Journal of Educational Planning and Administration

Volume XXVII No. 3 July 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 Pvt. Ltd., Delhi–110007.

JOURNAL OF
EDUCATIONAL PLANNING AND ADMINISTRATION
Vol. XXVII No. 3 (July 2013)

CONTENTS

Book Reviews

Journal of Educational Planning and Administration
Volume XXVII, No. 3, July 2013, pp. 233-256

A Century of Basic Education in Gujarat
— Shifting Paradigm and Crisis Management**

Vidyut Joshi*

Abstract

Gandhi started basic education experiments in Kocharab Ashram of Ahmedabad in 1915. Next year we will complete hundred years of basic education in Gujarat. Basic education survives only in Gujarat; but it faces challenges from within and outside the system.

As per stage theory, history of an institution is divided in to several phases for the purpose of analysis. History of a century of basic education in India is divided in four phases: (i) 1915 to 1951- The institutionalization phase; (ii) 1951 to 1975- The growth phase; (iii) 1975 to 2000- The routinization phase and (iv) 2000 to 2013- The crisis phase.

Education is not a prime mover, as some liberals think. As education system is a part of the larger system, it changes as per changes in the broader contexts. It got prominence during freedom movement. After independence it got financial help from concerned governments and number of institutions grew. But basic education pattern was not accepted as national policy of education. It became routinized in the third phase. During fourth phase, LPG phase, the basic education started facing crisis of existence. Several basic institutes in Gujarat are closing down.

The basic principles on which basic education was structured viz., mother tongue, life education, craft base, self sufficiency, are still valid. So the question is to manage crisis by keeping basic principles intact and giving up certain practices and changing certain old practices which have become obsolete.

* Gujarat Vidyapith, Ashram Road, Ahmedabad-380 014, Gujarat. E-mail: vidyutj@gmail.com
** Paper presented in the III Peoples' Congress on Education on The Indian Education System: The Crisis and the Shifting Paradigms, Ahmedabad: Gujarat Vidyapith (19-23 November 2012).

Introduction

Basic education experiments at Kocharb Ashram, Ahmedabad started in 1915 A.D. After two years, it will be the centenary celebration of the education system, variedly known as basic education, new education (*nayee talim*) or Vardha pattern of education. A century is sufficient time to evaluate any system. The present work is an exercise in this direction. At the outset, the following points need to be emphasized.

The paper is primarily based on the author's long-drawn field experience in ashram-type institutions in South Gujarat. The basic education institutions have also flourished elsewhere in Gujarat. But this author has only limited knowledge of institutions north of Mahi river. Secondly, this paper is based on stage theory, meaning, thereby, that "elements in a system (basic education in this case) move through a pattern of distinct stages over time. Such stage can be described in a constant order of succession" (Piaget, Jean, 1970:703-32). The structural elements and functions change in each successive stage. Third, the question, 'why and how the stage changes, brings us to the context theory, which narrates a system as related to other contexts. Social scientists, interested in education, view the relationship between education and society. This being so, whenever there is change in politico-economic context of the wider society, the changed context, or the paradigm shift, pressurizes the education system to change. This brings tension within the system-known as structural tension. Some elements of the structure of education are forced to change. Fourth, this brings us to the question of autonomy of education system. Social scientists, who have addressed themselves to the issue, have expressed different viewpoints. Of course, it is necessary to mention that very few of them have written directly on the nature of this relationship. Even then, a perusal of social science literature on education shows three viewpoints. The first viewpoint recognizes the role of education in and its inherent capacity to bring about change. Most social scientists, who have written on education, hold this view. The second viewpoint, opposite to the first one, holds that change in or through education system is not possible, without prior change in social structure. Not only does this viewpoint reject the inherent capacity of education to bring about desired changes but it considers education as a State apparatus. Both these viewpoints are fairly known among the scholars; hence it is not necessary to describe them in detail. As the third viewpoint is recent and less known and the present author wants his departure from this viewpoint, it is discussed with necessary details.

The chief spokesman of this viewpoint are Karuna Ahmed (1979-157-164) and A.R. Kamat (1982:1237-1244). Prof. Kamat writes "the education system, like every other sub-system in the general social framework, acquires, in the course of its development, a certain autonomy and, therefore, its own dynamics of development, depending on it's own contradictions as well as contradictions and conflicts in relation to the socio-economic system. It can, at times, produce serious value conflicts in the system between its different components and values of some components of the system with the ruling values and practices". Thus, Prof. Kamat takes a position that though "education is largely conditioned by the socio-economic and political power structure", "it acquires certain autonomy". Karuna Ahmed distinguishes between the dependent and the autonomous aspects. She writes, "Formal education is a social product. Its form is determined by the type of social change which the rest of the society is undergoing. It acts independently of the social structure only through the transmission of knowledge, ideas and values. Therefore, there is need to

distinguish between what are called structural aspects of change from the 'ideational' aspect of change. After all, the role that education plays in social change is crucial in the area of value transmission, attitudes and knowledge. I (K.A.) refer to these as 'ideational' changes. Again, there is need to differentiate between social change, which is generated by the politico-economic factors and precedes changes in the educational system, on the one hand, and the change that is generated through education. This will instill realism into the thinking of those who put too much faith in education."

"There is also need to see the contradiction in the role assigned to education. It is expected to transmit the cultural heritage and provide continuity with the past while, at the same time, building a new social order. The planners and policy-makers fail to see that education is very much a part of society and is subject to pressures from other parts .... Besides, this conflict is likely to be heightened in a society where private schools, by their very nature, are established to promote sectional interest."

This third viewpoint is a welcome departure from the earlier two viewpoints. One would tend to agree that every system has its own autonomy. But, at the same time, it is necessary to distinguish between the autonomy of education and religion, on the one hand, and the autonomy of policy and economy, on the other. It is true that germination of an idea in one's thinking is not necessarily dependent on one's socio- economic status. Students of the same socio-economic status, studying the same course, may provide different intellectual responses and develop different ideas. But this does not mean that "education acts as an independent variable of social change (only) through transmission of knowledge, ideas and values". (Ahmed, Karuna: 159) An idea could be autonomous at the level of idea, but when it is employed in order to propagate or bring social change, the idea becomes a part of the total ideology of the social change. Ideology is a part of the political system. If the idea (and the ideology), through which Karuna Ahmed talks of bringing change, is against the ideology of the ruling group, the rulers will view it as something against their interest and will try to regulate the idea and ideology of that change and will bring them to 'order'. Whatever be the ideology of the State, it thinks in terms of maintaining the order. Any idea that wants to bring change in that order is viewed as a threat to their interest and hence the State uses its power and authority to stop such ideas by de-recognizing schools, by stopping its grants or by using legal apparatus against those who propagate that idea of change.

Karuna Ahmed writes further, "Education can be viewed as a vehicle for introducing a developing society to new feeds and expectations and even to the idea of change itself. All this it can do through the transmission of values and by changing the attitudes of the people. In other words, education can help take our society away from the old, and towards the new. It can inspire belief in change, in adaptability and achievement and in rationality". It is true that education can help take our society away from old (particularly in the phase of transition that we are in), but the problem comes about the type of new society. If the officially laid down ideas of the State are of one type of society, and education-wallahs seek to propagate ideas and inculcate values of a new society, which is of another type, the fate of education's dream of bringing a new society will be crushed by the State. Of course, the sociologists of education should also analyze whether the idea put forward by education is really new or it is old wine in a new bottle.

But, still, one possibility is left open. If the idea, knowledge and attitudes about a new society became part of an alternative ideology and a political movement is led to bring a new society, the role of education will succeed to the extent the political movement succeeded in

achieving its goals. The education that tries to bring a 'new' type of change without the help of appropriate political action remains at the level of isolated experiment only. The claim made by basic education people has to be seen in this light.

Now the question remains is that of involving stage theory. Earlier, Prof. I.P. Desai (1977) studied the work of Vedachhi where, he said, that the change in political context influences the 'work of Vedachhi'. After that, author of this paper Vidyut Joshi (1980) studied the influence of changing political context on educational institutions in a limited field of ashram schools of Surat District. It was in line with these studies that another thought of studying the 'Basic Education Experiments in Gujarat'. Thus, the present paper views the influence of changing political context on basic education in Gujarat, and, in order to view this relationship, it breaks down the history of basic education into four stages or phases. Each new stage indicates a qualitative shift in structural and functional aspects of the basic education from the earlier stage. Thus, stage theory of Jean Piaget is used to de-contextualize basic education from earlier stage and re-contextualize it in the later stage.

No attempt is made here to define basic education nor to describe its special feature, nor even describe the techniques of teaching involved in this system. These things are well known and educators committed to this system. A full-length history, from this point of view, is available elsewhere (Patel, Narottambhai 2002). Not only that, good works on philosophical basis are also available right from Kishorlal Mashruwala to Vidyut Joshi. What is emphasized here is clearly the relationship between politico-economic context and education. While doing so, I would divide the one century of basic educations in the following four phases.

A. Institutionalization Phase (1915-1951)
   A.1. Experimental Phase (1915-1936)
   A.2. Institutionalization Phase (1936 – 1951)
B. Growth Phase (1951-1975)
C. Routilization Phase (1975 – 2000)
D. Crisis Phase (2000 – 2012)

Background

Gandhi was a man of epoch. He was for a humanist social order. To him, education was an agency for inculcating humanitarian values among pupils. During his stay in South Africa, he had started a school in Phoenix. He writes about the objective: The main object of the school is to strengthen the pupils' character. It is said that real education consists in teaching the pupil the art of learning. In other words, a desire for knowledge should grow in him. Knowledge, however, is of many kinds. There is some knowledge which is harmful. If, therefore, the boy's character is not formed well, they will acquire the wrong kind of knowledge….."(CWMG, 9:138)

Gandhiji paid greater attention to spiritual education and considered it as a foundation of all other training. There were 25 students in that school. Gandhiji used to tell them. "that to do good to others and serve them was real education." (CWMG, 9:138)

He paid equal attention to physical training as well. There were no implements for sports for that. There were a spade, a shovel, a sickle, a rake etc. All these were the tools of productive labour.

After having breakfast, the students used to set out with him, and work for two and a half hours. This provided training to all parts of the body. The body received tough training and became robust. The mind too, along with the body, got trained.

Two hours had been allotted for literacy education. Boys were taught two languages, world history and world geography. All these subjects were taught in their mother-tongue. The boys were taught their own language or Hindi and, if possible, Tamil and English. In addition, knowledge of Arithmetic and Botany was given. Gandhiji considered it necessary to impart religious instruction. He believed that the education of any people is fruitless without religious instruction. Hindu boys would be taught the fundamentals of Hindu religion. In the same way, pupils of other religions would be taught the fundamentals of their respective religions.

On the Tolstoy Farm, the boys who were willing were taught the art of shoe-making. They were also taught carpentry. Cooking was known to almost all the boys. They were especially encouraged to do such work joyfully and with full understanding. Care was being taken day by day to emphasise that true happiness lay in self-labour, in bread-labour, and in honest living so as to ensure that their dedication for such thinking and work became firm.

Gandhiji was not opposed to literacy training, but he was certainly opposed only to it. On the Tolstoy Farm, three hours were allotted to literacy training. The students were taught languages, History, Geography and Arithmetic. Gandhi had started his educational experiments with his own child and other children in the ashram in South Africa. With this background, he came to India in 1915.

When Gandhi came to India, the British Empire had already introduced a western, liberal formal classroom teaching-based education system. Even in some rural and tribal areas, such schools were opened, but they were isolated and scanty. (Rewakantha Directory V.I:413, Dangs District Gazetteers, 1971:435 and Sabarkantha District Gazetteers, P. 603).

A. Phase – I (1915 – 1951): The Institutionalization Phase

The Context

There is a remarkable relationship between the general political scene and basic education in this phase. In order to understand the relationship between the political contexts and education, we will first review the political scene in this phase.

(1) The British Raj's interest in Education

The British Raj started spreading its tentacles in the forest-clad tribal areas around 1865. It was around 1925 that they had a firm grip over the tribal areas. This appears from various administrative reports (Mahikantha Directory; Rewakantha Directory; Reports of the Director of Public Instruction) because almost all of them were published around 1920. Of course, this firm grip was not smoothly established. They were faced by severe opposition from tribals. Let us see the case of Dangs. "In September 1907 the Bhil outbreak occurred at Ahwa. Some chiefs and Naiks gathered at Ahwa with bows and arrows. All government servants stationed at Ahwa bolted away. The Bhils caused serious damage to private and government properties at Ahwa." Again, on "April 24, 1911, the Bhil chiefs again rose in revolt against the strict enforcement of the provisions of the Indian Forest Act." "Lastly, the

chiefs rose in revolt against the British rule in 1914". There were also cases of tribal uprising in other parts of the tribal belt, which were gradually calmed down using various tactics.

Now, it was clearly realized that in order to pacify unrest and, in order to shift them towards reform activities, the tribals must be provided education. "Besides, it was now being realized that the education of the backward class cannot really be isolated from their social, political and economic status and that the life of these people should be remoulded as a whole". (Desai I.I. 1971:7)

After the recommendation of the Education Commission (1882), the British government as well as princely states, made initial efforts to educate tribals. "But the people were ignorant, timid and superstitious. Moreover, they believed that one who takes education dies early" (Saini, 1980:56). It was now in the second phase that the government took an important political decision. The year 1921 was a landmark in the history of elementary education, as the control of elementary education was transferred to Indian Ministers who were responsible to a legislature with a large majority (Joshi, Vidyut, 1989: 21-22).

The elementary education among tribals was developing at a lower rate. It was from this realization on the part of the British Government that State Committee was appointed to inquire into the social, economic, and educational conditions of the backward classes. It was because of the recommendations of this committee that the government created a separate department and appointed a special Backward Class Officer as its head in 1931. Several officers were holding liberal and humanitarian views. But, the interest of the State in tribal education was more out of the need for 'law and order'.

(2) Freedom Movement Goes to Masses

Prior to Gandhi, the Indian National Congress did not have its roots in the masses. In 1922, after the Chauri Chaura incidence, Gandhi asked the Congress workers to go to the masses in the villages and take up some constructive activity. Several Gandhian workers followed his advise. Some went to tribal villages. It was, for the first time, that a political organization was establishing its roots among the masses, with a liberal view of amelioration of their condition by doing some constructive activity and with a radical view of enlisting them in the freedom struggle. It is because of this that social reformism and political activism go together in 'Gandhian' ideology.

The tribals were suspicious of any non-tribal visiting them. The history of their experience with non-tribals had taught the tribals that the former came to them either to exploit or cheat them. "The non-tribals, like forest officers, Kanabi farmers and Parsi pub-owners, were against any social reform among the tribals and they were harassing those tribals undertaking such activities. A group of Gandhian workers went to the tribal area. While the tribals used to stop the proceedings of their meetings on seeing Ujaliyats there, they allowed the Gandhian workers to attend the meeting and even deliver a speech as they knew that the Gandhians favoured social reform activities among them (Patel Tara: 1983:613). Another such incident is that of Thakkarbapa. "During the famines of 1919-20 and 1921-22, Thakkarbapa and Indulal Yagnik, under the instruction of Mahatma Gandhi, worked in the famine stricken areas of Dahod and Zalod talukas. During the relief work, Thakkarbapa, who was moved by the pitiable conditions of the tribals in this area, realized that educational and welfare activities should be a part of the programme, and decided to settle and work in this area. His aim was to prepare workers locally from the community itself"(Sarbarkantha District Gazetteers: 6.05).

The tribals were antagonistic to the administration, but they responded favourably to the leadership of Gandhi and call of the Gandhian workers. It was because of this rapport that the tribals of Gujarat and, to some extent of Maharashtra, participated in the freedom movement. The Quinquennial report of the progress of education in India (1927-32, Vol. II, p.3), as quoted in Review of Education in Bombay State (p.413), mentions that, with a rapidly increasing enthusiasm, children started coming to schools. A sort of faith in education had developed in the minds of the people.

(3) The Experiment of Basic Education

It is necessary to discuss basic education as a context because tribal education in Gujarat, in this phase, became a synonym for basic education. It so happened that all the Gandhian workers, who went to the tribal areas, were against British rule and hence against the education policy and practice of the British government. In that sense, the basic education had political ideologist connotations.

Gandhi's educational experiments started in 'Kocharab Ashram' (Ahmedabad) around 1915. Gandhi wanted to design an alternative ideology that would help him lead a movement. Now, an ideology of the movement had to provide alternatives to all aspects of the ideology of the establishment. In that sense, basic education pattern was an ideological alternative to the prevailing education pattern.

The question whether basic education was really an alternative educational ideology or not is a matter of debate. It is necessary to express some views on this issue. In order to see whether basic education was really an alternative or not, it is necessary to see the differences and similarities between basic education adopted by the Gandhians and the pattern of education of the Government.

The basic education pattern was different from the other educational experiments of the Christian Misson or Prarthna Samaj in the sense that, unlike them, basic education was a part of the political movement. Moreover, this political movement had its base among the masses. Basic education succeeded in this phase because the political movement, with which it was linked, succeeded in attaining its goals. Other educational experiments did not get even this much success. Of course, the political movement had a limited goal of changing the rulers. Hence, when that goal was achieved, the movement stopped. After achieving its goal, the experiment of basic education could not continue further in isolation of the political context.

The basic education was different from other prevailing education systems in the sense that it visualized a different culture. The culture visualized was based on a combination of humanist values and Indian traditions. It was basic in the sense that a craft (*udyog*) was at the base of everything that was taught.

The basic education was different from the general pattern in terms of certain symbols of revivalism. Ashram pattern, Khadi, daily prayer, vegetarianism and teetotalism, emphasis on 'Brahmacharya', limited reform in caste formation, with an ideal of maintaining Varna, are some examples of these symbols. It is because of these values that the pattern of basic education or the 'Ashrami Kelavani', as it came to be known in the rural areas, became popular among those people who favoured reform in rural society.

It is claimed that the pattern given by Macaulay was general education while basic education was different from it in the sense that the latter was craft-based. Though it must be agreed that the education given by Macaulay was largely a general pattern education, they thought of giving, and did give craft-based education. Lt. Col. F.W. Ferries, Political Agent of

Mahi kantha agency, writes in his annual report (1897-98): "The root of the evil is in the system of education. It is too literary and not at all practical. It is not possible, I admit, in impecunious states such as are grouped under this agency, to have technical schools or a system of purely technical education, but it is possible to introduce a curriculum that will supply practical education wants of the people. The government standards which are taught in the schools are peculiarly adapted to the preparation of youth who propose to acquire higher education and Center Government service (Govt. report 1936-37:215)". We also know that the Collector of Surat made special efforts to provide craft-based education for tribals at Surat and Godsamba. Thus, as far as the idea was concerned, it was not a new idea propounded in basic education. The practice of attaching Khadi as a craft in basic education was new. It was co-terminus with Khadi ('Swadeshi') movement.

Two contexts that emerge around 1936 were power to Congress in provincial government and need felt by some leaders to institutionalize new system — as a result of which the Vardha pattern also emerged.

Education (1915-1951)

Several experiments took place in the first sub-phase (1915-1936) of this phase. The chief among them took place at Kocharab Ashram in Ahmedabad. The experiment that started at Kocharab ashram had the features of Ashram life style, self work, spinning, manual training, literacy, instruction in mother tongue, no graded school, no examination, craft-centered subjects and character-building. Stalwarts like Kaka Kalelkar, Vinoba Bhave and Jugatram Dave were the teachers. Such experiments also took place elsewhere.

Chauri Chaura meassacre took place in 1922, as a result of which Gandhiji asked constructive workers to go to interior villages, start ashrams and prepare rural youth for non-violent 'Satyagraha'. Various workers started such ashrams. Jugatram Dave, first went to Sarbhon (1922) and then to Vedachhi and then created a history at Vedachhi. Indulal Yagnik, Nanabhai Bhatt and various other people also started 'ashram' type institutions, including Gujarat Vidyapith. All such institutions were on raised funds as the British rule would not provide them grants. As a result, there was no common pattern. Every main person (sanchalak) was running basic education according to his own understanding. Jugatram Dave (1975:160) writes, "The work of education that I did in Sabarmati Ashram and the scheme of education that we adopted in accordance with the local situation, here at Vedachhi, was mostly of this basic pattern. The system is now known as "basic education" and now it is recognized by the people and the state. I had then made up my mind that whatever work of education we do at Vedachhi must be the work of basic education."

Such ashrams were also centers of the freedom movement. Between 1922 and 1936, the role of such ashram schools was not that of imparting literacy. This was considered to be a secondary role. Their main role was to prepare freedom fighters and social workers. The ashrams of Surat district participated in 'No tax Campaign', 'Dandi March' and 'Salt Satyagraha'. When they were not engaged in programmes of freedom movement, they carried out social work and relief activities. Ashram properties were confiscated and the ashram workers-cum-teachers were arrested.

On the other hand, Congress had hold on some local boards (district-level boards) and municipalities. They started basic education schools, as they had financial resources. Such schools became known as 'national school' (Rashtriya Shala). In 1917, one such school was

started at Sabarmati ashram. Acting on the Nagpur Congress Resolution, 10 common high schools switched over to basic education pattern in Gujarat.

The city municipalities too were called upon, in the Congress Resolution, to boycott the Government schools. Responding to it, the municipalities of Ahmedabad, Surat and Nadiad had resolved not to avail the Government grant. As such, the Government had superseded all these municipalities. In Ahmedabad, 'People's Primary Education Association' was established and 'National Education Associations' in Nadiad and Surat. All these associations had taken up the work of primary education.

There were some more national schools, other than these, and 300 students were studying in the schools of the 'Wadhwan Kelvani Mandal' in Saurashtra. There were also some other schools. The number of students in all those schools was 30,000, as noted by Shri Vithaldas Kothari, with 800 teachers working in them.

This brings us to the second sub-phase of the first phase. After 1930, the nationalist movement became weak. The Congress had acquired power in many provincial governments, and, more important, there was a felt need among educationists to evolve common patterns for all the institutions of basic education. By its Education Act (1923), the government had decided to hand over the administration of primary schools to district-level boards. However, an account of the problem of financial responsibility, the same was accepted by various boards in 1929 only. The early local boards and school boards were composed of co-opted members. It was after the election of 1938 that the Indian National Congress captured local boards in Gujarat. Narottambhai Patel (2002:65) writes, "With the passage of time, non-cooperation movement was weakened. So the enthusiasm to establish and run the national schools was also on the wane. Some of the schools went back under the Government too. Even under such adverse circumstances, Gandhiji insisted on running the national schools as per the principles formulated by himself. As such, he began to put those principles before the directors and the teachers of the national schools: "Our main task is to establish schools… Our second responsibility is to win a good name for our schools… We have succeeded in enlarging the area, now we should address ourselves to improving the strength and quality…"

By 1936, three models of basic education had emerged. They were: (A) Ashram school (B) Boarding school and Day school. However, their courses, class-room teaching, subjects, time-table and examination patterns were different. It was at this juncture that the Vardha pattern emerged.

Vardha Pattern

In 1937, All India National Education Conference was held at Vardha to evolve a common pattern of basic education. The conference appointed a committee known as Zakir Hussain Committee. It gave a 20 point programme. These included common syllabus for boys and girls of 6 to 14 years of age, free and compulsory education, 5 hours 30 minutes daily working hours for the school, with 288 working days a year, a garden and a playground in every school. Other provisions included breakfast in the schools, remedial measures against malnutrition, local personnel as teachers and attachment of a practicing school to each teachers training college etc. The most important recommendation was inclusion of crafts in the syllabus, coordination and continuation of the subjects. Close relation of education with life, method of teaching through craft-work, permission to everybody for new

experiments and spirit of social responsibility etc. — were the special characteristics of the new scheme of education.

The Indian National Congress, in its session in 1938, passed a resolution approving the Basic Education on Scheme of 1937 in its entirety. There was, for the first time, a formal political approval to the basic education system. A *common syllabus was evolved.* The committee recommended the subject-structure for Standard I to VII to include Basic Craft – agriculture, spinning-weaving, carpentry and iron-smithy, card-board work, Mother-tongue and Hindustani from Std. V, Arithmetic, Social studies, General science and Drawing.

District local boards gave grants to various basic education pattern schools and also ran some schools as local board schools in Gujarat. They also conducted exams known as Vernacular Final. Thus, an alternative education system was institutionalized. It was in this sub-phase that many basic education, primary and secondary, residential as well as non-residential schools were established in Gujarat.

B. Phase – II (1951-1975): The Growth Phase

The Context:

(1) The Independence and Congress Government

With the achievement of Independence, the freedom movement achieves its main goal and the movement comes to an end. The Congress organization of the movement, in the first phase, becomes an organization of establishment in the second phase. The goals of reform (and education) are only partially achieved. But, there is a sort of enthusiasm among the leaders and the rank of Congress that as the power is with them, they will be able to use it to achieve these goals. Now, India declares itself a welfare state wedded to the upliftment and development of the weaker sections of society. With the change in the political context, the terminology of change also changes, which indicates qualitative change. Earlier, it was 'reform', which was used for the efforts made to change tribal society. 'Reform' is dropped, to give way to the term 'development'. Constitution declares Scheduled Tribes as a special category in need for state help. These are known facts and need no elaboration.

(2) State Policy of grants

A section of Gandhian workers, who were devoted to the constructive work and not to the power, was in dilemma. The question among them was will our government declare basic education as their official policy of education? Will they provide assistance to the institutions working for education of the masses? Should the basic educational institutions accept state help or depend on the people?

The Constitution of India considers the importance of education and accepts the ideals of free and compulsory primary education. Primary education is accepted as the responsibility of the State. But, at the same time, there is a dilemma whether the basic education pattern should be accepted as national policy of education or not. The government, in principle, accepted the basic education as an instrument of making basic change in the primary education. In 1955, the government appointed 'Assessment Committee on Basic Education (GOG.1970:19). The Committee recommended that all schools may be 'oriented to basic education'. It also said that as a first step towards changing

all schools to basic education, some elements of basic education may be introduced in all the primary schools.

The government of Bombay recognized the role of ashram schools in educating tribals in the pre-Independence period. Such ashrams, as then were opposing government prior to 1947, were not getting grant. Now such ashrams were facing financial problems. The government had to make special 'Ashram school Scheme – 1951, as ashram schools were not in accordance with the rules of grants to the general schools. This scheme was a recognition and promotional to dual education system.

(3) State-approach Differs:

The various states of India provided grants to basic education institutions while the basic policy provided only lip service in accepting basic education as official education system of the state. Nehru, the first prime minister, and other national level leaders did not go according to the Gandhian vision of development. So, basic education grew in this phase with the financial help of the state, but the basic education spirit was not accepted.

Perhaps, the observations of the Education Commission (1964-66) on basic education marked a turning point in its development. It observed "The essential principles of basic education are so important that they should guide and shape the educational systems at all levels. This is the essence of our proposals; and, in view of this, we are not in favour of designating any one stage of education as basic education (Education Commission. 1966:208)."

Apparently, the Commission seems to be highly appreciative of basic education. But the practical implications of their proposals in this regard proved to be detrimental to the best interests of basic education as indicated below.

The report of the Commission was considered by the Government of India, and, as a result, National Policy on Education was formulated and duly adopted by the Parliament in 1968. The statement of the Policy is quite silent about basic education. As such it is assumed that 'elementary education' mentioned in this statement has replaced basic education. The same thing is noticeable in the fourth, fifth and sixth Five-Year Plans that have been worked out since then. The fourth Plan emphasizes provision of facilities for elementary education as a pre-requisite for equality of opportunity. It says, "Priority will be given to expansion of elementary education and the emphasis will be on the provision of facilities for backward areas and communities and for girls (Five-Year Plan: 1969-74:353). The Plan seems to be concerned only with quantitative expansion of elementary education: qualitative improvement is not mentioned at all. The fifth Plan claims to have given very high priority to elementary education again, particularly to quantitative expansion, in order to make it universal.

(4) Voluntary Effects

After Gandhiji's death, political workers gathered under the leadership of Nehru whereas all non-political constructive workers went to Vinoba and they established 'Sarv Seva Sangh.' All voluntary institutions imparting education as per Wardha pattern came together under the fold of 'Nai Talim Sangh' in 1948 (Narottambhai Patel. 2002:197). In 1956, 'Saruashtra Lok Shala Sangh' came into existence to support and consolidate basic education efforts by voluntary institutions (Narottambhai Patel. 2002:200). Every Gandhian worker in almost all districts of Gujarat started their own basic education institution and

obtained government grants. The governments at the centre and the states (Bombay, Saurashtra and then Gujarat) were run by Congress Ministers, with sympathy for Nai talim work. So, various governments provided financial as well as other supports to such basic education institutions. However, it is necessary to reiterate that the official policy of the governments, both at central and state levels, did not accept basic education as official policy.

Education (1951-1975)

There were three types of schools in this phase. (A) Ashram Schools (B) Day Schools (Lok Sabha) and Boarding Schools. In some district (Surat and Dangs), normal day schools were converted into basic schools.

Despite the indifferent attitude of the Central government shown towards basic education after they had accepted the recommendations of the Education Commission (1964-66) in this regard, basic education continued to make progress in one state, Gujarat, because of the personal interest taken by the ministry and certain influential people in the state. Shriman Narayan, erstwhile Governor of the state, reported to the All-India *Nai Talimi* Conference, held at Shardagram (Gujarat) in June 1972, that all basic and non-basic schools had been functioning, according to the principles of basic education since 1971. Further, he was hopeful that, with support and cooperation of the Gram Panchayats, the work of basic education would be extended to the post-basic stage (*Nai Talim* Conference Report. 1972: 15-16). He stated that there was a proper linkage of basic education with education at the higher level and that the *Khadi* Board and *Khadi* Commission had contributed a great deal to the success of basic education. In this very conference, reports regarding the progress of basic education in three more States, namely Bihar, U.P. and M.P., were also presented. All these reports showed a downward trend. In Bihar, all basic schools, that made good progress between 1951 and 1958, started languishing thereafter, and ultimately, they were changed into ordinary schools with effect from March 1972. The situation in U.P. was no better. There, the basic schools were only in name. Even the time allotted to craft and creative activities was reduced from 12 periods to 6 periods per week; and the control of the so-called basic schools was changed from local boards to the State Department of Education. In M.P., the basic training colleges and schools were changed into traditional teacher training institutions; and the few schools that were officially called basic, were on the way out.

Ashram school scheme came into existence in 1951 as a result of which old ashram schools in tribal areas of Gujarat started getting grants from the government under this scheme (Vidyut Joshi, 1980:97). The other type was boarding schools, which were run first by local boards (up to 1963), and, thereafter, by concerned District Panchayats. Both were residential schools, with free lodging and boarding facilities, and both had basic education. (The difference was that the boarding schools were either run by local boards grant from social welfare department, whereas ashram schools were managed mostly by Gandhian type of voluntary organizations).

By the end of 1964, there were 70 ashram schools in the seven tribal districts of Gujarat, each accommodating not more than 120 students. Given this limitation, ashram schools could not solve the problem of literacy. It must be admitted that though ashram schools did little to impart the three Rs, they did a great service to tribal education in the sense that most of such ashrams, in this phase, were located in such remote areas where there were no days-

schools. The efforts of the voluntary organizations and teachers were commendable in this direction as they moved in remote tribal villages, collected students and inculcated attitudes for education among the tribals. Several students, who were trained in the basic education pattern of ashram schools, became teachers. These teachers had faith in basic education. They carried out basic education work with a sense of responsibility. This happened more in Surat and Panchmahals districts, having the influence of Raniparaj Sewa Sabha (led by Jugatram Dave) and Bhil Sewa Mandal (led by Dahyabhai Naik) respectively.

This was the phase of faith in the government machinery. Those who were concerned with basic education thought that the government would provide financial and other facilities and their efforts would succeed.

The question about the basic education remains. Unfortunately, Gujarat-level data on basic education is not available. But the all-India figures shows that there were 33,730 basic schools in India in 1951, out of which 31, 979 were in U.P. alone (all schools of U.P. were given the name of basic education schools). In 1960-61, there were one lakh basic pattern primary schools in the country, accounting for 21.2% of the total schools. The rise from 33, 730 in 1951 to 1,00,000 in 1961 was the result of the special efforts made by the Central Government to implement the recommendations of Assessment Committee on Basic Education. But this was more a change of nomenclature than a change of the system.

In spite of efforts made by the educationists concerned, the basic education pattern could not achieve any success as an alternative education system. Not only that, basic education was not yet accepted as national policy.

So far as the issue of day-schools and other schools with boarding is concerned, the state governments (Bombay and Saurashtra) provided full support in establishing schools at primary and secondary levels by providing grants.

In the meantime, Gujarat Vidyapith started Std. VIII of the Vinay Mandir, i.e. post-basic school, which gradually culminated in the opening of Std. XI (the old S.S.C. E. Class) in 1954 and the Govt. of Bombay granted permission to the first batch of its students to appear in the S.S.C. Examination of 1955. Thus, the Vinay Mandir became the first Government recognized post-basic school of Gujarat.

At that time, Saurashtra was a separate state and the Government of Saurashtra recognized Ambala Lokshala as a school having its own syllabus. Lokshala conducted its own examination and gave its own certificate to the students passing the final examination, which was also recognized as equivalent to the S.S.C. Examination by the Saurashtra Govt. In this way, basic education was naturally progressing into the post-basic stage.

The Bombay Government, after Independence, converted the primary schools into basic schools. Consequently, the number of students passing Std. VII from basic schools increased, and, there being no further provision of post-basic schools, they, circumstantially, were forced to seek admission in the ordinary schools. The leaders of *Nai Talim* in Gujarat did not think it desirable. This situation acquired urgency in the institutions wedded to *Nai Talim*. These institutions were Swaraj Ashram — Vedchhi, Vallabh Vidyalaya — Bocharan, Savodaya Ashram — Gundi, Bhil Seva Mandal — Dahod, Sarvoday Ashram — Shamlaji, Gram Bharti — Amrapur etc.

During all these years, the Gujarat Nai Talim Sangh in Gujarat and the Saurashtra Lokshala Sangh in Saurashtra carried out different experiments, framed their syllabi and developed a successful system to hold the final examination of the post-basic schools. They had prepared syllabi for different subjects conducive to social development, and also

prepared text-books and the teacher's hand books for languages, crafts, social studies etc. Theirs was a very effective and result-oriented contribution in the development of different aspects of productive crafts. The students, who received such meaningful education, became self-reliant in their later life and, many of them, took to social service and constructive work. On account of such desirable results, the *Nai Talim* pattern drew attention of the society and the Government as well.

The *Nai Talim* institutions, instead of being only the centers of education, became centers of variegated development of khadi, agriculture, animal husbandry, adult education, prohibition etc. and, through such activities, became centers of all-round social development. On account of such varied activities, done by those institutions, there was a great degree of awareness in the people in the surrounding villages, and the institutions also earned good appreciation at the government-level. The ministers and the officers were always ready to be helpful in the work.

State of Gujarat came into existence in 1960 and, immediately, Government of Gujarat was approached by *Nai Talim Sangh* to provide more facilities… the government set up a committee with Shri Bhanot as chairman. The government accepted most of the recommendations and provided more structural as well as financial support.

It is necessary to mention here that the first rural college, third layer of basic education, was established in 1953 at Sanosara as Lok Bharati Vidyapith. The then Saurashtra government provided all necessary support. Three more rural colleges, on Lok Bharati pattern, were established in this phase. Another development was granting a deemed university status to Gujarat Vidyapith in 1963 by the University Grants Commission, with cent per cent financial aid.

This completes the systematic arrangements of a parallel or alternate education system in Gujarat. Since all such institutions were established by Gandhian workers, they, more or less, maintained the spirit of basic or Wardha pattern of education, even though the grant–in-aid rules were applied to them. What could happen in Gujarat did not happen in other states. What happened in other states is best summed up as under:

"Thus, we see that efforts, to make craft-centered education pave its way even partially, were either not ventured at all or made timidly and haltingly under the most difficult conditions, such as, lack of co-operation from the related government departments of Supply, Industry and Commerce, whose help was indispensable. Unfortunately, the State Governments, whose responsibility it was to implement the scheme of basic education, were generally found luke-warm. The teachers, too, were not trained properly for the task nor were they stimulated, otherwise, to do their best. So far as the parents of children were concerned, no efforts were made to educate and mobilize them in support of the new system of education. No wonder, then, they sometimes resisted the spread of basic education.

The *Hindustani Talimi Sangh*, which, in the initial stage, performed the function of leadership and, later, assumed the role of the watchdog in the implementation of the scheme of basic education, was merged with *Sarva Seva Sangh* in 1951; and no other voluntary organization of that eminence could be set up to look after the development of basic education." (Salamatullah. 1989:34)

According to our observation, though basic education could not replace general pattern education, its culture definitely influenced the rural development actions. This was not because of the inherent capacity of the basic education but because of the commitment of the workers of basic education. But this culture was gradually giving way. Even then, one cannot

deny the role of basic education institutions in providing workers for voluntary organizations working for rural development in this phase (Joshi, Vidyut: 1989:97)

C. Phase 3 (1975 – 2000): Routinization Phase

The Context

(1) School per village

Panchayati Raj in Gujarat was established in 1963 and primary education was assigned to it. In 1963, Gujarat had a school within a radius of 8 km, on an average. This ratio was improved to a school within a radius of 3 km by 1975. This meant that almost every village had a school. Now, ashram schools and boarding schools were established and given grants because there were no schools in every village in 1951. Now, with every village having a school, parents would want their wards to attend village day-school. Only those poor parents would send children to residential schools of basic pattern for whom free lodging and boarding also mattered.

(2) State Education Policy

Kothari Commission does not recommend basic education as a national policy. It does not approve turning all primary schools into basic pattern schools (Desai, I.P. 1977:144). The Government of India does not accept basic education as national policy in this phase. This is a set-back. According to the report of this Commission, it is necessary to orient basic education programmes according to the changing needs of the people. What are these changing needs?

It was, in fact, due to the acceptance of work experience, recommended by the Education Commission (1964-66), as an integrated part of the 10 year school curriculum by the Central Ministry of Education, that submerged the identity of basic education. The Commission had recommended that basic education programme needed a re-orientation to suit the needs of a society that had to be transformed with the help of science and technology. In view of this, they suggested that the indigenous crafts, practiced in basic schools, must be replaced by work-experience, which was forward-looking, in keeping with the character of the new social order (The Education Commission 1966:202).

At state level in Gujarat, two great protagonists of basic education, Shri Manubhai Pancholi and Shri Navalbhai Shah, became education ministers in this phase. Even then, the state did not accept basic education as a policy for the state.

(3) Panchayati Raj

Panchayati Raj replaced local brands in Gujarat in 1964. Tribals got proportional representation in tribal districts. Most of the persons who came to power were Gandhian workers. They had sympathy for basic education pattern. But they had no choice of taking policy decision in education. The decision of rejection of basic education was already taken at the national level. District leaders had to take only administrative decisions. They established more schools. By the end of 1970, Surat, Valsad and Dangs had one school for village. In Surat and Valsad districts, every village had schooling facilities within a radius of

five kilometers. Similar situation took place in other tribal districts somewhat late. (Vidyut Joshi, 1989-93).

Panchayati Raj influenced social change and development in rural areas and, within a decade of its inception, a new rural elite class had emerged. The aspirations of this class did not go well with the philosophy and programmes of basic education. This created a situation wherein basic education was identified with lower segments of rural society.

(4) Voluntary Efforts and State Governments Support

An organization named Akhil Bharat Nai Talim Samiti was established by Gandhian workers in 1972, under the chairmanship of Shriman Narayan, to look after development basic education in India. But at Gujarat level, workers were made active. There were many organizations (Gujarat Nai Talim Sangh, Saurashtra Lokshala Sangh etc.) to protect and further the interests of basic education. Manubhai Pancholi Committee was set up in 1970 as "Evaluation Committee of Basic Education Programme." (Narottambhai Patel. 2002:217) All governments before 1995 were sympathetic to Gandhian organizations in Gujarat. It provided support to voluntary efforts of basic education but did not accept it as a state policy. This being so, both the streams—general as well as basic- grew side by side in Gujarat in this phase. Two education ministers—Manubhai Pancholi and Navalbhai Shah both—believers in basic education—could only provide additional support to basic education institutions, as a result of which such institutions could grow.

In 1970, government of Gujarat appointed Manubhai Pancholi committee. The then government of Gujarat accepted most of the recommendations of the committee which paved the way for opening new basic education institutions at different levels. It is necessary to emphasise here that this sort of support was not provided by other state governments.

Education (1975-2000)

So far as development of basic education is concerned, two things happened in this phase: (1) Basic education structure became complete with all stages — right from primary to doctoral levels. The structure to-day, is as under (Vidyut Joshi, 2012:20):

S.No.	*Std.*	*Institution*	*Hostel*	*Ashram School*
1.	Ph.D.	Gujarat Vidyapith	Optional	-
2.	M.Phil	Gujarat Vidyapith	Optional	-
3.	Post Graduation	Gujarat Vidyapith	Compulsory	-
4.	Post Graduation	Rural Colleges	Optional	-
5.	Graduation	Gujarat Vidyapith	Compulsory	-
6.	Graduation	Rural Colleges	Optional	-
7.	Teachers' Training	Gujarat Vidyapith	Compulsory	-
8.	Teachers' Training	Education Colleges	Optional	-
9.	Higher Secondary (Basic stream)	Lokshala etc.	Attached hostel	-
10.	Secondary School (9-10)	Post basic school	Attached hostel	Ashram School
11.	Primary (1-8)	Basic School	Attached hostel	Ashram School
12.	Primary (1-8)	Lokshala	Day School	-

Though Gujarat Vidyapith was established in 1920 (first phase), it became a U.G.C. recognized deemed university in 1963 and developed further in this phase. As a result, it got full grant from U.G.C. and, in turn, had to introduce certain structural changes. In all, 27 *'gram vidyapiths'* or rural colleges flourished in this phase and, by the end of this phase, they became affiliated colleges of general universities. The courses, teaching, examination and degrees were given by general universities, except that of 'Lok Bharti', which was autonomous college of Bhavnagar University. All such colleges became parts of rural studies faculty of university. The degree they award is known as 'Bachelor of Rural Studies (BRS). Higher post-basic schools came into existence in 1976, with the introduction of 10+2+3 type of structural change. Plus 2 stage schools of basic education became a separate stream. There were around 75 such higher secondary basic schools in this phase. All were grant-in-aid schools, as per government norms. Then there were basic secondary or *'uttar buniyadi* schools, now running 9th and 10th standards. There were 556 basic secondary schools in this phase, again running as per grant-in-aid norms. There were 300 hostels, attached to some secondary and post-secondary basic schools, managed with grants from social welfare department of the state government. Then there were 93 basic stream primary schools in Saurashtra and Kachchh. All were only known as Lokshala day schools, getting government grants, and managed by trusts, mainly run by Gandhian workers. Ashram schools are residential basic education primary schools (Vidyut Joshi. 1980), mainly in tribal and backward areas, originally meant for ST, but extended to SC and OBC in this phase. There were around 610 ashram schools in this phase. They are getting special grants under 'the *Ashramshala Yojana* - 1951.' The scheme was extended to secondary education as *"Uttar Buniyadi Ashramshala"* (post-basic residential school) and Gujarat had some 83 such schools run by voluntary organizations, registered under the Trust Act, and getting full government grant. The Ashram School model became successful, as a result of which other state governments also accepted this pattern.

Earlier phase (1951-75) witnessed the development of basic institution phase through voluntary efforts and government help. Government did not accept basic education as policy, as a result of which the basic education institutions were gradually compelled to fall in line with the main system or the general system of education. Their special features started giving way and routinization gradually entered in basic education institutions. The secondary Education Act (1972) brought several restrictions on basic education institutions. *Nai Talim* institutions received 100% grant but lost almost all autonomy. Routinization entered in several main areas. As a result, the freedom of selection of teachers by management was lost; corruption entered in basic education institutions; freedom of subject choice was lost; on account of the very rigid examination system, the importance of literacy subjects increased undesirably; importance of community life was nullified; and the teachers began to restrict themselves only to classroom teaching and neglect the important programmes of moulding the lives of the students, because they were provided some legal securities for their job.

"Nai Talim schools were the worse affected by this Act, because the Act took greater care of the employees' interests rather than the interest of education itself. In fact, the *Nai Talim* institutions were not opposed to the teachers' getting more benefits. Not only that, to protect the employees from exploitation by the selfish managements, it was Gujarat Nai Talim Sangh which suggested, first of all, to make payments to employees through government treasuries."

"Alongwith the rights of the teachers, their duties are equally important in education, rather more, about which there are not enough provisions in this Act. Therefore, good work of community life, craft-teaching, social service activities in the subject of social reconstruction etc., which served the purpose of character-building of the students and social reformation, was badly harmed. On account of the security of jobs provided by this Act, the teachers gradually developed an attitude that the above-mentioned activities were not a part of their duty. There arose problems in wearing of khadi clothes. Thus, with the very fundamentals of *Nai Talim* being questioned, their importance got eroded with the passage of time. Of course, the effects were considerably less in institutions in which the relations of the teachers and the managements were harmonious. But the greatest harm came after the Act came into force from the newly-appointed teachers, who thought they were selected on their qualifications and merit and hence, most of them, turned out to be purely job-minded. So, even the good institutions too could not be saved from the erosion of values and value based traditions" (Narottambhai Patel, 2002:226).

"As a result of the Act, Gujarat Secondary Education Board was constituted. The Board devised a system of merit-based counting on the results of various examinations and experience of teaching. And then it is made obligatory for the management of the schools to select and appoint a candidate who ranked top in the merit list, even though he might be a rogue, and addict, a debaucher or a characterless person quite unfit for the teaching profession. And an appointment of such a teacher, drunken with pride that he was selected on merit, cares little for the values of civilized life. And, yet, he is expected to prepare ideal citizens of democratic India. On account of this system of counting, merits has become the only yard-stick of a candidate's qualifications, not his virtues. Where would this system lead the budding generation to? "(Patel, Narottambhai, 2002:227).

The question that we need to ask here is why basic education, that claims to be a prime mover and change agent for society, could not change behavior of new entrants- teachers and students? Why did degeneration of values and routinization take place in this phase?

Kothari Commission had principally accepted the importance of craft-based education. *Nai Talim*, with craft base, was considered by the Central government as an "effective channel to provide employment to the educated unemployed youths. But only within a decade, this dream was shattered. The element of vocationalization of this stream was illusory. The youths did not benefit to any extent thereby, and they started an agitation. It was believed that the youths, after doing two years in this stream, would get some employment and, hence, they were not allowed to join the degree courses in colleges. However, when their employability of any sort did not emerge as presumed, the students demanded that they be allowed further study in colleges to get services with higher qualifications and they even resorted to an agitation for this purpose. And, for reasons better known to the Government, it accepted the demand of the students" (Patel, Narottambhai 2002: 235).

Thus, the efforts to bridge gaps between the general pattern and the basic pattern met with failure. This was also a setback to basic education.

By the end of the third phase, the system of basic education grew into a complete programme from primary to doctoral levels. New institutions, with grants, were established at primary and secondary levels. New layers of higher secondary, college (graduation) and university (post-graduation and doctoral) developed in this phase. However, the special character of basic education started giving way.

D. Fourth Phase (2000-2012): The Crisis Phase

This last phase has brought a paradigm shift and resultant crisis or tensions (if one may say so) in the system of basic education. Again, larger contexts started changing after 1990. Education, as related to larger context, started facing various types of tensions of adjustment with the wider system. Some of the newly-emerged contexts are as follows:

The Contexts

(1) **The Economic Restructuring:** By 1991, India was forced to give up mixed economy and had to resort to the economic restructuring based on liberalization, privatization and globalization. The phase of liberalization or decontrol also brought decontrol on education. Education, which was more a part of state activity, got related to larger market forces. This brought about rapid economic growth but widened class differences.

"This type of development, founded on economic growth alone, is, nevertheless, still profoundly inegalitarian, and growth rates vary considerably from country to country and from region to region. Over 75 per cent of the world's populations are estimated to live in the developing countries yet partake of only 16 per cent of the world's wealth. Even more disturbing, studies carried out for the United Nations Conference on Trade and Development (UNCTAD) reveal, that the average annual per capita income of the least-developed countries, with a total population of 560 million, is currently falling, it has been reckoned at $300 as against $906 for the other developing countries and $21,598 for the industrialized countries" (UNESCO. 1996: TO).

These sort of disparities, between and within nations, encourages market-friendly self-financed institutions and adversely affects education and rural and weaker sections of society.

(2) **Knowledge Society:** An old society, based on manual labour and craft-based work, is giving way to knowledge-based production and distribution systems. Some remarkable scientific discoveries, particularly in IT and BT fields, have almost brought about a paradigm shift in our system. Education, being part of the wider system, is experiencing some sort of systemic tension in this regard.

"This knowledge society (and economy) has influenced our structures and institutions. The glaring influence on education is in terms of diminishing demand for liberal as well as basic education.

(3) **Entry of Market Forces in Education: E**arlier, industrialists and businessmen used to be philanthropists, providing charity to educational institutions run by educationists. Now, in this phase, this sort of philanthropism is giving way to entry of market forces in the "business of education". They started many educational institutions, from primary to university levels, that were self-financed, English medium and were running urban-industrial based 'professional' courses. The craze for such type of courses and institutions, have not adversely influenced basic education institution, but have harmed liberal education institution also.

(4) **Role of Backward Elites:** After Independence, the Indian government started paying special attention to various development programmes among backward (SC, ST and OBC) classes, including educational programmes. Governments' support to basic education institutions was also a part of this policy. The peoples, who benefited from such

programmes, became backward class elites, getting life chances outside their traditional domains and in the so called mainstream. By 2000 AD, this class was sufficiently bigger in terms of numbers. There were small businessmen, politicians, professors, doctors, engineers, and, even civil servants. As they came to decision-making institutions, support of basic education, gradually, was either reduced or stopped. The irony of the situation is that some of the elites were beneficiaries of these basic education institutions.

Education (2000 – 2012)

By 2000 A.D., basic education institutions had already become routinized, losing their special features. Not only that, by the end of the third phase, the basic education system was almost identified as "education for weaker sections". The general and professional streams got prominence. The basic education institutions are experiencing systemic tensions and they are struggling for survival. The system is experiencing several tensions "we have to confront, the better to overcome them, the main tensions that, although they are not new, will be central to the problem of the twenty-first century." (UNESCO. 1996: 16-17) These tensions, in one way or the other, are seen in Indian education, in general, and in basic education, in particular.

"The tension between the global and the local: people need gradually to become world citizens without losing their roots and while continuing to play an active part in the life of their nation and their local community" (UNESCO. 1996:17). While, on the one hand, rural India has become part of global market, on the other hand, local communities want to assert their identities. The basic education institutions will have to manage this tension by changing their courses and make them more relevant to the aspirations of people whom they want to serve.

The tension between the universal and the individual's culture is steadily being globalized, but, as yet, only partially. We cannot ignore the promises of globalization nor its risks, not the least of which is the risk of forgetting the unique character of individual human beings: it is for them to choose their own future and achieve their full potential within the carefully tended wealth of their traditions and their own cultures which, unless we are careful, can be endangered by contemporary developments. (UNESCO 1996.17)

This is a classical dilemma for basic education institutional culture. The community to which they serve is changing. Though we emphasis *'Ashram'* culture in our institutions, students (and sometimes teachers) do not observe this. Students do not wear *'Khadi'* nor observe other norms when they leave the institutions. We will have to find a way out by a process wherein teachers and students also participate.

1. *Tension between tradition and modernity*: The issue is to what extent can we adapt to cultural change, and what will happen to us if we do not adopt? This tension is a part of the second tension.
2. The tension between long-term and short-term considerations: this has always existed but today it is sustained by the predominance of the ephemeral and the instantaneous, in a world where an over-abundance of transient transformation and emotions continually keeps the spotlight on immediate problems. Public opinion cries out for quick answers and ready solutions, whereas many problems call for a patient, concerted, negotiated strategy of reform. This is precisely the case where education policies are

concerned." (UNESCO 1996:17). This is a very important analytical task. Decide basic principles, like craft-based education, community life, sustainable development philosophy and re-interpret them to evolve new programmes and new behavioral norms to adapt to the newly-emerged contexts.

3. "The tension between, on the one hand, the need of competition, and on the other, the concern for equality of opportunity: this is a classic issue, which has been facing both economic and social policy-makers and educational policy-makers since the beginning of the century". (UNESCO. 1996:17). The pressures of competition have caused many of those policy-makers to lose sight of the type of society we want to have. The dilemma is more for basic education that is wedded to emergence of an egalitarian and co-operation-based society. It seems, we are losing ground here.
4. The tension between extraordinary expansion of knowledge, on the one hand, and limited capacity of basic education institutions to absorb them, on the other, has led to downgrading of basic education institutions. Let us accept the fact that the research base is very poor in our institutions. Our courses need a radical change.
5. "The tension between the spiritual and the material: often without realizing it. The world has a longing, often unexpressed, for an ideal and for values that we shall term 'moral'. It is thus education's noble task to encourage each and every one, acting in accordance with their traditions and convictions and paying full respect to pluralism, to lift their minds and spirits to the plane of the universal and, in some measure, to transcend themselves. It is no exaggeration on the Commission's part to say that the survival of humanity depends thereon." (UNESCO 1996:18)

The basic education system is a complete balance between spiritual and material considerations. We have not been able to manage structural tensions or crisis. This has resulted into routinization of the institutional structures, decrease in numbers of institutions, corruption and other malpractices, cut in grants by concerned grant-giving agencies and loosening of the institutional character.

There were 610 *ashram* schools, running in a full-fledged manner and getting full grant in the third phase. Many *ashram* schools' grants have been cut in this phase for various reasons. Some friends, running ashram schools in tribal areas, have spoken to me that they are unable to manage them and are ready to part with the managerial duties. Now, when every village has day-schools, parents prefer to put their wards in these schools and not in *ashram* schools. The same is the case in many post-basic *ashram* schools. In so far as hostels attached to basic schools and post-basic schools are concerned, the same is the situation. Out of 73 higher post-basic schools, 55 are in functional mode. Out of these 55, only four have still continued with basic education while the rest have switched to general pattern, which is an indication of defeat. There were 27 *'gram Vidyapiths'* (rural colleges) in third phase, out of which 14 are in functional mode in this phase. Of these, six are being managed at full strength. Some rural colleges have started self-finance course like M.S.W. and they take pride in it. The average fees for such self finance course is Rs. 15,000/- per student. There are several *'adhyapan mandirs'* (P.T.C. college), and some of them do not have a single student with them in this phase. This is again a symptom of crisis. Let us not look to more such details. The crux of the matter is this that almost all basic education institutions are struggling for existence.

Revitalizing Basic Education

First of all, let us not be complacent and accept the fact that basic education system has problems. Not only that it is not doing well, but it is losing grip. We will have to accept that education can bring desired social change only if other and larger contexts are congenial. Let us also accept that we can bring about only ideational change. In absolute terms, we cannot become social reform agency. Having done this, we will have to deal with the tensions (or diseases) and revitalize basic education again. How can this be done?

1. Let us have a national-level commission on basic education. Not the one of Ram Murti type, but of Kothari commission type. Let great educationalists, and not only non-academic Gandhian workers, be the members of this commission.
2. Let us accept principles of basic education as valid even to-day. Craft or vocation as a nucleus of course structure, education for knowledge, education to become complete human beings, education to live community life (co-operation), education for citizenship and education to become self-reliant, are such principles.

   Surprisingly, the four pillars of education mentioned in UNESCO report (1996:97) corroborate the principles of basic education. They are:

   2.1 **Learning to know,** by combining a sufficiently broad general knowledge with the opportunity to work in depth on a small number of subjects. This also means learning to learn, so as to benefit from the opportunities education provides throughout life.

   2.2 **Learning to do,** in order to acquire not only an occupational skill but also, more broadly, the competence to deal with many situations and work in teams. It also means learning to do in the context of young people's various social and work experiences, which may be informal, as a result of the local or national contact, or formal, involving courses, alternating study and work.

   2.3 **Learning to live together,** by developing an understanding of other people and an appreciation of inter-dependence—carrying out joint projects and learning to manage conflicts—in a spirit of respect for the values of pluralism, mutual understanding and peace.

   2.4 **Learning to be,** as better to develop one's personality and be able to act with ever greater autonomy, judgment and personal responsibility. In that connection, education must not disregard any aspect of a person's potential: memory, reasoning, aesthetic sense, physical capacities and communication skills.

   Formal education systems tend to emphasize the acquisition of knowledge to the detriment of other types of learning; but it is vital now to conceive education in a more encompassing manner. Such a vision should inform and guide future educational reforms and policy, in relation to both contents and methods.

   Thus, if you consider principles of basic education, they are capable of guiding future education. This being so, let us workout a new structure of basic education based on these principles.
3. We will have to convince policy-makers on two things and see that both these points are implemented, at least at primary level. The medium of instruction has to be the mother tongue, at least at the primary level. The government concerned will give recognition to

a school only when this condition is fulfilled. Education, at primary and secondary levels, must be craft-based. It is not a case of some productive activity as optional subject, but the courses will have to be restructured based on some productive activities. Crafts like agriculture, smithy, carpentry, food-making, and many others will have to be accepted. Primary level crafts will be different from the crafts at secondary levels. Considering the changed conditions and levels of crafts, we will have to give up some old methods.

4. Basic education will have to come out of 'rural studies' syndrome. It is not one of the many faculties of mainstream education system. It is a full-fledged system itself. We should work out structures of liberal arts, humanities, social sciences, pure sciences, technologies (including agricultural technology or organic farming), food technology (vegetarianism and organic-tradition food items), management (including water and soil management), Medical (Naturopathy), Pharmacy (Ayurved), Textile technology (including *khadi)*, and other such facilities.
5. In order to give up rural studies syndrome, we will have to give up the artificial classification of rural versus urban. Habitat is a continuum right from caveman (food gatherers and hunters) to megapolis. There is nothing like static ideal type of a village. The real ideal type is 'community'. We will have to design our education system keeping different communities in mind.
6. While keeping principles, we will have to let go some behavioural norms and some institutional arrangements. In fact, some such behavioural norms are part of nostalgia that sometimes create irritation among those who are otherwise sympathetic to the principles of basic education. We may, jointly and participatively, decide on this point.
7. We will have to do a lot of research and reinterpretation of some of our programmes. *Khadi* is one such programme (*khadi* is a programme and not a thought. The thought behind this programme is decentralization of production and *'Swadeshi'* (made in my country). The biggest questions are two: (A) Research to improve quality of *khadi*, and (B) marketing. The production of *khadi* requires much research to make it affordable. This research can be carried out by our textile technology faculty. *Khadi* will sell these days in three ways – it is a designer cloth, it is a health-friendly cloth and it is an eco-friendly cloth. Our management departments can take up the marketing issue.
8. Ashram schools have less utility when we have day-schools in every village. Each ashram school is equipped with 10 acres of land and many equipments. They need to be converted into technical schools.
9. When we oppose atomic energy, we will have to do research and develop a workable system of energy. People will accept our thoughts and programmes only if we can provide a viable alternative.

Conclusion

The system of basic education has changed less to meet the changing needs of people. As a result, we are facing several types of structural tensions. Let us come out of complacency, analyze the scenario in the context of the 21st century and change contextual norms, methods, subjects, rules and institutional arrangements, while keeping the philosophy of basic education intact.

References

Ahmed, Karuna (1979): Towards a study of Education and Social change". *EPW* (XIV-4) 27th January.
Collected Works of Mahatma Gandhi.
Dave, Jugatram: Mari Jivan Katha' (1975): Ahmedabad, Navjivan.
Desai I.P. (1977): 'Vedachhi Movement.' In History of Rural Development in Modern India. V.II, New Delhi Impex.
Government of Bombay (1958): A Review of Education in Bombay State (1855-1955), GOB. Bombay.
Government of Bombay (1936-37): Report of Director of Public Instruction, GOB, Bombay.
Government of Gujarat (1971): Dangs District Gazetteers, GOG, Gandhinagar.
Government of Gujarat (1971): Sabarkantha District Gazetteers, GOG, Gandhinagar.
Government of India; Report of the Education Commission (1964-66): (Kothari Commission).
Government of India: Fourth Five-Year Plan (1969-74), Planning Commission, GOI, New Delhi.
Joshi, Vidyut (1980): `Ashram Shalao: Ek Adhyayan', (Gujarati), Ahmedabad, Gujarat Samajik Seva mandal.
Joshi, Vidyut (2012): 'Payani Kelavanina Nava Ayamo.' (Gujarati), Ahmedabad, Amol Prakashan.
Joshi, Vidyut (1989): A century of Tribal Education in Gujarat. In Panchmukti. P.R. (Ed.) *Educational Experiment* in India (Vol III), Pune, Indian Institute of Education.
Kamat A.R.: "Education and Social change". *EPW* (XYII- 31), July 1982.
Mashruwala, Kishor: Kelavanino koyado.
Mashruwala, Kishorlal" 'Kelavani Na Paya' (Gujarati Navjivan, Ahmedabad).
Patel, Narottambhai (2002): Nai Talim in Gujarat' Ahmedabad, Gujarat Nai Talim Sangh.
Patel, Tara (1983): Education among Tribal Women in Gujarat (mimeo) Gujarat University, Ahmedabad.
Piaget, Jean: Piaget's theory in P.H. Mussen (ed.) (1970): Carmichael's Handbook of Child Development. New York, Wiley.
Report of the All India Nai Talim Conference (Hindi). June. 1972.
Saini, Shivkumar (1980): Development of Education in India. New Delhi, Cosmos.
Salamatullah (Dr.) Basic Education: A Case Study in Panchmukhi, PR (Ed.) *Educational Reforms in India*. V.II, Bombay, Himalaya.
UNESCO (1996): Learning the Treasure Within. Report to UNESCO of the International Commission on Education for the Twenty First Century. UNESCO, Paris.

Journal of Educational Planning and Administration
Volume XXVII, No. 3, July 2013, pp. 257-280

Education for Rural Transformation (ERT) in India: Dialectics between Theory and Ideology**

— The National and the Global

H.S. Bhola*

Abstract

Programs of Rural Transformation of nations, rooted in national Ideology and Economy, yet resonate to the drum beats of Globalization. The Global to the Local are mediated by the United Nations and its affiliated agencies, particularly the Food and Agricultural Organization (FAO) and its offspring The International Fund for Agricultural Development (IFAD). World Health Organization (WHO) is another important mediator. Theoretical lenses of choice today are Systems Theory that focuses on the holistic, and is joined with an Epistemic Triangle formed by (i) the systemic, (ii) the constructivist, and (iii) the dialectical. Contextualization is central in the application of these theoretical perspectives, in particular Social Configurations of Innovators and Adopters. India's Community Development Initiative, during its active life from 1954 to 1961, had covered 500,000 villages — an impressive achievement at that point in history. It, however, lost to India's new love-affair with Industrialization. During the last two decades, attention has once again been directed to Rural Reconstruction through such initiatives as: Poverty Eradication, Food Security, and Health Missions for Rural (and Urban) areas, Mahatma Gandhi-National Rural Employment Guarantee Scheme (NREGA) and, underpinning it all, Right to Education. Finally, the Global Phenomenon of Social Media is changing Rural (and Urban) India in truly transformative ways.

* 3537 E. Nugget Canyon Place, Tucson, AZ 85718, 520-232-9159.
Email: hs3bhola@earthlink.net

** This paper was first presented at the International Symposium on Education for Rural Transformation (ERT) — Good Practices from National and International Perspectives, held at Baroda (Vadodara), Gujarat, India, during October 15-17, 2012; and will be included in a volume bearing the same title, to be published by the Institute of International Education (IIE) Department of Education, Stockholm University, Sweden and the Department of Educational Administration, Faculty of Education and Psychology, the M.S. University of Baroda, India.

Introduction

It is hard to attribute meanings and purposes to such *social processes* as "Education" and "Transformation" as each, in itself, is in a constant, never-ending process of construction, deconstruction and reconstruction. Unsurprisingly, it is equally challenging to undertake boundary-setting of *social formations,* such as "Rural" and "Urban." An additional *complexity* is added, in that these "social formations" and "social processes" are in continuous *dialectical relationship* of mutual shaping.

To handle these complexities of definitions, overlaps, interactions and interfaces, we require the Holistic view provided by *Systems Theory* (Bertalanffy, 1968). Asserting that Systems Thinking, as a theoretical pre-assumption was "necessary but not sufficient," systems theory was elaborated into an *Epistemic Triangle,* with three angles, those being *Systems Thinking, Constructivist Thinking* and *Dialectical Thinking* (Bhola 1996, 2002, 2011b). It was also made clear that being Systemic was much more than being merely systematic.

History, of course, is prior, and neither theory nor ideology are created or practiced *outside* of history. Colonization by the West of the non-Western nations was historic, leading to the merger of national histories, written and oral. Globalization became the new buzz word.

Globalization: The Second Sky

Globalization can, indeed, be assumed to have been in process for centuries, co-terminus with the process of colonization. For long, both the colonizers and the colonized were in a state of Immersion within the emerging phenomenon enveloping them. During the last few decades, however, we have inescapably become aware of the phenomenon of Globalization. Images of a "Shrinking Globe" and of the world community crowded into one "Global Village" are now part of popular discourses. Globalization — the emergence of a whole, one-world system of shared values and structures in all domains – has been analyzed along multiple dimensions: cultural, social, political, economic, technological and, of course, educational (O'Meara, Mehlinger, and Krain 2000, Burbules and Torres, 2000, Stigliz 2002. The dominant ideology of political-economies of nations under globalization has been identified as Democratic Politics joined with Free Market Economy. There are, of course, multiple manifestations of both "democracy" and "free market."

Demography is Destiny

The Global Village that we live in today has serious population problem. According to the United Nations population data released on June 29, 2011, during the last half a century, the global population was just below 7 billion. By 2050, it is predicted that the world population will reach 9.3 billion, with 97% of the people living in less-developed countries of the world (Bloomberg News, 2011). Fears of exceeding the "Carrying Capacity" of the Earth have, however, been pacified by "Green Revolutions" that have increased world food production manifold; and the ability to transport food across continents and beyond oceans has made famines quite unlikely. Yet, the truth of "Demography is destiny" cannot be dismissed. Populations and the capacity to grow food or to pay for it, when bought from far away, are not spread uniformly among nations around the globe. Therein, resides a big problem.

Connecting the Global with the Local: United Nations and Affiliates as Mediators

The bridges between the Global and the Local have been built by United Nations (UN) and the many UN-affiliated specialized agencies. At the Apex, the United Nations has provided futuristic images of the New Global Order by proclaiming Declarations of Human Rights, and by asserting that Women's Rights are Human Rights. UNDP (United Nations Development Program), in the next step on the ladder, provides vision and operational dynamism for management, institution-building, and innovation (www.undp.org). Another UN Agency, UNRISD (UN Research Institute for Social Development), established in 1963, carries out research on socio-cultural dimensions of contemporary problems affecting development (United Nations 2004; See also (www.unrisd.org).

At the more pragmatic level, the UN and UNDP have provided Technical Assistance by way of consultations to *educate* policy-makers and development planners of Third World Nations. Whenever necessary, they have provided financial aid directly, or, in cooperation with donor nations of the West, for carrying out *pilot* projects to test innovations and models of change in local contexts.

United Nations' affiliated agencies have also provided leadership and material aid in their particular domains of specialization. ILO (International Labor Organization), while protecting interests of laboring populations, has promoted "Fair Globalization" (ILO, 2008, 2011); and has promoted use of participatory strategies in rural settings (ILO, 1997). World Health Organization (WHO), the public health arm of the UN, surveys the state of health of nations and, based on health statistics it collects, publishes annual Reports for national and international use. It has built surveillance systems to monitor the spread of epidemics and warns nations of their vulnerabilities to cholera, malaria, dengue fever, HIV-AIDS and several other diseases. Its interests are numerous, including maternal health, child malnutrition, breast-feeding, prevention of domestic violence, helping build Latrines in rural and urban slums, environmental health, obesity and aging (www.who.int).

Understandably, in Rural Development sector, FAO (Food and Agricultural Organization) has played, in its own domain, a most significant role in promoting appropriate development policies, plans and their implementation around the Third World, covering such policy issues as: promoting new farming technologies and appropriate use of tools and fertilizers; role of Education for Capacity Building and Indicator Writing for Evaluation of Results (Atcharena and Gasperini, 2003; Acker and Gasperini, 2009; and Sauvageot and Da Graca, 2007).

An offspring of FAO, The International Fund for Agricultural Development (IFAD), established in 1977, has gone all the way in changing the rural condition in the Third World—covering policy development, model building and helping to conduct projects on the ground. Water development projects, women's empowerment, income generation through market-oriented production of household food, participative natural resources development, restocking of herds and flocks, veterinary services; post-disasters' emergency assistance, scaling up of micro-irrigations systems; micro-finance in rural areas—and *Peace* — have all received due attention. http://www.ifad.org/governance/index.htm.

Last, but not the least, the *Educational Banner* has been unfurled and carried around the globe by UNESCO, emphasizing that without Education no significant and durable change is

possible in the Development of Nations; and that, in the Third World particularly, *Literacy* of youth and Lifelong Learning by all Adults was absolutely essential for them to avail of the reservoirs of Knowledge in Print and for their linkages to the streams and rivers of Knowledge, now flowing in and out of the digital oceans (Bhola 2006b, 2009). An initiative directed especially to Education for Rural Development is UNESCO/INRULED (UNESCO-International Research and Training Center for Rural Development), established in 1994 and located in China, it pursues an international agenda (www.inruled.org)

The Birth of the Idea of Development: Its Ideology and Theory

Yearnings for freedom were awakening in the colonies in the beginning of the 20th century. During the Second World War, "unwritten contracts" were beginning to be made between the Colonizers and the leaderships in the colonies — that promised Independence if the colonies did help in the War effort of Allied nations against the overwhelming Nazi onslaught in Europe and elsewhere. When the process of de-colonization did indeed begin, the colonizers promised not just to pack up and go home, abandoning the colonies to their own devices, but offered to help with both technical advice and materials resources in the grand project of eradicating ignorance, poverty, hunger and disease through the planned process of Development. Critical thinkers have suggested that, in reality, de-colonization never came and what did come was neo-colonization, which was undertaken under the guise of technical assistance and development aid.

Ever Expanding Concept of Development

Nonetheless, an "Ideology of Development" was articulated and joined with a "Theory of Development" in this historical moment. Liberal Democracy was to be central to the Development. In its initial iteration, Development was conceptualized as "Economic Development" using a Growth Model for wealth creation for the nation — not necessarily wealth for its peoples. The Limits of the Growth, however, were soon emphatically laid bare (Meadows, Meadows, and Behrens, 1972), and these limits were found impossible to neglect. The Political, Social, and Cultural components were slowly added to the concept and practice of Development. Education and Technology were added in subsequent reconstructions of the concept of Development. Development Theory was rooted in Systems Thinking with eclectic methodologies of Research and Evaluation.

Sustainable Development: Sustainability of Human Environment Now Supreme

The most significant, expansive and abiding definition of Development, namely *Sustainable Development,* was first minted at a UN Conference on the Human Environment in Stockholm in 1972 and, now, has been accepted almost universally. At the core of this concept of Development is *Sustainability of the Human Environment*. It insisted that in all cases, contexts and conditions, Development initiatives must include protection of the *Human Environment* as its goal. This ideal is Utopian in that it challenges the idea of Development in the Western mode and takes a moral stance of requiring acceptance of lowered expectations relative to today's artificially inflated needs and recklessly extravagant standard of living in the West (Bhola, 2008).

Since the 1972 UN Conference referred to above, the concept of Sustainable Development has received considerable support from power holders at the highest levels

from all around the world. This is exemplified in the *UNESCO Newsletter* (UNESCO, 2006 quoted in Bhola 2008), which lists seven milestones in the development of the concept and the project of Sustainable Development:

(1) *1972*: UN Conference on the Human Environment in Stockholm leads to creation of the United Nations Environment Program (UNEP); (2) *1987*: *Our Common Future*, the report of the Bruntland Commission, popularizes the term sustainable development; (3) *1992*: Agenda 21, adopted at the Earth Summit in Rio de Janeiro forms the basis for measuring progress in sustainable development; (4) *1999*: Launch of the Global Sustainability Index, tracking corporate practices; (5) *2000*: The Millennium Declaration, adopted by UN General Assembly, defines "respect for nature" as a fundamental value and commits "to integrate the principles of sustainable development into country policies"; (6) *2002*: The World Summit on Sustainable Development in Johannesburg promotes environmental protection, economic and social development as inter-dependent and mutually reinforcing; and (7) *2005*: The UN Decade of Education for Sustainable Development (DESD) is launched to advance life-long learning of knowledge, skills and values required for durable social transformation. (*Listed in Bhola*, 2008, pp 15-17).

Sustainable Development: The Big Tent for an Extending Family

Sustainable Development continues re-constructing itself and expanding as long as Policies and Practices are indeed developed to achieve, by now, universally accepted development goals; and as long as the Sustainability Principle is not violated. Today, programs under the big tent include Poverty Eradication; Inclusion of the Excluded; Women's Empowerment; Health; and Family Planning.

Poverty Eradication *Central to Sustainable Development*

Development actions for Poverty Reduction and, ultimately, its total Eradication need no justifications. It has to be realized that, in some cases, interventions for "Poverty Reduction" among the poor, and "Sustainability" of the Environment in which the poor are living may be clashing. In such cases, Development for Poverty Reduction must yet proceed and compensations, on behalf of Environmental Protection, made within an expanded socio-geographic perspective that includes a larger cluster of communities, the surrounding sub-region, the whole nation and indeed all nations around the Globe.

Inclusion *of the Excluded: An* Essential *of Sustainable Development*

Sustainability invariably seeks Economic and Social justice. This means an unalloyed dedication to the Inclusion of the Excluded by way of Gender, Class, Caste, Color and Ethnicity. India has the good fortune of having a Constitution that affirms Affirmative action on behalf of all the above mentioned groups as well as other weaker sections of the Community, such as Tribes and Indigenous peoples.

Women's Empowerment *and Health and Family Planning: Get Special* Attention *in Sustainable Development*

Women's Empowerment and Health and Family Planning are intertwined. Since the last United Nations' Conference on family planning in 1994, Family Planning had been dismissed from the international discourses of Development under pressure from some religious

leaders and some right-wing politicians. This had led to the substitution of the new phraseology of "sexual and reproductive health" for the unpalatable old term "Family Planning." Yet, not too much had happened. The Summit on Family Planning, held on July 11, 2012 in London, called by the British government and the Gates foundation, which is quite active in India, offered $4.6 billion and suggested that developing countries provide modern contraception — coils, pills, injectables, implants and condoms-to women who want them. Equally importantly, they suggested joining women's own *Choice* with *Accessibility* of clinics in far-off places. If these goals are indeed achieved, more than half the number of women- as many as 222 million in the age group 15-49 in poor developing countries- who want or need modern contraceptives but cannot get them, would, indeed, be able to get them. The Grand Dividends of these interventions will be that millions of unsought abortions, hundreds of thousands of maternal deaths, still births and infant deaths will be hugely reduced (THE ECONOMIST, July 14, 2012).

Bill Gates, the philanthropist, who needs no introduction, regrets that the Millennium Goals (MDG) did not include the Goal "To have, by 2015, the proportion of people without sustainable access to basic sanitation" (United Nations, 2008). Under his "Toilet Challenge", he asked for "a toilet that costs less than five cents per user per day to operate, that requires neither a supply of clean water nor sewage infrastructure to take the waste away and that will generate energy and recover salts, water and other nutrients." The ultimate aim is to bring safe, affordable and "sustainable" loos (slang for latrines) to the 40% of the world's population who lack access to basic sanitation. Within a year, three proposals had been received and given awards for their projects that have the promise to move their projects from conception to delivery (THE ECONOMIST, September 1, 2012, p.10)."

Some New Guests Welcomed under the Big Tent of Sustainable Development

Some prestigious *new* guests have recently been welcomed into the Big Tent of Sustainable Development:

Development *as Happiness*

Citizens of the Mountain Kingdom of Bhutan have been fortunate in their Kings. Since the 1950s, these unusual sovereigns have been working on the transition from absolute monarchy to a multi-party democracy, keeping peoples' interests above their own. In 1972, the King of Bhutan, who then reigned over the Kingdom, declared that "Development was Happiness" — of Individuals, Communities and Nations—and that Happiness is what we should seek as the goal of all Development. First seen as rather mystical by some, the concept of Happiness is now being analyzed using such variables as income, education, health, life-expectancy, economy, gender-equality, and sustainability. National Happiness Indices (GHP) are being developed and applied (*Wikipedia*, accessed September 21, 2012).

The Real Wealth of Nations

The shift from Adam Smith's "*Wealth* of Nations", that has ruled economic discourses ever since it was proposed, is now being re-conceptualized as "The *Real Wealth* of Nations." Economists had, for decades, remained settled on the Gross National Product (GNP)—and then, on the Gross Domestic Product (GDP), as indexes of National Wealth. The new voices now exclaim: "But that is a measure of income, not wealth. It values a flow of goods and

services, not a stock of assets." The United Nations has, since, published balance-sheets for 20 nations in a report overseen by Sir Partha Dasgupta of Cambridge University, U.K. that includes three kinds of assets viz. manufactured, or physical capital (machinery, buildings, infrastructure and so on); human capital (the population's education and skills) and natural capital (including land, forests, fossil fuels and minerals)." Their ranking places Norway at the top, and Congo at the bottom of some 170 countries that were included. Norway was at the top, Congo at the bottom. Bhutan was lowly 141st but its aids were sky high!

By using such a measure, America's real wealth amounted to $ 118 trillion in 2008, over 10 times its GDP that year, but its personal wealth per person was lower than in Japan. All this deserve a pause for thought. Using 1990 as benchmark, Germany increased its human capital by 50%; and China increased its manufactured capital by 540%. Many of the services that the Environment provides such as clean air and water, forests and greenery are shared as "The Commons" and cannot be measured. But the attempts to measure the various assets of nations yet constitute a useful thing to do.

"Inclusive or Comprehensive Wealth" data on the 10 selected nations is shown below for comparative purposes:

The Balance Sheet of Wealth
Inclusive Wealth

Country	*2008 (in Trillion Dollars)*	*1990-2008 Growth (%)*
USA	117.8	0.7
Japan	55.1	0.9
China	20.0	2.1
Germany	19.5	1.8
Britain	13.4	0.9
France	13.0	1.4
Canada	11.1	0.4
Brazil	7.4	0.9
India	6.2	0.9
Australia	6.1	0.1

It is important to be mindful of the fact that "Sustainable Development" and the "Real Wealth of Nations", now called *Inclusive/Comprehensive Wealth,* are not at cross-purposes, but in complete harmony with each other. (THE ECONOMIST, June 30, 2012. See also: http://www.cnngo.com/explorations/life/united-nations-annor)

From Ideology and Theory to Policy and Action on the Ground

Equipped with understanding of the general, by adopting Systemic thinking, i.e., holistic thinking (Bhola 1996, 2002, 2011), we now turn to the specific challenges of planning for actions on the ground in all the different sets of contexts and conditions.

A Model for Praxis in the Future

Putting Education to work in the challenging task of Development, in our case, Rural Transformation—which is an emphatic more passionate rendering of Comprehensive Development — we require a tool for *Modeling,* rooted in tested social-scientific theory, and which is amenable to both Quantitative and Qualitative for data-collection and research, required for Innovation and Change and for Measurement of results.

==========

Model for Planned Action:
Policy into Practice

←---- General Framework of Political Economy of a Nation ----→

\/ \/

Policy Processes of:
Formulation — Implementation — Mobilization — Evaluation

/\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\
\/ \/ \/ \/ \/ \/ \/ \/ \/ \/ \/ \/ \/ \/

Agents and Adopters; and Configurations of Planned Change:

Planner Objectives Adopter
System X of Change X System

\|/

The Logic of Action:
Dialectics between the Structural and the Instructional

==========

In the following, we elaborate on the various components of the Model above:

1. General Framework of Political Economy of a Nation

United Nations and its affiliated agencies, representing some 200 member nations, with a huge variety of political systems, make sure not to offend any nation by simply excluding any *direct* description or discussion of *political systems* in their discourses. Some *indirect* influencing is, of course, embedded in the very choice and design of programs promoted by United Nations. The political elite in individual nations must, however, understand the nature and structures of the Political Economy of their particular nation, to undertake intelligent action.

2. Perspectives on Policy and on Policy Processes

The concepts of policy, planning and implementation have undergone serious articulations and elaborations during the last half century or more, accelerated by the new preoccupation with designing and implementing development initiatives in the Third World. From a naive conception of "policy as proclamation" by the power elite, Policy was found to be a dialectic between crass politics and cold logic embedded in collective social scientific

knowledge not possible to completely disregard (Braybrook and Lindblom 1963/1970). Later, Fisher and Forrester (1993) noticed an "argumentative turn" in policy and then came to include the policy arguments on behalf of feminists as well.

A Holistic Perspective on policy, offered by Bhola (2003), suggested we look at all policy processes simultaneously, covering the analytics of all the processes from Formulation to Implementation, to Mobilization of Beneficiaries and those who will bring those benefits to them. It will have to be understood that Policy Processes do not proceed sequentially and in one pre-determined direction. Indeed, all these policy processes are mutually interactive. It is possible that Policy-makers, sometimes, would formulate policy statement with modest expectations because of known lack of resources to implement policies. In other cases, they may decide to limit themselves only to policies which can be evaluated to surely claim policy successes.

3. Agents and Adopters; Configurations of Planned Change

The widely-tested CLER Model of planned change and Development (Bhola, H.S., 1988) will accommodate the complexities of undertaking planned change, as elaborated herein. It is essential that to plan change, we look at both the Planner System and the Adopter System, and at the Objectives of the total Plan. Again, neither the Planner nor the Adopter is always going to be one unified uniform social entity. Each, in itself, may be a Configuration of entities such as Individual, Groups, Institutions and Sub-cultures, networked through Linkages formal, non-formal and informal, in turn, embedded in larger social-political-cultural configurations, within a particular bounded social space. They may not even be resonating all to one same Environment, but to many different Environmental canopies; and may have, available to them, different Resources—Conceptual, Informational, Material, Institutional, of Personnel, and of Time.

4. The Logic of Action: Dialectics between the Structural and the Instructional Understanding and Acting on the Structural

Using a Logic of Action means dealing, on the one hand, with activities involved in policy implementation with understanding derived from the dialectic between theory and ideology that inform both policies and plans. On the other hand, it requires that all action plans and strategies are born within the second dialectic, between the Structural and Instructional.

(4.1) Providing and Honing Instructional Components

In some settings of Development, particularly Rural Development, the Instructional may mean not just schooling, but also providing Literacy skills to men and women involved in farming and farm-related occupations (Bhola, 2009). In other settings, establishing schools for children may be needed. The Elementary school, of course, is one of the oldest and enduring structures within the Education Sector. But new needs may also mean establishing and upgrading of Middle Schools; Higher Secondary Schools; Colleges and Universities; Technical and Vocational Schools; Technical Colleges and Institutes comparable to other Higher Education Institutions; and professional colleges to Train Teachers, and Trainers of Teachers, Engineers, Artists, Architects, and Medical Doctors.

Top-*down or* Bottom-up approach in any development effort, including Rural Transformation, is indeed a false dichotomy. In the real World, making choices is not an either/or question, but it is often *and-or* situation. Both Top-down and Bottom-up approaches in togetherness will be necessary. Policy *Formulation* and its elaboration will be mostly a Top-down process. Selling policy to the peoples, and *Mobilization* of their efforts on the ground, in pursuit of Policy, will have to be Bottom-up, and linked to grassroots.

The Case of India

When the British left India in 1947, after some 250 years of Rule, they did not leave a clean slate behind. They left deep marks on the common consciousness of the peoples, and on India's polity and future history. In regard to the Rural/Urban situation, the Urban won great victories, but Rural India continued to be in neglect. Calcutta (now Kolkata), set up in 1690 by a member of the East Indian Company, later vied with London as the biggest metropolis in the British Empire. Madras (now Chennai), Bombay (now Mumbai), Allahabad and Lahore, were well-known cities. Half a dozen Indian Universities, all fruits of British initiative, aspired to become like the universities of London, Oxford and Cambridge. The British left other legacies as well. Though Thomas Macaulay, the great propagandist in service of the British, was disliked for his talk of the blessings of the British, the British Raj did have its blessings — the English Language became the grand instrument of unification of India and the Indian intelligentsia came to be connected with the European Enlightenment. The trains, telegraph, police and an administrative class (Indian Civil Service), that the British introduced, meant to help them maintain their own hold over the empire, also prepared the ground for progress on all fronts-political, economic and social-in India. This legacy has since permeated subsequent stages of India's progress, and, after Independence in 1947, made possible the big leaps in planned Development (Spear, 1965; Darwin, 2012).

The Rural Won No Victories

Rural India, in comparison, remained a dismal reality. What the people already knew and, leaders like Mahatma Gandhi cried over, was decried by Rural Sociologists, both from within India (Dube 1955) and outside India (Lewis 1958). Dube, in his book *Indian Village* (1955), talked of the terribly unjust social relations prevailing in rural India where those without land were complete non-entities. The untouchables were the lowest of the lowly and were treated most unjustly, indeed cruelly. They could be harnessed for free menial work, expected to behave correctly towards those from the higher castes, and not dare give any opinion on village matters.

Oscar Lewis, an anthropologist and theorist of culture, in his book, *Village Life in Northern India* (1958), talked sensitively of then prevalent religious and caste taboos. Hunger, poverty, malnourishment and weakness, together, so burdened the poor farmers that they did not have the stamina to even perform the tasks of harvesting their own tiny plots of land. Children and expectant mothers were particularly vulnerable. Lack of transportation kept them from exploring any income-generating activities outside the village. There was also social confinement, isolating them inside "Corporations of 100 villages each." These were the boundaries of their private worlds; they even chose spouses for their children from one or another of these villages, and seldom, if ever traveled beyond.

India's Community Development Movement: Attempting to Transform Rural India

The commitment to serve the rural and poor, emphatically reinforced by Mahatma Gandhi, did bear fruit, and began to compete with the Ideology of Modernization, based on Industrialization, practiced by Prime Minister Nehru. Gunnar Myrdal, in his Asian Drama (1968), captured the various aspects of Community Development as manifested in the first two decades (1947-67), representing some 20 years of the program's life (Myrdal, 1968).

1. Community Development Movement Formally Proclaimed

The Government's program of "Community Development and Agricultural Extension", under Union Minister S.K. Dey, was well-intentioned. It was, supposedly, meant to be rooted in a larger policy frame, seeking changes in all aspects of village life generating a total process of rural uplift — raising productivity, improving health and education, and, in the process, improving overall quality of life. Importantly, efforts were to be made to improve attitudes towards work and life in general, within the rural India set-up. It was considered important that Community Development program promote people's awareness of their responsibility in the planning and implementation of projects in their communities.

As implemented during its active life from 1954 to 1961, the program did make impressive gains in its coverage. It was indeed a nationwide program that did create a network of new institutions and new roles to promote commitment and action for development at various levels, from the Center, to State, to District, to Block down to the village level. It deservedly won the attention and praise of development workers throughout the developing world and of donors in developed nations.

At the prime of its existence, Community Development Blocks had come to be established throughout the country, and some 500,000 villages had, indeed, been covered. However, what was gained in breadth came at the cost of depth. The program included "every good thing' without any hope of generating strategic connections between parts. During its early years, special attention was given to Agriculture, but with relative neglect of the social and economic correlates of the program.

2. Critiques by Scholars and the Political Elite

Gunnar Myrdal (1968, page 257, 273) commented that India made a successful beginning of Independence — with one of the world's most progressive Constitutions (Government of India, 1950); an excellent balance between the Legislature and the Judiciary; and a Planning Commission (also established in 1950) to complement the Administrative structures of the State. The Army was indeed junior to the Civil State, and the Indian Administrative Service (established on the model of Indian Civil Service created by the British) was, in fact, non-politicized. However, the Parliamentary Democracy was not really solid. Indian Independence, however, was transfer of political power without a revolution. The power at the center beamed no farther than Central and State Parliaments. Peasant Landlords, merchants and money lenders continued to rule the roost. Structures of Politics, Economy and Society were left untouched.

The "Great Expectations" from the Community Development program did not fully materialize. In real life settings, the existing structures dividing communities by clan, caste,

class and assets remained untouched. Power of traditionally superior authorities, kept people down where they were before. Weaker sections and the excluded — women and lower castes did not gain much. The already well-to-do, gained much more even in projects of water and sanitation. Those who already had more, gained more, even under so-called Land reform. Literacy, the well-known instrument of transformative change, got no attention. Dube, the author of *Indian Village* (1955), returned to study the consequences from the Community Development in his second book, *India's Changing Villages: Human Factors in Community Development* (1958), and was quite a bit dismayed, noting that "there was one doctor per 6,300 of the population, but most of these were concentrated in urban centers; in village India, it was estimated, there was one doctor for 25,000 people. Low nutritional standards and unsanitary and unhygienic conditions prevailed."

John P. Lewis (the other Lewis!), in his book, talked of a "Quiet Crisis" (1962), also criticized the Community Development program for the "village fetish in Indian thought and the air of ineffectiveness" prevailing generally. He believed that main reason for this was the "reform effort, centering its focus on rural reaction on their own terms and their own ground, at their point of greatest resistance (p. 150)." After some two decades of life, Rural development seemed to have lost to the "industrial revolution of India", based on coal and iron, now the Central project for modernization of India.

3. The Green Revolution in India

India's Green Revolution of 1963, credited to Dr. Norman Borlaug, with shared credit to M.S. Swaminathan of India, was *Green* in a different sense than Green revolutions of today that seek to maintain sustainable development to keep Human Environment protected. India's Green Revolution was about increased food production through introduction of high-yield varieties of seeds for different food crops which, then, required increased use of chemical fertilizers as also water for irrigation. Results were amazing as productivity increased four-fold.

Rural Development, as such, was not on the agenda of India's Green Revolution, but its consequences for Rural Development were truly immense and far-reaching. The Green Revolution did indeed change the rural scene in India in ways more than one. Among the *Positives* can be counted the modernization of farms, and significant rise in farmers' incomes. The Green Revolution soon became a global phenomenon with world-wide ramifications. There was an unprecedented increase in production of food world-wide, leading to self-sufficiency in many developing countries. Among other gains were the new infrastructures that emerged; and diversification of local economies in countries that experienced the Green Revolutions. Among the *Negatives* discovered later were huge monocultures, resulting from reduction of genetic diversity of plants, use of energy-intensive chemical fertilizers and poisonous pesticides that hurt the health of humans as well as the soil. All this meant serious Environmental damage. There was a serious political-economic effect – the tendency towards family farms disappearing, and large-scale farms taking over, creating a new landless class (http://en.wikipedia.org/wikiGreen_ReEvoltion_in_India).

Re-Inventing Rural Development in the Indian Context

Today, we see no lack of leadership in India for Development, including Rural Reconstruction. The Indian Constitution may be the only one that required *Affirmative*

Action on behalf of the poor, the disadvantaged, and the excluded; and expected the Courts to enforce the social and economic rights as part of Affirmative Action. Indeed, the Law has become the Super Estate among the three Estates. This Partnership between the Constitution and the Courts has brought about wonderful results. Despite serious problems with enforcement, 84% of benefits have gone to the poorest two-thirds; Indian Law already promises to the people right to education, health and paid work; Right to equal education has pushed first-grade enrolment for girls by 10% a year, and brought two million children into school lunch programs. In December 2011, the Cabinet approved the "Right to Food" bill that would give two-thirds of the Indian population a right to cheap food. Whether it would be enforceable is another matter!

India's Planning Commission, ever since its inception in 1950 (http://planningcommission.nic.in), has been preparing Five-Year Plans to guide Government policy, including policy on Rural Development. The 12th Five Year Plan 2012-2017, to take effect soon, promises an average annual growth of 8.2 per cent, and identifies infrastructure, health and education as three thrust areas. This Five-Year Plan, like those before it, will be implemented by various Union Ministries at the Center and by appropriate Departments at the State Level. The Union Ministry of Rural Development is responsible for translating Planning Commission's vision in practical plans for implementation and evaluation of results. It started the Integrated Rural Development Program of India (IRDP) back in 1978 and has since gone through various updates and expansions. Several other Union Ministries contribute to the rural development mission.

Lay of the Land: The Meanings of Urban and Rural

Defining Rural and Urban

Indian Census Bureau (http://censusindia.gov.in) in 2011 defined an *Urban Unit (or Town)* as any place with a municipality, corporation, cantonment board, or a notified town area committee, etc. known as statutory town. Alternatively, to qualify as Urban would need meeting the criteria of a minimum population — numbering 5,000; density of population of at least 400 per square kilometer; and, at least, 75% of male workers mainly engaged in non-agricultural pursuits. Conversely, *Rural Area*, to be so defined, would need population below 5,000 and the density of population of less than 400 per square kilometer. Further, in such areas, at least 75% of the males of the working population would be engaged in agricultural pursuits. Related with the preceding, a rural community is defined as a small aggregate of families, who reside in close physical contact within a locality, share common interests and are, mostly, engaged in agrarian sectors.

The Dynamics beyond Definitions

In 2008, the United Nations proclaimed that the Human species, living on this Earth, had crossed a historic threshold wherein more people were living in Urban Areas than in the Rural Areas. The "Urban Age," demographers surmise had arrived. By 2025, two-thirds of mankind will live in the cities; and, by 2050, three-quarters of them would be city-dwellers. India, as we write, is predominantly rural, with 600 million of its 1.24 billion still relying directly on Agriculture, but this is bound to change.

The future change scenario for India, as reconstructed by S.S. Tarapore (2012) in a recent paper, is truly dismal. He quotes statistics to inform that during the decade of 1999-2000, the proportion of agricultural and allied activities in India's GDP went from 28.4 per cent down to 19.4 per cent; and during 2001-10, there was a further decline to 14.4 per cent. Such declines, he states reassuringly, are experienced by many developing countries during their development process. However, it is troublesome in the Indian setting since 70 per cent of the Indian population still lives in rural areas. The current distribution of income between the rural and urban sectors pushes migration from rural to urban areas, especially to metropolitan centers. Lack of infrastructure in the cities cannot accommodate the newcomers, who swarm to already crowded slums. The problem is further accentuated by the crude birth rate per thousand of population – 23.7 in rural areas and 18 in urban areas – that augurs an overwhelming urban-rural dialectic (Tarapore, 2012).

India's Countryside Today

"Countryside" may be a more appropriate label for the "Rural" in India today. The dialectic between the Urban and the Rural in India is highly dynamic. The Urban and the Rural are visibly encroaching on each other, losing any sense of clear boundaries. Successful people in urban areas or those receiving handsome *Remittances* of money from their children abroad, are building "urban islands" in the countryside, with spacious palaces, studded with modern amenities — off the electricity grid and running on privately owned diesel powered generators. These big enclaves in the rural areas have brought urban ways of living and tastes to the rural people to see, and to envy and to crave for. The rural populations, living in extreme poverty, and looking for any income they can make, have invaded the cities and created slums, where the Rural and Urban meet, huddled in hundreds of thousands of *Jhuggi-Chaunpari's*. New conceptualizations and categories need to be invented to capture the realities of what has now been called "Rurbanization" by the Chief Minister of Gujarat. Indeed, new projects designed for Development have to deal with both the Rural and the Urban, assuming the yin-yang relationship of each with the other.

Logic of Action for Rural Development in the Indian Context

The theoretical perspective of the Epistemic Triangle (Bhola, 1996) that informs our definition, description and discussion in our discourse, suggests that reality out there is best understood in terms of the *systemic*, the *constructivist*, and the *dialectical*. It will, therefore, be fruitless to search for a model that could serve as a master key to open all locks — a formulaic approach based on clear cause-and-effect connections. In the real world, there are more than one agent seeking change — the state and the civil society, and institutions secular and sacred — that do not always pull in the same direction. Categories and definitions overlap. For instance, "Rural Transformation" may include a whole array of categories: Rural Development *and* Urban Development; development of Deserts, of Hilly Regions and Coastal Regions. Other developmental categories subsumed may be Women Development, Adolescent Development, Child Development; and development of members of Tribes, of the homeless sleeping in the streets; Scheduled Castes, and Untouchables; and some others. Finally, and most importantly, initiatives and interventions will have unexpected consequences; the best of intentions may sometimes cause hurtful happenings.

The Structural and Instructional Dialectic in the Context of Rural Development in India

The State is more often than not the source of important structural initiatives and interventions. We begin with the *Structural Initiatives* and interventions undertaken by the Central Government in India during the last few years. These initiatives are not listed in chronological order, but along a rough and ready order of scope and significance — from the "General-Pervasive" to one limited to "Specific-Sectors."

Human Rights

Human Rights are fundamental to any Development. Rural Transformation will be meaningless if all it ensures is escape from poverty and access to creature comforts.

Right to Education (RTE)

Universal Elementary Education was on the constitutionally supported agenda, but it is now declared to be a Fundamental Right by a Constitutional amendment; and an "ambitious national program for universal elementary education has been launched with the goal of all 6-14 age children successfully completing eight years of elementary education by 2010." Already, changes are being mooted to include provisions for sports education as part of an updated RTE.

Right to Health: Health Missions for Rural (2005) and Urban (2012) Areas

Right to Health is another fundamental right. Big strides have been made here. India already has in place a National Rural Health Mission (NRHM), which was launched in 2005. Now, as part of the 12th FYP, it is proposed to convert the current National 'Rural' Health Mission into 'National' Health Mission to provide healthcare facilities to urban people as well. As part of this expanded vision, essential medicines, in their generic form, will be provided free to the needy through public health institutions in a phased and time bound manner. The government would endeavor to increase both Plan and Non-Plan public expenditure at the Center and the States levels, together adding up to 2.5 per cent of the Gross Domestic Product (GDP) by the end of the 12th Plan (GOI Daily Newsletter, Volume 04, Issue, 314).

A cluster of initiatives and interventions, with emphasis on the rural, have been undertaken, as for example, the following:

Promise of Food Security: The National Food Security Bill, soon to be Law

The Right to Food is an old idea. Three decades ago, India-born, Amartya Sen, Oxford University Professor and Nobel Laureate, had suggested that the most direct cause of famine was not shortage of food but economic inequalities which deprived the poor of resources to buy food they needed. This idea was not implemented as quickly as it deserved to be. No wonder that famines occurred most often in poor developing countries, which had meager resources to undertake structural changes to provide Food Security. "Development is Freedom" indeed.

In our times, several initiatives are afoot, both at the national and international levels, to provide food security to those in need. A UN report, on the right to food and extreme poverty, has suggested "the need for global social security fund of last resort to enable every country, howsoever poor, to provide guarantees for its citizens against catastrophic events that exhaust their resources needed for survival (http://www.africafocus,org/docs12/-pp; Aksi Committee on World Food Security, http://www.fao.org/cfs/en/)."

India has had a Food Security Initiative of its own. The Indian Food Security Bill, as enacted in 2011, will provide a legal entitlement to cheaper food grains to over half of India's 1.2 billion people: 75% of rural population and 50% of urban households will have the right to 7 kg of food grains per person per month, at the rate of Rs.3.00 per kg for rice, Rs.2.00 per kg for wheat and Rs.1.00 per kg for coarse grains, to the priority beneficiaries. In general, this would mean that the poor will be provided at least three kg of food grains per person per month at half the minimum selling price. In addition, rations or cooked meals to children under 14 years of age, the destitute, including women and persons on the margins of society, will also be ensured. [http://igovernment.in/site/food-security-bill-be-tabled-Thursday/utm_source=newsletter-e.....]

National Livestock Policy 2011/12

Related to the above, the Central Government has proposed a National Livestock Policy to increase cattle population in the country. The proposed livestock policy aims at providing food and livelihood security to cattle farmers to improve their socio-economic status. It also aims at ensuring a clean environment for cattle farmers for themselves and their herds.

Right to Work – For the Rural People (MG-NREGA)

Right to work is an assumed, though often unfulfilled, Right in all societies today. In India, unemployment is high among the productive age of 15-35 in urban India; but, in rural India, employment opportunities are almost non-existent. To redress the situation in rural areas, a beginning has been made with Mahatma Gandhi National *Rural* Employment Guarantee Scheme (MG-NREGA), the most ambitious scheme of social protection in India. Every rural household has the right to 100 days of work a year — improving village infrastructure such as irrigation system. In 2009, some 50 million households signed up, slowing migration from poor to rich regions.

NREGA, now sanctified with reference to Mahatma Gandhi and called MG-NREGA, has since been handed over to Panchayats who will decide what employment activities will be chosen for support. Problems remain. The critics lament that not everyone demanding work can get it; and wages are paid late and, sometimes not, at all by the corrupt middlemen. To avoid the seeping of corruption, some states have decided to pay wages to workers by direct deposit to their Banks through electronic transfers. The government also now requires that MGNREGA accounts be audited annually by chartered accountants to get fresh installments of funds.

Adhaar: New Identities for the Poor and Landless by Identity Cards

Once again we return to an initiative that is "General-and-Pervasive", with extremely significant and nation-wide consequences. The National Identity Cards – called *Aadhaar*, a unique 12-digit identification number given to residents of India, when it becomes available

to all citizens of India, could indeed prove to be super agents of transformation of Indian society, urban and rural. By giving all Indians a Personal-Social Identity where half the population currently does not have one — because they do not have regular homes and, therefore, no home addresses. As a result, they do not have mail delivered to them, nor do they have access to postal banks where they could deposit their savings, howsoever small. As of now they have to depend on intermediaries to receive their benefits from the state, and too often get swindled and defrauded by them. The GOI daily Information newsletter of July 2, 2012 – reported that *Aadhaar*, will soon provide state pensions, wages to workers, and scholarships to students. Rural wage earners, under the MG-NREGA scheme, are the first on the list to get their benefits through *Aadhaar*. Ultimately, *Aadhaar* will enable the poor living on land receive "**Property Titles"** for the property they have owned for generations.

Bharat Nirman: New Infrastructures for Rural Development

An impressive effort in this regard was an initiative of the Government of India which was time-bound and was implemented in partnership with state governments, and Panchayati Raj Institutions during 2005-2009. The Initiative, named *"Bharat Nirman*", was committing huge investments in irrigation, all-weather roads, rural housing, rural water supply, rural electrification, and rural telecommunication connectivity, beginning with telephones. The expectation was that these investments in rural infrastructure would *unlock the growth potential of rural areas*. Much more needs to be done. While the poor in Rural India have been provided much needed welfare, they have not been empowered enough to be able to control either education or policing.

Rural future does look hopeful. A recent document from government sources in India (GOI, 2010) presents an overview of developments in Rural India during the last two decades or more, thus "Rural landscape of India has been radically transformed altogether by policy initiatives of the government and people's movements at the grassroot levels especially during the period 1988-2009. Notable among these changes are the increasing vibrancy of *Panchayati Raj* Institutions, resulting from the Constitution Amendment (73rd); the emergence of the model of Self-Help Groups (SHGs) that operate through collectives; and the massive new organizational capital being created through work collectives for workers under NREGA and other collectives, like JFM groups etc. These groups provide scope and mechanism for convergence and can sustain the efforts made by literacy campaigns. Newspapers, TV, Cable and mobiles have played a major role in connectivity, accessing information and interaction, thus creating a literate environment within the family and village (GOI, 2010)."

Focus on Education for Rural Transformation

Educating decision-makers

Even officials at the highest decision-making level within policy and administrative structures need training for acquiring personal capacity in such areas as policy development, institution-building, and organizational behavior. Planners, Practitioners and Evaluators need to acquire skills in design and usage of Management Information Systems (MIS's) that can store both quantitative and qualitative data in their MIS's.

India has a large number of Universities, spread all over the country, as well as Specialized Institutions, such as (1) National Agricultural Universities — among the agricultural Universities, there is one located in Ludhiana, Punjab, India that has attracted international attention for its research and development. The Hyderabad-based National Institute of Community Development was world famous at one time. The Rural Institute of Udaipur, Rajasthan is also one among those many prestigious institutions.

Education for Mobilization of the Masses on their own Behalf

Separate statements on National Policy of Education (NPE) have been promulgated by the Government over the years. In 1968, the first NPE statement was promulgated by Prime Minister Indira Gandhi; and the second, in 1986, by her son, then Prime Minister Rajiv Gandhi. The NPE of 1986 was modified in 1992 by Prime Minister Narasimha Rao. 1n 2005, Prime Minister Manmohan Singh adopted a new policy based on "Common Minimum Programs."

A document, published by the Government of India in 1998, included the National Policy on Education of 1986 as revised in 1992, as well as reproduced the text of the earlier National Policy on Education, 1968 for ready reference (Government of India 1998). No separate chapters are dedicated to the subject of Rural Development/Transformation or to Rural Education, as such, though need for rural education remains part of the concern. For instance, it was noted with satisfaction that since the adoption of the NPE of 1968, "more than 90 per cent of the country's rural habitations now have school facilities within a radius of 1 kilometer (paragraph, 1.5)."

Greater attention to science and technology and to building of values of secular democracy and economic and social modernity was shown as well, while, at the same time, seeking to keep indigenous values alive and well. There was a clear understanding that "the rural areas, with poor infrastructure and social services, will not get the benefit of trained and educated youth unless rural-urban disparities are reduced and determined measures are taken to promote diversification and dispersal of employment opportunities (paragraph, 1.12)."

Gender disparities were a special concern. Girls were not to be condemned to the study of "domestic science" and other unchallenging curricula. Universal literacy (within a framework of life-long education) was to be pursued, and women were to be given special attention in related programs of Adult Education and Non-formal Education.

Research Supports Eminent Role of Education in Rural Transformation

In a scholarly article on the subject of economic growth and rural poverty in India, the authors, a trio of economists (Fan, Hazell and Thorat 2000) put the role of education in rural transformation in a balanced perspective, suggesting that, to reduce rural poverty, the Government of India should consider making additional investments in rural road construction and agricultural research. *Education, they found, had the third largest marginal impact in rural poverty alleviation and in promoting productivity growth*. Other investments including irrigation, soil and water conservation, health and rural and community development have only a modest impact on economic growth and poverty alleviation "per additional rupee spent."

Instructional Interventions Education to Serve Rural People

The name of the game in education is the transmission and inculcation of appropriate knowledge — Cognitive, Affective and Skills-oriented, needed by all those engaged in the grand project of Education for Rural Transformation from the political elite themselves, through policy-makers, planners, implementers, and evaluators, down to field workers, who finally engage with the leadership of Panchayats, as also with members of village families (GOI: National Knowledge Commission 2006/2007). At the top of the hierarchy, it will be more of re-orientation through discussion and dialogue, and capacity-building (Bhola 2007). When it comes to motivating, mobilizing and preparing the excluded masses on the ground, it will have to be "dialogic action" (Freire, 1970), more often than not in the context of literacy groups (National Literacy Mission 1999, Bhola 2006a, 20006b, 2009)

A Hoped for Dividend from International Meetings

The "International Symposium on Education for Rural Transformation (ERT) -- Good Practices from National and International Perspectives," held in Baroda, Gujarat, India during October 2011, had assumed that Borrowing and Lending of good practices is both possible and desirable between and among nations. Learning from the Experience of others is indeed a virtue both at Individual and National levels (Phillips and Ochs, 2004). However, borrowing and lending are not simple processes of copying and getting copied. All "Good Practices" are indeed rooted in the Context of time and place of their practice. That means that for Borrowing and Lending of policies and Good Practices, those must be *unpackaged* and *re-packaged,* with due adaptations in each shift of context. We know that even the most admired practices, such as Bangladesh's *Grameen Bank* and Brazil's *Bolsa* had to be adapted to be adopted in other contexts and conditions.

Above and Beyond the Best Laid Plans

Above and beyond these well-laid policies and plans and well-meant actions on the ground, truly amazing and authentically transformative movements of global scope and consequences continue to unfold.

Internet as the Super Connector

Since August 1991, when the first World Wide Web was launched by Tim Berners-Lee, at the European Organization for Nuclear Research (CERN), the world has transformed itself into something never even dreamed of, not even in science fiction. Who knew that one day, there would be innumerable websites crowding the space above with computers to access them, at will? Who knew that we would be able to carry a whole office to the library or to the corner Coffee House — and that the Smart-phone would make it possible for any person standing in one corner of the globe to talk to another person in another corner of the world? Who could have imagined the wireless, the e-mail, the cellphone, music downloads and video streaming?

Have Phone, Will Call

Connecting across villages, cities, countries and continents is no more an idle dream. The cellphone is the tool, and the spoken word – now also the written Text — can be used to

communicate and create virtual communities. The cellphone is not a rarity anymore. As *The Economist* of June 18, 2011 wrote, "India has almost 600 million active mobile phone subscribers — about one for every two people, including babies. Some sources claim India already has 929.37 million cell phones! It also has among the lowest prices anywhere, and a home-grown, world-class operator, Bharti Airtel. India's mobile phone industry inspires great hopes. Many see it as vital to the nation's development — a way of bypassing obstructive bureaucrats and bringing services to the masses, from mobile banking to accurate crop prices. Already a third of subscribers are in rural areas" (THE ECONOMIST, June 18, 2011).

Technology and Terminology

The new Technology of the cell, by itself, will not do, if the spoken words are not understood. Thereby, language could impose limits. In a country like India, with its 800 or more dialects, limits imposed by those several languages would be severe. There is good news, however. Hindi, spoken by more people than any other Indian language, is slowly, but surely, in the process of becoming the National Language. Bengali, Gujarati, Tamil and some other Indian languages are acquiring the status of "Regional" languages. Finally, English, which has acquired the status of a *"World Language"*, is not 'foreign' to peoples of the world, and especially not to Indians. At least 130 million Indians can speak, read and write English. Those who do know English — or other widely spoken languages — can act as *multipliers* of communications. Those billions of conversations that take place, thanks to these technologies, are no longer merely personal chit-chats. They now include the communications of both social and political import, creating virtual communities of the like-minded. This has brought about what is now called a "Social Media Revolution."

Social Media Revolution

The cellphone, as a vehicle of Social Media, has now been able to mobilize activists of nations to chase out dictators, and demand economic, social and political justice for the peoples. The "Arab Spring" has brought liberation to peoples of Tunisia, Egypt, and Libya and freed them from the clutches of dictatorial regimes. Of course, the cellphone could play an equally important role in the mobilization of the rural masses on their own behalf. In its more mundane uses, it could and indeed has brought development to backward rural and the urban areas, without waiting for the roads to be built, and rails to be laid first. Distances used to be the bane of those in rural areas: children could not go to school, farmers could not take their produce to the market, not learn about prices, emergencies could not be reported nor advice received from specialists. The cellphone can now serve as an effective tool of ameliorations. The cellphone can receive information from a central source and enable "transactional communication" between buyers and sellers, and lenders and borrowers. Mobile banking has made it possible for all who care to open an account and avail various other banking services.

Of course, we should be careful not to be carried away. The Social Media cannot bring about Rural Transformation without good old agriculture extension workers, who travelled on foot or bicycles to spread needed knowledge and skills. And Health Extension workers to disseminate the knowledge made available by the latest medical advances. We would need trained mid-wives, and health assistants to provide inoculations against the scourges of

Small Pox, Polio, Malaria and Tuberculosis. Vaccines exist but commitment to action, to make those remedies accessible, to guard against Measles, Mumps, Rubella, is missing. Diarrhoea continues to kill some 1.5million children every year.

Fortunately, India's planners have gone beyond the miracle of the cell phone and working on other wonders offered by the ICT. India has already kicked off a "Mega-Project to Connect All Villages with Broadband" to enhance inclusive growth in the country and strengthen the economic activity in rural areas. Projects, to highlight use of Information Technology, to promote production and use of "Solar Energy" in rural India, are among the other breakthroughs.

Facing the Moral Hazard

It is indeed saddening that we are today witnesses to the continuing tearing apart of the moral fabric of peoples on a global scale. Institutions and roles — sacred and secular — that were once considered sanctified today have begun rotting to the core. Neither teachers nor preachers, nor healers are any more trustworthy. As the "Transparency International Indices of Corruption" show, few of the nearly 200 nations of the world come completely clean. Others are hopelessly corrupt, and they include India, Pakistan, Bangladesh, China, Nigeria, and several others. Scandinavian nations seem to be welcome exceptions (Transparency International at http://transparency.org/).

In India, corruption has a long history, going back to the pre-Independence period. The present nexus between politicians, bureaucrats and criminals, however, is hugely frightening. Plans to eradicate poverty from the land are defeated as two-fifths or more of the welfare allocations from the Center are stolen by politicians and bureaucrats on its way to villages and city slums. The dreams encoded in the Indian Constitution, of an India that would be democratic, prosperous and just, seem to have become improbable. Yet, the second decade of the new millennium gives hope. A public awareness of Corruption is emerging, helped by public media. In 2011, India saw an anti-corruption movement led by Anna Hazare that was reminiscent of Mahatma Gandhi's non-violent civil resistance movement. Hazare demanded a "Jan Lokpal Bill" that would create custodians of moral action on the part of all, from the policeman on the street to the Prime Minister, in his high chair grand office. At the more mundane level, technology is being harnessed to the task of taking the intermediaries out of the process of cash transfers and distribution of food rations to those for whom they are intended. Unique Identity Cards, based on an individual's biometric data, are being issued that would enable beneficiaries to open personal post office or bank accounts to which cash grants can be sent. Already, 215 million such cards have been issued. Within two years, the database is expected to include 600 million. Complexities remain, but this is a big step forward on all accounts (*The Economist*, November 10, 2012, pages 41-42).

References

Acker, David and Lavinia Gasperini (2009): *Education for Rural People: The Role of Education, Training, and Capacity Building in Poverty Reduction and Food Security*. Rome: FAO.

Atcharena, David and Lavinia Gasperini, Coordinators and Editors (2003): *Education and Rural Development: Towards New Policy Responses.* Rome: FAO/Paris: UNESCO/New Delhi: Rawat Books.

Bertalanffy, L. (1968): *General systems theory: Foundations, development, applications*. New York: George Braziller.

Bhola, H.S. (1988): The CLER model of innovation diffusion, planned change and development: A conceptual update and applications. *Knowledge and Society: An International Journal of Knowledge Transfer,* 1(4), 56-66.

_____ (1996): Between limits of rationality and possibilities of praxis: purposive action from the heart of an epistemic triangle. *Entrepreneurship, Innovation and Change*, 5, 33-47.

_____ (2002): A Discourse on educational leadership: Global themes, post-modern perspectives. *Studies in Philosophy and Education,* 21 (2), 181-202.

_____ (2003): Policy: A holistic perspective. *Journal of Educational Planning and Administration,* XVII (1), 85-104.

_____ (2006a): Access to Education: A Global Perspective. In: Akpovire Oduaran and H.S. Bhola, editors). Widening Access to Education as Social Justice: Essays in Honor of Michael Omolewa (pp. 44-68). Berlin, Heidelberg, New York: Springer/UNESCO/UIE.

_____ (2006b): Adult and Lifelong Education for Poverty Reduction: A Critical Analysis of Contexts and Conditions, *International Review of Education*, Vol. 52 (3-4): 231-246.

_____ (2009a): "Literacy" (10,829 words). In: *Encyclopedia of Library and Information Sciences,* Third Edition. Editors: Marcia J. Bates, and Mary Niles Maack (both at UCLA) New York / London, U.K.: Taylor and Francis, January 2009, Four Volumes, 5,100 pages.

_____ (2009b): Reconstructing Literacy as an Innovation for Poverty Reduction and Sustainable Development: A Policy Advocacy for Bangladesh, *International Journal of Lifelong Education,* Volume 28, Issue 3, May 2009, pages 371-382.

_____ (2009c): The Role of Education in Sustainable Development under Globalization, in the Context and Conditions of India, *Perspectives in Education*, Silver Jubilee Year Issue. 2009. Vol. 25, no. 4, 234-251.

_____ (2011a): "Essentiality of a Policy Framework for Promoting Literacy, Adult Education and Lifelong Education," a paper presented at the International Conference on Women's Literacy for *Sustainable Development*, focused on the E-9 nations jointly by UNESCO and the Government of India, New Delhi, India, during September 8-10, 2011.

_____ (2011b): Systems Theory Perspective on Education for Rural Transformation: In the Dialectic between Global Contexts and Local Conditions, *Journal of Educational Planning and Administration*, Vol. XXV, No.1, January 2011, pages 5-19.

Bhola, H.S., and Sofia Valdivielso Gomez (2008): *Signposts to Literacy for Sustainable Development*. [Two Complementary Studies by the joint winners of the 2004-2005 International Award for Literacy Research.] Hamburg: UNESCO Institute for Lifelong Learning (UIL).

Bloomberg News, 7 billionth person coming Oct. 31, He or she will be born in India, researchers expect. [Report read in *Arizona Daily Star* / July 29, 2011, A23].

Braybrooke, David and Lindblom, Charles E. (1963/1970): *A Strategy of Decision: Policy Evaluation as a Social Process*. New York, N.Y.: Free Press.

Burbules, N.C. and C. A. Torres (2000): *Globalization and Education: Critical Perspectives*. New York: Routledge.

Darwin, John (2012): *Unfinished Empire: The Global Expansion of Britain*. London: Allen Lane/New York: Bloomsbury.

Development and Cooperation (D+C), (International Journal, Special Focus on Food Security). Vol. 39, No. 3, 2012.

Dube, S.C. (1955): *Indian Village*. London: Routledge and Kegan Paul p.112.

Dube, S.C. (1958): India's Changing Villages: Human Factors in Community Development. Syracuse: Cornell University Press. [The whole book, of 230 pages, can be accessed on < www.Questia.com>

Fan, S.P Hazell and S. Thorat (2000): Government Spending, Growth and Poverty in Rural India, American Journal of Agricultural Economics 82(4).1038-51.

Fisher, Frank and Forester, John (Ed.) (1993): *The Argumentative Turn in Policy Analysis and Planning*. Durham and London: Duke University Press.

Freire, Paulo (1970): *Pedagogy of the Oppressed*. Newe Yotk: Herder and Herder.

Government of India (1950, 1991): *The Constitution of India*. New Delhi: Government of India. [The Date of Commencement of the Constitution was January 26, 1959; The 991 edition includes Amendments until 1991. The latest Amendment to the Constitution was made in 2011.]

Government of India (1998): *National Policy on Education as modified in 1992)*; with *National Policy on Education, 1968.* New Delhi: Government of India, Ministry of Human Resource Development, Department of Education, 1998.

Government of India (2007): *National Knowledge Commission Report to the Nation, 2006*. New Delhi: National Knowledge Commission.

Government of India (2010): *Draft Report of the Task Force for Alternative Approaches and Strategies for Basic Literacy*. National Literacy Mission, Ministry of Human Resource Development, New Delhi.

Government of India (2012): The Twelfth Five-Year Plan 2012-2017. New Delhi: Government of India.

Government of India, *GOI Daily Newsletter*, Volume 04, Issue 314. http://government.in, accessed 9 July 2012.

Government of India, Ministry of Rural Development: The Mahatma Gandhi National Rural Employment Act, 2005. http://www.nrega.nic.in/netnrega/home.pdf.

Green Revolution of India, http://en.wikipedia.org/wikiGreen_ReEvoltion_in_India Accessed September24, 2012.

http://www.education.nic/policy/npe86-mod92.pdf

IAMAI/IMRB, eTech, 2010. Internet for Rural India.

http://www.iamai.in/Upload/Research/Internet_for_Rural India_44.pdf

IFAD Website: http://www.ifad.org/governance/index.htm

Indian Census Bureau (2011): www.censusindia.gov.in/2011-common/censusdata.

International Review of Education, 38(2): 103-115.

Lewis, John P. (1962): *Economic Development and American Policy*. Washington, D.C.: Brookings Institution, 1962, p.150.

Lewis, Oscar (1958): *Village Life in Northern India*. Urbana: University of Illinois Press, p.47.

Meadows, D.H., Meadows, D.L. and Behrens, W.W., 1972, The Limits of Growth: A Report to the Club of Rome's Project on the Predicament of Mankind. New York: Universe Books. [A New revised edition published in 2004.]

Myrdal, Gunnar (1968): *Asian Drama: An Inquiry Into the Poverty of Nations*, (Vol. I, II, and III). New York: Pantheon, A Division of Random House, pages 2284. References particularly to pages: 1968. 271; 870 ff; 888 ff; 1305; 1339-46' 1605 ff; 1687 ff; 1900; 2158-59).

National Literacy Mission (NLM) (1999): *Towards Lifelong Learning*. New Delhi: National Literacy Mission

O'Meara, Patrick, Howard Mehlinger and Matthew Krain Eds.) (2000): *Globalization and the Challenges of the New Century: A Reader*. Bloomington and Indianapolis, IN: Indiana University Press.

Phillips, David and Kimberly Ochs (eds.) (2004): *Educational Policy Borrowings: historical perspectives*. Oxford, U.K.: Symposium Books.

Planning Commission of India (1950): New Delhi, India: http://planningcommission.nic.in

Sarva Shiksha Abhyian [It is the India's surrogate for Education for All initiative of 1990. See http://ssa.nic.in [see page 279]

Sauvageot, Claude and Patricia Dias Da Graca (2007): *Using indicators in planning education for rural people: A practical guide*. Rome: FAO (Food and Agricultural Organization of the United Nations; and Paris: UNESCO International Institute for Educational Planning.

Spear, Percival (1965): *A History of India 2*. New York, NY: Penguin Books.

Stiglitz, Joseph E., (2002): *Globalization and its Discontents*, New York: W. W. Norton.

Tarapore, S.S., "A Viable Agriculture Policy for Sustainable Growth," *Scoch Digital Inclusion*-Unicode (UFT-8) July 24, 2012. www.Includion.in]

THE ECONOMIST, March 31, 2012, Free Exchange, The law and the poor, Courts in emerging markets are better for the poor than many assume. Details and discusses *The Law's Majestic Equality* by Daniel Brinks and Varun Gauri, March 2012.

THE ECONOMIST, June 18, 2011, Indian mobile telecoms: Happy customers, no profits, pp. 71- 72.

THE ECONOMIST, June 30, 2012. Free Exchange, The real wealth of nations, p. 78. Based on "Inclusive Wealth Report 2012", www.ihdp.unu.edu/article/iwr, (Also, http://www.cnngo.com/explorations/life/united-nations-annor

THE ECONOMIST, July 14, 2012. Contraception and development, Choice not chance, Family Planning returns to the international agenda, p 50.

THE ECONOMIST, September 1, 2012. Technology Quarterly, Flushed with pride, p. 10.

THE ECONOMIST, November 10, 2012. Welfare in India, Money where your mouth is, A debate is growing about how to get welfare to the needy, pages 41-42.

UNESCO/INRULED (UNESCO-International Research and Training Center for Rural Development), Peoples Republic of China, (www.inruled.org).

United Nations (2004): *An integrated approach to rural development: Dialogues at the Economic and Social Council*. New York: Department of Economic and Social Affairs, Office for Forecosoc Support and Coordination.

United Nations (2008): *The Millennium Development Goals Report 2008*. New York: United Nations. http://mdgs.un.org/unsd/mdg/...

UNRISD (UN Research Institute for Social Development), established 1963, www.unrisd.org

Wikipedia, search for "Kingdom of Bhutan, Development is Happiness," accessed September 21, 2012.

Journal of Educational Planning and Administration
Volume XXVII, No. 3, July 2013, pp. 281-309

A Framework for Analyzing Demand and Supply of Faculty and the Quality of Higher Education

Chiranjib Sen*

Abstract

The shortage of faculty is a serious problem confronting Indian higher education institutions. In order to be effective, policy measures must explicitly recognize the structural determinants of the demand and supply for faculty. The demand for faculty resources depends both on the exogenous factors that drive the demand for higher education, and also on the recruitment decisions made by the institutions that deliver higher education services. We present an analytical framework that incorporates these dimensions. There are different categories of higher education providers (universities, private and public colleges, professional education institutions) whose capacities and motivations differ. The demand for faculty resources in the academic market depends on how much education services these institutions decide to provide. Our framework postulates that higher education institutions decide by seeking the optimal combination of two outcomes of their activity, viz., (a) net operating income and (b) institutional reputation. The nature and quantity of faculty resources that are demanded by the academic institutions depend depends on how they choose to allocate their operating budget between net income generation activities and building institutional reputation. We also examine the determinants of the quality of higher education, and its cost implications. Since their operating context and resources differ, their allocations are shown to also differ. The framework is deployed to analyze several alternative hypothetical situations: (1) excess demand for higher education with and without a faculty supply constraint; (2) impact of a 'policy constraint'; (3) the demand and supply of faculty in the market, to highlight the distinction between the actual shortage and the conventional definition in terms of "unfilled vacancies"; (4) the tradeoff between the quantity and quality of higher education that emerges from the economic choice made by the academic institutions, and how it varies across differently endowed institutions. We end by drawing some implications for policy.

* University Resource Centre, Azim Premji University, Bangalore- 560100.
E-mail: chiranjib.sen@azimpremjifoundation.org
@ The author is grateful to Prof. Dhande for permission to use the material in this Paper. H. Narang, Manju Singh, Amitava Bose, Gopal Naik, Rupa Chanda, N. Ravi and A. Damodaran provided valuable comments on an earlier draft, which are gratefully acknowledged. Responsibility for remaining errors lies with the author.

Introduction and Context

Higher education has a crucial role in India's ability to succeed in the modern global economic system. The number of institutions serving the sector and student enrolments in India have expanded very rapidly in recent decades (Agarwal, 2009). Enhanced educational attainments have contributed significantly to the high economic growth rates in the services sector that have buoyed India's recent economic performance. Yet higher education institutions and their performance are plagued by many problems, and this has been a major source of policy concern.[1] This paper will focus on two of these major issues—namely the phenomenon of "faculty shortage" and the "quality" of higher education.

The Indian higher education sector is heterogeneous. Different types of higher education delivery institutions co-exist, and these operate with very different motives and working contexts. All types of higher education institutions face serious problems of faculty shortage and in maintaining the quality of education. However, they follow different strategies while responding to this problem. Moreover, the actions of one type of institution can have important impacts on others. These impacts can be either positive or negative. Hence in order to develop strategies for addressing the problem of faculty shortage, it is important for policy makers to take an overall systemic view of how the higher education sector functions, and hence to assess how different components would respond to policy interventions. This paper attempts to examine the two issues of faculty shortage and higher education quality in relation to the relevant choices that higher education institutions make. We assume that these choices are made in response to economic incentives that different categories of higher education delivery institutions face.

Though reliable data relating to the quantum of faculty shortage is not available, the extent of shortage in percentage terms is believed to be substantial, varying between 20 to 50 per cent. On average, the shortage of faculty is deemed to be around 35 to 40 percent. Most estimates are imprecise and incomplete because there are no regular official surveys where information is collected systematically. There are a large number of unfilled vacancies for faculty in both universities and colleges. Typically, faculty shortage is estimated by the number of unfilled positions as a proportion of the "sanctioned posts". However, there is very little knowledge even among experts and policy makers on the degree of faculty shortage that prevails in different academic disciplines.

However, this method of estimating the extent of faculty shortage is imperfect. This is because it does not accurately reflect the true extent of faculty shortage in any given period, which is the gap between demand and supply of faculty in the academic market. The number of sanctioned positions in any higher education institution (which is taken as a proxy for demand) is administratively determined, and these numbers generally remain fixed for long periods. Thus, the number of sanctioned positions does not necessarily reflect the actual demand for faculty prevailing in the academic market. The market demand for faculty resources is determined by the decisions of higher education institutions in response to the demand for higher education from students. The latter, in turn, depends on the underlying

[1] These perceived problems have prompted the Government of India to set up a number of expert committees to study different aspects of the higher education scenario such as Chaddha (2008); Mehta (2009); Pitroda (2009); Yash Pal (2009); Thorat (2009) and Prakash and Bhushan (2006).

demographic trends, and economic determinants, such as trends in income and employment aspirations, all of which change over time.[2]

Most policy-makers and experts emphasize inadequate supply as the most important cause of faculty shortage. Qualified persons are not entering the academic profession in adequate numbers due to economic reasons. Incentive structures relating to the academic profession are adverse. Academic careers are unattractive when compared with other professions. Not only are academic salaries uncompetitive, there are additional constraints to attracting the best talent. For example, the social status of a teacher is not as high as it used to be in earlier decades. The teachers' work environment and service conditions have steadily turned more difficult. Potential teachers are discouraged from entering the profession also by negative features of their working conditions. These include arcane procedures, transfers, and the trend towards increasing teaching loads of existing teachers. New courses are started without filling posts, thereby making work far difficult for the latter. Hence, remedial steps typically propose addressing these supply-side issues.

There is, on the other hand, a clear trend towards the use of part-time and ad hoc teachers in state universities and deemed universities. This is a response by the institutions to the inadequate supply of regular faculty, as well as to the inflexibility faced by some institutions in recruitment of full-time faculty. However, maintaining a high quality of education, with this mode of meeting faculty resource requirements, is a challenge. Currently, there are inadequate norms regarding certification to ensure high quality of such temporary faculty. In this context, many analysts and policy makers support the idea of increasing the available pool of qualified faculty in the short and medium term through steps such as retention of "mature faculty" (i.e., extending the age of mandatory retirement), or by inducting teaching talent from the large pool of talented professionals practicing outside academia.

Many higher education institutions face a serious funds shortage, and they find it difficult to manage the impact of salary increases emerging from pay revisions. This is particularly true of many government-funded institutions, especially the State Universities. Hence, there is a fund-constrained de facto hiring freeze in place particularly in state-supported institutions. Therefore, there is a lack of effective demand for new faculty in these institutions. This indicates that the perceived shortage of faculty in Indian higher education has both demand-related as well as supply-side dimensions mentioned above.

The declining quality of higher education is a problem as serious as faculty shortage with regard to education outcomes. This problem can be addressed through multiple measures, including upgrading of existing faculty. However, upgrading of existing faculty quality is costly for the institutions. Efforts to ensure quality standards through imposition of stricter norms by mandate are at best moderately effective. There is, therefore, an implicit trade-off between providing the higher quality of education vis-à-vis greater quantity of higher education. Internal decisions made by higher education institutions, in the context of

[2] Macro-economic factors such as the GDP growth rate, trends in industrial and services sector growth are the key indicators of income and employment patterns.

policy directives and regulatory requirements, determine the actual balance between quality and quantity of higher education.[3]

Skewed incentive structures are at the root of faculty shortage in professional education. This problem is marked in most disciplines where the income earned by non-academic professionals is much higher than their academic counterparts. This situation distorts the demand-supply configuration in faculty jobs, creating pockets of relatively acute scarcity. In areas such as medicine, pockets of severe faculty shortage exist in some sub-sectors alongside relative abundance in others.[4].

Salary differentials operate to weaken established government colleges. The shortage of faculty in these institutions is caused or exacerbated by poaching of their faculty by the newer private colleges. In medicine, some potential teachers are drawn away by non-teaching hospitals. A parallel situation is encountered in disciplines such as law.

Universities are expected to exercise supervision over recruitment decisions and to ensure faculty adequacy of their affiliated colleges. In practice, the regulatory and/or supervisory capacities of universities are inadequate to deal with the large number of their affiliated colleges.[5] In general, the private colleges are able to bypass norms regarding permanent faculty. This contributes to the phenomenon of so-called "absentee faculty", who are nominally on the faculty rolls of more than one college, and are actually not available to the students on a regular basis.

The scarcity of funds in the established public universities has encouraged them to introduce various courses that enable them to earn higher revenues. Some, like the proliferating distance education courses, are cost-effective. However, many "self-financing courses" have been introduced with the primary objective of easing fund constraint to. The use of these revenues for cross-subsidization is commonplace, and quality suffers as a consequence. Distance education programmes do have the potential to provide a technological solution to the scarcity of faculty. However, when offered by large universities for commercial objectives, they share many of the quality problems alluded to above in the case of self-financing courses.[6]

Maintaining an appropriate cadre structure is acknowledged as a desirable institutional feature of academic institutions and constituent departments. There are prescribed norms

---

3 Hence, it is important for policy makers to understand the operating context of higher education institutions. This context is likely to vary across different categories of higher education institutions.

4 For example, faculty shortages exist in specific fields such as pre-clinical and para-clinical studies, whereas faculty numbers are available in the clinical segment. The misallocation of faculty resources arises because of misalignment of incentives. This arises from the better income prospects in the latter. On the other hand, such clinical-linked faculty personnel are often drawn towards professional practice as a supplementary source of income. This system has obvious benefits, but also requires monitoring to ensure quality in delivery.

5 In the case of dentistry, universities are often not in a position to exercise any control over the recruitment practices of their affiliated colleges. They are not kept informed when a faculty member joins or leaves the college (Dhande 2012).

6 In this context, it is ironic that specialized distance education institutions have difficulty in attracting students as compared with larger universities. The "brand value" of the established universities is the reason for this phenomenon. This confirms the importance of institutional reputation as a key element in student demand.

for the ratios between assistant professors, associate professors and full professors. These structural norms are typically not followed in Indian higher education institutions. The situation is not uniform. The older established institutions facing funds constraint are unable to hire younger faculty. Hence, their cadre profile is dominated by senior faculty. On the other hand, the newly-established institutions find it more convenient to induct junior faculty. This results in a relative imbalance in their case, with a bias towards junior faculty.

It is clear from the above discussion of the higher education scenario, that economic behavior of market participants is at the root of both the problems of faculty shortage and of declining quality of education. In the remainder of this paper, a simple economic framework has been developed to explain the behavior of higher education institutions. Our framework takes into account the different operating contexts of categories higher education institutions. Our analysis examines the responses of these institutions to changing regulatory and market conditions in relation to faculty shortage and quality of education.

Faculty Shortage and Allocation Decisions of Higher Education Institutions—Analytical Framework

Faculty shortage is a market determined quantity, reflecting the mismatch between the supply and demand for faculty resources in the academic market. Since faculty resource is a key input in the production of higher education services, the demand for faculty resource is derived from the underlying demand for higher education services from students. Hence, the economic response to market conditions of academic institutions providing higher education is a crucial determinant of both faculty shortage and quality of education.

How academic institutions behave depends on their operating environment--in particular on the relative importance of markets vis-à-vis government intervention that prevails at any time period. This environment can change with time. Regulatory measures and policy guidelines that might be effective in a 'command-and control' economy would face opposition and possible evasion in a post-market reform scenario if these are not incentive-compatible. We assume that, in the present context, financial considerations are very important in the decisions of academic institutions. Several factors define the operating environment of higher education institutions. These include government policies, regulatory norms and requirements, the revenue generation possibilities, other non-revenue sources of funds, institutional capacity and reputations of higher education institutions. Decisions concerning recruitment, deployment and nurturing of faculty resources are all made by academic institutions. Hence, the effective impact of any policy or other ameliorative action depends on how this affects the decisions of academic institutions. Moreover, there are significant differences across academic institutions with regard to their operating context, which affect their behaviour.

Most available estimates of faculty shortage in Indian Higher Education, as mentioned above, are expressed as a proportion of sanctioned faculty positions. However, there are really no solid empirical grounds to assume that sanctioned faculty positions actually reflect the underlying demand for faculty. Hence, these estimates are at best tentative. In the absence of systematic data, it is difficult to derive reliable estimates of faculty demand, particularly relating to specific broad academic fields such as humanities and sciences, management, engineering, medicine and so on. In the era of high economic growth, with

rising participation of private sector providers of education services and the trend towards higher tuition fees, decisions made by suppliers and demanders of higher education have an economic foundation. Hence the shortage of faculty is the result of underlying trends in the supply-demand configuration of higher education services. For example, the discipline-wise demands for faculty depend on the underlying pattern of demand for higher education from students.

In this section, we develop an analytical framework that sets out the inter-relationships between the key economic determinants of faculty shortage and quality of higher education in a systematic manner. The framework presented below is kept simple. However, it may be useful in illustrating the nature of systemic interconnections that underpin some of the problems affecting faculty shortage that have been identified from our deliberations with stakeholders. The insights, so obtained, may be useful in the strategic choice and prioritization of policy interventions.

Demand and Supply for Higher Education

Faculty Shortage represents a mismatch between the demand and supply of faculty resources. Faculty resources are required only as one of several inputs in the production of higher education services. Hence, the demand for faculty, in both absolute terms and in composition, is derived from the underlying **demand for higher education.** This latter demand can be analyzed in two parts. The first is the aggregate demand for higher education, and second aspect is the composition of this aggregate into its components—i.e., different types of disciplines. The former is shaped by long-term factors and is a function of certain key macro-trends in the economy. These factors include the following:

- Demographic trends: The size and age-structure of the population determines the number of student-age individuals that forms the population pool from which the demand for higher-education will occur.
- Economic growth trends: This is the crucial factor governing the (expected and actual) economic returns to higher education, as the prospects for employment and incomes change. These factors affect both the ability to pay for higher education as well as the disciplinary composition of the demand for higher education. Courses and disciplines, where job prospects are bright and expected incomes are high, would be in greater demand. This would be reflected in higher enrollments (if seats for admission are available), as well as in the trends of student applications. To the extent that commercialization (or other forms of price flexibility) of higher education is permitted, these sectors would command higher student fees. In addition, social status factors govern job aspirations, which are, to some degree, independent of the pure economic calculation of the net benefits of higher education by students.

To summarize, the aggregate demand for **higher education i**s a function of the following factors:

- the number of student-age population and
- the 'desired gross enrollment ratio'. [7]

[7] Not every person in the student-age population may want to enroll for higher education. Thus the low GER that is observed is *not necessarily* due to shortage of educational opportunities (supply

The 'desired gross-enrollment ratio', in turn, is a function of following factors:

- trends in per capita income;
- the cost of higher education (tuition fees, etc); and
- sociological trends linking social status with higher education attainment

The above factors determine the broad total demand for higher education. The discipline-specific demands for higher and professional education are components of the aggregate demand for higher education. The discipline-wise composition of the aggregate demand for higher education stems from the economic choice made by the prospective students. This reflects the relative attractiveness of different academic disciplines. Factors which enter the expected benefit-cost calculations of the potential student population reflect the evolving labour market conditions in different types of professions and employment opportunities.[8] The key variables are:

- average entry-level salaries in the respective fields after the degree is obtained
- tuition fees received by private sector institutions in each of the major fields.

The demand trends would be apparent to the providers of higher education by observing enrollments and applications received in different disciplines of study. In addition, signals from education policy makers provide additional information to academic institutions regarding the demand patterns in higher education.

Based on the above determinants of the demand for higher education, higher education providers (viz., universities, public and private colleges, professional education institutions etc.) make two related choices. They first decide on the quantum (and composition) of higher education that they will provide during the year.[9] Once this is decided, they then make effective decisions about acquiring and allocating faculty resources. These decisions, in turn, determine the demand for faculty in the academic market space. We assume here that the recruitment and other faculty-resource enhancement decisions are made on the basis of an economic logic that is consistent with the institutional goals of these institutions. What is the logic on which higher education institutions make their decision? An economic logic seems appropriate. We assume that these institutions are essentially economic organizations because they utilize human and other resources (that are purchased from the market) and they also provide higher education services that have a significant economic value to individuals and to society at large. Hence, we shall suppose that these institutions operate rationally as economic agents to maximize an 'objective function'. This objective

constraint). This phenomenon is clearly evident in the advanced economies such as the USA. We have not attempted here to statistically estimate the desired GER as a function of its determinants, but rather to explicitly delineate the logic of the relationship. However, from a policymakers' point of view, it would be desirable to conduct regular surveys and use the data to estimate reliable statistical projections of the desired GER.

8 For example, there has been a sharp rise in the demand for software engineers in recent decades, which has impacted the demand for courses in engineering and other related disciplines from students. By contrast, courses in humanities and liberal arts and sciences have witnessed a sluggish demand. The demand for higher education in India is affected by competition from universities abroad, as ever larger numbers of Indian students migrate for higher studies abroad. Even so, the pressure of demand for higher education within India remains strong in relation to supply.

9 The quantity of higher education is measured in this framework by the number of degrees that are given during the academic year. It is closely related to the number of students that are enrolled.

function should reflect the appropriate context in which they operate. They must satisfy the conditions for their economic survival and institutional growth, and they must meet the expectations of their major stakeholders (e.g., government, owners, funders, faculty, students, recruiters, peers, etc.).

What are the elements of the objective function of higher education institutions? We assume that academic institutions, through their allocation decisions, seek to find the optimum combination between two independent objectives. These are (1) Net Operating Income; and (2) Institutional Reputation. These objectives represent short-run and long-run dimensions of institutional success. The importance of generating a net surplus in terms has become increasingly important after economic liberalization for all higher education institutions because of rising costs as well as stagnant or shrinking grants. It is relatively easy to measure, being the difference between income flows and recurring costs. Income accrues from tuition and other fees paid by students, other sources such as endowment investment income, grants, funded research projects and consulting activity. The ability of institutions to generate incomes from each of these sources varies considerably, and hence there is a difference in their relative importance in the objective functions of different types of institutions. Institutional reputation, on the other hand, is difficult to measure directly. However, its importance as an institutional objective of institutions providing higher education can hardly be questioned.[10]

Institutional reputation is a more complex entity. It is typically created over a long period of time through a combination of activities that includes consistently providing high quality education services. Also important are the job market performance of its graduates, and the recognition of the institution's research and faculty quality.[11] Institutional reputation can be acquired through expenditure of resources over extended periods. Among the key inputs that lead to high institutional reputation are the quality of faculty resources, an attractive working environment for academic activity and good infrastructure. Each of these items has cost implications. At the same time, institutional reputation is not merely an item of cost. It can also significantly enhance the capacity of the academic institution to earn a higher income. This arises from their improved ability to attract students, charge higher tuition fees, innovate and create new academic programmes and/or courses, to win research projects and to earn consulting incomes. Last but not least, high reputation also makes it easier to attract high quality faculty. The nature and quantity of faculty resources that are demanded by the institutions, therefore, depends on how they choose to allocate their budgetary resources between net income generating activities and building institutional reputation.

The operating contexts are normally quite different for different types of academic institutions. For example, the nature of infrastructure available to large Centrally-funded

[10] A similar argument could be made for hospitals. These institutions offer services, whose quality and effectiveness are not obvious to the users. Hence, reputation serves as a signal for quality and institutional capacity.

[11] The relative importance of research in determining institutional reputation varies over time and across countries. For several decades after Independence, in the face of high growth of demand for education, teaching excellence was seen as the pre-eminent component of reputation. Several specialized research institutions sprang up, but outside the university systems. In recent times, research is again gaining importance as Indian higher education gets globalized.

universities is very different from state universities and both differ from private sector institutions. In addition, they must conform to the relevant regulatory norms. Regulatory norms govern cadre ratios. Government policies are an important determinant faculty emoluments in public sector supported institutions. [12]

It is clear that the underlying context in which the academic institutions make their faculty-related decisions can and does vary over time and across the type of institution. Unlike commercial firms, they do not mainly seek to maximize profits. It is also true, however, that in the era of market reforms, commercial considerations have grown in importance. Apart from 'pure' economic objectives, the actual demand for faculty is shaped by different characteristics of the operating or 'business environment' faced by higher education institutions. For example, in a system in which all institutions are government-owned and fully funded without major budgetary constraints, the decisions on faculty deployment would be taken without an explicit economic consideration in mind. Alternatively, for a private sector college without a major endowment support for back-up, reliance on tuition fees is high, and this would impact its faculty-related decisions. Apart from the financial and ownership aspects, there are other important elements that influence the decision-making by academic institutions. These elements include constraints placed on their operational freedom and flexibility by means of regulation and/or government policy. Chart 1 provides a schematic representation of the logic underlying the determination of demand for faculty resources.

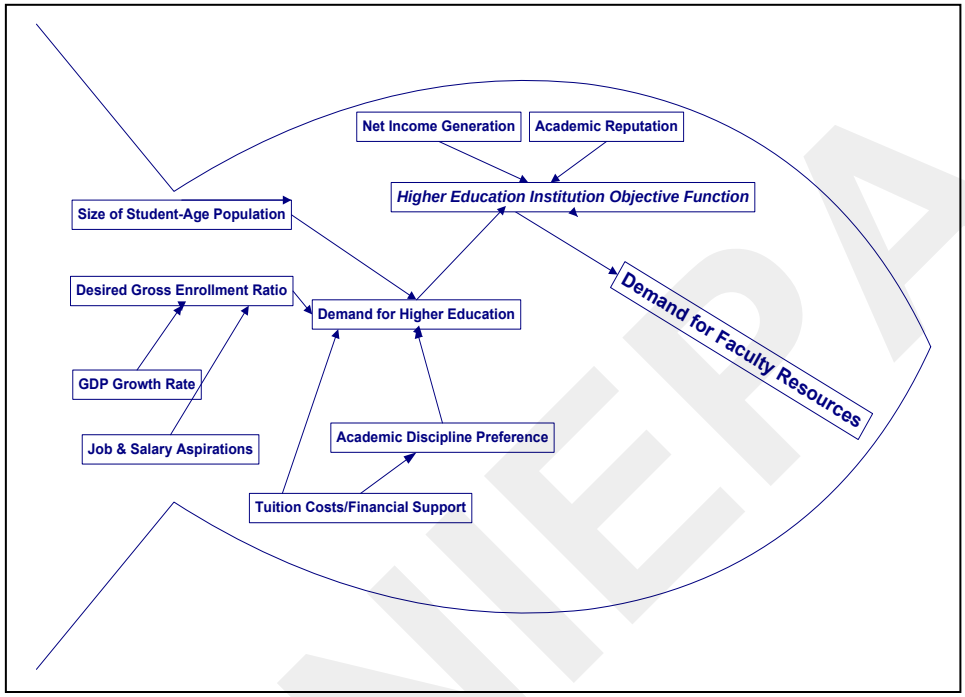
There could be a trade-off that between the two objectives, institutions must choose the appropriate balance between maximizing net income or reputation. In the initial analysis we shall abstract from this aspect, and assume that they are maintaining a balance between these objectives in a manner that is optimal from their standpoint. In the latter part of the analysis, we shall discuss the choice between the two—in terms of the choice between quality and quantity of higher education.

The relationship between the demand and supply of higher education, and the perceived shortage of faculty is explained schematically in the following diagrams. The gap between demand and supply of higher education is commonly attributed to faculty shortage. However, this need not always be true. We examine below a few illustrative scenarios, where the cause of inadequate availability of higher education varies.

[12] The demand for permanent faculty may be viewed in economic terms as being similar to the acquisition of an investment good by a firm. In other words, like infrastructure, permanent faculty is a stock that yields a stream of faculty services over a long period. Its quality and productivity can be enhanced by further investment. In this discussion, we have abstracted from this aspect of faculty demand and treated faculty resources as a variable input.

CHART 1

Determinants of the Demand for Faculty Resources



Situation 1 : Excess Demand for Higher Education without a Faculty Constraint

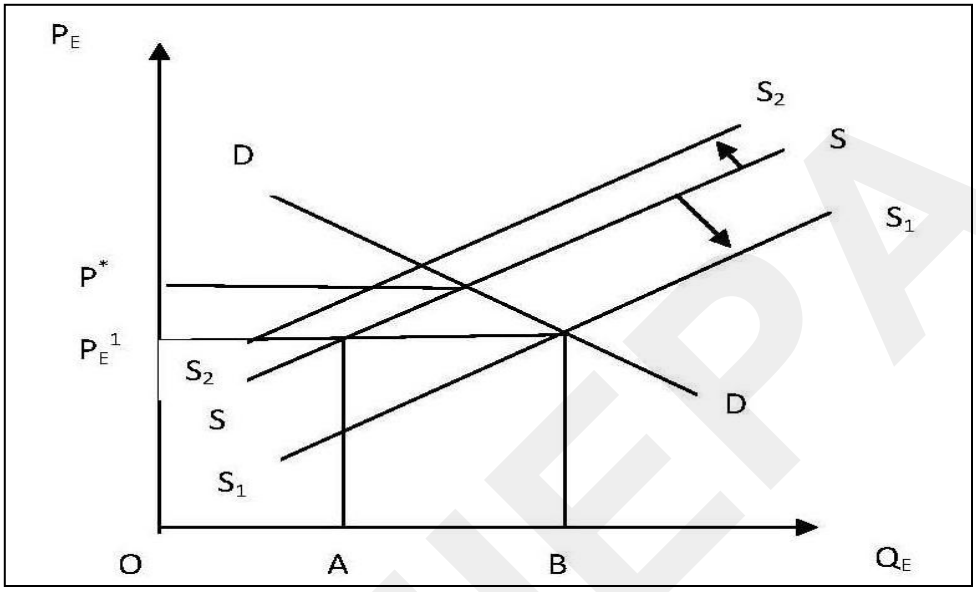
Figure 1 illustrates a situation of excess demand (or shortage) of Higher Education. DD is the demand curve for higher education. The horizontal axis measures the 'quantity of higher education' (Q_E). This represents the demand for degrees/diplomas from students. Thus, the quantity measured on the X-axis is the number of degrees/diplomas demanded and/or supplied during each academic year. The price of higher education (tuition fees) is measured along the Y-axis (P_E). As explained above, the demand is a function of the tuition fees (price of higher education). Other parameters affecting demand include the number of student-aged population, with adequate pre-college qualification, and the 'desired gross enrolment ratio').[13] The SS curve depicts the initial supply of higher education as a function of the price of higher education.[14] Apart from the tuition fees charged, the supply of higher

[13] Changes in any of the other variables, e.g., the desired GER, would cause the demand curve to shift in position.

[14] We assume here that the market for higher education has many service providers who compete with each other. None can exercise monopoly power to influence the market price. Following standard economic logic, for any given level of price P_E, net-income maximizing providers of higher education services would supply education quantity up to the point at which the price equals the

FIGURE 1

Excess Demand for Higher Education Services without Faculty Shortage



education depends also on other sources of income, and/or financial support received for provision of higher education (grants from government, and/or non-government sources, endowment income, etc.), the price (salary) of faculty inputs to deliver teaching services, and the policy and regulatory requirements that must be fulfilled by the educational institutions.[15]

It is obvious that institutions can try to dilute the quality of higher education services in an effort to lower costs.[16]We shall assume initially that the academic institutions supply higher education services at a fixed level of quality. If the higher education sector operated according to purely market principles, then the market for higher education would be in equilibrium at price P^*. However, this market price might not be deemed socially acceptable on grounds of equity and the implied financial burden for an "essential" service may be seen as too high. Therefore, policy makers and/or regulators may impose an effective ceiling price. The diagram illustrates what would occur if there were a policy-determined or regulator-determined price P_E^1. In this case, there would be a shortage of higher education of an amount AB, since the supply would be OA and the demand would equal OB.

marginal cost of supplying an additional unit of education. Hence, the supply curve coincides with the marginal cost curve. Increasing costs of faculty resources would raise marginal costs and make the supply curve less price-elastic (i.e., steeper in slope). In this paper, we have not extended the analysis to academic markets with non-competitive structures.

15 We assume in this case that faculty services are in relatively elastic supply. If salaries are raised moderately, faculty may be recruited in the academic market place.

16 This can be done in a variety of ways. The most common methods are to increase the class size per teacher, lower the quality of academic infrastructure, and intensify the teaching load of faculty.

One way to close the gap between demand and supply of higher education is to restrain the demand for higher education by sharply raising the standards required to qualify for admission. This would cause the demand curve to shift to the left. This phenomenon may be observed in the case of certain types of professional education institutions focusing on law, management or engineering, where the excess demand is particularly obvious.[17] This solution may not, however, be optimal from the viewpoint of society as whole.

It is not unlikely that in this type of situation, the higher education institutions might argue that there is a faculty shortage. If faculty resources were more plentiful, their salary would fall, and this would enable the institutions to increase supply and close the gap. However, this would be a wrong diagnosis of the problem. What this actually reflects is the fact that there would be a faculty shortage only if an attempt is made to lower the existing levels of faculty salaries. The basic reason for excess demand for higher education here is that the price for higher education is lower than equilibrium, and that, at existing costs, higher education institutions have no incentive to supply the level required to eliminate the gap. As depicted in Figure 1, the supply curves of higher education are fairly elastic, indicating that there are no severe supply-side difficulties in a structural sense (arising from faculty unavailability in a physical sense).

The problem can be addressed by improving the incentives of the higher education institutions by means of either freeing the tuition rates that they can charge, or, alternatively, provide subsidies and/or grants so that the supply curve shifts to S_1S_1.

Under these conditions, if the policy response focuses, instead, on trying to improve the supply of faculty by mandating better salaries and working conditions, this would not ameliorate the situation. The problem might get worse if it raises the cost of production of the institutions, unless there are accompanying measures to relax the financial constraints of the institutions.[18] This is depicted in the diagram as a shift to the left of the supply curve to position S_2S_2. This would worsen the gap between demand and supply of higher education. Hence, the ability of institutions to earn more revenue or to tap other income sources should be at the core of any solution aimed at improving supply of education. In this connection, it is easy to understand the phenomenon of institutions attempting to introduce separate 'self-financing courses' with higher fees that was reported by many of stakeholders to the Task Force. A third approach to the problem would be to intensify the work-load of the existing faculty pool by mandating greater sizes of student enrolment or by increasing the teaching load. This would cheapen the cost of faculty services to the institutions. As we shall see below, there are negative implications of such an approach for the quality of education.

[17] For example, nearly 186,000 candidates appeared for the Common Admission Test (CAT) in 2012. They were seeking admission to the Indian Institutes of Management, which admitted just about 2800 students in all. In other words only 1.5% of the applicants were able to gain admission.

[18] We are examining the effects in the short and medium term. If the higher faculty salaries bring forth a very high increase in faculty resources supplied, it is theoretically possible that the supply curve for higher education may actually increase. In that case, the shortage of higher education will reduce—unlike what is depicted in Figure 1.

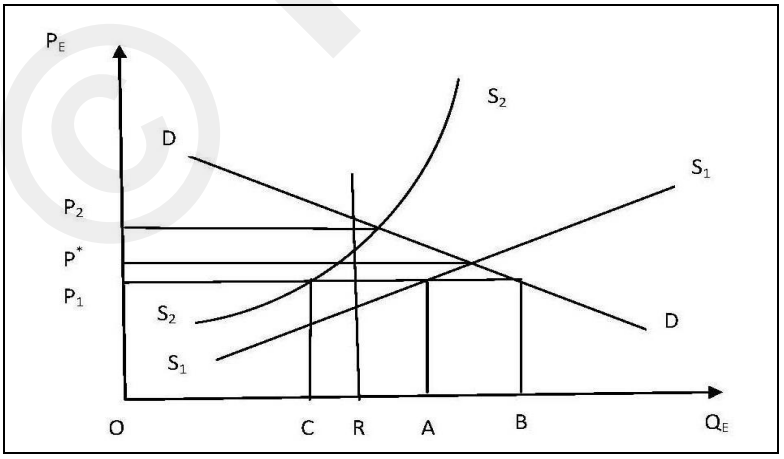
Situation 2: Excess Demand for Higher Education under Conditions of Faculty Shortage and Restrictive Policy

Figure 2 illustrates a situation where there are two different types of constraints on the ability of the higher education institutions to provide education services. The first is a scarcity of faculty available due mainly to the fact that alternative job opportunities are preferred by potential teachers and researchers. The figure shows two different supply curves reflecting alternative cost conditions faced by academic institutions. The S_1S_1 curve depicts the situation discussed earlier in which the supply curve is relatively elastic. This represents the condition where higher education supply can be expanded with modest increases in price because faculty resources are available in the market. The second supply curve S_2S_2 turns steep after a certain level of education has been supplied. The point of inflection marks the level beyond which the availability of faculty has become scarce, due to underlying structural factors.[19] Beyond this point, the price of education would have risen to elicit additional supply, because marginal costs increase. We continue to assume that the price of higher education is subject to an upper limit due to policy and/or regulation. This price is P_1, while P^* is the market-clearing equilibrium price when the supply curve is S_1S_1. When supply becomes inelastic the market clearing price is even higher at P_2.

Figure 2 shows that when the supply curve is relatively elastic (S_1S_1), the excess demand for higher education is AB (=OB-OA). But, in the case where the supply curve is less elastic due to faculty resource scarcity, the gap is larger given by BC. We see that there is an increase in the level of excess demand for higher education in the case where there is a scarcity of faculty. In other words, BC is larger than AB. Thus, faculty scarcity exacerbates the excess demand for higher education but does not create it.

FIGURE 2

Excess Demand for Higher Education with Faculty Shortage and Policy Constraint



[19] There could, however, be some reasons other than faculty scarcity for the supply curve to become inelastic. This includes constraints in expanding academic infrastructure, which could be due to funding constraints.

Apart from faculty scarcity, there could be other reasons why higher education institutions cannot increase the supply of higher education. Policy induced restrictions may be a distinct and separate barrier. Among the problems that were brought to the attention of the Task Force was the fact that several Central and State universities had to impose a "hiring freeze" for an extended period. This was related to strained fiscal conditions of government budgets. There could be other sources of similar constraints. For example, there could be long delays in obtaining regulatory clearance to open new campuses or institutions or courses of study. The important task from a policy standpoint is to recognize which of these two types of constraints is binding. In Figure 2, OR represents the limit to provision of higher education posed by such a policy constraint.[20] When the supply curve is elastic (S_1S_1) the supply will be OR, indicating that now the effective constraint is the policy constraint, and, thus, the excess demand will be RB, which is higher than AB. In other words, faculty shortage is not the reason for the observed excess demand for higher education.

As far as remedies are concerned, we can see from the figure that efforts to increase the supply of faculty will have little impact on the core problem when the policy constraint is binding. Unless the binding constraints can be relaxed, the problem of excess demand cannot be mitigated.[21]

What would be the situation when the policy constraint is not binding?

Figure 2 also illustrates this situation. Consider what happens when S_2S_2 is the supply curve. In this case, OR (the policy constraint) exceeds OC, which is the market supply at price P_1 (the administratively fixed price). In this case, the policy constraint is not the binding constraint but rather the relative shortage of faculty. At the mandated price of higher education, the supply of education is OC and the demand is OB. Hence, the excess demand for education is amount BC.

What are the appropriate remedies in this situation? In this situation, relaxing the policy constraint on expanding higher education services will not be effective. The immediate steps should address ways of relaxing the faculty shortage through a variety of short-term measures. This will improve the supply of education to some degree, and the supply curve would shift to the right, while still remaining inelastic. There may still be a persistence of some excess demand. Alternatively the price ceiling can be lifted, and this will reduce demand. However, the danger in this approach is that the demand for higher education can tend to get skewed towards those courses of study where the potential economic returns are high enough to justify the higher fees paid by students.[22] The long-term solution would be to take steps to improve the entry of larger numbers of qualified professionals into the teaching/research careers, and ease infrastructure constraints so that the supply curve for higher education assumes the elastic shape of S_1S_1, while it also shifts to the right. Some relaxation of the ceiling price for education might be needed if the entry of new faculty also

[20] For the sake of expositional simplicity, we have depicted OR as a rigid barrier. It may still be possible to increase the supply of higher education in this situation by increasing faculty work-loads and/or reducing education quality.

[21] We do not deny that there may be good reasons for the policy or regulatory constraints. Our analysis suggests that these require prior resolution if the larger objective of providing an adequate level of higher education services is to be met.

[22] This phenomenon is quite evident in case of professional degrees/diplomas in management, engineering, law and medicine.

requires higher salaries and other institutional costs towards providing better academic environments, unless this is feasible through grants or endowment income.

In this sub-section, we have discussed the essential features of the market for higher education, in relation to both demand and supply. We have analyzed the economic logic of decision taken by academic institutions with regard to the supply of higher education, as they try to maximize their net income subject to a variety of constraints. In other words, we have assumed, until now, that higher education services are supplied, while maintaining a given level of quality. We have seen that the core problem of excess demand for higher education can arise from different sources, of which scarcity of faculty resources is only one source. The effective constraint on greater supply of higher education can vary depending on the context. It could be faculty scarcity in some circumstances, but other effective constraints have been identified in the above discussion.

Academic institutions make both output supply and input demand decisions. We have, in this section, examined the former. With regard to the shortage of faculty resources, it is the input demand decisions of academic institutions that are directly important. We now turn to an analysis of the market for faculty resources.

The Market for Faculty Resources

The Demand for Faculty Resources

To summarize the argument thus far, the **demand for faculty** is determined on the basis of the economic decisions made by the higher education institutions. These decisions reflect their economic and strategic objectives as well as the constraints of their operating environment. Since the mix of institutions that provide higher education services is quite diverse, we would expect that the nature of their demand for faculty would vary significantly. It is, therefore, necessary to take these differences into account in specifying the logic of their faculty resource decisions. Figure 4 illustrates the simple analytics of the demand for faculty resources. The assumptions underlying the diagram are as follows: (1) Academic institutions have made a prior decision (based on the logic discussed above) about the quantity of higher education services that they will provide during the year. (2) They have also decided to offer these services at a certain level of quality. (3) Certain quality norms have been set by regulators that they are expected to respect. This would imply (among other requirements) that they maintain a certain minimum level of faculty, with the appropriate levels of qualifications. (4) There are upper limits to the level of faculty inputs that are effectively set by policy-makers/regulators. These may have to do with limits on the number of sanctioned posts, or with a fiscal crisis-induced freeze on recruitment, or with the permission to offer new courses. (5) Subject to all the above conditions, the academic institution attempts to maximize its net income. A diagrammatic representation of the demand and supply for faculty resources is shown in Figure 3.

In Figure 3, the quantity of faculty inputs is shown in the X-axis, while its price (faculty salary) is measured along the Y-axis. The demand curve D_fD_f for faculty services under the above assumptions, following standard economic analysis, is given by the Value of the

Marginal Product curve.[23] The curve depicts the demand for faculty resources as a function of the salary that is paid for them. As discussed above, other factors cause a change in the demand for faculty resources, which are taken as given parameters.[24]These parameters are:

- The quantity of higher education to be supplied
- Regulatory norms and official permissions governing cadre structure, and infrastructure requirements
- Flexibility with regard to starting new academic courses[25]

From stakeholder consultations, the Task Force has noted that, in recent years, the market for higher education has tended to get fragmented. The demand for professional education courses, that promise higher income prospects, has expanded much more rapidly, relative to the liberal arts and sciences. This factor has affected the functioning of the sector. This has led to a corresponding increase in the demand for faculty resources in these fields. At the same time, the supply of faculty resources has also shown a differential trend. The pattern of supply seems to be as follows. There has been a general slowdown in the supply of faculty resources. For ease of exposition, we show this as a left-ward shift of the supply curve for faculty resources.[26] In addition, the supply of faculty resources in the professional and technical disciplines has tended to contract more sharply than in other disciplines so that the faculty shortage issue is more severe in these areas.

The Supply of Faculty Resources

The supply of faculty may be viewed in relation to the (a) appropriate time frame and (b) both the quantitative and the qualitative dimensions. Faculty availability can be enhanced by actions that are effective in the short run, the medium and long term. The long term dimension may often tend to be neglected in order to address pressing requirements of the present. However, it is necessary to address the long-term structural issues that are the fundamental contributory factors to the phenomenon of faculty shortage. Moreover, actions that expand the supply of faculty in the short run, may not be adequate to ensure that the quality of academic faculty is maintained and improved. This consideration is strategically important in the context of India's aspirations as a "Knowledge Economy".

The long-term supply of faculty is determined by structural features of the Indian economy as also specific characteristics of the higher education sector. There is a general

[23] The diagram incorporates standard economic analysis of input markets. A key assumption is the law of diminishing returns, i.e., the marginal product of any input (e.g. faculty time) falls as more of it is utilized with fixed quantities of other inputs (e.g., class rooms and academic infrastructure). Net income maximization by the institutions will lead them to hire faculty inputs up to the point where the cost of 1 unit (the salary or wage) will equal the value of the marginal product yielded by that input.

[24] When they change, this results in a shift in the position of the demand curve (to the left or right depending on whether the impact on demand is positive or negative).

[25] This flexibility depends on the extent of autonomy enjoyed by the academic institutions, their credibility and reputation as well as the financial position of the institution.

[26] There is no hard evidence to suggest that the supply of faculty resources at any given salary level has actually shrunk in absolute terms, but this is the strong impression of most observers—particularly if we assume that the quality of faculty is kept constant.

consensus among the key stakeholders that the basic constraint on the supply of faculty is the *relative economic unattractiveness of the academic profession* in the current circumstances. The incomes earned by faculty are below those available at the entry level in alternative professions for persons with comparable intellectual capability and educational attainment. The situation has been exacerbated in the post-reform high-growth rate scenario. This trend has affected professional and technical education sectors more severely. In the case of liberal education, the problem is less severe. However, the perception itself that programmes in humanities, social and natural sciences are not expanding in academic institutions has had a broad-based negative impact of faculty supply. Hence the long-term supply of faculty needs to be addressed through policy measures that restore the attractiveness and status of the academic profession.

Monetary incentives are not the only, nor perhaps the most significant influence on the decision to take up an academic career. Apart from salaries, other important structural determinants of the supply of faculty resources include:

- Service conditions (e.g., teaching workload, opportunities for research, administrative facilitation)
- Salaries obtainable in other professions and employment, with comparable qualifications
- Career advancement prospects (e.g., promotion, skill upgradation programmes, possibilities for external recognition of research)
- Institutional reputation (i.e., faculty resources would tend to shift to an institution with a better reputation, and there would be less attrition)
- Better post-retirement benefits
- Providing prestigious fellowships for inducting talented scholars towards PhD work and academic careers

The above key steps would improve the attractiveness of academic careers and enhance the long-run supply of faculty resources.

In addition, the supply of faculty resources may be enhanced in the short to medium, term by certain other measures. Several of them would have a one-time impact on the supply of faculty resources. These include:

- Increasing the opportunities for participation in academic work by other potential teachers and researchers[27]
- Relaxation of the age of retirement of faculty
- Creation of posts such as emeritus professor/fellow
- Creating policies for "brain gain" that attract NRIs and other international academic personnel

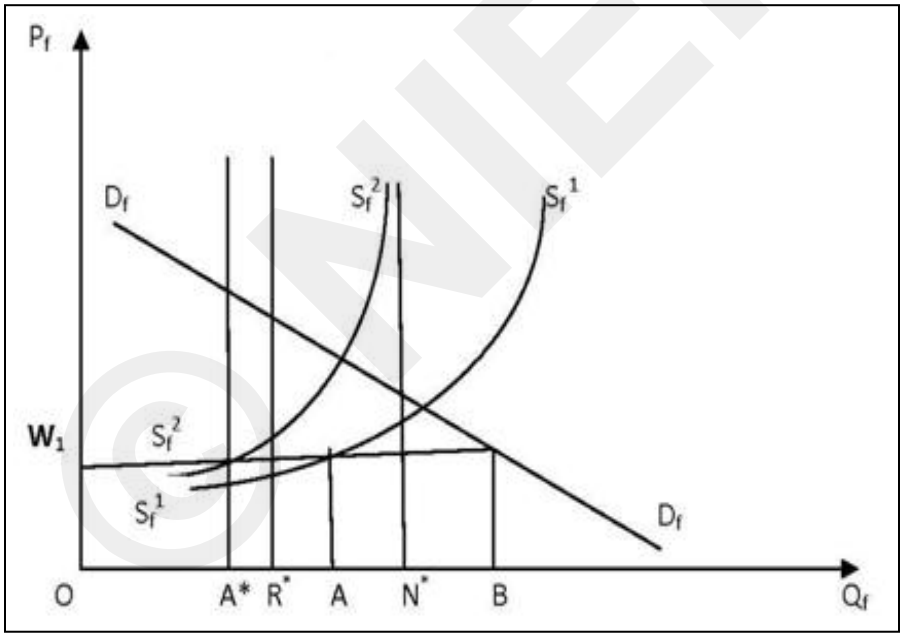
[27] There is a large pool of technically qualified researchers and practitioners who might be willing to teach part-time. But under current conditions they are unable to supply teaching and/or research services to academic institutions. Their potential to ease the faculty shortage is increasingly recognized. The UGC has instituted a scheme for the purpose. Typically, several categories of faculty appointments could be made that are more adaptable. These include adjunct faculty, visiting faculty, and international visiting fellows, with more flexible terms and conditions.

The diagram (Fig. 4) depicts supply curve(s) for faculty resources as a function of the price (salary). Changes in any of the other parameters listed above would cause a corresponding shift in the supply curve.

Figure 3 illustrates the working of market for faculty resources. The quantity of faculty resources is measured on the X-axis and the price (faculty salary) on the Y-axis. The D_fD_f line is the demand curve. As explained above, this corresponds to the "value of marginal product of faculty resources". It is drawn on the assumption that other parameters affecting the demand for faculty resources are given. In particular, it corresponds to a particular quantity of higher education services that the institutions have decided to provide. Two illustrative supply curves are shown. They represent two different configurations of supply in two consecutive periods. $S_f^1S_f^1$ and $S_f^2S_f^2$ are the supply curves in periods 1 and 2 respectively. The supply curve in the latter period shows a shift to the left reflecting the general trend of shrinkage of faculty supply for reasons discussed above.[28]

FIGURE 3

Demand and Supply of Faculty Resources



$S_f^1S_f^1$ is the initial supply curve for faculty resources. The curve becomes steeper (more inelastic) as Q_f increases because, beyond a point, there is a growing scarcity of faculty

[28] To keep the diagram simple, we present this situation in terms of a given demand curve and shrinking supply curves. In reality, the demand curve is likely to have shifted to the right as the demand for higher education has expanded, whereas the supply curve has either shrunk or expanded much slower than the expansion in demand. In any case, the net effect is as depicted in the figure.

services. In a free market, the market clearing price and quantity would occur at the intersection of the demand and supply curves. However, Indian faculty salaries have been traditionally determined by administrative norms, and this condition continues. The faculty salary is, thus, assumed to be given at the level W_1. There are certain other regulatory or policy-related bounds on faculty utilization. OR^* is the minimum level of faculty recruitment that is mandated by the regulatory authorities. This corresponds to quality specifications, such as maintaining a minimum level of faculty-student ratio. Similarly ON^* shows an administratively set upper limit on faculty resources. This corresponds to the number of "sanctioned posts".

The diagram yields the following insights. We notice that the actual shortage of faculty resources when the faculty salaries are given at W_1 is equal to amount AB. This is the gap between faculty demand and supply. The actual shortage is seen to be greater than the number of "unfilled" positions relative to the number of sanctioned posts, which is given by AN^*. Hence the standard practice of measuring faculty shortage relative to sanctioned posts is inaccurate, and could be potentially misleading for policy-makers. In period 1, there are no violations of any regulatory norms. The actual utilization of faculty resources is OA, which is within both the upper and lower bounds.

Consider the situation in period 2. The supply curve for faculty resources has contracted. Not surprisingly, the actual faculty shortage has increased to A*B from AB. However, in this case, there is likely to be a violation of regulatory norms because at the given salary level it is not possible to maintain the minimum required faculty resource level OR^*. The available supply is OA^* which is less. There would be a decline in quality of education supplied because faculty inputs to deliver the required standard cannot be obtained. What would be the likely consequence? The institutions would attempt to effectively shift the supply curve back to its original position. Likely responses from the institutions would be some combination of the following: (a) under-supply higher education to maintain quality, but at the cost of creating a shortage in higher education; [29](b) try to expand the faculty supply through short-term measures, such as use of temporary faculty and lowering of entry barriers into the teaching profession;[30]and (c) lower the effective cost of faculty resources by intensifying the workloads of existing faculty by demanding more teaching hours per year.[31]

It is possible to extend this analysis to the case where the market for faculty becomes fragmented due to differential trends in the patterns of demand and supply. The Task Force learned from its consultations with stakeholders that certain segments of higher education, linked to professional education, has experienced much sharper rise in demand, compared to the arts and sciences. This is largely due to the perceived difference in income prospects. At the same time, the supply of faculty resources in those very disciplines has tended to decline. The reason is that there are better income opportunities outside academia in these disciplines due to increased job opportunities and lucrative private practice. It would be

[29] This seems to be happening in the case of engineering, law and management in the reputed institutions.

[30] Unless there are adequate processes in place for certification and quality control, this option also could diminish the quality of education supplied

[31] This line of action would also have a negative impact on quality of education. Moreover, by pre-empting the time of the existing faculty members from research, this would eventually lower the academic reputation of the institution.

more appropriate to analyze the two sub-markets separately rather than in the aggregate as done in Figure 3. Though a separate diagrammatic analysis is not presented here, it is easy to see that in such a situation, there would be a marked difference in the intensity of faculty shortage between the two segments of higher education, if the faculty salary is the same in both segments. We may term these as the "high shortage" and "low shortage" sectors respectively. Under such market conditions, we would expect the "high shortage" segment to experience a great pressure to increase faculty salaries to enhance supply. They would also be inclined to charge higher tuition fees for these courses. If raising salaries and tuition fees in the high-shortage segment is not permitted for some institutions, but is possible for others, it will lead to a fragmentation among the higher education institutions themselves. Institutions that can operate on commercial principles will tend to specialize in the high shortage segments. They would be tempted to "poach" faculty from other more regulated institutions, and this, in turn, would lead to a secondary negative impact on the supply of faculty resources to the "low-shortage" sector, because of relative disincentives. The response of institutions in this sector is likely to include lowering costs and enhancing faculty resources through lowering entry barriers, and endangering quality.

From the above discussion, we can clearly discern the inter-relatedness of the problem of faculty shortage with the quality of faculty resources and of higher education itself. It seems important, therefore, to examine the relation between quantity and quality in more depth.

The Balance between Quantity and Quality of Higher Education

Higher Education institutions produce both a certain quantity of higher education as well as quality. Until now in this chapter, we have discussed economic decisions by academic institutions, relating to both output (higher education services) as well as input (faculty resources), in quantitative terms, assuming that the quality is being maintained at a particular level. However, it is useful and more realistic to consider quality of higher education as an element of conscious decision made by institutions. Hence, we shall extend our framework to analyze the quality-quantity configuration as a joint decision. In situations of rising demand for higher education and associated shortage of faculty resources, there is an inevitable trade-off between quality and quantity. Typically, the service providing institutions must make a choice, and strike the most advantageous balance between quantity and quality. This aspect of the problem confronting higher education is not explicitly recognized in the discussions of faculty shortage. However, this is a crucial aspect of policy because the effectiveness of higher education, both for the students as well as for society as a whole, ultimately depends on its quality.

Threat to quality of higher education arises from the choices made by the delivery institutions in different market situations. Regulatory bodies often find that imposition of stricter quality norms is not easily enforceable.[32] This holds even where regulatory functions have been delegated to other academic bodies, such as the university vis-à-vis its network of affiliated colleges. The arrangement is not very effective. The universities are not accurately

[32] These norms typically relate to the maintenance of minimum teacher-student ratios, an appropriate cadre structure of faculty composition with respect to different levels of seniority, and adequacy of academic infrastructure.

informed about faculty presence in the colleges. Quality is compromised in publicly-funded institutions and also qualified faculty members are 'poached' from older established public institutions by new more commercially run private institutions. Some higher education institutions attempt to meet the challenge of faculty scarcity by increasing the workload of existing faculty members. While this strategy might serve to increase the quantity of higher education, it typically leads to lowered quality.

An extension of the analytical framework to sketch the key elements of this choice between quality and quantity of higher education is attempted here. It is useful to conceptualize the activity of an institution as the production of both Quality (Q_L) and Quantity (Q_N) of higher education. Institutions produce Q_L and Q_N given a particular configuration of academic infrastructure and faculty resources, as well as regulatory and other institutional norms. Given its operating budget during any particular year, the institution allocates its resources in between Q_L and Q_N in order to maximize its net returns.[33] Thus, the choice of the proper balance between quantity and quality of higher education is the key decision that institutional administrators must make. Indeed, the whole point of policy steps to increase faculty resources to relieve the gap would be lost if this were to be accompanied by a marked decline in quality.

We treat quality and quantity of higher education as two analytically separable 'outputs' of higher education institutions. We may measure Quantity of Higher Education (Q_N) in terms of the number of academic degrees/diplomas produced. Essentially, this reflects the throughput of students in the institution. The institutions can supply 'quantity' by providing essential physical infrastructure, and routine academic processes, such as classroom instruction and examinations. The economic return from this activity can be measured by the payment received by the institution as tuition fees. The Quality of Higher Education (Q_L) is more difficult to measure precisely. However, it has several generally accepted elements. These include academic rigour in courses and instruction, the relevance of the content of courses in terms of being upto date and in consonance with what graduates would need as they enter employment, the ability to provide adequate choice to students through elective course offerings, the ability of the courses to build self-confidence in students so that they can think independently and creatively, and so on. It is clear from the above that, though students experience quality and quantity of higher education jointly, from the institutions point of view, these two 'outputs' can be supplied relatively independently of each other. Most importantly, the institutions can choose the combination of quality and quantity of higher education that they wish to supply.[34]

Quality can be developed and enhanced through ensuring the presence of the following enabling factors[35]:

- Attracting and retaining Talented Faculty members
- Academic Autonomy (to enable flexibility in curriculum design and delivery)

[33] The concept of returns to quantity produced is straightforward, but this is not easy to conceptualize in the case of quality. We shall discuss this aspect below.

[34] We assume that any higher education institution will produce positive amounts of both quantity and quality of higher education. This assumption rules out economically meaningless choices such as zero quantity and positive quality.

[35] Most of these quality enablers are highlighted by the National Knowledge Commission (2006, pp 62-90).

- Regular review and revision of the curriculum[36]
- Research Capacity (so that new knowledge is created and infused into teaching)
- Sufficiently high Teacher-Student Ratio (to enable closer interaction with teachers)
- Improved examination systems that encourage continuous assessment systems throughout the academic year
- Moderate Faculty Teaching Workload (that allows sufficient time for research)
- Academic Infrastructure (libraries, laboratories, connectivity) that is upgraded regularly
- Schemes for training and skill-improvement of teachers (e.g., paid sabbaticals)

All of the above factors, that are positively associated with quality of education, require careful planning and conscious decisions by institutions. More important, they require considerable commitment of resources. Some of these—such as faculty quality, academic autonomy and institutional mission and relevance are difficult to measure. They can be approximated by proxy indicators.

What can be said about the return to such investments? What is the motivation for institutions to incur quality-enhancing expenditures? Apart from the consideration that a certain quality parameters are mandated by regulators, there are several long-term benefits from high quality. The most important benefit is the fact that quality is the most crucial input in building "institutional reputation". A strong reputation is gradually built up over time through the long term sustained satisfactory experience of its stakeholders. A good reputation is of enormous economic value to academic institutions (in a manner analogous to the 'brand value' of corporations and products). Reputation enables them to (a) attract larger numbers of talented students; (b) allows them flexibility to begin new courses and to innovate; (c) attract talented faculty members; (d) raise funds from other sources—such as foundations, consultancy and research grants; (e) enhances their credibility to enter national and international academic collaborations with other respected partner institutions; and (f) it also provides them the capacity to charge higher tuition fees in the long run. These obvious benefits notwithstanding, it is difficult to measure both the "amount of quality" produced[37] as well as the net economic returns to expenditure on quality. However, it is possible to regard the expenditures incurred on these items as a "long term investment" in reputation, for which the institution's management receives an "expected return".[38] While, it is a notional amount, it is important in deciding whether or not quality enhancing expenditures should be incurred. We shall term this return on the additional rupee spent as the "Value of the Marginal Product of Quality". Given the difficulty in measurement, the analysis in this section should only be taken as illustrative and indicative of the broad directions of change.

With regard to quantity, we shall measure it, as before, in terms of the number of degrees granted per year. This enables the institution to earn an income through tuition and

[36] In the case of professional courses, the curricula should have inputs from external stakeholders to ensure contemporary relevance.

[37] In principle, it is possible to construct an index of the quantum of quality based on the levels of quality-enhancing indicators noted above. This exercise has not been attempted here.

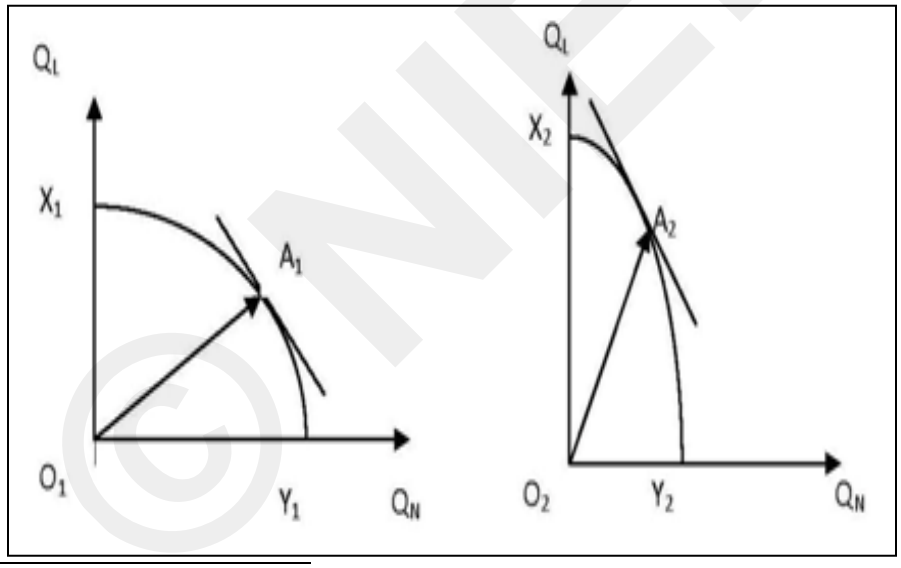
[38] This return is analogous to Keynes' idea of the marginal efficiency of investment—which is also based on the concept of an expected return.

related fees to deliver any quantity level costs resources. The return on the additional rupee spent on generating higher education quantity can be termed as *"value of the marginal product of quantity".* [39]

We assume that decision-makers in an academic institution allocate their current operating budgetary resources in a rational manner towards the production of two distinct 'outputs', viz., quality (Q_L) and quantity (Q_N). Their decision results in producing a particular optimum combination of quality and quantity that maximizes their objective function based on the relative price of quantity and quality.[40] The price received for quantity is the tuition fee. The price received for higher quality can be approximated by the inflows from grants received, research support and consultancy income. It should also be noted that academic institutions can differ with regard to their ability to produce quality and quantity. This capacity depends on the existing levels of academic infrastructure, faculty resources commanded and operating systems for producing quality and quantity respectively.

FIGURE 4

The Choice between Quality and Quantity of Higher Education by Differently Endowed Institutions



[39] The value of marginal product of quality equals the 'price' received for quality multiplied by amount of 'quality' produced by the expenditure of the incremental rupee spent on quality. As explained above, this price is an expected amount that institutions believe a unit of quality to be worth. Since the pecuniary returns from quality will accrue in the future, while the returns from quantity are realized immediately, there is an implicit choice embedded in this value between gains made in the present vis-à-vis the future. It should, in theory, be equal to the present value of the expected stream of future incomes that accrues from a unit of quality. The value of the marginal product of quantity may be defined in a similar manner, except that the measurement of both its price and magnitude is straightforward.

[40] For simplicity, we may suppose that the objective function is the weighted sum of quantity and quantity, where the weights are the 'prices' received for quality and quantity respectively.

Figure 4 illustrates the logic of the framework thus far developed. The capability to produce quality and quantity may vary significantly across higher education institutions, depending on their existing physical infrastructure, as well as faculty stock and quality-enhancing systems and processes. We, therefore, distinguish between two distinct types of higher education institutions. The maximal combinations of quality and quantity attainable, given the existing resource endowments, from a technical standpoint are given by the two 'production possibility curves' ($O_1X_1Y_1$ and $O_2X_2Y_2$). They represent the production capabilities of the two different categories of academic institutions. $O_1X_1Y_1$ is the curve pertaining to Category I which has relatively greater capability in producing Q_N. On the other hand, the Category II academic institution has a relatively greater competence in producing Q_L. The convex shape of the curves reflects the economic principle of diminishing returns. In other words, it shows that as resources are shifted from say production of quantity and deployed in producing quality, the additional unit of quality is available at an increasing opportunity cost (in terms of how much quantity must be sacrificed). The difference in shape of the two curves clearly indicates this underlying difference in relative capabilities. Figure 4 also shows that, confronted with exactly identical prices for quality and quantity, the optimum combination of quality and quantity chosen by the two categories of institutions will differ, in a manner that reflects their relative capabilities. The Category I institution would operate at point A_1, while the Category II would choose the point A_2.[41] It may be observed that the ratio of (Q_N / Q_L) at A_1 exceeds that at A_2, as is evident from the difference in the slopes of the lines joining A_1 and A_2 to the origin. The policy implication from this observation is that even if the 'price' of quality were to be raised relative to quantity, the Category I institution would remain laggard in quality, unless adequate steps are taken to improve their quality-enhancing infrastructure and faculty resources to bring about greater parity with Category II institutions. These steps, as noted above, would include a range of investments that, over time, enhance the quality producing capacity of the Category I institution.

The analysis above concerns comparison of two types of institutions at a point in time. However, it is also possible to interpret it in terms of a comparison over time. An institution which neglects to maintain quality and permits its research infrastructure and its talented faculty pool to decay will find that its production possibility curve shifts over time. Thus, an institution can, over a period of time, be transformed from a Category II institution into a Category I institution. A case could possibly be made that some of our universities have undergone precisely such a transformation. They are much less of research hubs and have become much more of purely degree granting institutions than they were a few decades ago. A similar transformation would occur if the process of "poaching" of talented faculty members from older established public institutions by newly set up private or newly licensed foreign institutions were to take place.[42]

---

41 The diagram shows A_1 and A_2 as the points of optimum choice by the two institutions. These are the points of tangency between the lines representing the objective functions with the respective production possibility curves. These are the highest values of the objective functions attainable. The lines of tangency are parallel to each other indicating that the relative price of quality to quantity that both institutions face is identical.

42 As noted earlier, this phenomenon of poaching of faculty was cited by several stakeholders during deliberations with the Task Force.

The allocation decision made by institutions with regard to their operating budget is explained by Figure 5, which is an alternative depiction of the choice shown in the preceding figure. Let us assume that both the Category I and the Category II institution have the same size of operating resources that they must allocate either towards producing Q_L or towards Q_N. This is given by OO/ which is the X-axis. Any point on the line OO/ represents a particular allocation of the operating budget between quantity and quality. Thus, for example at point A, amount OA is allocated to Quality, and the remainder of the budget O/A is allocated towards Quantity. The two vertical axes (OY and O/Y/) measure the *Value of the Marginal Product of Quality* (VMP_L) and the *Value of the Marginal Product of Quantity* (VMP_N) respectively.[43] The VMP_L curve and the VMP_N curve respectively are plotted in the diagram against the amount of operating funds that are incurred towards them. These curves are drawn on the assumption that P_L (price of quality) and P_N (price of quantity) are exogenously given to the institutions.[44] Here, PP_1 and PP_2 are two curves for VMP_L that pertain to the Category I and Category II institutions respectively. The curves have a negative slope because of the principle of diminishing returns, i.e., given a particular stock of infrastructure and resources, the additional amount of quality of higher education produced by each successive rupee of operating expenditure falls. The slope of PP_1 is steeper than PP_2 because, by assumption, the Category I institution has less of quality enhancing resource endowments than the Category II institution. Similarly, we can draw the curve for VMP_N. For simplicity, let us assume that both institutions have the same VMP_N curve, but differ only in respect of production of quality. RR and R*R* represent two such VMP_N curves. Each of these curves is drawn with reference to a given price (P_L). R*R* refers to a situation where the price of quantity (tuition fees) is higher, and, hence, it is drawn above the RR curve ($P_N^* > P_N$). Both these curves also have a negative slope for the same reason discussed earlier.

It can be easily shown that the optimum allocation of operating budget between Q_L and Q_N that maximizes the total returns is given by the intersection of the two relevant VMP curves.[45] In other words, the operating budget should be allocated so that the marginal returns from both quality and quantity are just equal. Thus, in situation 1, where the price of Q_N is P_N, the Institution I will choose A_1. It will allocate OA_1 of its budget towards quality and O/A_1 towards producing quantity. Similarly, the allocation decision by Institution II would be OB_1 and O/B_1 respectively. The diagram makes clear the fact that Institution I will allocate relatively higher proportion of its budgetary resources towards producing quantity compared to Institution II. This not only confirms the conclusion drawn from Figure 4, but also suggests that the future trend will be to further exacerbate the quality gap between the

[43] See footnote 39 for a discussion of the definition of the value of marginal product of quality and quantity. We assume here that in the short period that any institution, by spending more on quality, cannot, in the short run, bring about a discontinuous rise in its ability to generate more research-based income. In other words, the basic "institutional type" remains unaltered. This assumption justifies our postulating a diminishing 'value of the marginal product of quality' curve.

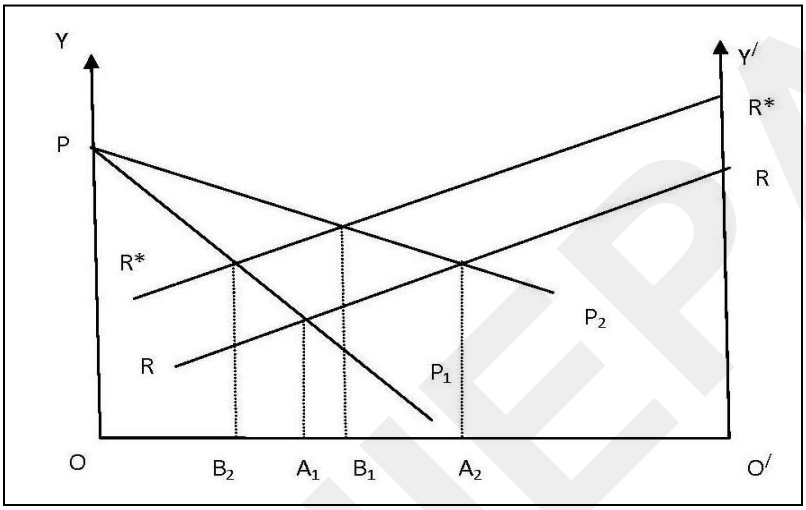
[44] As noted earlier, P_L is an expected price. The assumption reflects the idea that the institutions cannot themselves influence the price through the exercise of monopoly power.

[45] We are making an implicit assumption here that the curves depicting the value of marginal product of quality and quantity are *net* of marginal costs. Hence, these represent the values of net marginal returns.

two institutions. This is because it would spend relatively less of its internal funds on maintaining quality enhancing resources in each period.

FIGURE 5

The Allocation of Institutions' Operating Budget between Quality and Quantity



Let us now compare situation 1(with P_N) and situation 2(with P_N*). The optimum allocations by the two institutions I and II are B_1 and B_2 respectively. The diagram reveals the consequence of an upward shift in the VMP_N curve caused by a rise in P_N. This rise could be caused by a regulatory decision to allow increase in tuition fees or by allowing the institutions to start new high market value courses. A similar effect could also arise from sources other than higher tuition fees. If, for example, the institution was able to (a) intensify the teaching load of faculty members, or (b) induct less expensive faculty resources (say ad hoc teachers), or (c) use IT to lower the cost of education service delivery, the impact on the RR curve would be similar.

The impact of this shift in the VMP_N curve on the equilibrium allocation is evident. In both institutions, the result would be to bias the allocation of budgetary resources away from quality and towards quantity. If the size of the operating budget were to remain unchanged, the impact on quality would not be neutral. Quality would actually become lower. The situation is, of course, relatively more acute in the case of Institution I, but the direction of change in both cases would be the same.

The important question for policy and regulation is what could be done to maintain quality. There are several possible approaches.

1. One possible course of action is to mandate a certain level of expenditure on quality through regulation. There are, however, some potential obstacles to this approach. It can be easily deduced from the diagram that any allocation other than the perceived optimum would result in lower total returns. The institutions would consequently have a strong incentive to evade the regulatory mandate, implying the necessity of a credible enforcement mechanism. We should also note that the actual trend in policy

recommendations appear to be in the opposite direction. In the face of rising demands, the policy makers find it more convenient to mandate or recommend higher levels of quantity (say larger enrollments). While relieving the short-term quantity constraint, the long-term consequence of these would be to lower quality, unless careful counter-measures were taken.

2. The second approach is to directly improve the perceived benefits of quality. In other words, steps should be taken to shift upward the VMP_L curve. This could be done in several ways. This line of action is likely to be more effective because it would be in positive alignment with their institutional objectives. The most direct method would be to financially support the creation of quality enhancing infrastructure, talented faculty recruitment and retention, institutionalization of quality enhancing business processes and norms. Many of the recommendations of the Task Force, with specific reference to faculty resources, are along these lines. There are, however, certain other channels through which these actions could be reinforced. These are steps that ensure that the price P_L , received by institutions for producing quality, rises. The avenues through which high quality institutions are rewarded for their investments should be expanded—so that they can either earn a market premium or receive higher grants and support.[46]

Conclusion

The problem of faculty shortage is generally recognized as a key problem confronting the higher education sector. It is necessary for policy-makers and regulators to keep in view the close connection of faculty shortage with other problems and features of higher education. These problems include (a) the underlying structure and trends in demand and supply of higher education services from which the faculty shortage emerges; (b) the regulatory and policy context, and (c) the tension between providing adequate quantity of higher education services and maintaining high quality. This chapter has presented an analytical framework within which these inter-related problems can be examined. The analytical framework employs an economic logic to understand the behavior of academic institutions that provide higher education. Given an exogenously determined demand for higher education and the policy-cum-regulatory context, the decisions of academic institutions crucially determine the level of demand for faculty resources, as well as both the quantity and quality of higher education. Without their willing compliance, the effectiveness of policy and regulatory actions would be limited.

The analytical discussion presented here yields the following insights:

1. There is a close association between faculty resource scarcity and the excess demand for higher education services. However, it is not a rigid relationship. Even if there is no faculty scarcity in a structural sense, there could still be excess demand for higher education due to other reasons such as the controlled price of higher education services. If, in these circumstances, efforts are made to improve the

[46] There are several ways that this could be done. This would include stronger accreditation systems and linked-reward systems, among others. We do not develop these ideas here as it is beyond the scope of the Task Force mandate.

supply of faculty resources by mandating better salaries, it would be ineffective, unless, simultaneously, there is an enhancement of the ability of higher education institutions to earn higher income.

2. There could be a different type of constraint on the ability of higher education institutions to increase their faculty resources. This is the 'policy constraint', which sets an upper limit on the number of faculty members a higher education institution can recruit at a given point in time. Hence, it important for policy-makers to determine which is the binding constraint, and addresses this on a priority basis.
3. The market for faculty resources operates under a number of exogenously given parameters or norms. There include faculty salaries, the number of sanctioned posts and the minimum faculty-student ratio. Our analysis shows that, under these conditions, the actual shortage of faculty resources could be significantly higher than the shortfall as conventionally measured in terms percent of unfilled sanctioned posts.
4. Under conditions of severe under supply of faculty resources, higher education institutions would find it uneconomical to meet the regulatory quality norms, and hence, would be tempted to lower quality
5. If some institutions have the capacity to charge higher tuition fees while some others do not, this would lead to a 'fragmentation' of the market for faculty resources. Phenomena such as 'poaching' of qualified faculty members by the more liberalized institutions from the constrained institutions may occur. This would worsen quality in the latter.
6. Our analysis of the balance between quality and quantity of higher education examines this trade-off as a conscious economic choice that academic institutions make. The capacity to deliver quality is the result of sustained investment by the institutions over a period of time. Hence, there are likely to be differences in the 'quality infrastructure' across institutions. We find that under similar operating conditions, different institutions will allocate their internal operating budget differently between quality and quantity. This is likely to exacerbate the already existing quality gap between the differently endowed institutions. It is also possible that quality can decline over time even in high quality institutions if investments in quality are not sustained. This situation can arise if these institutions are not able to generate funding for quality investments, and/or have enhanced incentives (through higher tuition fees) or face policy pressures to increase quantity. Hence policy should take care to bolster the institutions' capacity for quality.

This analytical framework, developed in this paper, can be extended in several ways. It has been confined here to a limited context—namely where the academic market structure is competitive, and where only two specific categories of academic institutions are considered. We can extend the analysis to examine public versus private institutions—where price setting abilities differ. We have also not distinguished between the private costs and benefits facing academic institutions, and the social benefits and costs, i.e., when education has external effects. We have considered a homogeneous faculty resource in our framework. It is, however, possible to examine the implications of two different categories of faculty—namely 'research faculty' and 'teaching faculty, having relatively higher competence in research and teaching respectively. These extensions offer avenues for future research.

References

Agarwal, Pawan (2009): Indian Higher Education—Envisioning the Future, Sage Publications. New Delhi

Chaddha, G K {Chairperson} (2008): The Committee to Review Pay Scales and Service Conditions of University and College Teachers, University Grants Commission, New Delhi.

Dhande S G {Chairperson} (2012): Report of the Task Force on Faculty Shortage and Design of Performance Appraisal System, Ministry of Human Resource Development, Government of India, New Delhi

Mehta, Goverdhan {Chairperson} (2009): the Pay Committee for Faculty and Scientific/Design Staff of Central Technical Institutes

National Knowledge Commission (2006): Report to Nation, New Delhi

Pal, Yash {Chairperson} (2009): Committee to Advice on Renovation and Rejuvenation of Higher Education, Ministry of Human Resource Development, Government of India, New Delhi

Prakash Ved and Sudhanshu Bhushan (eds.) (2006): Report of the National Seminar on Privatization and Commercialization of Higher Education, NUEPA, New Delhi.

Thorat, S. (2009): *Higher Education in India—Issues Related to Expansion, Inclusiveness, Quality and Finance*, University Grants Commission, New Delhi.

ISSN 0004-4555

The Asian Economic Review

Journal of the Indian Institute of Economics

Volume 55 April 2013 No.1

CONTENTS

Journal of Educational Planning and Administration
Volume XXVII, No. 3, July 2013, pp. 311-319

PH.D. THESIS ABSTRACT

An Economic Analysis of Demand for Higher Education

— A Study of Engineering Education in Delhi

Pradeep Kumar Choudhury*

Title	An Economic Analysis of Demand for Higher Education: A Study of Engineering Education in Delhi
Research Scholar	Pradeep Kumar Choudhury
Supervisor	Professor Jandhyala B G Tilak
Department	Department of Educational Finance National University of Educational Planning and Administration, New Delhi – 110016
Degree Awarded	Ph.D.
Year of Award of Degree	2013
Number of Pages	236
Availability of Thesis	Library, National University of Educational Planning and Administration

* Institute for Studies in Industrial Development, 4, Institutional Area, Phase II, Vasant Kunj, New Delhi – 110070. E-mail: pradeep.hcu@gmail.com

Introduction

The Indian higher education sector has undergone massive expansion, though not uniformly, during six and a half decades after Independence. There were only 2.6 lakh students in all disciplines of higher education in 750 colleges and 30 universities in India in 1950-51. It has increased to about 1.7 crore students in 33,000 colleges and 634 universities in the year 2010-11[1]. In the last five years, the number of institutions in higher education (including all disciplines) in India has increased at the rate of five per cent, whereas the institutions in engineering education has increased at the rate of 13 per cent (*Selected Educational Statistics* 2005-06 and *Statistics of Higher and Technical Education* 2009-10). Similarly, the enrolment in engineering education increased seven-fold, whereas it increased only three times in overall higher education (including all disciplines) during 1990-91 to 2009-10 [University Grants Commission (UGC) *Annual Reports* 1990-91 and 2009-10].

Among the states, Delhi figures on top in the Gross Enrolment Ratio (GER) of higher education[2] in 2009-10, which is 47.9 per cent. It has six full-fledged universities (four central universities and two state universities), 11 institutions deemed to be universities, two institutions of national importance, 155 colleges (89 colleges in arts, science and commerce, 15 degree-level engineering colleges, eight medical colleges, 31 teacher training colleges and five colleges in the disciplines of law, management etc.) in the year 2009-10[3]. During 1985-86 to 2009-10, total higher education institutions in Delhi have doubled, from 67 to 133, while the engineering institutions have increased seven times. Likewise, the share of engineering institutions to total higher education institutions has increased from three per cent in 1985-86 to 11 per cent in 2009-10 (Table A1.1 in appendix). Thus, in comparison to higher education, there has been considerable expansion of engineering education in Delhi in the last two and a half decades. This may be due to the larger intervention of private sector in providing engineering education in Delhi than other higher education courses.

Further, it is widely acknowledged that the meritorious students, with high score in senior secondary level, opt for government engineering institutions, such as Indian Institutes of Technology (IITs), National Institutes of Technology (NITs) and state government engineering colleges, whereas less meritorious students are left with no choice but to go to private institutions, which, obviously, reflects the difference in the quality of education provided in these two types of institutions. However, this does not seem to be the case always. In some cases, students may prefer private to government institutions and, in some other instances, students qualified to be admitted in government institutions may not be able to opt for the same, due to a number of socio-economic and other reasons. For example, students who do not get their preferred branch of study in government institutions opt for private institutions. The choice of students for government and private institutions seems to be complex in nature and involves a set of socio-economic, institutional and other related factors. Hence, there is need to study the dynamics involved in the students' choice of government *versus* private engineering institutions.

---

1 Higher Education in India at a Glance, UGC, February 2012.

2 Gross enrolment ratio (GER) in higher education is the ratio of students enrolled in post higher secondary classes to total population in 18-23 age group.

3 Statistics of Higher and Technical Education, 2009-10, Ministry of Human Resource Development (MHRD), Government of India.

Students enrolling either in government or private institutions have to choose the discipline of study. The major branches offered in the degree level of engineering education include civil engineering, mechanical engineering, electrical engineering, computer science and engineering, electronics and communication engineering, Information Technology, telecommunication engineering, etc. It is commonly perceived that the students with higher ranks in the entrance examination wish to enrol themselves in the courses such as computer science and engineering, electronics and communication engineering, information technology, and telecommunication engineering as against courses such as civil engineering, mechanical engineering and electrical engineering. This may be due to the higher probability of getting employment after passing from courses like computer science and engineering, electronics and communication engineering, Information Technology and telecommunication engineering as compared to courses such as civil engineering, mechanical engineering and electrical engineering, the traditional ones. It may be so, yet the fact could be far more complex. Thus, it offers an area of deeper concern to be probed, objectively and scientifically, as to what makes students choose different courses of study.

The literature discussed, on demand for education in chapter 2, shows that majority of studies are in school and higher education and a very few studies have focused on engineering education. Thus, the present study uses these two major concerns as basic premise or rationale of the study. Focusing on Delhi, the following have been the objectives of the study:

- To examine the nature of demand for traditional *versus* IT-related courses of engineering education;
- To explain the growth of private engineering education;
- To look at the household expenditure and related aspects, including student loans and subsidy in engineering education; and
- To analyse the labour market aspects of engineering education.

Data and Methodology

The study has used the data collected by National University of Educational Planning and Administration (NUEPA) in the context of an international comparative study on "Potential Economic and Social Impact of Rapid Expansion of Higher Education in the World's Largest Developing Economies" (conducted by Professor Jandhyala B. G. Tilak in collaboration with the Stanford University) in 2009 and 2010 (hereafter referred to as NUEPA survey). The survey provided both quantitative and qualitative information on the status of engineering education, based on a purposive sample of 1178 students in the fourth-year of studies from 11 institutions[4]. These include two central government (one IIT and one central university), three state government and six private[5] institutions. From each institution, one department in the order of preference of electrical engineering, mechanical

[4] The study had attempted to cover all the then existing 15 degree level engineering institutions in Delhi. However, the survey could not be conducted on all the colleges.

[5] The 'private' engineering institutions used in the entire study means 'private un-aided' unless otherwise mentioned. There were no private aided degree level engineering colleges in Delhi when the survey was conducted, i.e., in 2009-10.

engineering and civil engineering and three departments such as computer science and engineering, electronics and communication engineering, and information technology were taken for the study. The students in the fourth-year of studies from different departments were selected purposively for the survey. Although all the students in the fourth-year of studies from each selected department of the institutions were considered as sample for the study, the data could not be collected from all of them, mainly because some students were absent at the time of data collection. Two questionnaires were used to collect the data: (a) *Student questionnaire;* and (b) *Institutional questionnaire*[6]. The major part of the analysis for the present study is carried out with the help of data/information obtained from student questionnaire. The institutional questionnaire was not used much in the present analysis.

The NUEPA survey data has been processed with the help of Statistical Packages for Social Sciences (SPSS 16 version) and STATA 9 version. The econometric tools used in the analysis include:

- *Logit Model:* This model is used in problems where the dependent variable is dichotomous in nature.
- *Ordinary Least Square (OLS) Technique*: This is used in the context of examining the determinants of household expenditure on engineering education, as the dependent variable is continuous in nature.

Besides the primary survey, the study also takes into account the growth of engineering education in India and, especially, in Delhi based on the secondary data collected from Selected Educational Statistics (SES), Statistics of Higher and Technical Education (SHTE) and Analysis of Budget Expenditure on Education (ABEE) of Ministry of Human Resource Development (MHRD); Annual Reports of University Grants Commission (UGC); All India Council for Technical Education (AICTE); Manpower Profile, Institute for Applied Manpower Research (IAMR); Planning Department, Government of National Capital Territory (NCT) of Delhi.

Major Findings

Demand for Engineering Education

An attempt is made in Chapter 4 to analyse the demand for engineering education by considering two important aspects: (a) factors determining students' choice of IT-related *versus* traditional courses; and (b) what makes students choose government or private institutions? Subject to the limitation of "choice", logit model is estimated in both the cases. The models have included individual characteristics, household factors, academic background and current educational status of students as explanatory variables. The major findings are as follows:

[6] The institutional questionnaire was administered on the head of the institution (principal/director) to collect the information on applicants and enrolment details by gender and caste, fee structure, financial support provided to the students, admission policy, placement details, funding pattern of the institution, and other related aspects. Besides these, a few open-ended questions covering contemporary issues of engineering education in India were also added in the questionnaire.

Students' Choice of IT-related versus Traditional Courses

- Father's occupation came out to be the first most statically significant determinant in students' choice of IT-related *versus* traditional courses. A father engaged in professional and technical work is more likely to send his child to IT-related courses compared to traditional courses, than a father engaged in other occupations. Moreover, as revealed by the corresponding marginal effect, a student has 11 per cent higher probability of attending IT-related courses if his/her father is a professional and technical worker, than engaged in other occupations.
- Academic performance of the student (measured in terms of percentage of marks scored in the senior secondary examination) emerged as a statistically significant factor in students' decision to enrol in IT-related or traditional courses. The results indicate that scoring higher percentage of marks increases the probability of attending IT-related courses by one percentage points.
- The logit estimates reveal that there is a significant gender disparity in probability of attending IT-related *versus* traditional courses. Boys have a lower probability of attending IT-related courses than traditional courses by eight percentage points than girls belonging to an identical family background.

Enrolment of Students in Government versus Private Engineering Institutions

Another important issue examined in Chapter 4 is the enrolment of students in private *versus* government engineering institutions. It is pertinent to mention here that students may not have unlimited choice between private and government institutions because of the supply constraint and the counseling system followed in the admission process. Generally, students with higher ranks in their entrance examination get enrolment in government institutions, whereas students with lower ranks go for private institutions. The results of the logit estimate, to find out the factors determining the probability of enrolment of students in private *versus* government institutions, reveal the following:

- Students, who study in the schools affiliated to central boards, prefer private to government institutions; compared to the students who have studied under state boards. The corresponding marginal effect is 40 per cent, i.e., the students of central boards have 40 per cent higher chances to enrol in private institutions than government institutions. This does not support the general observation that students from the schools, managed by central boards, would prefer government to private institutions than the students of state boards, as quality of education provided in central boards is expected to be better than state boards. This finding is not clear and needs to be probed further.
- Educational level of the father emerged as a significant factor for enrolment of students in private vis-à-vis government institutions. Marginal effect estimates reveal that one year increase in the years of schooling of the father increases the probability of the student attending private institution by two percentage points. But, the effect of mother's level of education on enrolment of students between private and government institutions is, statistically, not significant.
- Scheduled Caste and Scheduled Tribe students have significantly lower likelihood of attending private than government institutions, as compared to general category

students. Marginal effects indicate that the magnitude of impact is comparatively higher for the 'ST' group (by 15 percentage points). Around 20 per cent of students in government institutions belong to SC and ST, whereas the figure is as low as seven per cent in private institutions. It may be due to the inadequate implementation of reservation policy in private institutions.

- Employment assurance of graduates considerably influences their choice to enrol in a private or a government institution. The results of the logit estimate show that the students with higher employment assurance go for government institutions (than private institutions), as compared to the students with lower employment possibilities. Stated differently, students of government engineering institutions have higher chances to getting employment than students of private institutions, and this influences the choice of government institutions. This may be due to the quality and brand name (if any) of government vis-à-vis private institutions. Around 50 per cent of students from government institutions have got employment, as against only 20 per cent of students enroled in private institutions. It is important to note here that the students, who have got job offer through on-campus recruitment, are taken as a proxy of their future employment probabilities.

Determinants of Household Expenditure on Engineering Education

Pattern and determinants of household expenditure on engineering education were analysed in relation to different individual characteristics, household factors, academic background of students and current educational status/characteristics of students in Chapter 5. The household expenditure on engineering education has three major components like: (a) fees (tuition fees, library fees, examination fees, fees on games and sports); (b) expenditure on non-fee items (housing, food, textbooks, transport); and (c) additional expenditure (improving English, cost of computers and cellphones, telephone and internet bills, entertainment and other necessary day-to-day expenses). Annual per student household expenditure on engineering education is Rs. 131 thousand, which constitutes 34 per cent of the annual average income of the family. Students spend 35 per cent on fees, 30 per cent on non-fee items and the rest 35 per cent on additional items.

Specifically, the focus has been to find out the determinants of household expenditure using OLS technique. The chapter has also analysed the extent of expenditure incurred by the household on pre-admission coaching of their wards, considered as a preparatory tutorial to occupy a seat for admission in the degree engineering programme. Besides these two aspects (household expenditure and pre-admission coaching), the pattern and extent of financial assistance received by the students in the form of scholarships, tuition waiver, room/board/other allowance and work study opportunities have also been discussed in this chapter. Major findings are as follows:

- Students enroled in private institutions have spent considerably higher than the students enroled in government institutions. This difference is mainly due to the variation in fees paid by the students. Students of private institutions have paid twice the tuition fees paid by students of government institutions.
- The second most important factor determining household expenditure is the students' decision to go for higher studies or not, i.e., up to master and doctorate level. The annual per head expenditure is higher for the students wishing to go for higher studies

than the students who do not wish to do so. Students intending to study upto master and Ph.D. level are found to be spending 31 per cent and 22 per cent more respectively than students who are not willing to study further. This may be due to the fact that the students wishing to go for higher studies may spend some extra money on different academic activities, such as improving English and computer knowledge, besides the formal training they are getting as part of their course.

- Caste is found to be an important determinant of household expenditure. Students belonging to SC households spend less than the general category students and the coefficient is statistically significant at 10 per cent level. The other two dummies (ST and OBC) in caste category are statistically not significant.
- Occupation of the mother is considered as a dummy variable (in fact, three dummy variables) to see its impact on household expenditure. Of the three dummies included in the regression model, MOTHOCP_PROFF (the dummy equals 1 if the mother is working as a professional or technical worker, 0 otherwise, i.e., if the mother is a housewife or self-employed) came out to be statistically significant at five per cent level. Surprisingly, the value of the coefficient implies that the student whose mother is engaged in technical and professional work spends less compared to the student whose mother is self-employed or a housewife. Father's occupation included in the model was statistically not significant in the determination of household expenditure, which needs to be probed further.

Determinants of Educational Loan from Commercial Banks

In the present study, students have taken educational loan from two sources namely, commercial banks and family and friends. However, given the policy implications of government loans, the focus here is mainly on the loans received by students from commercial banks, an institutional source of loan financing. Of the total students covered in the study, only one-fifth have got loan from banks. In that, the share of male students is higher compared to females. By the same token, larger number of students enroled in government institutions have got loan than the students of private institutions, whereas there is no considerable variation in the percentage of students getting loans between the traditional and IT-related courses.

The logit model used to find out the factors determining students' probability to get educational loan from banks reveals the following:

- The type of institution, namely private or government, matters considerably in the probability of getting loan from commercial banks. The logit estimate suggests that a student enroled in private institution is less likely to get loan than a student enroled in a government institution. Moreover, as revealed by the corresponding marginal effect, a student enroled in private institution is 17 per cent less probable of getting loan from banks than the student enroled in government institution. This may be due to the differences in the brand name of government and private institutions, which matters for the banks to sanction loan.
- Generally, banks take note of students' academic background in providing loan. In the present case, academic performance of the students, measured in terms of percentage of marks scored in the senior secondary examination, emerged as statistically significant in determining the probability of availing loan. Marginal effect estimates

show that one per cent increase in marks scored in senior secondary examination increases the chance of availing loan from banks by one percentage point.

Labour Market Aspects

In Chapter 7, an attempt is made to analyse the labour market profile of engineering graduates. In this context, the survey had asked them the following questions:

(a) Have you already accepted a job offer through on-campus recruitment?

(b) If the answer to above question is yes, then the students were asked to provide the following detail: (i) occupation/designation (engineering/non-engineering); (ii) location of the job (Delhi and around/other states); (iii) type of company (foreign/joint-venture/domestic); and (iv) annual salary offered in the first year of their joining.

The job offer of the students is taken as a proxy of employment providing capacity of institutions/courses of study, whereas the first year annual salary is taken as the proxy of their earnings.

The two important aspects covered in this chapter are (a) to find out the factors determining the employment probabilities of engineering graduates using logit model; and (b) factors determining the earnings difference among graduates with the help of OLS technique. Major findings of the chapter are as follows:

- The most important factor determining graduates' employment probabilities is type of institution, i.e., their enrolment in government or private institutions. The logit coefficient suggests that graduates of private institutions have lower chance of getting employment than the graduates of government institutions, the value of the marginal effect being 31 per cent. This may be attributed to the quality and brand name (if any) differences between these two types of institutions. In a sense, the government institutions provide quality education to graduates, which increase their employability in the labour market.
- Existence of the system of alumni in the institution, (i.e. if the institution has a formal mechanism to keep in touch with their fellow graduates) is found to be a significant determinant of graduates' employment in the labour market. The logit coefficient of ALUMNI is positive and statically significant at one per cent level. It implies that graduates of engineering institutions, with a formal system of alumni, have higher probability of getting employment than graduates of institutions not having formal alumni system. Around 40 per cent of graduates from the institutions having alumni association have got employment, whereas the figure is 28 per cent for the graduates in institutions having no formal alumni link. It is perhaps due to the fact that institutions having alumni association put in efforts to organise talks and group discussions between the graduates and alumni on job market details, which helps the current graduates' get employment.
- Type of institution has a significant impact on earnings of engineering graduates. OLS estimates show that the graduates of private institutions earn less than the graduates of government institutions. Annual average earnings of the graduates enrolled in government institutions was Rs. 481 thousand, whereas it was Rs. 375 thousand for the graduates of private institutions. Difference in the earnings may be due to the fact

that graduates from government institutions are more skilled and competent than the graduates of private institutions and, hence, bargain for more earnings.

- The second most important factor determining the earnings of graduates was their field of jobs (broadly categorised as engineering or non-engineering). Regression coefficient suggests that the graduates employed in non-engineering related jobs earn less than the graduates employed in engineering jobs. The mean earning of graduates working in the non-engineering field is Rs. 485 thousand, whereas it is Rs. 408 thousand for the graduates working in engineering related jobs. It does not support the general presumption that the earnings in engineering-related jobs is higher than non-engineering related jobs. Higher earnings may be one of the important reasons for the graduates to work in the non-engineering related fields.

In spite of the large involvement of researchers in the education sector in India in recent years, only a few studies have examined different issues in engineering education, particularly integrating different interrelated aspects in a cohesive framework. Hence, it is believed that the present study will be of significant policy use. The analysis of demand for engineering education reveals that the expansion has mainly been noticed in the private sector. This tends to be excluding the poor because of charging higher tuition fees. Thus, it has serious impact on equity in the domain of engineering education as the students of lower-income households are not able to attend costly engineering education offered by private sector. Thus, the policies of regulating private education and the fees charged by these institutions are required in the present context.

Journal of Rural Development
Editor and Chairman: Dr. M V Rao, Director General

Vol. 32 **April - June 2013** **No.2**

ARTICLES:

Subscription Rates
Indian Annual Subscription
Individuals: Rs.200/- + 160/- (Regd. Post Charges)
Institutions: Rs.500/- + 160/- (Regd. Post Charges)

Life Membership: Rs.3,500/-
Annual Institutional Membership: Rs.1200/-
Foreign : Annual for JRD: US $ 50/UK £ 40

Foreign Institutional: $250 (50% discount to developing countries). Orders may be sent through Demand Draft drawn in favour of
National Institute of Rural Development to the address given below.

Head (CMRD)
National Institute of Rural Development
Rajendranagar, Hyderabad – 500 030, India
Telefax: 91-040-24008473, E-mail: ciec@nird.gov.in
Website: http://www.nird.org.in

Journal of Educational Planning and Administration
Volume XXVII, No. 3, July 2013, pp. 321-335

RESEARCH NOTES/COMMUNICATIONS

Examination Stress amongst Secondary School Students in Context of Certain Demographic Variables and Study Habits

— A Research Study

Veer Pal Singh*
Avtar Singh**

Abstract

This investigation was intended to study the examination stress among secondary school students with respect to certain demographic variables and habits. For this, a sample of 813 students of Delhi and NCR region was taken and two tools, namely Examination Stress Scale for Students (ESSS) and personal Data Sheet, were administered. The collected data was analyzed by employing statistical techniques like mean, standard deviation, t-test, ANOVA, F-test, and coefficient of correlation. The results reveal that examination stress significantly varied with respect to gender, age, number of members in the family, study space available at home, participation in games and sports, mothers' education, fathers' occupation and hours devoted to study at home by the students whereas locale, category, type of family, fathers' education, mothers' occupation, tuition habits and number of hours spent watching T.V. per day did not effect the degree of examination stress significantly.

* Department of Educational Measurement and Evaluation, National Council of Educational Research and Training, New Delhi–110016. E-mail: vpsncert2@rediff.com

** Department of Educational Measurement and Evaluation, National Council of Educational Research and Training, New Delhi–110016. E-mail: avsingh3@rediffmail.com

Introduction

Stress is a common phenomenon experienced by everyone in life. It varies from individual to individual and situation to situation. Most of the times, it is 'perception' of the stressful event that causes the stress rather than the event itself. For example, in case of public examination, the news of the postponement of dates of examination does pose an emotional stress for a student, who is preparing for that examination, whereas it will be just a normal thing for another student of the same peer group who is not a candidate for the examination. Therefore, perception of situation is as important as real situation.

In a society like ours, there is competition among youths not only for employment, but for getting more marks in the public examination also so as to get admission into a good school or course or a stream of course, in line with their job security perceptions. As a result of it, students fight for every mark to prove themselves as the better performers, on the one hand, and in line with the expectations of self, parents and schools, on the other. This sort of situation puts them under pressure or psychological stress, which may be termed as examination stress. Sometimes, it becomes fatal for the youths because everyone has own abilities and potentialities beyond which one cannot perform or live up to the expectations of others. Highlighting the gravity of examination stress, National Curriculum Framework-2005 has emphasized that there is a need to reduce stress, to make examination non-threatening and to enhance success in examinations, especially on public examinations. Further, taking into account the need to reduce examination stress, Position paper National Focus Group on examination reforms (2006) has suggested various measures to reduce examination stress among students, like change in the typology of questions, enhancement of time in answering the question paper, examinations of shorter duration, flexibility in opting for the subjects for examination, on demand examinations, making class X examination optional, online testing etc. Here, the basic question that arises is what is examination stress?

Exam stress refers to the emotional reactions that some students have towards exams (Mc Donald, 2001). The fear of exam is not an irrational fear – after all how you perform in exams can shape the course of an academic career. However, excessive fear of exams may interfere with the student's ability to be successful in the examination (Musch and Broder, 1999). Students with high exam stress or anxiety develop and maintain less complete conceptual representations of the course content. In order to improve academic performance, academic counselors often focus on the underlying causes of test anxiety and on the student's studying behavior (Topman and Jansen, 1984). Many factors can lead to the development of exam stress and test anxiety. Students' past experiences and beliefs, which have been shaped by a complex interplay of factors, may result in unique reactions to a test situation and lead to test anxiety (McDonald, 2001). These may include their past experiences with courses and their perceptions of course load, as well as their ability to manage time.

In view of Lay and Schouwenburg (l993), exam stress have three components, viz., physical, cognitional and emotional. The cognitive component is the mental activity that revolves around the testing situation and its potential implications on the individual and constituent elements, such as thinking about consequences of failure, worrying a great deal about examinations and lack of confidence in one's ability. The emotionality component is the physiological component of test anxiety leading to tension, apprehension and

nervousness towards examinations, physical component involves typical bodily reactions to anxiety such as a knot in the stomach, palpitation, nausea and perspiration. Demographic variables such as age, gender, ethnicity, and study habits also affect test anxiety levels. Perceived course load could be one of the factors leading to test anxiety.

Extensive course load and comprehensive information in academic curricula necessitates use of proper time management and effective study strategies. Time management can be defined as clusters of behavioural skills that are important in the organization of study and course load (Lay and Schouwenburg, l993). Hence, one of the aspects of time management is to develop effective study habits that essentially help in managing the study load. Time management skills typically include planning in advance, prioritizing the work and adhering to the pre- set schedules. Students' perceptions of their learning environment are important determinants of the quality of their learning outcomes. The course load may also affect the manner in which students learn and can be useful in the design and evaluation of curricula (Walker and Siebert, 1990). Students' perceptions of the teaching and the learning environment, such as assessment methods, relevance of the course and their course load also influence their approaches to learning (Weerakon, 2005). Thus, students' perceptions of these curriculum elements need to be taken into account in curricula assessment and evaluation (Ramsden, 1992).

Further, clarifying its nature, it may be concluded that examination stress denotes the conditions that arouse anxiety or fear. Anxiety can be defined as emotion characterized by feelings of anticipated danger, tension and distress and by tendencies to avoid or escape. Further, as per Morris, Davis & Hutchings (1981), anxiety is not more unitary concept. It has two components, Worry (W) and Emotionality (E). Worry is described primarily as a cognitive concern about one's performance, about the consequences of failure, or about poor evaluation in comparison to others. Emotionality refers to self-perceived arousal or autonomic reactions (eg. muscular tension, sweaty palms) evoked by stress. Here, examination stress is taken as the mental state of WORRY, CONCERN and UNCERTAINITY due to encountering of testing situations (oral or written), which act as a constant source of uneasiness for the individual.

Related Studies: An Overview

Researches conducted in this area have revealed that most of the work is done on test anxiety or examination anxiety or academic stress rather than examination stress. Beck (1976) stated that appraisal of an event effects the performance of a person. If a student is highly anxious about result of his annual exam, he may appraise his future performance negatively. Negative appraisal induces anxiety which, in turn, creates other problems. Stone et.al (1987) observed that body's immune system functions less well under stress while Maes, Van der Plankin, Van Gastel et. al. (1998) found that stress from any source can influence on the endocrine, hernopoetic and immune systems. Findings of Koul and Bhadwal (1989) on achievement motivation and test anxiety revealed that if the learner is subjected to frequent testing situations, as in the case of unit testing, it may help in decreasing the level of test anxiety in him. Sharma and Sud (1990), in their study on 'examination stress and test anxiety: a cross-cultural perspective', conducted on high school students, reported that (i) irrespective of gender, Korean and Jordanian students report higher Test Anxiety (TA) than their Indian and Chinese counterparts; ($P<0.001$), the US (American) students report higher

TA than their Turkis counterparts (P<0.001) and the students from these two cultural groups report high TA than their Italian and German counterparts (P< 0.001), (ii) females from all these cultures report higher TA than the males, and (iii) Indian females have higher worry (W) than their male counterparts (P< 0.001) and Jordanian females have higher emotionality (E) than their male counterparts (P < 0.001).

Campbell and Sevenson (1992) observed that different factors like self concept, unrealistic expectations, inappropriate time management skills besides financial social and academic pressures contribute to the development of high levels of stress among school, college and university students. When stress is perceived negatively or becomes excessive, it can affect both health and academic performance of the students, while the finding of Hagtvet et. al (2001) on 'generalizability of self related cognitions in test anxiety' supported the notion of test anxious students as viewing themselves in a broader social evaluative academic context, including both self-and-other-reference self-related cognitions. The emphasis on self-referencing in current measures of test anxiety may be viewed as representing a part of a more comprehensive evaluative concern.

Sharma (2002) reported the conceptualization of state-trait distinction in anxiety and characteristics of persons with high (test) anxiety. The State Trait Anxiety Inventory (STAI) and the Test Anxiety Inventory (TAI), as assessment tools of anxiety research across cultures, were examined, and the nature of anxiety-academic performance relationship and relative efficacy of diverse interventions in alleviating (test) anxiety, and the socio-cultural genesis of (test) anxiety were critically examined. However, the need to take up a longitudinal research in examination stress has been visualized by Singh (2005). Reporting the findings of a study on 'Academic Stress among post-graduate students before and after announcement of result', Ahmad and Bano (2008) concluded that examination result causes stress among students, wherein stress levels of post-graduate female students of Psychology department were measured one month before the announcement of result, one hour before the announcement and one month after the announcement of result (P<0.001). Hence, the overview of researches conducted so far disclose that there is a need to work in the area of examination stress, either to consolidate the previous findings of researches or to establish new facts.

Objective

To study the examination stress amongst secondary school students in relation to certain demographic variables and study habits.

Hypotheses

1. Secondary school students do not differ significantly in their examination stress in the context of their gender, locale, type of family, study space available at home, parental education and parental occupation.
2. Secondary school students do not differ significantly in their examination stress in the context of their participation in sports/games, tuition, and hours spent in watching T.V. and hour devoted for study at home.
3. There is no significant correlation between the examination stress and age of secondary school students.

Methodology

Design

This study was an ex-post facto research aimed at studying the examination stress among secondary school students in respect of certain demographic variables, study habits and other habits.

Sample

A total of 813 students were included in the study from 12 schools of Delhi and NCR region. Out of the 12 schools, three schools were Government, two were NDMC schools, three were Kendriya Vidyalayas, two were Government-aided and two were private (public) schools. Further, out of 813 students, 427 (52.6%) were boys and 386 (47.4%) were girls. Social group wise, 79% (638) students were from others category, 10% (85) from OBC category, 8% (72) from SC category and 2% (18) students from ST category. Area-wise, 97% (791) students were urban while three per cent students were rural.

Variables and their Measurement

In the present study, selected demographic characteristics viz. gender, locale, age, type of family, social categories, education of parents, occupation of parents, number of siblings and family size and study space at home; study and other habits, such as hours devoted for study, hours devoted for watching television, participation in sports and games; and stress were measured. For measuring the examination stress of the students, demographic characteristics, study and other habits, two tools developed in the Department of Educational Measurement and Evaluation, National Council of Educational Research and Training, New Delhi were used. These were Examination Stress Scale for Students (ESSS) and Personal Data Sheet for Students. The reliability of ESSS was computed by using the split–half and the Kuder — Richardson (KR-20) method. It was found to be 0.897 and 0.94 respectively. The validity of the scale was established through computing the correlation between the scores on ESSS and Examination Stress Observation Scale for Parents (ESOSP), which was found to be 0.59. It is significant at 0.01 level of confidence. Hence, the scale was having fairly good construct validity.

The personal data-sheet was used to collect the information regarding demographic characteristics such as gender, locale, age, type of family, social categories, education of parents, occupation of parents, number of siblings and family size, study space at home and habits, such as hours devoted to study, hours devoted to watching television, participation in sports and games etc.

Data Collection

The data was collected from the secondary/senior secondary schools of Delhi and NCR region. Two tools, namely Examination Stress Scale for Students (ESSS) and Personal Data

Sheet, were administered on a sample of 813 secondary school students one month before their annual (public) examination.

Statistical Treatment

As per the objective and design of the study, different statistical techniques were employed to analyze the data. In order to know the nature of the data, the measure of central tendency and dispersion like mean and standard deviations (S.d.) were employed. Two tailed test was used to test the null hypotheses of no difference between means of two large and independent groups. Further, in order to find out the significance difference between two means, 't' value was calculated. ANOVA was also computed to find out the difference among various groups. Whenever, F ratio was significant, it was supplemented with t – test in order to understand the direction of significance. The coefficient of correlation was computed to know the relationship between age and examination stress.

Results and Discussion

In the light of the objective of this study, the data was analyzed by applying statistics like mean, S. D., 't' value, ANOVA, and coefficient of correlation in respect of examination stress and certain demographic variables and habits like gender, area, age, category, family type, number of members in the family, education of the parents, profession of the parents, availability of study space at home, participation in games and sports, watching hours for T.V., study hours at home etc. Examination stress in respect of certain variables and habits has been interpreted and discussed in detail as under:

Gender

It is clear from Table 1 that mean stress scores of girls are significantly higher (M = 130.09) than boys (M = 115.81). It means that girls were more worried and emotional about their performance in examination in comparison to boys, which leads to stress. Perhaps, they think more about their performance, marks, consequences of failing, future course of action etc. than their counterparts. The same findings were reported by Sharma and Sud (1990) and Jayanthi and Padmanaban (2008) in their studies of test anxiety, conducted on high school and higher secondary students, respectively. Further, the finding gets support from the studies of Latha and Reddy (2006), Shih et al (2006), Mathew (2006) Huan et al (2008), who found that girls experienced significantly higher academic stress than boys. In contract, Pastey and Aminbhavi (2006), Vijaylakshmi and Lavanya (2006), and Carlson and Grant (2008) reported that adolescent boys tend to have significantly higher stress scores than the girls. However, the studies conducted by Masih and Gulrez (2004) and Nielen et al (2007) revealed that there is no significant difference in academic stress of boys and girls.

TABLE 1

Mean scores, S.D.s and 't' values for different groups based on gender, area, type of family, study space at home, participation in games/sports and tuition

Context/ Variables	Groups	N	Means Scores	S.D.	't' Values
Gender	Boys	427	115.81	30.23	6.28**
	Girls	386	130.09	34.51	
Area	Rural	22	123.31	27.96	0.104
	Urban	791	122.57	38.24	
Family Type	Nuclear	636	122.37	32.67	0.446
	Joint	176	123.63	34.61	
Study Space at Home	Having	694	121.08	33.65	3.175**
	Not-having	119	131.45	28.22	
Games/Sports	Participated	453	117.32	30.47	5.066**
	Non-participated	358	128.97	34.97	
Tuition	Taking	605	122.92	32.25	0.597
	Not-taking	206	121.33	35.50	

** Significant at 0.01 level of confidence.

Locale

It is also evident from Table 1 that mean stress scores of rural and urban students are, more or less, same because of insignificant difference in mean scores of both the groups. It implies that both rural and urban students are equally stressed by the examination. However, the finding of Jayanthi and Padmanaban (2008) revealed that test anxiety of urban students was significantly higher than the test anxiety of their rural counterparts. Similar results were observed by Taragar (2009) in regard to stress of secondary school students.

Family Type

Table 1 further shows that mean stress scores of students belonging to joint family is higher (123.63) than nuclear family (122.37). But the difference in mean scores of both the groups of students is insignificant at acceptable level of confidence. Hence, it may be said that students belonging to nuclear and joint families were having, more or less, same level of stress which occurred due to examination. In other words, types of family could not influence the stress level of students significantly.

Study Space at Home

It is obvious from Table 1 that the mean stress scores of students having sufficient study space at home is significantly lower (M = 121.08) than the students not having sufficient study space at home (M = 131.45). It means that insufficiency of study space at home significantly enhances the stress level of the students. In other words, sufficiency of study

space at home lowers the stress level of students. Perhaps, it is the study space at home that facilitates the students to study more and, as a result of it, they are less stressed in comparison to their counterparts having insufficient study space at home. It implies the need to provide ample space for study at home in order to facilitate their studies.

Participation in Sports/Games

It is clear from Table 1 that mean stress scores of participating students in sports/games is significantly lower (M = 128.97) than the non-participating students (M = 117.32). The computed 't' value (5.066) is significant at .01 level of confidence. It means that participation in sports/games regulates the stress level of the students. That is why, those participating in sports/games were having less stress as compared to their non-participating counterparts. This finding implies that sports/games should be encouraged in schools and it should be part of students' routine activities.

Tuition

Table 1 depicts that mean stress scores of tuition seekers is higher (M = 122.92) than non-tuition seekers (M = 121.33). But the computed 't' value is 0.597, which is not significant at acceptable level of confidence. It means that stress level of both the groups of students is not varying significantly. In other words, students of both the groups were having more or less equal stress. Further, it is observed that tuition seekers were having higher stress in comparison to their non-tuition seeking counterpart but the difference was insignificant. Hence, the practice of taking tuition needs to be discouraged and class-room teaching or self-learning activities needs to be encouraged.

Social Categories

It is obvious from Table 2 that F-ratio in case of social categories of students is not significant at acceptable level of confidence. It means that students belonging to different social categories like Scheduled Caste (SC), Scheduled Tribe (ST), Other Backward Categories (OBC) and Others were not differing significantly in their stress scores. In other words, it may be said that students belonging to different social categories were having more or less same stress. It has an implication that social categories do not contribute in increment or decrement of students stress and the difference in students' stress scores for different categories was a matter of chance.

Family Size

Table 2 further reveals that there is a significant difference between stress scores of students having varied number of members in the family as obvious from F-ratio (F=2.532) which is significant at .001 level of confidence at 17 degrees of freedom. It means that students belonging to different families having varied number of members differ significantly in their stress level. In other words, stress level of students either increases or decreases with the increment or decrement of the members in the family. Hence, the number of members in the family regulates the level of stress of the students. Further, when F-ratio is supplemented with 't', after clubbing the family members in three groups viz. small, medium and large, it

was found (as obvious from Table 3) that there was significant difference among mean stress scores of students of small, medium and large families. As the family size increases, the stress mean scores also increases. In other words, family size significantly regulates the stress level of the students. It might be due to the facilities students got in terms of resources for their studies in the family, which, ultimately, influences their stress. The results reported by Kadapatti and Khadi (2006) also support this finding. They found that as the sibling size increased, academic stress also increased.

TABLE 2

ANOVA for Stress in context of social categories, family sizes, education of fathers and mothers, occupation of fathers and mothers, T.V. hours and Study hours

Context/ Variables	Source of Variance	Sum of squares	df	Mean Square	F-ratio
Social Categories	Between Groups	1382.442	3	460.814	0.420
	Within Groups	888161.610	809	1097.851	
Number of Family Members	Between Groups	45687.518	17	2687.501	2.532**
	Within Groups	843856.534	795	1061.455	
Fathers' Education	Between Groups	14481.478	9	1609.053	1.477
	Within Groups	875062.574	803	1089.742	
Mothers' Education	Between Groups	27516.825	8	3439.603	3.208**
	Within Groups	862027.226	804	1027.173	
Fathers' Occupation	Between Groups	34342.583	13	2641.737	2.468**
	Within Groups	855201.468	799	1070.340	
Mothers' Occupation	Between Groups	5474.776	11	497.707	0. 451
	Within Groups	884069.276	801	1103.707	
T.V. Hours	Between Groups	2021.12	3	673.71	0.614
	Within Groups	887522.93	809	1097.06	
Study Hours	Between Groups	28881.07	3	9627.02	9.049**
	Within Groups	860662.98	809	1063.86	
	Total	889544.052	812		

** Significant at 0.01 level of confidence.

TABLE 3

Comparison of Mean Stress Scores based on family size

Groups	Family Size	N	Mean Scores	S.D.	't' Value
1.	Small	243	114.97	29.79	3.411**
2.	Medium	404	123.89	33.59	2.156*
3.	Large	166	130.61	34.34	4.898**
1.	Small	243	114.97	29.79	

* Significant at 0.05 Level of Confidence
** Significant at 0.01 Level of Confidence

Parental Education

It is clear from Table 2 that there is no significant difference between the stress level of students belonging to different families, where fathers were having varied educational qualifications, as the F-ratio (F = 1.477) at 9 df is lower than the table value at .05 level of significance. It means that educational qualifications of fathers did not influence the stress level of the students significantly. In other words, stress level of the students does not vary significantly with the variation in the education of the fathers.

Table 2 further shows that there is a significant difference in stress level of students belonging to different families, where mothers were having varied educational qualifications, as the F-ratio (F = 3.208) at 8 df is higher than the table value at 0.01 level of confidence. It has a meaning that mothers' education is having significant effect on the stress level of the students. In other words, the stress level of students significantly varied with variation of mothers' education. When F-ratio is supplemented with 't', it is found (as obvious from Table 4) that level of mother's education significantly affects the stress level of the students. The mean stress score was least (M=112.73) for students whose mothers were having graduation or higher degrees and highest (M=128.65) for students whose mothers were having secondary education. It means that as the level of mothers education goes up from secondary to higher secondary and higher secondary to graduation or more, the stress level of students reduces successively. It has an implication that students' stress can be reduced by enhancing the education of mothers. Hence, emphasis should be on women's education in the society as it plays a vital role in decreasing or increasing the stress level of the secondary school students.

TABLE 4

Comparison of Mean Stress Scores based on Mothers Education

Groups	Mothers Education	N	Mean Scores	S.D.	't' Value
1.	Illiterate & Literate (No schooling)	190	127.76	31.09	1.43
2.	Upto Elementary	125	122.39	34.96	1.49
3.	Secondary	133	128.65	32.40	1.78
4.	Hr. Secondary	196	121.92	34.40	2.67**
5.	Graduate or More	168	112.73	30.84	4.58**
1.	Illiterate & literate (No schooling)	190	127.76	31.09	1.75
4.	Hr. Secondary	196	121.92	34.40	0.120
2.	Upto Elementary	125	122.39	34.96	2.50**
5.	Graduate or More	168	112.73	30.84	4.35**
3.	Secondary	190	127.76	32.40	0.247
1.	Illiterate & literate (No schooling)	190	127.76	31.09	

* Significant at 0.05 Level of Confidence
** Significant at 0.01 Level of Confidence

Parental Occupation

Table 2 depicts that there is a significant difference in stress level of students whose fathers were having different occupations as the F-ratio (F = 2.468), at 13 df, is higher than the table value at 0.01 level of significance. It means that fathers' occupation significantly contribute towards stress of the students. Further, when F-ratio is supplemented with 't', it is found (as obvious from Table 5) that stress mean scores were significantly higher (M=129.39) for students whose fathers were having low occupational status than the students (M=117.40) whose fathers were having higher occupational status. It means that stress level of the students increases with the decrement of fathers' occupational status. Perhaps, it might be due to the higher expectations of fathers having low occupational status.

TABLE 5

Comparison of Mean Stress Scores as per Fathers' Occupational Status

Groups	Fathers' Occupational Status	N	Mean Scores	S.D.	't' Value
1.	Low	96	129.39	32.56	1.84
2.	Medium	152	121.70	31.80	
3.	High	294	117.40	32.82	1.33
1.	Low	96	129.39	32.56	3.11**

** Significant at 0.01 Level of Confidence.

Table 2 further reveals that there is no significant difference between the stress level of students belonging to different families where mothers were engaged in various occupations as the F-ratio (F = .451), at 11 df, is lower than the table value at .05 level of significance. It means that occupation of the mothers does not influence the stress level of their children significantly. In other words, stress level of the children does not meaningfully vary with the variation in the occupation of the mothers.

Hours of watching T V

It is evident from Table 2 that there is no significant difference among the stress levels of students watching T.V. for varied spans of time as the computed F-ratio (F = .614), at 3 df, is lower than table value at .05 of significance. It means that span of watching TV does not effect the stress level of students significantly. However, it is observed that stress level increases with the increase in watching T.V. hours as is obvious from Table 6. The similar observation has been made by Taragar (2009) that watching too much T.V. disturb students' studies i.e. it was the first order stressor. It might be due to inattention in studies and devotion of less time to their studies. Ultimately, at the last moment, the students have to rush through their studies to complete the syllabi which cannot be completed just before the examination. Hence, they felt more stress in comparison to those who devoted enough time for their studies from the very beginning instead of watching television for long hours.

TABLE 6

Mean Stress Scores for different groups made on span of watching T.V.

Time span for T.V.	N	Mean Scores
Never	53	120.94
1 hours or less	371	121.58
2 hours	276	122.79
More than 2 hours	113	126.22

Study hours

Table 2 further shows that there is a significant difference between the stress level of students devoting different hours for their studies as the computed F-ratio (F = 9.049), at 3 df, is higher than table value at .01 level of significance. It means that study hours affect the stress level of the students significantly. When the F-ratio is supplemented with 't', it was found from Table 7 that students devoting two or more than two hours for their studies at home were having significantly least mean stress scores (M=119.30) in comparison to students devoting 1-2 hours or less than one hour to their studies as the stress mean scores were higher (M=125.97 and M=139.72 respectively) for both the groups. Hence, stress scores decrease significantly with increase in study hours. It means that more study hours, less stress, and less study hours, more stress. It has an implication that students should devote more hours for their self-studies at home, apart from the school hours, at secondary level. Therefore, more emphasis should be given on enhancement of self-study hours of the students, which automatically facilitates their learning and reduces stress among them.

TABLE 7

Comparison of Mean Stress Scores based on hours devoted to self Study at home

Groups	Hours devoted to Study	N	Mean Scores	S.Ds	't' Value
1.	Not at all	13	107.85	33.50	2.96**
2.	Less than 1 hour	61	139.72	35.59	2.89**
3.	1-2 hours	237	125.97	32.47	2.62**
4.	2 & more hours	502	119.30	32.29	1.26
1.	Not at all	13	107.85	33.50	1.95*
3.	1-2 hours	237	125.97	32.47	2.89*
2.	Less than 1 hour	61	139.72	35.59	4.61**
4.	2 & more hours	502	119.30	32.29	

* Significant at 0.05 Level of Confidence
** Significant at 0.01 Level of Confidence

Relationship between Age and Stress

The relationship between age and stress scores was computed through Pearson product correlation method. The computed value (r) was .073, which is significant at 0.05 level of confidence. It means that stress increases with age or vice-versa. It has an implication that enhancement in age leads to more stress. It might be due to self-consciousness with advancement of age, which makes the individual more aware of the consequences of not getting good marks in the examination. It might be related to getting admission in good schools or in professional courses, social prestige, parental expectation, school expectations etc. This sort of thinking creates pressure on the individual. Hence, more the age, more the stress and less the age, less the stress.

The finding gets support from the studies of Shancham (2004), who revealed that the bell shaped phenomena exist with correlation between age and emotional, physiological and behavioural stress reactions, that is in the age group 6 to 9, there is low level of physiological reactions, which increases in the 9-12 age group and decreases at adolescence. Further, Vijayalakshmi and Lavanya (2006) found that senior intermediate students have more stress than juniors. In another study, conducted by Mani (2010), it was revealed that age of the students was significantly associated with exam stress with the younger students reporting low exam stress as compared to older students. However, the study conducted by Masih and Gulrez, (2004) showed that there was no significant difference in terms of age as far as students' stress is concerned.

Conclusion

On the basis of the findings of this study, it can be concluded that examination stress significantly varied, in respect to sex, family size, sufficiency of study space at home, mothers' education, fathers' occupation, participation of students in games and sports, and number of hours devoted to self-study at home whereas locale (rural/urban), social categories (SC, ST, OBC and others), family type (nuclear and joint), fathers' education, mothers' occupation, tuition (taken/not taken) and number of hours devoted for watching T.V. do not significantly effect the degree of examination stress among secondary school students of Delhi and NCR region. Hence, for reducing the examination stress among secondary school students, management and proper care is needed to control the factors contributing towards stress. This can be done by more and more participation of students in games/sports, physical exercises, a proper time management and parental involvement. Further, self-study habits and proper planning to crack the examination can significantly reduce the stress. Therefore, keen observation and help by the school, teachers and parents may prove to be a boon for the students to get rid of excessive examination stress.

References

Ahmad, A. and Bano, M. (2008). Academic stress among postgraduate students before and after announcement of result. *Gyanodaya, 1 (1), 1-7.*

Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Campbell, R.L. & Sevenson, L.W. (1992). Perceived level of stress among university undergraduate students in Edmonton, Canada. *Perceptual and Motor Skills*, 75, 552-554.

Carlson, Ginger A. and Grant, Kathryn E. (2008). The Roles of Stress and Coping in Explaining Gender Differences in Risk for Psychopathology Among African American Urban Adolescents, *The Journal of Early Adolescence,* 28(3), 375-404.

Hagtvet, K.A. et. al (2001). Generabizability of self-related cognitions in test anxiety, personality and individual differences. *Pergamon,*31, 1147-1171, n.

Huan, V.S., See, Y.L., Ang, R.P. and Har, C.W., 2008, The impact of adolescent concerns on their academic stress. *Educational Review.,* 60(2), 169-178.

Jayanthi, J.L.N. and Padmanaban, T.(2008). Test anxiety of higher secondary students. *Edutracks,* 8 (2), 36-37.

Kadapatti, M. and Khadi, P.B., (2006). Factors influencing for academic stress among pre-university students. *Indian Psychological Review,* 66(2), 83-88.

Koul, L. and Bhadwal, S.C.(1989). Achievement motivation and test anxiety: effect of unit tests. *Indian Educational Review*, 24(1), 1989, 59-71.

Latha, K.S. and Reddy, H., (2006). Patterns of stress, coping styles and social supports among adolescents. J. Indian Assoc. Child Adolesc. Ment. Health, 3(1), 5-10.

Lay, Clarry H., Schouwenburg, Henri C. (1993). Trait procrastination, time management, and academic behaviour, *Journal of Social Behavior & Personality,*8(4), 647-662.

Maes M., Van der Plan Kin M., Van Gastel A. et.al (1998). Influence of academic stress on hematological measurements in subjectively healthy volunteers. *Psychiatry Researches*, 80, 201-212.

Mani, Vajaya (2010). Students' perception of the impact of course work on exam stress, *International Journal of Arts and Sciences*, 3 (17), 104-110.

Masih. P.P. and Gulrez, N.K., (2004). Age and gender difference on stress. *Recent Trends in Human Stress Management*, pp.97-104.

Mathew, B., (2006). Parental disciplinary practices on academic stress and mental health among adolescent children. *J. Psychol. Res.,* 50(2), 75-78.

McDonald, Angus S. (2001). The prevalence and effects of test anxiety in school children, *Educational Psychology: An International Journal of Experimental Educational Psychology,* 21(1), 89-101.

Morris, L. W., Davis, M. A., & Hutchings,C. H. (1981). Cognitive and emotional components of anxiety: Literature review and a revised worry-emotionality scale. *Journal of Educational Psychology, 73,* 541-555.

Musch, J. and Broder, A. (1999). Test anxiety versus academic skills: A comparison of two alternative models for predicting performance in a statistics exam, *British Journal of Educational Psychology,* 69(1), 105–116.

National Curriculum Framework (2005). New Delhi: NCERT Publication.

Nielsen, Anne M. and Hansson K. (2007). Associations between adolescents' health, stress and sense of coherence, *Stress and Health,* 23(5), 331–341.

Pastey, G.S. and Aminbhavi, V.A., (2006). Impact of emotional maturity on stress and self confidence of adolescents. *J. Indian Acad. Appl. Psychol.,* 32(1), 66-70.

Position paper national focus group on examination reforms (2006). New Delhi: NCERT Publication.

Ramsden, P., (1992). *Learning to teach in higher education.* London, Routledge.

Shancham, M. and Lahad, M., (2004). Stress reactions and coping resources mobilized by children under shelling and evacuation. *The Australasian J. Dist. Traum. Studies,* 2, 80-84.

Sharma Sagar, (2002). Anxiety in students. *Psychological studies*, 47, (1-3), 2002.

Sharma, S. & Sud, A.(1990). Examination stress and test anxiety: a cross – cultural perspective. *Psychology and Developing Societies*, 2 (2), 183-201.

Shih, J.H., Eberhart, N.K., Hammen C.L. and Brennon, P.A., 2006, Differential exposure and reactivity to interpersonal stress predict sex differences in adolescent depression. *J. Clin. Child Adol. Psychol.,* 35(1), 103-115.

Singh, V. P. (2005). Managing examination stress to attain success. *Journal of Community Guidance & Research*, 22 (3), 276-291

Stone, A.A., Cox, D., Valadimarsdottir, H., Jandrof, L. & Neale, J.M. (1987). Evidence that secretary Ig A antibody is associated with daily mood. *Journal of Personality & Social Psychology*, 52, 988-993.

Taragar, Shipla (2009). Stressors among the students of high school. Master dissertation, University of Agricultural Sciences, Dharwad, Department of Home Science in Human Development, pp. 99.

Topman, R.M., & Jansen, T. (1984). "*I really can't do it anyway": The treatment of test anxiety.* In H.M. van der Ploeg, R. Schwartzer, & C.J. Speilberger (Eds.). Advances in test anxiety research. Hillsdale, NJ: Erlbaum.

Vijaylakshmi, G. and Lavanya, P., (2006). Relationship between stress and mathematical achievement among intermediate students. *Edutracks*, 7(7), 34-37.

Walker T, and Siebert A. (1990). Student success: How to succeed in college and still have time for your friends. fort worth: holt: rinehart and winston; pp. 33-39.

Weerakon P. (2005). *Evaluation of online learning and students' perception of workload.* Presented at: The Higher Education Research and Development Society of Australasia (HERDSA) 2003 Annual Conference. Available at: http://surveys.canterbury.ac.nz/herdsa03/pdfsref/Y1194.pdf. Accessed June 10, 2005.

JOURNAL OF INDIAN ASSOCIATION OF SOCIAL SCIENCE INSTITUTIONS
(IASSI)

IASSI Quarterly: Contributions to Indian Social Science

Vol. 31 No. 2 April-June 2012

Articles

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 E-mails: stiassi@bol.net.in; iassi79@yahoo.com

Journal of Educational Planning and Administration
Volume XXVII, No. 3, July 2013, pp. 337-348

Book Reviews

JUSTINE, Mercer; BERNARD, Barker and Bird, RICHARD (2010): **Human Resource Management in Education: Contexts, Themes and Impact,** Routledge Taylor & Francis Group, pp. 188, ISBN: 978-0-415-41279-7 (Paperback); £ 27.99

As we are progressing towards a borderless world, the need of work force in every field is increasing. The focus is shifting more to developing 'knowledge societies' than just creating a skilled work force. This has tremendously increased the importance of Human Resource Management in Education. Past two decades have witnessed the growth of Human Resource Management as an important field throughout the management circle. Most important to note here is that this particular area has been used extensively beyond the corporate world. The primary, secondary and tertiary levels of education use Human Resources Management as a mode to provide quality education. The book *Human Resource Management in Education: Contexts, Themes and Impact* have tried to cover the role and impact of Human Resource Management in schools. The book has concentrated on the British education system as a whole.

The book is divided into three parts and each part is based on a theme. In all, it contains eleven chapters, which are segregated and placed under the three parts. The first part is based on the current context of human resource management and has three chapters. This part basically discusses concept of human resource management and talks about the societal values. The first chapter is 'Introduction: Globalization, human capital theory and human resource management'. As the name of the chapter suggests, it defines HRM and traces its genesis through key historical trends, whereby HRM was replaced by personnel management. It then goes on to discuss the initial phase of HRM and then discuss the differences between HRM in education and HRM in business. Further, the chapter explores four key concepts which are human capital theory, neo-liberalism, managerialism and performativity. These four concepts are discussed in brief and a link between all the four concepts have been tried to be developed. The chapter does not discuss much about globalization; instead, at the end, it gives a brief overview of the following chapters.

The second chapter is based on Government legislation and societal values. The chapter starts with the discussion on industrial relations at three levels viz a viz macro, meso and micro levels. The changes in industrial relations have been discussed with UK as its base. Further, it discusses the British trade unions and their changing roles. It tries to highlight the role of trade unions within schools. The chapter then moves further to discuss Government legislation through few case studies. The case studies form the basis for Discrimination and retirement legislation, equity legislation and family-friendly legislation. These, then, lead to a new concept called reform unionism. The chapter highlights the researches on the role of education unions acting as reformatories in promoting social justice. The whole chapter is based on various studies conducted in England and Wales than considering a global view.

The third chapter, 'Teacher culture(s) and the crisis of confidence', defines teacher culture (s) and the teaching profession. It starts with discussing the meaning of culture and, then, tries to explain cultures of teaching. It tries to explore the difference between teaching profession at various levels and how teachers at different levels (primary, secondary and tertiary levels) perceive the word profession in teaching culture. The discussion is based on various studies conducted and finally the conclusion is drawn.

The second part is based on the theme Contemporary themes in human resource management. This part stores four chapters which discuss various issues ranging from college improvement, empowering groups, designing learning organizations and something about greedy organizations. The chapter four, *leading school and college improvement,* is based on leadership issues in schools and colleges and is explained through two case studies. The chapter discusses the role of leaders in transforming the educational system. The studies show that present-day leaders have an impact on government policy and research in UK and other nations. The studies again stress more on UK than discussing the transformational leadership as a whole. The other form of leadership i.e distributed leadership, is taken up in another section that discusses various views on the role of leadership. The discussion is majorly based on a study sponsored by NCSL of 11 schools. This covers six different models of distributed leadership. This section ends with the conclusion that distributed leadership plays an important role in the improvement of the schools. The other section then goes on to discuss reformations in social organizations. This has been discussed with the help of two case studies in two schools.

The fifth chapter, 'Empowering groups and teams', discusses how the employees are empowered and motivated to increase the organizational performance and productivity. The chapter goes on to discuss teamwork and its advantages. Then, it discusses teams in education and its relationship with distributed leadership. The chapter also tries to explain the concept of group formation and development. The section focuses on the famous study by Bruce Tuckman's (1965) of group formation and development and its implications on the performance. Thereafter, the chapter goes on to discuss the team roles based on Belbin's (1981) study. This is done with the help of a case study on team work. This is further extended in the sixth chapter on 'Designing learning organizations'. This tries to find out the advantages and disadvantages of the learning organizations using various studies. The chapter also discusses varied views of interchangeable use of organizational learning and the learning organization and the difference between the two. The features of the learning organizations are discussed at the school-level. To explain this, a case study of the school has been taken into consideration. The seventh chapter of the second part is based on *greedy organizations* which discuss the performance of teachers in schools based on the global changes like rising levels of skills and knowledge. It tries to explore the facts regarding false consciousness which stresses on the fact that there is more to learning than simply trying to get rid of false perceptions and mistaken assumptions. The chapter highlights the features of greedy organizations and presents a case study of UAE where specific sponsorship laws allow all employers to exploit expatriate staff. This is the only example taken in the whole book apart from UK.

The third part is on contemporary practices in human resource management. Chapter eighth is on *selecting and developing professionals.* This chapter covers the basics of selection procedure in human resource management which includes training, recruitment, selection, induction and development. The whole procedure concentrates on school

teachers. The whole chapter is based on the studies conducted at various levels by various experts on the selection and development of the teachers. The latter part of the chapter tries to focus on the leadership issues of selected teachers. It conforms to the idea that few teachers opt for a leadership role. The ninth chapter, 'Remodelling: new learning and teaching teams', discusses the national agreement again. In this chapter, this agreement has been discussed a little elaborately and forms the basis for an extended version of selecting and developing the school professionals. The scale and scope of workforce remodeling has been discussed through a statistical study based on the data provided by Department of children, Schools and Families (2008) in UK. The study is localized. The whole chapter is based on national agreement and its various components. The tenth chapter focuses on 'Appraisal and performance'. The literature review covers different notions of appraisal and performance like teacher appraisal, teacher evaluation, performance management and performance review. The appraisal part exclusively concentrates on England and Wales. This reviews the changes (reforms) happening in England and Wales in the teaching profession. Again a case study of UAE has been taken to discuss the impact of appraisal mechanism. The conclusion part discusses the positives of the appraisal system. The eleventh chapter is ' 'Conclusion: From micro-politics to sustained improvement'. This is the final chapter of the book and summarises the other 10 chapters. It highlights the purpose of education, meaning of teacher and the circumstances where the students can learn the best.

The book is based on an extensive research work done on human resource management in education, especially in England and Wales. The study is extremely localized, barring a couple of case studies from UAE. England and UAE are extremely different nations in terms of educational patterns, culture etc. and, therefore, a comparison in these two nations is not very much justified regarding the structure of the book. The book can be recommended for academicians, especially in school education. Since the book concentrates on UK, a further scope of study is possible in other countries as well.

School of Management Studies
IGNOU, Maidan Garhi, New Delhi-110068

Neeti Agrawal
neeti@ignou.ac.in

SINAGATULLIN, I.M. (2006): **The Impact of Globalization on Education**, Nova Science Publishers Inc: New York, pp. 220, Price: $ 378.80, ISBN: 978-1594547140.

Globalization refers to the increasing flow of technology, finance, trade, knowledge, values and ideas across borders. The meaning of globalization for a country, in stark terms, is global competition and, in a competitive world, the one who comes second is not good enough. One has to be at the top to be counted. The tool that will take the country to the pre-eminent position is knowledge. It gives a country the competitive edge. The wealth of a nation is no more just land, buildings, and money, but knowledge-based system which add value. Many countries, even in third world, realized the value of the intellectual progress of their people and equated intellectual capital with real money. These countries started witnessing various types of changes around the world. These changes have made a country

realize that it cannot isolate itself and build walls around it from the rest of the world, neither can it survive without the aid of other developed countries. So, globalization means development on a global scale without any relevance of national boundaries.

This book begins with the historical perspective of globalization, emergence of Buddhist, Islamic and Christian ideology and how it influenced the world scene. Further, this book also discusses issues like Tolstoy's humanitarian and pedagogical ideas which influence Gandhi as well, with Gandhi later entering the Indian freedom movement. It also focuses on the pedagogical ideas of John Dewey, psycho-analytic theory of Sygmund Freud and cognitive theory of Vygotskay and, apart from these, it also focuses on the other resulting factors that promoted globalization, like multi-culturalism, western food, designs, beverages etc. Initial phase of this book shows contemporary globalization as a culminating point of the integrative and global processes having occurred in the previous millennium. It centers on some important events that had a profound influence on human integration and global development of contemporary society.

Further, in next chapter, it tries to explore the signs and contradictions, characteristics of present-day globalization and globalistic layers-groups of people who are carriers of globalization. It tries to deal with socio-political, socio-economic, ethno-culture, demographic, religions, technical and informational educational and socio-linguistic perspective, which are major areas of concern post-globalization. Another area of concern is the fundamental contradiction between more developed and less developed nations and a global hierarchical layer that incorporates a group of people from the intellectual, scientific, political, business, cultural and educational elite. Moreover, the problems of globalization are discussed in the chapter, which analyzes the sign of globalization, examines two greatest contradictions taking place in contemporary human society and disunion on the globalistic layers i.e. groups of people involved in globalizing processes.

This chapter begins with the nature of globalization and tries to come to a consensus on what globalization actually means, whether, for example, it is an idea prevailing in certain socio geographical space or a process. Further, the most confusing and closely associated terms of globalization have been discussed. These are globalization, internationalization, westernization, and individualization and the misconception of globalization as a new word came in the last century only. Moreover, this chapter continues to reveal to a curious reader the enigmas at globalization. It describes the nature and essence of globalization; helps gain insights on its relation to closely-related terms; clarifies the nature of vertical and horizontal matrices; and focuses on misconceptions surrounding globalization.

Fourth chapter begins with the issue of education from a wider, cross-cultural perspective and aspects of phenomenon of civilization and its relation to culture and other existing nations. It also emphasizes on the eight major civilizations of the world: Atlantic, Nordic, Eurasian, Middle-east, south-eastern, Pacific, African and Latin American civilizations. Moreover, this chapter provides a brief account of the contemporary globalizing world. It also preserves a criterion-based approach to the phenomenon of civilization and offers some reflections on several countries labeled as "exclusive".

If we wish to create a lasting peace, we must begin with the children, quoted in this chapter from Mahatma Gandhi, who also reflected much on the educational perspective. This chapter tried to study how globalization influences contemporary education and related issues and some general issues of education, briefly examines a number of contradictions in

education, characteristics of the new globalizing era and suggests that globalization can impact education both negatively and positively.

Another major section of this book dealt with global hazards challenging education. It tried to focus on a range of social and school milieu factors making a destructive influence on education and child development. Other social issues like corruption, sexual and moral degradation, HIV/AIDS pandemic, degradation of spiritual and moral values, war crimes and terrorism, increasing socio-economic polarization, excessive experimentation with children, negligence of strong education etc. have been dealt with regard to globalization. Further, hazards triggered by child reflected substance use like-child abuse and neglect, deterioration of children's health and adolescents' health, drug addiction, alcohol consumption and problems like cigarette smoking were also focused in the study. Moreover, this chapter dwelt on a range of global hazards challenging the harmonious and effective organization of the pedagogical process in education institutions, family and society as well.

Globalization has made a considerable impact on education by bringing the English language into the global educational space. A rush of English into the educational institutions, professional and personal lives of millions of people, in developed and even developing countries, and an increasing motivation to learning this language have been triggered naturally due to globalization these days. This chapter dealt with why and how the English Language became an important phenomenon in the global socio-cultural and educational space. This portion also studied how English influences the overall language situation and how it triggers the reshaping of the existing language policies.

Global education involves the study of problems and issues that cut across national boundaries and the inter-conceitedness of the system involved-economic, environmental, cultural, political and technological. Global perspectives are important at every grade level, in every curricular subject area and for all children and adults as well. This chapter emphasizes principles on nature and goals of global education. It also includes a survey analysis conducted throughout the world from among the high school and university students. Moreover, in this chapter, a journey of global education, which embodies a direct consequence of the turbulent personalizing era, has been focused on.

Knowledge occupies an exceptionally valuable and important place whenever the issues of global education are concerned. Knowledge is an essential component of a student's global cemetery. This chapter deals with global competency that is knowledge: knowledge of world history, globalization diverse demography etc. It also focuses on knowledge in terms of nature and its created components along with the present day major issues like violation of women's right, terrorism as a global threat, poverty, environmental problems etc. Further, the last chapter discusses global competency as an attitude and skills. Attitude is an individual's way of standing and thinking, his or her understanding and readiness to participate in solving vital global problems challenging humankind. Attitude in relation to understand oneself, society, human values, scientific theories etc. are dealt with in this chapter, followed by skills like interaction and communication, training and IT, which, in terms of global development, are more important these days, especially in the competitive world of education, industry, business and commerce. Global education demands the development of students' global competency. Global competency has been discussed in two parts, knowledge and attitude, and the skills school graduates should possess to favorably function in an inter-dependent human society.

Globalization has become almost synonymous with human development these days. Although it is said that globalization is a new term but the concept of globalization had originated thousand years ago. Human beings are curious by nature at individual, societal and national level and always seek to cross the physical boundaries created by mankind to come up with new innovations, discoveries for the betterment of human life. Undoubtedly, knowledge, the most reliable source for any kind of development and the ultimate tool for globalization, with each country seeking to exchange it's knowledge-based assets in terms of concrete physical needs. New knowledge, language competency, creative ideas and available resources make the human mind ponder over diverse possibilities and possibilities beyond imagination in pursuit of better life.

Maulana Azad National Urdu University
Hyderabad-500032

Bhanu Pratap Pritam
bhanupritam@gmail.com

SHARMA Rashmi and Vimala RAMACHANDRAN (Eds.) (2009): **The Elementary Education in India: Exploring Institutional Structure, Process and Dynamics**, Routledge, New Delhi, ISBN-978-0-415-48328-5, pp. 346, Price: ₹ 795 (Hardbound).

If we analyse the major shortcomings of elementary education in India, more often we will confront the inconsistencies of official statistics, confusion in educational policy, poor use of educational expenditure and the mismanagement and lack of accountability of the elementary education institutions in the country. The book under review had, more or less, investigated all the above inadequacies at the elementary level. Moreover, it emphasized the existing institutions available in the country linked to elementary education and explored their processes, practices and dynamics in making the system efficient. Through different initiatives, India had considerably streamlined the institutional arrangements to manage elementary education in the country. In the last one and a half decades, efforts to achieve the goal of Education for All is noteworthy. By considering a sample of two states, the authors provide a glaring picture of Indian educational institutions across the country. Through different perspectives, the authors make an in-depth analysis of the differentiation in the two Indian states. Major arguments were substantiated through empirical evidences with regard to the functioning of elementary education establishments in the country. The book under review tried to find out the gap between the policies and practices in the two states.

The author have undertaken field visits and talked to different stakeholders of elementary education. They have produced pen-portraits of the institutions, the people working within them and the dynamics in their working culture, attitude towards work and opinions of their vision towards achieving Universalisation of Elementary Education. This book is not about making educational systems work but about reminding and showing the reader that there are many derivatives linked to functioning of a proper education system, as a whole. The book reports on research undertaken as a result of funding from Oxfam N (O) VI B, the Netherlands. The approach followed in the book is to describe and explain a

situation in which the readers will find themselves as the authors examine the intricacies and dynamics of the way in which elementary education is run in the country.

In the introductory chapter, quoting two important policies, one from The Constitution of India, Article 45 in 1950 and the other 86th Amendment in 2002, regarding important declaration in elementary education, the editors try to highlight how the problem of basic education is pertinent even after 60 years of Independence. The authors provide a historical retroscope of different policies and plans in the Indian context. The chapter contains the statistics on access, enrollment, retention, drop-out and quality facets. It also highlights the thrusts on innovation in the elementary education scenario in India. It also covers the different educational systems, both academic and administrative, in the country. In the second chapter, Rashmi Sharma and Vimala Ramachandran try to compare two educationally developing states in India, Andhra Pradesh and Rajasthan. The chapter deals with the basic educational indicators, with substantial information on different institutional structures. A surfeit of new institutions have come into existence with the priorities entrusted on both the state and national governments. The introduction of decentralization in the Indian education system also gave a boost to devolution of power to the local-level institutions. These structures cover from bottom (Village Education Committee, Cluster Resource Center, and Block Resource Center) to the top level (State Project Office, State Institute of Education Management and Training etc.) of educational bodies along with the line departments.

The third chapter by Jandhyala B.G. Tilak deals with the expenditure pattern incurred in the two states. Affirming the Plan and non-Plan expenditure and share of Centre- State educational budget, the author argued- that with chronic under/inadequate investment, both the states had unsatisfactory development in the educational sector. The author further argues that though Andhra Pradesh has a better per capita income, it is still lagging behind Rajasthan in total educational scenario. If the present thrust on education continues in both the states, Rajasthan would have better educational development in the days to come. The author mentions-"if these trends continue in both the states, then Rajasthan can hope to break with the infamous 'Bimaru' fraternity and Andhra Pradesh may take its place, at least in the field of education" (p. 104). V. Sudhakar, Samantha Valluri, Nagendra Nagpal, Rashmi Sharma and Vimala Ramachandran, in chapter four, provide glimpses of the villages and schools from where the entire data collection was undertaken. It describes the educational situation in the sample villages and the socio-political contexts of the schools and villages under survey. It explains the geographical location, cultural practices and sociological dimension of the village and schools. It describes the educational facilities available in the respective survey locations.

The fifth chapter deals with the organizational aspects and human resource perspectives of the entire education set-up of the two sample States. Rashmi Sharma, the author, tried to understand the institutional underpinnings and dynamics of the educational institutions at the State, District and Sub-district level. It also describes the staff development, promotion facilities, administrative hierarchies and the kind of professionalism shown at these state-level institutions, both academic and administrative, in a comparative framework. Understanding the practices followed in the two states the author tries to highlight the lacunae and motivational policies at the state. Complexity in decision-making, nepotism and idle bureaucracy, along with unclear policy and wrong or poor implementation strategies, added to a tough predicament. The same situation may persist in other states of India. In

comparing the two states, the authors gave credit to Andhra Pradesh, citing its clear policy and well organised institutional structure. In their words, "*… it can be argued that Andhra Pradesh has a better formal institutional structure than Rajasthan* (p. 159). Moreover, the authors were satisfied with the teacher-related well-developed policy of Andhra Pradesh over Rajasthan. Similarly, the administrative decisions of Andhra Pradesh had stronger grassroots structures, with proper mechanism of monitoring and supervision. The authors highlighted the lack of internal coherence between the academic and administrative institutions.

Chapter six is more critical about the happenings inside the classroom. Understanding of the present pedagogy of teaching-learning, Hriday Kant Dewan (Hardy), the author, is sceptical about the implication of National Curriculum Framework 2005. There is a huge gap found in the text documents and practices being followed inside the classrooms. The author is also suspicious about the role of local level resource institutions. Though, at present, there is more emphasis on quantitative expansion of local level institutions, but it has absolutely no impact on the classroom quality. The present initiatives in the form of training, material production and publications seems ritual. The situation, at present, prevailing in the field, the author explains*, is sub chalta hai (anything goes) rather than to reach and then raise the bar of quality at present* (p. 249)".

In Chapter seven, Vimala Ramachandran tries to highlight the social equity issues and its impact on the present basic education in India. The role of institutions at each level of the society is important to bridge the gap between social opportunities among all the categories of children. In the last chapter, the authors consolidate the finding of each chapter and are optimistic that change is possible only by going into the heart of the matter in multiple ways. There are no absolute quick-fix solutions possible in making elementary education universal in reality. This book is another piece of evidence that education can be achieved much more in the synchronization and proper management of institutions for achieving the unfinished business of education, both in its thinking and action.

Kendriya Vidyalaya Sangathan (HQ)
18, Institutional Area, Shaheed Jeet Singh Marg, New Delhi-110016

Sudhanshu Shekhar Patra
psudhansu@gmail.com

GRIFFIN Rosarii (ed.) (2012): **Teacher Education in Sub-Saharan Africa: Closer Perspectives**, Symposium Books Ltd., U.K., pp. 256, Price: $ 48, ISBN: 978-1-873927-36-6.

The book under review contains 13 chapters divided into three distinct sections namely (i) institutional and national discourses on teacher education; (ii) case country research reports on aspects of teacher education in Sub-Saharan Africa ; and (iii) teacher education at the chalk faced closer perspectives. The contributors examine issues and concerns within the context of teacher education against the backdrop of the current status of teacher education in Sub–Saharan Africa, with particular focus on Lesotho, Uganda, Mozambique, Tanzania, Kenya, Zambia, Gambia, Madagascar, Sierra Leone and South Africa.

Teacher education in Sub-Sahara Africa is facing serious challenges on major accounts; (1) Large number of teachers employed in the school system are unqualified, (2) there is

shortage of teachers in the region. The 2010 UNESCO report indicates that 1.2 million additional teachers will be needed to achieve EFA in the region. In addition, there is a need for additional teachers to replace the retiring teachers. Again, the deployment and distribution of teachers is also a cause for concern. The rural areas suffer the most in this regard. Teacher recruitment and training trails massively behind in the expanding EFA provision. Contract teachers have been deployed to meet the shortage but the contract teachers are stated to be unqualified para-professional teachers.

The problem of teacher absenteeism is quite serious as it affects adversely the learning time teaching and learning outcomes, as well as national education costs and spending (UNESCO, 2008, p. 121). For example, in Uganda, the teacher absenteeism rate in primary schools runs at 27%. Programme on Teacher Education like Teacher Educational Sub–Saharan Africa (TESSA) operations currently cover Ghana, Kenya, Nigeria, Rwanda, South Africa, Sudan, Tanzania, Uganda and Zambia. The Teacher Education Exchange Partnership (TEEP) in Uganda, in collaboration with Irish Aid, have helped Sub-Saharan Africa in pedagogy of school teachers. Similarly, the teaching and learning of Mathematics in Uganda in Secondary Schools has brought about reforms in mathematics and science teaching. Building capacity for teachers has been the major concern. However, teacher's own epistemologies have left them rather uneasily at odds with the requirements of both curriculum and teacher's roles (Harley et.al. 2000, p. 295). The study by Harley, et al, found that teacher's comments reflected some of the practical complexities arising from the contradictions between policy expectations and the teachers (p. 65). A study of initial teacher training education students (Haber and Serf, 2006) found contradictions between "do as I say" and "do as I do", wherein-lecturers did not necessarily provide a good role model for the development of democratically professional teachers (p. 67).

It would imply that there was need for more discussion, research on purposes and goals of teacher education and the issue of their congruence with internal processes and practices. It is reported that children with disabilities remain very disadvantaged in terms of access even to primary education in Lesotho (Lesotho College of Education, 2007).

In the implementation process of Universal Primary Education (UPE), as envisaged in the Dakar Framework for Action (2000) and the multi-sector Millennium Development Goals (MDG's) in Sub-Saharan Africa, the shortage of qualified teachers, classrooms, learning materials, supervisory support would become more severe. The enrolment of over-age children in Sub-Saharan Africa in primary schools remains a major problem. It further combines with a fairly high grade–repetition rate (repeaters being 10% of the enrolment in 2008) to put pressure on available resources and to contribute to a low survival rate for the primary cycle (Okuni, 2003). It is reported that Uganda government has made determined efforts in the training and recruitment of teachers, the provision of material resources and the structure and content of the curriculum. This explains why this country has got the cooperation and financial support from the donor group (p. 84). Although the progress of enrolment at the primary stage has been rapid, it is still of an uneven, degrading quality and, by accommodating all, has generated costs that become unsustainable without reforms and mask "much silent exclusion" (Lewin and Akyeampong, 2009). According to them, among children attending formal primary schools, where MDG targets is the main focus of policy, many fail to achieve minimum levels of competence in basic numeracy and literacy even after six or more years of schooling and many are overage for their grade (p, 87).

While reflecting on teacher education in Sub-Saharan Africa, it is an issue of quality both in Pre-service and In–service teacher education programmes because teacher education tends to perpetuate traditional, unreflective and teacher-centered pedagogy–rather than challenge it. Education for sustainable development (UNESCO, 2007) remains neglected since it has not become an integral part of teacher education programmes (p. 97). There is further need to develop teacher education in such a way as to embed it within the broader issues of quality, culture and context and, specifically, the relationship between western and indigenous knowledge systems (Stephens, 2007).

Madagascar case study, reported in the book, is one of such models of good practices where Education for Sustainable Development and teacher education have been addressed. As it happens, environmental education is related to the context and cultures of the communities. Since there is a tendency of making a provision for basic education to 10 years in Sub-Saharan Africa and other countries, the upgradation of teacher education programmes for competency-based approval is a desirable goal in the near future. At present, the Sub-Saharan Africa is facing this challenge, with capacity-building at the center of all educational programmes (the capacity of the learners, teachers, institutions and community). In Madagascar Island, under teacher education programme (both pre-service and in-service), the Prevert or Green Education programme unrelated to environmental education has been introduced and the prospective teachers are involved to carry it out in many of the clusters of primary and secondary schools in the surrounding community. To make the task easy, the Malagasy language was used to explain the lesson concepts and emphasis was put on the learning processes involved. But the task was carried out with a very teacher-centered approach, with no peer or group work activities (p. 105). To achieve the desired success for such innovative curriculum, it is pertinent to note that competent and dedicated leadership from the top to down the line of administration should be created. There is strong recommendation that for good education for sustainable development, there is a need to address -the concerns for relevance, efficiency and effectiveness; a balance between theory and practice and to support the college or school financially; effective means of pupil assessment and teacher evaluation and strong school-community links. This recommendation has emerged and documented from the case study of Madagascar Island. Analysis of opportunities, constraints and lessons, drawn for the purpose of building capacity for educational research in Sub-Saharan Africa in the context of Mozambique, Tanzania and Uganda, shows evidence of deficits existing amongst faculties. This is constrained by the scarcity of funding of research projects. So is the case towards a holistic understanding of special educational needs. Again, an exclusive chapter devoted to the teaching and learning of Mathematics in Ugandan secondary schools, examines the four factors concerned with (i) pedagogy; (ii) teachers' attitudes to participatory learning; (iii) teachers' need for continuing professional development; and (iv) the restrictive influence of national examinations on teaching. The conclusion drawn from this study reflects enhancement of general knowledge on teaching and learning and pedagogical content knowledge that will foster a stronger problem—solving orientation among students.

Paulo Freire, the well-known Brazilian educator, envisioned literacy as being a process of conscientization for political, social and economic awareness and freedom of one's self within one's life-world (Freire, 1985, p. 160). The process of education was key to this wakefulness. Conscientization is Freire's vision of personal and communal transformation towards authentic humanization.

Chapter 12 on "An Account of the Alternative Education Experience Africa Programme in Transition," Irish pre-service teachers' experience in Zambia and the Gambia provides an insight on the research findings: of a research project which was funded by Irish Aid. The research findings have clearly indicated a number of positive and consistent personal and professional impacts on students-teachers (p. 223).

The book contains informative aspects on both pre-service and in-service teacher education programmes. Some contributions are empirical in nature and others are outcomes of some new initiatives and reforms in teacher education to cover the gap of good qualitative and quantitative teacher education in Sub-Saharan African countries.

90/31 A, II Floor (Rear Portion)
Malviya Nagar, New Delhi-110017

V.P. Garg

JOHNSTONE, D. Bruce; d'AMBROSIO, Madeleine B. and Paul J. YAKOBOSKI (Eds.): **Higher Education in a Global Society,** TIAA-CREF Institute Series in Higher Education. Cheltenham, UK: Edward Elgar, 2010, pp. 213 + index; ISBN: 978-1-84844-752-3 (hard-bound)

Higher education systems are facing severe challenges, posed by the increasingly globalised world economy, which puts several pressures and new demands on higher education. As a result, everyone feels that "most institutions and organisations – corporations, governments, manufactures and the media – have had to reinvent themselves. Colleges are no exception…" (p. 198). Most of the articles in the book under review start with this premise. In about a dozen chapters in the book, eminent scholars, with vast experience in research and administration in higher education, describe how universities have to respond to the new demands and compelling challenges.

The book opens with a chapter by Bruce Johnstone, an international and comparative higher education specialist and a former chancellor of a state university in US, which describes the positive and adverse effects of globalization on higher education. Globalisation requires universities to constantly replenish knowledge, and university administrators to work under fiscal austerity while striving for improvement in internal efficiency. According to Philip Altbach, the new wave of massification of higher education throughout the world poses new challenges in funding, emergence and growth of private (for profit) institutions, adoption of corporate management cultures, etc. It will have significant effects on the academic profession itself.

One of the important features of higher education under globalization has been new modes of internationalization of higher education. Under the new modes, alternative forms of cross border activities have emerged as very popular. Jane Knight, a well known expert on cross-border higher education, unravels the key elements of emerging 'second generation' cross border strategies, including regional education hubs, economic free zones, education cities, knowledge villages, gateways and hotspots. In an interesting 'case study', Mark Kamlet reviews the experience of the Carnegie Mellon University in offering domestic degrees outside the US. The description of 'nuts and bolts' issues relating to this experience would be quite useful to other universities embarking on such business initiatives.

Many contributions in the volume are devoted to issues relating to bringing international students to US campuses. Charles Phelps narrates in detail how to recruit, retain, educate, support and celebrate international students in US campuses. The issues covered include a wide range, from travel and visas to smoking, nurturing, dining, and funding. In an interesting article, Peter McPherson and Margaret Heisel outline the methods on how to create a good and successful experience of study abroad programmes. With the help of a case study of Baruch College of the City University of New York, Kathleen Waldron explains the practical methods on how to create an international experience on the domestic campus. Though international research collaborations have not been new, they are being emphasized by some as the best forms of internationalisation of higher education. While some view these collaborations as methods of augmenting additional financial resources, Elizabeth Capaldi reviews these collaborations more from an academic research point of view. As Capaldi states, some issues of research require research competency available across the world. As she concludes, "indeed all of us need to partner… We cannot do all of everything.." (p. 80). The faculty plays a crucial role in the various modes of internationalisation of higher education. While Patti Peterson describes how faculty has to be reoriented to face the globally oriented campuses, Diana Carlin explains the barriers to internationalisation of faculty and how to overcome them.

The book serves as a practical guide on how to go with certain modes of internationalisation of higher education. However, this is more than a mere practical guide, though serious scholarly critic of these new modes of internationalisation is not attempted by any. Some do refer, rather peripherally, to the pitfalls of such programmes of internationalisation, along with benefits that flow from such programmes. Secondly, though written from a distinctively US perspective, the insights provided by the scholars will be found useful by higher education administrators in other countries as well. As many contributors to the volume observe, it is difficult to foresee the ultimate shape that the global education process will take.

Department of Educational Finance, NUEPA
New Delhi-110016

Jandhyala B.G. Tilak
Email: jtilak@nuepa.org