based on several modes in practice, one can define it as a contractual relationship between government and private sectors for a specific project, with simultaneous involvement of government and private sectors in education. The state and the private sector share costs and profits or resources, and risks and rewards. It is assumed that PPP provides an avenue to tap untapped private resources and will ease financial constraints on the part of the government, as the private sector makes huge investments on its own. It is argued by the proponents of PPP that as both private and public sectors complement each other, total resource base will increase, and there will be improved access to education, increase in quality of education and equity in education. It is further argued that as it will also increase competition, this will reduce costs and improve cost-effectiveness. A few contributors in this volume highlight these and other advantages of PPP in education. In recent years, several hybrid partnerships evolved, involving new combinations of state and non-state sectors engaged in a range of activities in education.

Based mostly on papers presented in a symposium on 'Public-Private Partnerships in Education: New Actors and Modes of Education Governance in a Globalized World,' held in 2009 at the University of Amsterdam under the 'Is Academie Programme on Education and Development?', funded by the Dutch Ministry of Foreign Affairs, the volume under review presents more than a dozen interesting articles by as many as 19 scholars that explore the complexities of PPP in education being operated in a variety of contexts. The contributors include scholars drawn from university academia, policy makers from organizations like the UNESCO and the World Bank, and practitioners, including those from non-governmental organizations.

The three chapters in Part I, besides the introductory chapter by the editors, provide a rich platform for a serious engagement on several conceptual issues and debates in the area. Roberton and Verger discuss the issue of legitimacy of PPPs as a tool of governance; Alexandra Draxler reviews a few international PPPs; and Mark Ginsburg positions PPP as a tool of neo-liberal globalization, which undermines democratic forms of politics. Besides a critical conceptual discussion and a review of the debates (in Part I), and national experiences (in Part III), the volume provides a set of interesting studies on the role of transnational actors in promoting private education and PPPs in education (in Part II). Karen Mundy and Francine Menashy describe the active role of the World Bank and the International Finance Corporation (IFC) in promoting educational reforms towards a high growth of privatisation. Antoni Verger and Susan Robertson describe how the General Agreement on Trade in Services (GATS) affects the scope of public education, and how a global market is created by the GATS. That there is an indisputable dispute between World Trade Organisation/GATS and public education is widely accepted. Similarly, Zohra Bhanji concentrates on Microsoft Corporation as a case of corporate-led PPP at international level. Generally, it is believed that corporate-philanthropy-based private organizations promote public good nature of education. But one has to note that there arises a serious clash between corporate interests and public interests in education, and corporate interests may often dominate the others. Often one finds that corporate interests are antithetical to the

public good nature of education. Justin van Fleet highlights these aspects in a study on American corporate philanthropy in education, and so do Prachi Srivastava and Su-Ann Oh in another article. Srivastava and Oh highlight the problems in making sound research studies and need for filling up the systematic gaps in data. PPP can lead to distortion in national priorities, increase in costs, promotion of unhealthy competition, and even to privatisation of public goods. In this sense, PPP is not a 'governance arrangement' as some scholars tend to argue. Alexandra Draxler highlights the aspects while discussing the conceptual issues relating to PPP in Part I.

Some of the country experiences described in Part III raise some valuable questions: even if the NGOs and other private sector organisations are able to provide educational services, should this be their role? After all, they may not view education as a human right. Hence, it is right to ponder, like Maria Ron-Balsera and Akanksha Marphatia, over the question whether PPPs fulfil the right to education? Or do the low fee private primary schools serve the interests of the poor? a question that Joanna Härmä and Pauline Rose examine with evidence from India, and conclude that they do not. Or, as Shailaja Fennell asks why PPPs in Pakistan focus on girls' education rather than on gender equality?

As Fennell states, often there is no conceptual clarity on the part of the governments or the non-state sectors involved in education on several issues. Many of the stakeholders involved in PPPs may not be knowledgeable about education which is a public good, a merit good and a complex social good.

As the several chapters in the volume show, there are several modes of PPP under operation in different contexts. Though many have common features, there are also significant differences between them. Most partnerships are based on market-oriented logic, they may adversely influence the publicness of education and social and political goals of the society. It is necessary to examine, as the editors suggest, who are the actors involved? Is there a 'lead' actor, or coordination between the actors? What are the motivations behind partnerships? And at what scale does the partnership operate? etc., before one attempts a critical evaluation of the outcome of a given form of PPP. However, as Robertson and Verger state, it cannot be concluded that all public private partnerships are *per se* a good, bad or neutral policy solution. Mark Ginsburg also pleads, "it would be more appropriate to celebrate or condemn the operation of particular public private partnerships, depending on how they function, how they are structured, and what implications they have for neoliberal globalization and democratization" (p. 75).

Public Private Partnerships in Education is a scholarly contribution to the growing literature on the topic, providing useful insights into the problem. The wide perspectives provided compel the serious readers to go for in-depth research on many related aspects.

Department of Educational Finance, NUEPA
New Delhi-110016

Jandhyala B G Tilak
jtilak@nuepa.org