Journal of Educational Planning and Administration

Volume XXV, No. 3, July 2011

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

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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. XXV No. 3 (July 2011)

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Journal of Educational Planning and Administration
Volume XXV, No. 3, July 2011, pp. 205-221

Knowledge and Power

The New Politics of Higher Education*

Hans N. Weiler#

Abstract

Among the major changes that our understanding of the concept of knowledge has undergone over the last fifty years, few are as significant as the realization of the profoundly political nature of the process of knowledge production and dissemination. The politics of knowledge manifest themselves in the hierarchical nature of knowledge systems and knowledge institutions, in the intricate relationship between knowledge and power (which can be construed as a relationship of reciprocal legitimation), in the political dynamics inherent in the transnational knowledge system and its division of intellectual labor, and in the political economy of the commercialization of knowledge. The discourses on development, gender, and democracy provide cases in point. As premier agencies for producing and disseminating knowledge, institutions of higher education are deeply affected by the politics of knowledge, and have to be cognizant of the many ways in which political forces contribute to shaping their programs of teaching and research, the role of disciplines in structuring academic life, the assessment of academic quality, and their relationship to the state. A special issue arises out of the growing tensions between the transnational nature of the global knowledge system and the many ways in which universities are still beholden to national frames of reference.

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* A condensed version of this paper was presented as a Keynote Address at the International Higher Education Congress 'New Trends and Issues' organized by the Turkish Council of Higher Education in Istanbul, May 27-29, 2011. The author has addressed the issues covered in this paper on several previous occasions, including more recently the Colloquium on Research and Higher Education Policy of the UNESCO Forum on Higher Education, Research and Knowledge in Paris in December of 2004 (published as 'Challenging the Orthodoxies of Knowledge: Epistemological, Structural, and Political Implications for Higher Education' in Guy Neave (ed.), *Knowledge, Power and Dissent: Critical Perspectives on Higher Education and Research in Knowledge Society.* Paris: UNESCO Publishing, 2006, 61-87). Each of these iterations, including this one, has grown several more "rings" around the original tree.

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Introduction: Knowledge, Change, and Higher Education

The invocation of the notion of a 'knowledge society' has become ubiquitous. Among its many dangers is that it creates the illusion that we know what we are talking about when we talk about 'knowledge'. This paper claims that, when it comes to knowledge, we do *not* know what we are talking about.

More specifically, I argue that the contemporary discourse on knowledge, particularly in Europe and North America, suffers from three major deficits:

1. It does not take a critical enough view of what 'knowledge' means, and of the fundamental changes that the concept of knowledge has undergone in the course of the twentieth century;
2. It fails to address the political conditions and consequences of the production and use of knowledge – in other words, it is oblivious to the politics of knowledge; and
3. It does not adequately address what kinds of structural and other changes in higher education would follow from recognizing both the epistemological and the political transformation of our contemporary knowledge culture.

The purpose of this paper is to address this threefold deficit and to help overcome it.

- I begin by looking at the profound changes in our understanding of what 'knowledge' means and how it is produced (Part 1);
- I then present (in Part 2) the essential features of a 'politics of knowledge' and proceed to illustrate these features by reference to the discourses on the concept of development, on the meaning of gender roles and on the understanding of democracy; and
- Conclude by pointing out (in Part 3) some of the implications that this kind of critical reflection on knowledge has for the future direction of higher education.

The Changing Concept of Knowledge

Especially in the second half of the twentieth century, the concept of 'knowledge' has undergone profound changes and has been at the center of major controversies; Rajni Kothari from India speaks of a 'deepening sense of crisis in the modern knowledge system' (1987, p. 283). These changes have to do with the epistemological foundations of our understanding of knowledge, but also with the way in which we assess different processes and institutional forms of knowledge production.

I am referring here to both the criteria for judging the validity and adequacy of knowledge and the structural arrangements under which knowledge is being produced. It is in the debates on these different meanings of knowledge that the political significance of the concept and the intimate relationship between knowledge and power become particularly clear. Altogether, this process presents itself to the observer – as I once put it in an article published some twenty years ago – as 'a remarkable mixture of uncertainty and liberation, of a loss of dependable standards and an openness towards new ways of knowing, of a profound doubt about established conventions in the production of knowledge and the exhilarating sense of a new beginning'. (Weiler, 1993, p. 5)

These changes in the concept of knowledge are reflected and documented in a wide variety of writings and are being articulated by critical voices from highly diverse cultural

traditions: Ali Masrui (1975), Paulin Hountondji (1983; 1997; 2002) and Andre Kraak (2000) from Africa; Syed Alatas (1976), Rajni Kothari (1987; see also Sheth and Nandy, 1996), Susantha Goonatilake (1984; 1998), Vinay Lal (2000; 2002), Ashis Nandy (1981; 1989; 2000) and Homi Bhabha (1994) from Asia; Clifford Geertz (1983), Stephen Greenblatt (1991), Sandra Harding (1986; 1993; 1998) and Paul Roth (1987) from North America; Pablo González Casanova (1981), Arturo Escobar (1984-85) and Carmen Garcia Guadilla (1987; 1996; 2002) from Latin America; Edward Said from Palestine (1983; 2000); and Michel Foucault (1971; 1972; 1980), Zygmunt Bauman (1991; 1992), Helga Nowotny (1994; 2001), Nico Stehr (1992, 2001), Michael Gibbons (1994), and Steve Fuller (2000; 2002; 2003) from Europe – to name but a few of the diverse voices in this discussion, without claiming that the list is representative, let alone complete.

This process of change in the meaning of knowledge is as diverse as the people participating in it; it involves, among other things, both the questioning of the epistemological tradition of a 'unified science' and the demonopolization of a concept of knowledge that has its roots in the natural sciences, as well as the emergence of new ways of knowing.

Challenging the Tradition of a "Unified Science"

The critique of the tradition of a 'unified science'questions the notion of a homogeneous and uniform concept of knowledge that can be applied equally to every conceivable object. This notion originated in the epistemology of the classical natural sciences and its extension to the social and behavioral sciences – in line with Talcott Parsons' classic statement in his discussion of Max Weber's work: "There is not 'natural' or 'cultural' science; there is only science or non-science and all empirical knowledge is scientific in so far as it is valid." (1977, p. 61)

The critique of this position has found its sources and manifestations in such developments as the growing importance of phenomenological and hermeneutic forms of social inquiry (Gadamer, 1981; Habermas, 1978; Thompson, 1981), the growing influence of non-Western (Kothari, 1987; Nandy, 1981) and feminist epistemological thought (Belenky et al., 1986; Farganis, 1986, Harding, 1986), and the commotions of post-structuralist and post-modernist debates (Deleuze and Guattari, 1987; Foucault, 1971, 1972; Lyotard, 1984).

Along these fault lines has emerged a conception of knowledge that is at once more differentiated (in the sense that it differs by the objects of knowledge and the circumstances of generating it) and more contingent (in the sense of statements that are valid only under certain conditions). As a result, some elements of classical conceptions of knowledge have increasingly been questioned. These include in particular

- the notion of *objectivity* – i.e. the independence of the observed 'subject' from the observer;
- the idea of the *certainty* of statements across temporal and other circumstances;
- the possibility of *prediction*, i.e. the dependability of 'if-then' statements; and finally
- the belief in the possibility of *quantification*, i.e. of representing reality adequately and exhaustively in numerical categories.

As part of this process, there has been a shift of emphasis in the relative 'worth' of the general and the specific and on the balance between nomothetic and idiographic knowledge. While these approaches to knowledge remain complementary, the shifting balance between

them is unmistakable, and accounts for a significant change in the pattern of research strategies: in-depth case studies, historical analyses, ethnographic studies, biographical analyses, process, content, and critical incident analyses, and interpretive studies of both literary and social evidence are increasingly competing with the time honoured approaches of hypothesis-testing on the basis of sampling strategies that permit generalization to a theoretically defined universe with identifiable sampling errors. The situation is similar with respect to the tension between 'explanation' and 'understanding' (see Apel, 1984; Roth, 1987; Dallmayr and McCarthy, 1977).

Lastly, the critique of a tradition of scientific rationality geared to the natural sciences has led us to a situation in which knowledge is no longer seen exclusively in cognitive categories, but increasingly in normative and aesthetic categories as well. As a result, both ethical justification and artistic expression are divested of their stigma of being unscientific, and are becoming a legitimate element in a new system of knowledge (Habermas, 1985, pp. 134-137; cf. 1975; see also Putnam, 1987, pp. 53-56; Lenk, 1986, pp. 349-463; Roth, 1987). This development also takes account of the fact that the 'cultural location', and hence the normative disposition, of the observer is a constitutive element in the process of knowledge creation and has a decisive impact on the results of this process – a conclusion that has found expression in the term 'culturality of knowledge', with an increasingly rich yield in the literature (Böhme and Scherpe, 1996, p. 9; cf. Vismann, 1996, p. 106; Greenblatt, 1991).

New Ways of Knowing

The erosion of the canon and legitimacy of a 'unified science' has opened up the process of knowledge production in major ways, giving forms of knowledge previously considered unscientific or extra scientific a new and more legitimate role. It should be noted that the hegemony of the tradition of a 'unified science' has been not only an epistemological issue existing in a vacuum, but has also produced a complex system of institutional mechanisms for setting and sustaining the relevant standards at universities, in scientific publications and in the funding of research. Thus one of the consequences of the erosion of that predominance is also the structural opening up of the system of knowledge production and its institutional infrastructure.

Among the results of that opening is the growing recognition of other and traditionally less esteemed or, indeed, suppressed forms of knowledge. Michel Foucault speaks of the rehabilitation of 'subjugated knowledges ... a whole set of knowledges that once were disqualified as inadequate to their task' and that have now acquired new validity as 'people's knowledge' (*le savoir des gens*) (1980, p. 82). In an article entitled 'African Famine: Whose Knowledge Matters?', Guy Gran makes a case for recognizing African farmers' grassroots knowledge of what does and does not work in African agricultural development as both more legitimate and more effective than the agrarian remedies imposed on them by international agencies (1986).

The formerly rigid boundaries between scientific and non-scientific knowledge are increasingly being questioned, and we have learned to derive powerful insights into the nature of social reality from the literary testimony of writers such as Orhan Pamuk, Gabriel García Marquéz, Günter Grass, Chinua Achebe, or Wisława Szymborska, from artists such as Diego Rivera, Robert Rauschenberg, Anselm Kiefer, or Joseph Beuys, or from film-makers like Rainer-Werner Fassbinder, Akira Kurosawa, Ousmane Sembene, or Andrzej Wajda.

Particularly fruitful in this connection is the rediscovery of the relationship between the scientific and literary analysis of social reality, in which sociology has arrived at a new understanding of itself as what Lepenies calls a 'third culture' (1988). He finds that, throughout its history, sociology 'has oscillated between a scientific orientation which has led it to ape the natural sciences and a hermeneutic attitude which has shifted the discipline towards the realm of literature,' (1988, p. 1) producing 'sociology's precarious situation as a kind of "third culture" between the natural sciences on the one hand and literature and the humanities on the other.' (ibid., p. 7)

The Politics of Knowledge

The process of transformation that has been summarized in the preceding section of this paper has had a lasting influence on our understanding of knowledge. But it has also suggested that the linkage between knowledge and power is both very intimate and very consequential, and that arriving at a better understanding of this linkage is crucial to any attempt to formulate a political theory of knowledge and its production.

There is, of course, nothing new about recognizing the fact that knowledge and power are closely and symbiotically related; it has been dealth with in the works of Karl Marx and Karl Mannheim as well as in those of Emile Durkheim and Max Weber. But it was Michel Foucault who took up this issue with a particularly incisive eye in his, as Edward Said puts it, 'highly wrought presentation of the order, stability, authority, and regulatory power of knowledge' (2000, p. 239).

Of the many facets of this close relationship between knowledge and power, I would like to highlight four in particular:

- the critical importance of *hierarchies* in the existing knowledge order,
- the relationship of *reciprocal legitimation* between knowledge and power,
- the *transnational division of labor* in the contemporary knowledge order, and
- the political economy of the *commercialization of knowledge*.

The Importance of Hierarchies in the Production of Knowledge

Hierarchies are the quintessential manifestation of power. They signify higher and lower ranks in a given order, domination and subordination, greater and lesser value, prestige and influence. Wherever they occur, they reflect structures of authority and power, and thus the essence of politics.

In the world of knowledge, hierarchies are a pervasive structural characteristic that is manifested in different ways:

- Different forms and domains of knowledge are endowed with unequal status, the natural sciences traditionally – and, on a more subtle level, even up to the present day – occupying a leading position, while the less 'exact' forms of knowledge are relegated to the lower ranks of academic prestige.
- In the realm of the institutional arrangements for the production of knowledge, there are again clear and more or less recognized hierarchies. Here, the Max Planck Institutes, private American research universities, the *Grands Ecoles* and exclusive *think tanks* form the tip of the hierarchical pyramid; this institutional hierarchy

serves to organize the politics of knowledge, at least at the national level; it has, as we shall go on to show, its international variant as well.

- Finally, the hierarchical principle also works within knowledge-related institutions – between professor and student, between institute directors and staff, between senior and junior faculty and, if more subtly, between administrators and faculty.

All of these hierarchical relationships are based on more or less explicit agreements on what constitutes an appropriate basis for status and authority in the world of knowledge. In the traditional version of this world of knowledge, such agreements were reached by a relatively peaceful and harmonious process of consensus seeking, some elements of which have been preserved up to the present day. However, as the ideas on what constitutes knowledge that underlie these agreements are challenged, these hierarchies are coming to be increasingly questioned as well. The increasingly open rivalry between Oxbridge and the redbrick universities in Britain, the breaking down of hierarchical distinctions between traditional universities and 'universities of applied sciences' (*Fachhochschulen)* in Germany, the discussion about junior professorships and the abolition of the "Habilitation" in Germany are all signs of an erosion of traditional hierarchies which have been accompanied, not surprisingly, by serious political controversies.

Knowledge and Power: A Relationship of Reciprocal Legitimation

My basic thesis here has two objectives. First, to demonstrate that the concept of legitimation, typically reserved for the authority of the state, can be usefully applied to the realm of knowledge and science as well. Second, to show that a problem central to the understanding of modern statehood, namely, the relationship between knowledge and power, acquires a particularly sharp focus by being interpreted as a relationship of reciprocal legitimation.

On the first point, I posit that not only power requires legitimation (which we have known since Max Weber, if not before), but that knowledge is in need of legitimation as well. Just like power, knowledge must be able to claim credibility and requires recognition of which it must be 'worthy'. The history of social thought has seen and debated different foundations for the recognition of knowledge – from the revelation of mystical experience to the deductive logic of scholasticism to the epistemologies of scientific proof. None of these foundations exclusively inheres in conceptions of knowledge itself; they derive their respective strength from social and cultural circumstances as well. The knowledge of Hildegard von Bingen was accorded, in the cultural circumstances of her lifetime, the same degree of legitimation as, in their respective lifetimes, the knowledge of Paracelsus and Albert Einstein. In other words: The legitimation of knowledge, like that of political power, is subject to changes in their respective criteria, and these changes cannot be explained – at least not exclusively – in terms of the content of knowledge itself.

This is where my second point becomes relevant: that knowledge and power are connected by a relationship of reciprocal legitimation – i.e. knowledge legitimates power and, conversely, knowledge is legitimated by power. There is ample evidence for this symbiotic relationship between knowledge and power, most notably the ever-increasing degree to which political decisions are justified by reference to a particular body of knowledge – from environmental and energy policies to the location of new industries and from the redistribution of wealth to decisions on how to manage financial crises. In our

complex and knowledge-based societies, knowledge and science have virtually become the currency of choice in legitimizing state power (Berger and Luckmann, 1967, p. 102; cf. Gouldner, 1970, p. 50; Marcuse, 1964, pp. 158-159). In his interpretation, Ashis Nandy of India takes this line of reasoning yet a step further to its implications for the role of the university:

'As more and more areas of life are "scientized" and taken out of the reach of participatory politics to be handed over to experts, the universities as the final depository of expertise have become a major global political actor of our times. In addition to their other tasks, they legitimize the "expertization" of public affairs and the reign of the professionals.' (2000, p. 116)

But the relationship is far from being a one-way street. Just as knowledge legitimizes power, it also derives a great deal of its own legitimation from decisions of the state – decisions on, for example, what is to be learned and taught at schools, what sort of knowledge is required to qualify candidates for specific public offices and careers, what sort of research should enjoy public funding, etc. In all these and many other decisions that are subject to state authority, *one* type of knowledge is typically given priority over *another* and is accorded special standing and legitimacy. The close and often intricate relationship between knowledge and power reveals itself as an instrument of reciprocal legitimation (cf. Weiler, 2001).

The relationship between knowledge and power is also, and not surprisingly, the subject of many a literary account. One of my favorite examples is Stefan Heym's so finely drawn figure of the valiant historian Ethan, who, for the sake of the integrity of his discipline, attempts to refuse King Solomon's request of writing the official and politically correct 'King David Report' (1972) and in so doing becomes the tragic centerpiece of a memorable literary monument to the symbiotic relationship between knowledge and power.

The Transnational Knowledge System and the International Division of Labor

The frame of reference for a political theory of knowledge is, however, by no means confined to the institutional and national level; it would not be complete unless the international dimension is taken into account as well (see Drori et al., 2003). This international dimension is characterized not only by a worldwide information flow that is increasingly facilitated by technology, but also by its own kind of political dynamics. For the apparent openness of the international knowledge system tends to obscure the fact that there are extreme global disparities in the distribution of both knowledge production and consumption. Indeed, one of the salient features of the international knowledge system is its peculiar division of labor, in which key intellectual tasks, such as setting theoretical agendas and methodological standards, are the prerogative of a relatively small number of societies and institutions that play a disproportionately important role in this system – societies and institutions which are, almost without exception, located in the economically privileged (northern) regions of the world.

This particular type of hierarchy in our contemporary international knowledge system is by no means concerned only with knowledge, but reflects quite faithfully the international hierarchies of economic influence and political power with which the international knowledge system maintains a closely symbiotic relationship. This relationship in turn has parallels to the relationship of reciprocal legitimation between knowledge and power that I

have described earlier. This is particularly evident in the case of institutions like the World Bank, whose role in the international system is by no means confined to exercising influence on economic activity and policy. Less well-known, but extremely effective is the influence the World Bank wields by imposing an orthodoxy of knowledge to which all countries and institutions that wish to enter into negotiations on financing and support with the World Bank must subscribe (Weiler, 1991; cf. 1988; 1992).

This paradigmatic hegemony of knowledge norms, which has its origins in Western societies and their scientific institutions, has, however, not gone unchallenged. Indeed, the increasingly intense controversy over a new international system of knowledge is one of the most interesting and significant political phenomena of the last twenty-five years. Instrumental in this 'redrawing of the map of world culture' (Böhme and Scherpe, 1996, pp. 18-19) were many of the voices from the countries of Asia, Africa, Latin America and the Arab world that I have already mentioned – e.g., Hountondji, Kothari, and many others, including very prominently Ashis Nandy with his call for 'a new, plural, political ecology of knowledge' (1989, p. 267).

The Political Economy of the Commercialization of Knowledge

A final aspect of the contemporary political economy of knowledge production has to do with the growing commercialization of knowledge in the modern world. To be sure, certain kinds of knowledge have always had their economic utility, but it is an important part of our times that the creation of knowledge has come to be conceived so pervasively in economic and commercial terms. This has something to do with the increasing cost of knowledge production and, hence, the dependence of knowledge producers on external financial sponsorship; such sponsorship very often does have an economic and political agenda of its own under which the support and the production of new knowledge is being subsumed. More importantly, however, the very nature of modern economic activity has become so massively dependent on up-to-date knowledge of constantly increasing scope and complexity that the linkage between knowledge and both productivity and profitability has become virtually inescapable. This is true not only for the 'hard' sciences and their utility for industrial and other forms of engineering, but also for the knowledge of social and psychological processes and its significance for dealing with labor relations, enhancing productivity, and other forms of 'social engineering.'

As a result, a whole new set of power relationships has emerged around the world of knowledge. These relationships are dictated by both the interests and the resources of the commercial users of knowledge and take a variety of forms -- from outright research contracts between industry and universities to more subtle influences on research programs by philanthropic foundations, and from industry-sponsored research institutions inside universities to the setting up of industry-owned research centers in more or less direct competition with other producers of knowledge in the academic realm. The story of Silicon Valley over the last forty years offers a particularly instructive lesson on both the advantages and disadvantages of this new symbiotic relationship between knowledge and commerce in the context of high-tech development (Weiler, 2003).

Whatever the specific institutional arrangements, however, the overall growth in the commercialization of knowledge production has added a further layer of politically constituted interests to the contemporary system of knowledge production: the discourse

about the notion of the 'knowledge society' reveals upon closer inspection that the politics of knowledge become less and less separable from the politics of production and profit, which are arguably among the most powerful political dynamics in today's world. The international dimension of this kind of dynamic in the politics of knowledge is the growing debate about including higher education and research in the 'General Agreement on Trade in Services' (GATS), designed to guarantee access to national markets by foreign suppliers of knowledge (Gewerkschaft Erziehung und Wissenschaft, 2002; World Trade Organization, 2001).

The Politics of Knowledge: The Discourses on Development, Gender, and Democracy

Among the many manifestations of change in the realm of knowledge, three discourses highlight particularly, direction and extent of change as well as its political dimension: the discourses on the notion of development, on the role of gender and on the meaning of democracy.

Development

It is surely no coincidence that the discussion on the relationship between knowledge and development has been at the center of the extraordinarily rich debate conducted over the past several decades on the concept and political significance of 'development'. Ashis Nandy carries this debate farthest in his critique of a development policy that he considers the modern world's fondest – and at the same time cleverest – form of charity (1989, p. 269). He is even skeptical about the many *alternative* conceptions of development – sustainable development, eco-development, indigenous development – suspecting them of being 'products of the same worldview which has produced the mainstream concept of science, liberation, and development'. For him, the real challenge is to radically reject the unholy alliance between traditional science and traditional development and construct a 'post-modern science' and a 'post-development world' (ibid., p. 270).

The common denominator in the work of the many authors who have contributed to this debate (many of them assembled in Rahnema, 1997) is the close connection they see between the discourse on development and the debate on the politics of knowledge. As Guy Gran puts it: '... the heart of both generating and applying authentically developmental knowledge is the reduction of power differentials ... Power differentials both within a locale and between levels ... fundamentally determine how knowledge is perceived, whose knowledge matters, and the ensuing effectiveness of policies on which it is based' (1986, p. 287).

Gender

As in the case of development, the critical discourse on gender is also much more than an exercise in redefining a concept, but is closely linked to both the political agenda of the feminist movement and its epistemological claims about 'Women's ways of knowing', as one of the early contributions to this debate is entitled (Belenky et al., 1986; cf. Farganis, 1986; Harding, 1993; 1998; Figueroa and Harding, 2003). This convergence of both a political and an epistemological agenda has yielded a wealth of contributions to our understanding of the role of gender in the construction of social reality and of the many ways in which elements of

patriarchy have pervaded our conception of such issues as performance, achievement, success, competition and, indeed, knowledge (Pateman, 1988). Here, too, the international dimension of the discussion has by now attained considerable importance, especially in the feminist debate of post-colonial discourses on knowledge and development (Charlton, 1984; Sangari und Vaid, 1989; Mohanty, 1984).

Democracy

The increasingly rich discourse on the meaning of democracy, like that on development and gender, also has a dual dimension. On the one hand, it addresses fundamental questions about the nature of democracy in modern societies, especially in terms of the relative importance of representative and participatory elements (Pateman, 1970; Barber, 1984). At the same time, however, this discourse on democracy is also a discourse on the politics of knowledge and, more specifically, on the democratization of the process of knowledge production and consumption. This aspect of the discourse on democracy is reflected, for instance, in a heightened recognition of the rights of the research 'subject', in the growing importance and acceptance of 'participatory research', in the funding – especially by Canadian and Scandinavian institutions – of autonomous research projects in Third World countries, and – in an interestingly unfamiliar guise – in such images as Ashis Nandy's notion of the 'shaman' as 'the ultimate symbol of non-cooptable dissent' (1989, p. 266).

An important debate in this connection is that on the 'governance of science', which – as, for example, in Steve Fuller's book – deals with the remarkable paradox that scholarship, while in the course of history a significant contributor to the democratization of societies, has at the same time been remarkably reluctant to subject itself to democratic norms of procedure (Fuller 2000, p. 135).

The Politics of Knowledge and the Future of Higher Education

The transformation of the traditional system of knowledge that this paper has thus far described is bound to have major implications for the future orientation of higher education in terms of its organizational and institutional arrangements as well as its cultural norms and properties. This process will confront institutions of higher education with some major challenges, including the following:

- the need to acknowledge the fact that the production and mediation of knowledge is a genuinely political process requiring systematic and critical inquiry, and a process in which both the culturality of knowledge and the role of knowledge in legitimizing political power play an important part;
- a thorough examination of the role of traditional disciplines as the dominant matrix for organizing scholarly activity and for sustaining the basic structures of the academic enterprise;
- the critical review of the criteria and methods for evaluating the quality of scholarship, taking into account the power structures inherent in these procedures; and
- a candid reassessment of the role of institutions of higher education in sustaining and shaping the international politics of knowledge.

The Politics of Knowledge in Teaching and Research

Knowledge and the political conditions of both its production and consumption still remain at best a peripheral subject of serious and critical inquiry, generally relegated to disciplinary niches such as the sociology of knowledge, the history of science, etc. Attempts to transcend these niches – by people like Lepenies or Homi Bhabha or Helga Nowotny or Steve Fuller – are, given the importance of this issue, a remarkably rare exception. Ashis Nandy has eloquently described the power of definition, of establishing categories and concepts as the key to understanding the new relationship between knowledge and power:

'The old, clichéd saying, "knowledge is power," has acquired a new potency in recent years. For nearly a century it was fashionable to study how interests and material forces of history shaped knowledge. The world that has come into being in the aftermath of World War II seems to have reversed the relationship. It has forced us to recognize that dominance is now exercised less and less through familiar organized interests, such as class relations, colonialism, military-industrial complexes, multinational corporations, and the nation-states. Dominance is now exercised mainly through categories, embedded in systems of knowledge. ... The war cry of our times is now: "define or be defined." ... Universities have come to share this new power, for they specialize in handling categories.' (2000, pp. 115-116)

This very central challenge to inquiry is and remains very much a secondary subject of study in our hierarchies of research priorities. One of the ideal sites on the academic map to properly address this challenge would seem to be the field of cultural studies (*Kulturwissenschaft*), as postulated by Böhme and Scherpe:

'That today crucial cultural renewals originate in cultures previously considered peripheral, in syncretistic cultures, post-colonial countries and ethnic minorities in the industrialized societies, is a process whose segregating and polymorphous structure can no longer be understood in terms of the humanities; it can only be dealt with by a cultural studies discipline capable of moving flexibly between world culture and regionalism on both an empirical and theoretical level.' (1996, pp. 18-19)

Viadrina European University at Frankfurt/Oder in Eastern Germany (as whose first president I had the honor to serve) is one of the places where, in a bold experiment in cultural studies, this challenge is being taken up. In one of the better analyses of this experiment, Cornelia Vismann quite convincingly reasons that a modern cultural studies program simply cannot avoid focusing on the production and mediation of knowledge as one of its principal subjects:

'The founding of a Faculty of Cultural Studies at the university corresponds, at the institutional level, to what has been happening on the discursive level over the past twenty or so years: the transition from a closed system of the humanities and social sciences to a new, open knowledge system, which in its turn should now assume the form of a teachable and learnable "discipline". The transition – or, to put it another way, the blurring of boundaries between disciplines – has itself become significant, namely to the extent to which one of the most prominent fields of cultural studies concerns *knowledge*: its conditions of production, its rhetorical manifestations and its forms of transmission.' (Vismann 1996, p. 106)

This reappraisal of our understanding of knowledge and of the cultural and political conditions of its production is one of the major challenges facing modern institutions of higher education.

Disciplines and the Structures of Academic Power

The tenacity with which the traditional disciplines have retained their dominance of academic structures is quite remarkable and tends to defy the considerable evidence of their obsolescence or, at the very least, their limitations in adequately dealing with human and social reality. Boundaries between disciplines have been blurred considerably – between economics and political science, between sociology and psychology, and even between the social sciences and the humanities. Theoretical and methodological variation within disciplines is now often greater than between disciplines. Just as importantly, vast new domains of knowledge and systematic inquiry have emerged at the interstices of traditional disciplines and have become the source of important insights into such phenomena as biogenetics, materials research, symbolic systems, organizational behaviour, epidemiology, and social engineering.

One of the reasons why, in spite of all this, disciplines persist so tenaciously has to do with the fact that the organization of science in terms of disciplines is not just a question of academic classification; it also is a question of discipline-based power structures in which decisions are made on personnel matters, resources, publications, libraries, buildings and equipment. Disciplines provide the rationale for professional associations and the organized representation of their interests; they form the framework in which decisions on the funding and the publication of research are made; and they secure the succession of academic dignitaries. But Wolf Lepenies is right in pointing out the profound limitations in discipline-based discourses: 'The strict invocation of disciplinary identities may be useful in distributing scarce resources and cheering on old-fashioned academic cockfights. ... but it is no longer suitable as a stimulus for intellectual ideas.' (1997, pp. 93-94)

Higher Education and the Changing Role of the State

One of the key parameters for the politics of knowledge is the changing relationship between higher education and the state in many parts of the world. The net effect of these changes is an increase in the degree of the university's self-determination or autonomy, at least from the state. This proves to be an ambivalent situation in at least two respects. On the one hand, especially where the university's greater autonomy is a result of the state's fiscal crisis, the university is likely to enter into sponsoring relationships (with tuition-paying students from certain segments of the society, with business interests or with philanthropic or international agencies) that are likely to establish new and different kinds of dependency. Whether or not this is the case, however, greater institutional autonomy for the university tends to be resisted by faculty which has traditionally enjoyed a considerable degree of *individual* autonomy even in situations where state control kept the university's *institutional* autonomy rather strictly limited.

In this respect as in others, the modern university reveals one of its most intriguing traits: that of profound ambivalence about its own identity and purposes. One can argue, as I have done elsewhere (Weiler, 2005), that this ambivalence is at once a defense mechanism against overly powerful accountability pressures upon the university (an institution that is ambivalent about its purposes cannot very well be held accountable for whether or not it has achieved those purposes), and the result of a profoundly ambivalent attitude of society about the nature of the university (as between the pursuit of knowledge for its own sake and

the satisfaction of societal and economic needs). The relationship between higher education and the state under these conditions of ambivalence will remain one of the key issues for both policy and research.

The Politics of Knowledge and the Assessment of Academic Quality

Not surprisingly, the evaluation and assessment of scholarship is one of the most contested domains in the politics of knowledge; after all, it is the evaluation of scholars, students, research proposals, manuscripts, and publications that determines the principal rewards of academic life: peer recognition, institutional standing and influence, research grants and, most importantly, publication. This is where academic laurels are awarded and where scholarly effort is rewarded. This is where power is being wielded.

This assessment process tends to be fundamentally conservative in the sense that it is guided by what has proven its worth, and duly skeptical about what has not yet been tried and tested. Disciplinary identities, methodological orthodoxies, and the continuity of research traditions are tried and proven; interdisciplinary research and the addressing of new questions with new methods mean discontinuity, treading new ground, and taking risks.

This kind of caution has been a reasonable safeguard for preserving valuable scientific legacies; it has also, however, increasingly become a significant feature of everyday academic life and the reality of our academic institutions; in its worse incarnations, it tends to act as a brake on the necessary process of constant renewal of our concepts of knowledge. It is here that the traditional hierarchies of knowledge manifest their power most clearly and effectively, and that the difference between powerful and powerless knowledge becomes tangible.

Hierarchies become capable of innovation by being accountable. Hierarchies – and this is also true of the hierarchies of knowledge – are not intrinsically incompatible with innovation; they become so by failing to comply with the requirements of transparency and accountability. Unlike some of my German colleagues with whom I interact on questions of university reform in Germany, I am not troubled by strong university presidents, an academic system based on quality assurance or a system of research funding governed by intense competition – as long as the decision processes and criteria are transparent and open to critical dialogue with those concerned and affected. This applies equally to the grading of written examinations and to the decisions of research funding, to academic appointments and to university admissions.

Creating this very transparency and accountability is a political challenge of the highest order. The current academic climate in many countries, notably in Europe, has in recent years fostered some remarkable changes – changes in governance, in the status of professors, in programs of study, and in university financing. Creating transparency and accountability is an issue, however, on which there is still room for further progress.

Transnational Knowledge and National Universities

It has always been difficult to reconcile the national origins and frames of reference of universities with the fundamental internationality and universality of knowledge and scholarship. Given an international and transnational knowledge system that is

characterized by increasingly salient conditions of inclusion and exclusion, of privileged and underprivileged knowledge, this issue is acquiring special urgency, confronting institutions of higher education – and not only them – with a momentous challenge (cf. Inayatullah and Gidley, 2000; Weiler, 1995).

This has something to do with issues such as foreign-language study programs, internationally comparable degrees, the acceptance of credits obtained while studying abroad, etc. But given the nature of the international knowledge system, it is even more important to provide students with the skills they need to critically monitor the process of globalization and to assess its conditions and consequences. This, however, is only possible if the Western world's largely monocultural institutions of higher education become, in scholarly and curricular terms (and not only in extracurricular and folkloristic activities), real centers of cultural encounter and multicultural discourse. At such centers, debates on the question of whose knowledge matters would be a normal and integral part of teaching and research, where what Rajni Kothari once called the transnational knowledge system's 'homogenizing monoculture of the mind' (1987, p. 284) would be consciously subjected to critical and self-critical reflection. And where it would be the rule rather than the exception that someone like Homi Bhabha teaches in Chicago or Harvard or Berlin.

This critical role of academic institutions with respect to the transnational knowledge system has something subversive about it. Ashis Nandy sees some institutions of higher education in the Third World making courageous and imaginative efforts to 'begin to act as sources of skepticism toward the victorious systems of knowledge, and as the means of recovering and transmitting knowledge that has been cornered, marginalized or even defeated.' (2000, p. 118) And where the knowledge institutions of the West and the North are concerned, we would do well to heed Wolf Lepenies' reminder: 'It is high time that Western societies change from being cultures of lecturing to being cultures of learning.' (1997, p. 40)

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JOURNAL OF INDIAN SCHOOL OF POLITICAL ECONOMY

Editor: V.S. Chitre

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DOCUMENTATION

1. ***Report of The States Reorganisation Commission,* Government of India in the Ministry of Home Affairs, No. 53/69/53-Public, dated 29th December, 1953**

2. **Thoughts on Linguistic States, Anand Sahitya Sadan, Siddhartha Marg, Chhawani - 20, Aligarh - 202001. (First Published 1955)** — **B.R. Ambedkar**

Book Reviews

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Journal of Educational Planning and Administration
Volume XXV, No. 3, July 2011, pp. 223-234

Elementary Education for Girls in India

Gurminder Singh*

Abstract

Educating girls has a catalytic effect on every dimension of economic development including high productivity, faster growth, high economic gains and a step towards empowerment of women. Educated women are also observed to be strong positive role models for female children. Gender discrimination makes girls the first sacrificial victim to be withdrawn from school when times get tough, and it is a more relative disadvantage in SC or ST families. The article examines the causes of gender disparities in access to education and details the initiatives taken at the governmental and societal levels to address this issue.

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Introduction

Promotion of female education has been the concern of India since Independence. In this light, the central government and state governments, institutions and other organizations have been doing a lot for the progress of the girl child's education. Yet, the achievements in girl's education are far from the goals set for Universalization of Elementary education. The 86th Constitutional Amendment Act 2002 made education a 'Fundamental Right' for children in the age group of six to fourteen years by providing that 'the State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine'(Constitution of India, Article 21A) The bill specifies that every parent or guardian of a child has to 'enrol his/her child, or, as the case may be, ward in a recognized school, cause the child to attend such school with at least such minimum regularity as may be prescribed; and provide the child full opportunity to complete elementary education'.

The National Commission set up to Review the Working of the Constitution (22 February, 2000) recommended that children should enjoy the fundamental right to free and compulsory education. In addition, girls and children from scheduled caste (SC) and scheduled tribe (ST) households would have judicially enforceable right to education until they are eighteen years of age. According to the Constitution of India, 'The state shall endeavour to provide, within a period of ten years from the commencement of this constitution, for free and compulsory education for all children until they complete the age of fourteen years (Constitution of India, Article 45, 1951).'

'A far cry from the provisions of the Constitution of India, a land of more than a billion people having slightly less than one-third of the world's non-literate population aged fifteen years and above (UNESCO, 1998).' The goal of Universalization of education as set out in the Constitution seems unrealisable even after six decades. The original period of ten years to achieve this goal was extended to sixteen years after the government failed to meet its target. The Education Commission in its report in 1966 regretted this failure on part of the government and pushed the date further. The new target date was 1985. In 1986, the National Policy on Education extended the date by another ten years. In 1993, the department of education, in its report 'Education For All', set the date at 2001(A Review of The National Policy Of Education 1986). Now, the Indian government has to accomplish hundred percent enrolments of children by 2008.

Extension of goals, years after years, indicates the lack of sincerity towards the child's betterment. The situation further worsens when the question of the girl child and caste differences arises. Caste plays a very important role in educational attainment in India, alongside affecting other major individual and household level variables. There is no doubt regarding the relative disadvantage faced by children belonging to the scheduled castes and scheduled tribes and other backward classes. The effect is even stronger for girls (Drèze and Kingdon, 2001). Drèze and Kingdon have found strong evidence of sharp gender bias in school participation in rural north Indian states of Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan. Ramachandran (1996) has shown that rising literacy rates in Kerala were closely linked to falling barriers of caste, class, race, and religion and that, in turn, the reduction of these barriers has been a key factor in furthering the spread of education. The vital importance of education in almost every sphere of women's empowerment has been experienced, making it an issue which must not be ignored. There is little argument that

ending illiteracy amongst women raises their capabilities, enhances their agency, and involves them in the development process. The relationship between education and development is also a dialectical one.

In this paper we have tried to point out some of the government's endeavours and societal approaches towards the girl's education in the last century and therefore, especial emphasis has been given on Indian education policies after Independence. However the Government of India has made efforts at some levels but still lot has to be done to bring greater numbers within the ambit of education. Disparity in female education is still widespread in Indian society due to the patriarchal outlook or societal taboos towards sending a girl child to school. Further this paper has tried to show the evidence for this view i.e. elementary education for girl child is based on societal approach as well as government initiatives. It is also an attempt to understand, some of the issues confronting practitioners, policy makers, and researchers in female education in India and what they can do to move toward high-quality and gender-equitable education for all.

Gender Inequality in Access to Education

Greek philosophers thought a 'woman is an unfinished man left standing at a lower step in the scale of development. The male is by nature superior and female inferior. The one is the ruler and the other ruled. Woman is weak of will and, therefore incapable of independence of character and position.' Such prejudices prevail even today. On the threshold of a new millennium the status of woman is still to be elevated to that of man.

Given all these difficulties of conceptualization, measurement, quality and accessibility of data, the scorecard on gender equality and female education in Asia is intended to expand understanding and facilitate comparison with regard to achievements of gender equity in and through schooling.

The ideas that have driven the construction of this scorecard are multi-faceted. Existing measures for access to and efficiency in the school system are very limited as measures of gender equality, even though there have been marked improvements in sex-disaggregated data. These access and retention measures cannot, in their raw form, point to a wider understanding of gender equality neither in schooling nor as a result, in the area of education more generally. Thus, the idea for developing a scorecard that weighs enrolment, participation and survival into adulthood originated from concern over the need to find a publicly accountable measure that could distil some general components of human flourishing linked to education and schooling. There are some interesting issues that arise when the scores of India are high in most of the South-Indian states, while in most northern states, they are low (Drèze and Sen, 2000). The very large numbers of districts where enrolment and achievement are low contributes to India's low score. Firstly, coordinated government policies with strong local champions within government, NGOs or a women's movement can lead to significant increases in the score. Good scores, once attained, yield value over decades. Secondly, little action on gender equity in education, coupled with large internal inequalities, can lead to a fall in score. Thirdly, the effects of war linger for many decades after fighting officially ends. Reconstruction requires much sustained programmes.

Schooling has innumerable benefits, and yet vast majorities of Indian children, especially girls are deprived of these. Despite various measures undertaken by the government and

local bodies to reduce the inequality in education between genders, castes, classes and religions, this inequality still persists (Divya Vaid, 2004).

India alone has 26.8 million primary school-age children who are not enrolled in primary school, accounting for 23 per cent of global absentees (Unicef, 2005, P. 14-15). Today, the total number of girl students enrolled in the upper primary education are much better because of many policy interventions on behalf of the girl child, such as the Report of the National Committee on Women's Education (1958-9), the Kothari Commission Report (1964-5) and above all the National Policy (1968) and the National Policy on Education (1986), which stressed the need for empowering women, thereby making them capable of guiding their own destiny and becoming self-reliant through exposure to education and survival skills, including income generation (Ramachandra, 2001).

India, being a predominantly agrarian country (*According to the 1991 Census, about 67.7 percent of Indian Population were engaged in agriculture*), a substantial number of girls are expected to contribute to the family income by their own labour or to look after their younger siblings (Aggarwal, 1997) The opportunity cost of educating girls is thus especially large in rural and low-income families (Sengupta and Guha, 2002). The National Committee on the Status of Women in India (1975) accepted that poverty plays a major role in the attitude to girl's education especially for people below subsistence level (Aggarwal, 1987). The Public Report on Basic Education in India (PROBE, 1999) finds that in northern states of India, such costs are substantial: 'In fact, "schooling is too expensive" came first (just ahead of the need for child labour) among the reasons cited by Probe respondents to explain why a child had never been to school' (PROBE, 1999). 'The development paradigms have generally failed to address the unequal relationship between men and women, and failed to account the potential of women to contribute in the private and public sectors to a country's development. As a result, issues affecting women and girls are nearly invisible in the theories, policies and practices of the development' (UNICEF, 2004).

Girls and women endure numerous violations of their human rights, from social and economic discrimination to physical, psychological and sexual violence, to exclusion from positions of power within and outside the family. Among all the issues facing girls and women, why has education taken centre stage? Educating girls has a catalytic effect on every dimension on economic development including higher productivity and faster growth (Wolfensohn, 1995).

Equal access to educational opportunity is a basic human right essential to well being. Besides, it is now well established, that in developing countries, the economic gains from educating females, at least up to a minimum level, are much greater than the gains from educating males. Educating girls has a catalytic effect on every dimension on economic development including higher productivity and faster growth (World Bank, Report 1995). In the case of the poor girl who must work, her right to education is being infringed upon because she is unable to attend school. There seems to be very little difference between an infringed right and a violated right in this situation. Existence of gender gap in educational attainment thus becomes an important dimension of entitlement failure that threatens sustainable human development.

The primary role of the rights approach is to change public perceptions of what is due to Indian children. In particular, the rights approach can help to put children's issues on the political agenda, and to forge new social norms on these issues. To illustrate, the recent recognition of elementary education as a fundamental right of every child has helped to

dispel the resilient notion that education is 'unnecessary' for some sections of society. A similar consensus needs to be built regarding the rights and entitlements of children. One symptom of the marginalization of children (especially young children) in Indian democracy is the low coverage of children's issues in the mainstream media (FOCUS, 2006).

India is still biased towards female education even after sixty years, a wide pervasiveness of the gender disparity, especially in rural areas where education is most sorely needed, the record in education is dismal, there exists a shamefully low literacy rate and disparities based on caste, religion, gender and region still flourish in the access to education, the quality of that education, and the benefits that arise from it. But positively the issue of female education in particular, has increasingly come into the focus of Indian policy makers in recent years.

As mentioned in Focus on Children Under Six (FOCUS 2006) report there are two types of intervention that are needed. First, a need to address the structural roots of child deprivation, including mass poverty, social discrimination, lack of education, and gender inequality. Second, there is a need for immediate protection of children under six, by integrating them in an effective system of child development services that leaves no child behind. It is with this immediate task that this report is concerned.

There is a need to adopt a rights-based approach in emergencies. The enforcement of girls' rights must be accorded the highest priority since many violations of girls' rights are only possible because of the invisibility of girls and the vulnerabilities they face. Therefore, protection, which embraces both the material conditions of children's lives as well as their psychological and emotional well-being, may be seen as a cross-cutting objective of humanitarian action. Agencies' child protection efforts should be focused on addressing and preventing violence, abuse and neglect, exploitation and discrimination as well as forced recruitment in armed groups. Education should be further recognized as a means for protecting and rehabilitating girls affected by armed conflicts (Mathieu, 2006).

Those who are illiterate are denied basic human rights because illiteracy ultimately 'suffocates the consciousness and the expressiveness of men and women who are forbidden from reading and writing, thus limiting their capacity to write about their reading of the world so that can rethink about their original reading of it.' (Freire, 1998: 4)

It is also significant that these conflicts have affected an Asian region that is 'still one of the most iniquitous regions in India as well as in the world in terms of gender, with discrimination against girls and women widespread (Boyden J., 2002)'. Therefore, the impact of conflict and post-conflict settings on female education in Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka requires an in-depth research in order to take concrete actions and meet the gaps identified. A Girl said in Darfur, 'Education is light. When you don't know how to read and write – ignorance is like darkness.' And she also said to Rima Salah (UNICEF, 2005), 'Please continue to give us light, because we don't want to stay in darkness.' When we talk about education, it is like light. Education is the means towards empowerment of women, and the empowerment of girls. Studies have also linked education levels to lower rates of malnutrition, higher levels of economic empowerment and productivity, lower wage differentials, higher sex ratios, and lower mortality rates. There are intrinsic and extrinsic benefits to education (Sen, 1997), not the least of which is that educated women are strong positive role models for female children and other mothers.

Whatever be the cause, there is a gap in enrolment. The social barriers standing in the way of girls attending schools — poverty, compulsions of older girls in families having to

look after the home and siblings, the misconception that girls do not need education and/or that what is taught in schools is irrelevant to them, parents seeing limited (economic) benefits in educating daughters, lack of women teachers and separate schools for girls, supportive facilities (like adequate and clean toilets in schools) and transport facilities to travel to school and back, all these inhibit parents from getting their girls enrolled.

The gender discrimination in schools is an extension of what we think in the family, in society and in the community in which we live. Unless there is camaraderie, dignity and partnership among the members of and within the family, it is difficult to expect the school to create it artificially in its own environment, and to pursue it without reference to what is happening in society. Gender discrimination remains rife in both the curriculum and organization of the school. The most effective way to ensure quality education for all children is to eliminate the barriers for girls: schools that are at long distances from home, high school fees and other hidden costs, lack of safe water and sanitation, discrimination and the threat of violence.

There has to be a democratic environment in the home for the child to be democratic in her lifestyle. Any programme of gender discrimination, elimination in educational institutions, must take into confidence the parents and guardians and undoubtedly the teachers, for whom there must be continuous programmes, orienting them to equality in thought and deed. This manifests itself in language, gestures, postures and action as seen in the way girls and boys are seated in the classroom. We neither need to exceed the limits of decency nor need we show prudishness — again it is for teachers and the administrators in schools to ensure that girls and boys are comfortable in each other's company. Quite often more chances are given to boys than to girls (by a kind of reflex action) to answer questions or to take on responsibility. Girls keep away from sports and physical activity and nothing is done to see that they are talked out of this preference by providing them with some transport or other facilities for getting home safe and encouraging them to take part in all the games and fitness programmes of the school. In addition, all students should be encouraged to take part in life planning — both girls and boys, planning as individuals and as members of a family.

Rightly does it emphasize the role of the community in helping the school to combat gender stereotyping? It encourages local communities, particularly women to play an active role in every aspect of the programme. This includes intensive capacity building for groups in the community to focus on issues relating to the education of girls. Involvement of the community is also required in monitoring enrolment, retention and levels of achievement and classroom behaviour and transaction, with emphasis on girls. The equal treatment promoted in the schools ought to be able to transform the thinking within families. Within the school itself, there is need to identify the overt and covert discrimination, arising out of ignorance and deeply ingrained ways of thinking, on the part of teachers and educational administrators (Karuna, 1988). Freedom and equality have to be seen in relation to the culture and structure of specific societies, and differences in male and female roles do not *ipso facto* result in inequality between sexes. Mukherjee, P. N. proposed three counter concepts to understand equality; discrimination, exploitation and oppression (Karuna, 1988). It seems that all these intervention are designed to programme a fixed social construction of girls.

Government Initiatives: Apprenticeship of Womanhood

After independence, the Government of India has taken number of steps to strengthen the educational base of the persons belonging to the girls and children of Scheduled Castes and Scheduled Tribes. Pursuant to the National Policy on Education-1986 and the Programme of Action (POA)-1992, the following special provisions for SC's and ST's have been incorporated in the existing schemes of the Departments of Elementary Education and Literacy.

The right approach would be to replace the current practice of setting timeless global targets for the whole country with disaggregated targets for different states and UTs. This would inject the much needed sense of realism to the whole exercise of assessing the magnitude of the task and setting time frames. Considering that education is on the concurrent list and the centre has rightly provided high priority to elementary education, appropriateness of a proactive approach by the centre in designing development activities cannot be questioned. Going by past experience, there is a danger that after the initial enthusiasm, the implementing agencies may seek financial assistance under *Sarva Shiksha Abhiyan* but lose interest in and ownership of the programme and action soon after. Proactive approach of the centre may be taken as a license by many states to be inactive. The real test of *Sarva Shiksha Abhiyan* would be its adaptability to the changing contexts of different states and its ability to enthuse the state governments to continuously innovate the strategies for demanding central assistance. Therefore norms for support under *Sarva Shiksha Abhiyan* should have flexibility to accommodate new initiatives (Kainth, 2006, p. 3291).

The introduction of water, sanitation and hygiene is one factor in India's overall commitment to school quality and improving girls' enrolment. *Sarva Shiksha Abhiyan* is a Government flagship designed to get all children into school, especially girls disadvantaged by caste, tribe or disability. It relies on community participation and monitoring with an emphasis on the recruitment of women and members of disadvantaged groups. The initiative evaluates every aspect of the learning spaces against gender-friendly standards, including the provision of safe water and sanitation. To ensure the enrolment and retention of girls, schools serve midday meals and offer girls scholarships for uniforms and supplies. Teacher training and recruitment are part of an overall push for quality. Advocacy is a strong component of 'back-to-school' campaigns for children who have dropped out, messages directed to parents about the importance of education, a zero-rejection policy for disabled children and adolescent tutorial camps for girls (Unicef, 2005).

As Jean Drèze (1999) has said 'the schooling revolution has raised the literacy status in general and women in particular in Himachal Pradesh. Fifty years ago, educational level in Himachal Pradesh was no higher than Bihar or Utter Pradesh. Today, Himachal Pradesh is second only to Kerala in terms of school participation and literacy rate in the younger age-groups.' In 1951, the first post-Independence census showed Himachal Pradesh's literacy rate to be 19 per cent. By 2001 it had gone up to 77 per cent, with male literacy at 86 per cent and female at 68 per cent. In the fifteen to nineteen age groups, literacy rates were 95 per cent for females and 97 per cent for males, second only to Kerala, where the corresponding figures are 98 and 99 per cent respectively. Of all the states, school attendance rates in Himachal Pradesh in the six to twelve age group are the highest in the

country. The distribution of educational performance in terms of gender and caste is also an impressive aspect of schooling in Himachal. In the seven to fifteen age groups not only are the aggregate levels of literacy very high, the gender gap (female literacy 94 per cent; male literacy 96 per cent) and caste disadvantage (SC female literacy 92 per cent; SC male literacy 95 per cent) have also greatly reduced (FOCUS, 2006).

A great deal of variation exists among states. In Rajasthan, the primary gross enrolment ratios for girls in primary and upper primary are 50 and 23 respectively, while the corresponding figures for Kerala are 98 and 104 respectively. Unexpectedly, primary gross enrolment ratios for Dalit girls are only marginally lower than the overall female average, though for tribal girls the difference is more marked. Low gross enrolment ratios at the secondary level reflect a disturbing trend in female education: a high drop out ratio. Drop out rates are highest amongst girls and Dalit communities, though in the latter boys and girls are equally likely to drop out. According to Mily Roy Anand and Mona Yadav (2006) 'A large number of SC girls do not have access to successive stages of education. The drop-out rates of Scheduled Caste girls are another crucial indicator in the field of educational development.'

One of the three elements of the strategy for Universal Elementary Education (UEE) of the National Education Policy of 1986 in India, was a large and systematic programme of non-formal education for children of habitations without school, working children and girls who cannot attend whole day schools.

- relaxed norms for opening of primary/middle schools; a primary school within one km walking distance from habitations of population up to 200 instead of habitations of up to 300 population.
- Abolition of tuition fee in all States in Government Schools at least up to the upper primary level. In fact, most of the states have abolished tuition fees for SC/ST students up to the senior secondary level.
- Incentives like free textbooks, uniforms, stationery, schools bags, etc., for these students.
- The Constitutional (86th Amendment) Bill, notified on 13 December 2002, provides for free and compulsory elementary education as a Fundamental Right, for all children in the age group of six to fourteen years.
- To achieve the long cherished goal of Universalization of Elementary Education (UEE) through a time bound integrated approach, in partnership with States, *Sarva Shiksha Abhiyan,* which promises to change the face of elementary education sector of the country, aims to provide useful and quality elementary education to all children in the six to fourteen age groups by 2010.

The main features of the programme are:

- Focus on girls, especially belonging to SC/ST communities and minority groups.
- Back to school campus for out of school girls.
- Free textbooks for girls.
- Special coaching remedial classes for girls and a congenial learning environment.
- Teachers' sensitization programmes to promote equitable learning opportunities.
- Special focus for innovative projects related to girls education.
- Recruitment of 50 per cent female teachers.

Some other programmes which directly or indirectly support to the Girl Child educational development are as follows:

- District Primary Education Programme (DPEP)
- Mahila Samakhya (MS)
- National Programme for Education of Girls at Elementary Level (NPEGEL)
- Shiksha Karmi Project (SKP)
- Kasturba Gandhi Balika Vidyalayas
- Jan Shikshan Sansthan (JSS)
- Mid-Day Meal scheme
- Central Institute of Indian Languages (CIIL)
- Kendriya Vidyalayas (KVs)
- Navodaya Vidyalaya (NVs)
- National Institute of Open Schooling (NIOS)
- Adolescence Education Programme (AEP)

Recent assessments show that girls' participation in schooling has improved significantly during the last ten to fifteen years. In July 2003, the government of India approved a new programme called the National Programme for Education of Girls at Elementary Level (NPEGEL) as an amendment to the existing scheme of *Sarva Shiksha Abhiyan* for providing additional support by way of girl child friendly schools, stationery, uniforms, etc, of underprivileged/disadvantaged girls at the elementary level. The scheme has been implemented in Educationally Backward Blocks where the level of female literacy is below and the gender gap is above the national average, i.e. in blocks not covered under Educationally Backward Blocks but have at least 5 per cent SC/ST population and where SC/ST female literacy is below 10 per cent – and also in selected urban slums. Apart from NPEGEL, a new scheme called the Kasturbha Gandhi Balika Vidayalayas has been approved for launch during 2004-05 for setting up 750 residential schools with boarding facilities at elementary level for girls belonging predominantly to SC/ST, other backward castes and minorities in different areas.

India has recently introduced incentives similar to the Bangladesh secondary stipend programme, in which every family with a single girl child will be eligible for free education from Class 6. The motivation seems to be less of an EFA strategy than an attempt to control population and to redress the alarming population imbalance caused by son-preference.

During the eighth five year plan, the target of 'universalizing' elementary education was divided into three broad parameters: Universal Access, Universal Retention and Universal Achievement i.e., making education accessible to children, making sure that they continue education and finally, achieving goals. As a result of education programs, by the end of 2000, 94 per cent of India's rural population had *primary schools* within one km and 84 per cent had upper primary schools within 3 km. Special efforts were made to enrol Schedule Caste/ Schedule Tribe and girls. The enrolment in primary and upper-primary schools has gone up considerably since the first five year plan. So has the number of primary and upper-primary schools. In 1950-51, only 3.1 million students had enrolled for primary education. In 1997-98, this figure was 39.5 million. The number of primary and upper-primary schools was 0.223 million in 1950-51. This figure was 0.775 million in 1996-97.

In 2002-2003, an estimated 82 per cent of children in the age group of six to fourteen were enrolled in school. The government of India aims to increase this to 100 per cent by the end of the decade. To achieve that goal the Government launched *Sarva Shiksha Abhiyan.*

The strategies adopted by the Government to check drop-out rate are:

- Creating parental awareness;
- Community mobilization;
- Economic incentives ;
- Minimum Levels of Learning (MLL);
- District Primary Education Programme (DPEP);
- National Programme of Nutritional Support to Primary Education (Mid Day Meals Scheme);
- The 86th Constitutional Amendment Act was passed by the parliament to make the Right to Elementary Education a fundamental right and fundamental duty;
- National Elementary Education Mission;
- A National Committee of State Education Ministers has been set up with the Minister of Human Resource Development as the Chairperson of the committee;
- Media publicity and advocacy plans;
- *Sarva Shiksha Abhiyan.*

However, the Global Monitoring Report of UNESCO on progress towards Education For All goals considers the progress to be far from satisfactory and emphasizes the goal of gender parity and equality must be met. Are the strategies pursued for girls' education appropriate? It is important that a gender perspective is incorporated into all aspects of planning. For instance, in order to promote girls participation in schooling the Operation Blackboard scheme required that the second teacher appointed to any primary school with one teacher would be a woman teacher. The early 1990s also saw the emergence of an explicit programme for woman's empowerment such as *Mahila Samakhya* as means of improving participation of girls in schools. Unfortunately, no effort has been made to capitalize on the achievements made through these by incorporating complementary measures to retain girls in schools through the full cycle of elementary education, universalizing primary schooling by 2007 and elementary education by 2010. The model and strategies followed by Tamil Nadu and Kerala could be emulated by the poorer performing states. 'Learn While You Earn' scheme could be an effective measure to retain students in schools. 'To improve the quality of results on the part of students, grants are given to all teachers for developing teaching-learning materials, twenty days training is expected to be given to all teachers and free textbooks distributed to all girls and children of SC/ST origin' (Kainth, 2006). It is required to understand why each government initiative has been co-opted with larger cultural framework.

Conclusion

Decades after the commitments and reaffirmations by the government, to ensure quality education to every child, and reduce illiteracy, a large number of girl children are still denied the fundamental right to education. Despite thousand of 'successful' projects in the country, gender parity in education - in access to school, successful achievement and completion is as

elusive as ever and girls continue to systematically lose out on the benefit that an education affords.

Emile Durkheim defines education as 'the methodical socialization of the young generation' (Durkheim, 1956). Education opens the 'doors of understanding the world' to girls and helps them be a responsible, increases their self-confidence, expands their sense of potential, their social and negotiation skills, earning power and ability to protect themselves against violence and ill health. Her absence in primary education leads to deprival to higher education as well.

As the world has experienced, girls had played a vital role at every stage of development, in her family, community, national and the universal development. She is a pathfinder to new generations through socializing and upbringing her children the right way. If she is well-qualified obviously she will better nurture the coming generation. If she has this sense of justice inculcated in her, she will also inculcate it in her children. What's happening in the world, the violence being perpetrated is also because we don't have a sense of justice. Because we keep talking about peace, right, But if you don't have justice with this peace, you cannot have peace. All these are, I (we) think, the values that we can get in school. And, of course, boys are important, but more importantly for girls because of the role she plays in socialization (UNICEF, 2005). She (a girl) will play a very important role in her community, but she will also play a very important role in socializing her children and their upbringing.

The stereotyped, persistent and often subtle gender discrimination that run through most societies, make the girls the first sacrificial victims, since being the last enrolled, they are the first to be withdrawn from schools when times get tough. Regardless of social, economic and physical challenges faced by a girl child, education must be ensured to every girl child and, so the government needs to mobilize the needed resources. It has been observed that parents often do not understand the government has the obligation to make available education to all the children (include girl child). The government is obliged to mobilize and make aware the mass, and attribute their children's failure to attend school as the failure of parent and society, both.

Despite the scientific evidence of women's contribution to the society in development and of the country, this has yet be widely recognized. Educating girls is seldom discussed as a strategy in the policy circles, as a way to ensure social progress. As a result, investment in girls' education is often bypassed when budget decisions are being negotiated. Women's role in Policy making must be ensured or reserved for better understanding of issues included here.

The behaviour and attitudes of policy makers and practitioners at best fail to meet particular needs of girls and boys, and at worst sabotage their right to an education without recognition of such differences in the needs of girls and boys, and the inequities in their roles, responsibilities and identities. Education policies and practices are 'gender blind' and the traditional perspectives often fail to take in to account the gender issues that affect girls' access to school.

Denial in any forms, to basic right to education should be considered a nation's failure to provide compulsory, free, available, accessible, acceptable – and adaptable to girls and boys alike. Jean Drèze and Amartya Sen (1995) assert that persistent gender inequality and deprivation of females are among India's most serious social failures. Though women's groups in India work toward progressive change, more efforts from public and private sectors are needed to bring about fundamental social change to reduce gender inequality

Universalization of education, and all the good that it will bring, is possible. Investing in girls' education today – not just with money but with energy and enthusiasm, commitment and concern, focus and intensity – is a strategy that will protect the right of all children to a quality education, and a strategy that will jump-start all other development goals (UNICEF, 2004).

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Journal of Educational Planning and Administration
Volume XXV, No. 3, July 2011, pp. 235-247

The Spectrum of International Educational Development

A Taxonomy

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Abstract

International educational development has been for a number of decades a thriving field of scholarly activity. A lacuna is the existence of taxonomies. The aim of this article is to develop a taxonomy of the spectrum of international educational development, by means of a multivariate approach (cluster analysis), employing a set of fifteen indicators conventionally used as indices of educational development. A nine category taxonomy of national education systems, according to their levels of development, is derived at. This taxonomy is presented and discussed. The picture of a forceful process of the global universalisation of primary and secondary education participation and the massification of higher education taking place is heartening. On the other hand, a global polarization of educational quality seems to be developing and a new steep gradient of educational inequality, created by the global digital divide, is threatening. In conclusion the need and scope for further taxonomies of international educational development, as possibilities for further research, are suggested.

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Introduction

International development has been for considerable time – at least since the founding of the United Nations' Educational, Scientific and Cultural Organization (UNESCO) in 1948 – not only the focus of scholarly research, but also a major concern of policy makers, international aid projects, and a host of other clients. A lacuna is the existence of taxonomies. Williamson (1979:27) suggests that 'to make possible the scientific study of social reality it is necessary to reduce it to intelligible typological proportions. While, admittedly, the subject of the field: international educational *development* is per definition changing – ruling out a stable, unchanging, time-proof taxonomy, and operating within a paradigm which sets as ideal the eventual attainment of one (uniform?) level of developed education – thus rendering a taxonomy eventually redundant; taxonomies in the field is desirable not only to facilitate an intellectual grip on the current spectrum and patterns of educational development internationally, but also to assist with the drawing of inductive generalizations and with the formulation of hypothesis which in turn can guide further investigation and aid theory building.

The aim of this research is to develop a taxonomy of the spectrum of international educational development, by means of a multivariate approach employing a set of fifteen indicators conventionally used as indices of educational development.

The article commences with a literature survey of existing taxonomies in the broader field of Comparative and International Education. The research methodology is then explained and the findings presented and discussed.

Existing Taxonomies

In Comparative and International Education, the most common categorization of countries and national education systems is the dichotomy of developed-developing countries. Each of these two classes encompasses a wide range. The same objection could be leveled against the term 'Third World' – the other descriptor frequently used in Comparative and International Education Studies. Therefore additional categories have been created, allowing for finer calibrated categorization of countries. At the lower end of the set of developing countries the United Nations has created the category of least developed countries (UNESCO, 2001). At the upper end of the developing countries continuum, the term transition countries (*cf.* World Bank, 2002: 3) or emerging countries (*cf.* Steyn & Wolhuter, eds., 2000; Maguina, ed., 2011) are sometimes employed.

The World Bank (2008) uses the following fourfold classification of countries, based on *per capita* Gross Domestic Income: lower income countries, lower middle income countries, upper middle income countries, and high income countries. Apart from the concern that all the categories mentioned encompass a wide internal range of economic and other traits; from the point of view of studies in international educational development the problem is that these classifications are not based on educational characteristics.

Theoreticians of Comparative Education have for a long time noted and expressed concern about the lack of taxonomies of education systems – whether based upon the level of development of education systems or upon other features of education systems (e.g. Hans, 1949:6-7; Epstein, 1983; Halls, 1967; Jones, 1971; Wolhuter, 1997:161). At present the existing typologies seem to be very outdated.

Furthermore they are based on only one or two variables, or combine educational, demographic and economic variables instead of dealing with education exclusively (Wolhuter, 1997:162). These include Kandel's (1938) *Types of Administration*; Hans' (1949) classification of three sets of factors influencing educational development: natural factors (race, language and environment), religious factors (Catholicism, Anglican and Puritanism) and secular factors (humanism, socialism and nationalism); Hopper's (1968) four dimensional typology of different modes of selection within education systems; Paulston and Le Roy's (1982) classification matrix of non-formal education programmes; Asher and Shively's (1969) classification based upon a multiple correlation and discrimination analysis of thirteen economic, social and educational variables; and La Belle and White's (1980) typology of interaction between class and ethnic groups within countries and the educational policies and practices typical of each type. In the Cold War era literature a frequently used categorization was that of Western-East Bloc/Socialist education systems (e.g. *cf.* Fägerlind and Saha, 1983:245-251), terms used as loosely as that of 'developing' a 'third world'. While the persisting emergence of the terms post-Socialist education (e.g. *cf.* Wiseman and Silova eds, 2011) signify that scholars still find this categorization useful (i.e for past five years, 2010, 2009, 2008, 2007 and 2006 ERIC — Education Resources Information Center — lists respectively five, two, three, four and four scholarly publications with the term 'Eastern Europe' in the title), this distinction too is not based upon indicators other than that of educational development. But these terms are becoming more and more anachronistic and should be replaced by more relevant categories, reflecting the world of the twenty-first century.

The two classifications based exclusively on indicators of educational development, Harbison and Myers' (1964) classification, based upon an index calculated from secondary and tertiary enrollment ratios, classifying seventy-five countries into four categories: underdeveloped, partially developed, semi-advanced and advanced; and Wolhuter's (1997) nine category classification of 135 national education systems based upon a cluster analysis of fifteen indicators now seem fairly outdated, considering the educational developments internationally the past decade and the past half century.

Research Method

What follows is an attempt to derive at a taxonomy of international educational development, based upon the following fifteen indicators conventionally used to describe the development of national education systems:

A – adult male literacy rate
B – adult female literacy rate
C – gross enrollment ratio: pre-primary education level
D – gross enrollment ratio: primary education level
E – gross enrollment ratio: secondary education level
F – gross enrollment ratio: tertiary education level
G – pupil: teacher ratio at primary education level
H– annual per student expenditure (in US$): primary education level
I – annual per student expenditure (in US$): secondary education level
J – annual per student expenditure (in US$): tertiary education level
K – gender parity index: upper secondary education level

L – survival rate to last year of primary education
M – circulation of daily newspapers per 1000 people
N – personal computers per 100 population
O – Internet access per 100 population

While Indicators A – F are indicators of participation and access to education, Indicators G - J (expenditure and student-teacher ratio) are indicators of quality of education, and Indicator K is an index of equality in education. Indicator L is an indication of the duration of access to primary education. Indicators M – O are measures of the richness of informal education environments. Informal education is here used as defined by Coombs (1985:20-26), and especially Indicator N and O are in this electronic age important in this regard.

Data of these indicators for 146 countries could be procured from mainly UNESCO (2010) and World Bank (2008) publications. The data were subjected to routine cluster analysis.

Cluster analysis is a statistical technique used to investigate the degree of similarity between a large number of cases, with respect to a multitude of variables. It is possible to plot a graph, showing the position of a set of cases with respect to two variables. It is also possible to construct a three dimensional model, showing the position of cases with respect to three variables. With a computer it is possible to thin in n-dimensions – as many dimensions as there are variables. In this n-dimensional space (where n is the number of variables) it is possible to consider each case (in this study each country or national education system constitutes a case) as a unit having a value with respect to each of the n-variables. On the n-dimensional graph, where the position of each case with respect to each variable (in standardized or Z-scores) appear, the aggregate distance (i.e. with respect to all variables) between any case and any other case can be measured. With cluster analysis the two closest cases in the set are combined to form a proto-cluster. The next two cases are combined to form another proto-cluster, and so the process continues. Proto-clusters are combined to form higher order clusters, and the process continues until one macro-cluster, including all the cases are formed. The sequence of pairing can be presented as a linkage tree or dendogram (e.g. *cf.*: Wolhuter, 1997).

Cluster analysis is widely used for constructing taxonomies, also in the social sciences (*cf.* Bertholomew, *et al.*, 2002; Anderberg, 1973).

The number of classes or categories are decided upon by the researcher, depending upon the number of classes desired, the number of cases per class (which should be neither too small – each class constituting its own class would not constitute a taxonomy, or too large – all cases in one macro-class, likewise, would produce no classification system) and how much intra class variance could be tolerated.

Findings

The result of the cluster analysis is shown in figure 1. A Euclidean distance (Z-scores) of twelve was taken as cut-off point, producing a nine-category taxonomy (cf. Figure 1). The countries included in each category, and the averages with respect to each indicator of each category are presented in Table 1 and 2, respectively.

FIGURE 1
Dendogram of Cluster Analysis (Explanation Cases 1-146, See Table 2)

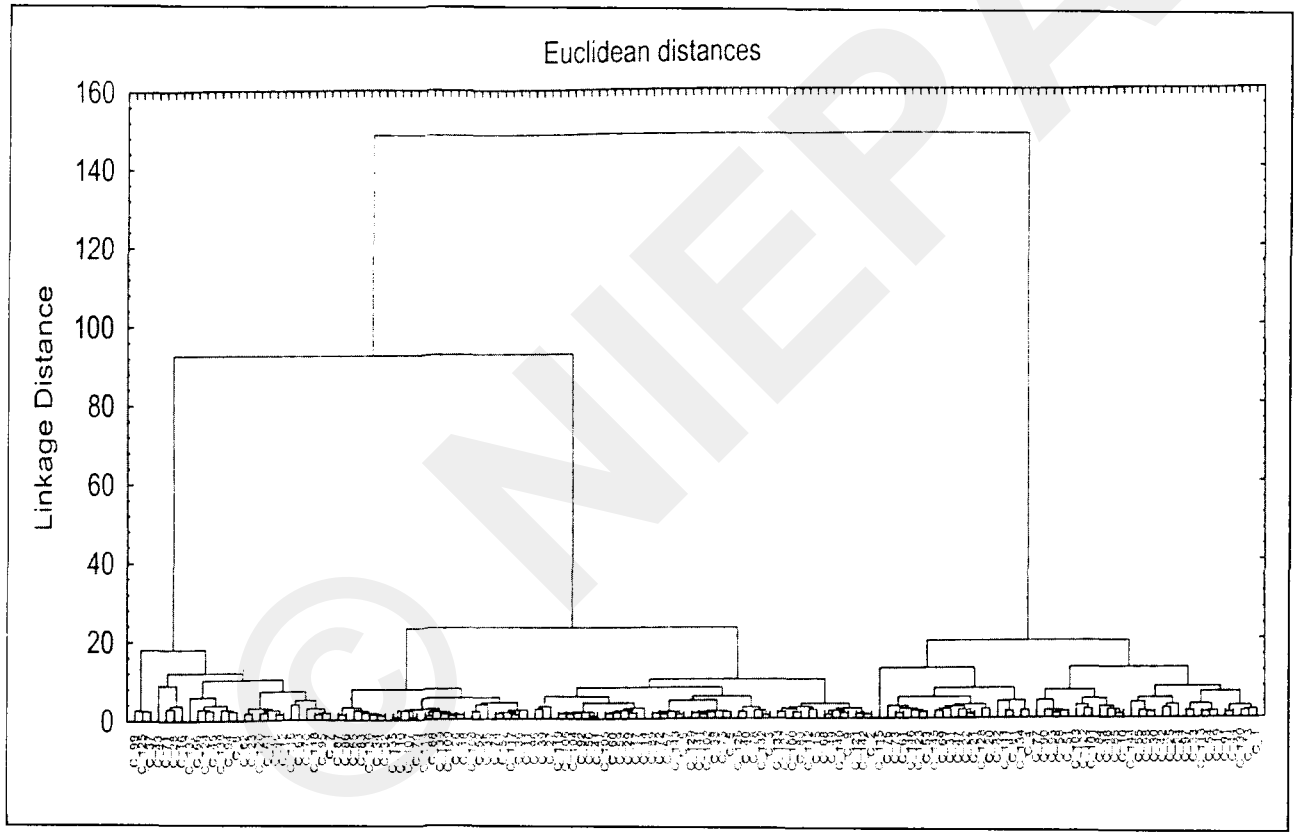

TABLE 1

Taxonomy of International Education Development

(Read with Figure 1 and Table 1)

Category I	Category III	Category IV	6 Armenia	Category VI	128 Tanzania
99 Norway	87 Mexico	43 Estonia	129 Thailand	77 Liberia	20 Burundi
129 Switzerland	86 Mauritius	7 Kuwait	141 Venezuela	90 Morocco	82 Malawi
37 Denmark	65 Jamaica	28 Hong Kong	102 Panama	93 Nepal	111 Rwanda
	86 Malaysia	16 Botswana	38 Dominican Republic	58 India	61 Iraq
Category II	136 United Arab Emirates		75 Lebanon	51 Ghana	134 Uganda
137 United Kingdom	34 Croatia	Category V	5 Argentina	103 Papua New Guinea	4 Angola
66 Japan	32 Costa Rica	96 Nicaragua	126 Syria	122 Sudan	Category VIII
124 Sweden	135 Ukraine	39 Ecuador	40 Egypt	101 Pakistan	115 Sierra Leone
45 Finland	110 Russian Federation	27 China	78 Libya	84 Mali	
138 USA	107 Poland	111 South Africa	132 Tunisia	48 Gambia	Category IX
94 Netherlands	79 Lithuania	106 Philippines	3 Algeria	85 Mauritania	144 Yemen
8 Austria	114 Serbia	104 Paraguay	133 Turkmenistan	10 Bangladesh	55 Guinea Bissau
62 Ireland	88 Moldova	92 Namibia	127 Tajikistan		98 Nigeria
23 Canada	139 Uruguay	56 Honduras	100 Oman	Category VII	30 DRC
120 Spain	109 Romania	41 El Salvador	80 Former Yugoslav Republic of Macedonia	76 Lesotho	42 Eritrea
64 Italy	26 Chili	105 Peru	112 Saudi Arabia	73 Laos	25 Chad
46 France	18 Bulgaria	60 Iran	15 Bosnia Herzegovina	81 Madagascar	24 Central African Republic
12 Belgium	108 Portugal	59 Indonesia	68 Kazakhstan	146 Zimbabwe	97 Niger
116 Singapore	52 Greece	29 Colombia	49 Georgia	123 Swaziland	33 Cote D'Ivoire
631 Israel	35 Cuba	17 Brazil	140 Uzbekistan	53 Guatemala	113 Senegal
70 Republic of Korea	74 Latvia	14 Bolivia	9 Azerbaijan 121 Sri Lanka	145 Zambia	54 Guinea
118 Slovenia	57 Hungary	89 Mongolia	142 Vietnam	69 Kenya	91 Mozambique
99 New Zealand	117 Slovakia Republic	72 Kyrgyzstan	2 Albania	31 Congo, Republic	44 Ethiopia
7 Australia	36 Czech Republic	67 Jordan	131 Trinidad and Tobago	47 Gabon	130 Togo
30 Germany	11 Belarus	143 Palestine		22 Cameroon	13 Benin
					1 Afghanistan

TABLE 2

Mean values of 15 indicators within each category

Indicator Category	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
I	100	100	83	100	109	68	11	13776	18508	34974	0.96	96	415	72	68
II	99	100	93	103	104	69	15	7090	9139	10404	1.02	94	258	62	56
III	97	96	79	101	92	56	17	1333	1707	1768	1.04	96	110	17	29
IV	93	91	58	79	88	31	16	2525	3672	17020	1.08	97	137	34	37
V	93	88	41	105	92	32	21	497	595	1284	1.08	87	48	5	12
VI	61	47	43	93	46	7	37	246	307	1617	0.82	65	29	3	5
VII	81	71	17	116	39	7	45	115	209	2283	0.81	61	12	2	3
VIII	47	27	5	158	35	2	44	25	12	923	0.66	98	55	1	0
IX	63	36	5	87	28	4	48	236	574	1461	0.55	58	3	1	2

Discussion

The nine categories from one to nine show a pattern of declining educational development. The educational and societal features of each category of countries will subsequently be discussed. Across the nine categories, a corresponding pattern of declining educational output quality exist, as far as could be ascertained from available (IEA) International Association for the Evaluation of Educational Achievement and (PISA) Programme for International Student Assessment data. This too will be discussed. The taxonomy will also be compared with the taxonomies of Wolhuter (1997) and Harbison and Meyers (1964), to gain some insight into how the spectrum of international educational development has changed the past fifteen years and half a century. Finally, some holistic impressions are discussed and possibilities for further research are suggested.

Indicators of output quality were not included in the cluster analysis as comparable data for 146 national education systems are not available. As an indicator as to how output quality varies, available data from the IEA's *2003 Trends in International Mathematics and Science Study (TIMMS)* (thirty-four countries) average grade 8 students' science and mathematics scores (National Center for Education Statistics, 2003:85,96) and from the IEA's 2006 *Progress in International Reading Literacy (33 countries) Study,* 50th percentile grade 4 were used to calculate average for the nine categories. The results are presented in Table 3.

TABLE 3

Indicators of Education Output Quality

Category (*cf.* Table 1)	Average score of grade 8 students in TIMMS study of 2003		50 percentile score on 2006 IEA Reading & Learning Study
1	460	496	530
2	529	539	539
3	485	500	535
4	585	561	450
5	383	400	412
6	No available data	No available data	402
7	No available data	No available data	No available data
8	No available data	No available data	No available data
9	No available data	No available data	No available data

Category I

These are countries with universal adult literacy, and also universal primary, secondary and tertiary education (in this article, concerning tertiary enrolments, Trow's (1973) distinction is used: elite higher education: less than 15 per cent gross tertiary education enrollment ratio; mass higher education: 50 per cent gross tertiary enrollment ratio)/ Quality of education (as measured in per pupil public expenditure on education and pupil: teacher ratio as measures of input quality and primary school throughput rate as indicator of process quality) is extremely high, as is equality (using the gender parity index as yardstick for equality). These are informal education rich environments (informal is here used as defined by Coombs (1985:42): the life long process by which every person acquires and accumulates knowledge, skills, attitudes, and insights from daily experience and exposure to the environment – at home, at work, at play, from the examples and attitudes of family and friends, from travel, from reading newspapers, by listening to the radio or viewing television or films), on the positive side of the global digital divide. These are all developed countries, in the World Bank taxonomy high income countries and they are egalitarian (low Gini index, in region of thirty).

Category II

As is the case with the category I national education systems, the countries of this category are characterized by universal adult literacy and universal participation in education, from pre-primary through tertiary level, high quality, equity and a rich informal education context. They differ from category I systems in that their per student public spending on education is significantly lower than in the category I countries (though still very high when measured against the global norm). These too are all developed countries, high income countries and egalitarian, though slightly less than the countries of the first category (Gini index typically between thirty and forty).

Category III

These national education systems are, like those of the first two categories, characterized by universal adult literacy and universal pre-primary through higher education participation, as well as by a high level of quality and equity. There is, however, a sharp drop in per student public funding, and, secondly, when proceeding to this category, the global digital divide has been crossed – the informal educational environment is markedly poorer.

Most (sixteen of the twenty-four) countries are upper middle-income countries. These countries are (as countries falling in all subsequent categories, IV – IX) socio-economically strikingly stratified – Gini index in the region of fifty.

Category IV

The national education systems falling in this category feature universal adult literacy and universal primary and secondary education, but not universal higher education (though there is mass higher education). They score well on the quality and equality counts too. Having dynamic economies, they have a better informal education environment than that of the category III countries, though they still fall short of crossing the global digital divide. Being in economic expansion phases, they spend more than the category III countries per student on education. It is especially on the tertiary level where per student expenditure is markedly higher. Being dynamic young (recently in their economic phase) economies, with rapidly expanding tertiary education sectors requiring for example large capital expenditures, probably explains these expenditure figures. It too explains their lower (than category IV) tertiary enrolment ratios – lagging behind those of categories I to III national education systems, but increasing rapidly.

Category V

While there is improvement in universal adult literacy, universal primary and secondary education and mass higher education, as well as in gender equity, quality drop to mediocre levels, as measured by the increased student teacher ratio and the sharply reduced public per student educational expenditure (Table 3). There is also a sharp drop in quality of education output between category IV and category V national education systems. The informal educational environment is much poorer and the negative gradient of percentage of the population being part of the world of electronic communications has now subsided to single digit figures. Most (thirty-seven of the forty-five) of the countries, falling in these countries are lower middle-income countries.

Category VI

In the countries of this category, there is no universal adult literacy. While there is universal primary school education, this is not the case with respect to secondary education. In contrast to categories IV and V, where there is mass higher education, category VI countries are characterized by elite higher education systems. Per student public educational expenditure is lower, and the thirty-seven pupil-teacher ratio at primary education level places a question mark over quality.

All but one of the countries are low income countries.

Category VII

The national systems of education pertaining to this category are poorer on every score than the systems falling in categories III and higher. The countries are, with the exception of one, all low-income countries.

Categories VIII and IX

The countries of these two categories have education systems characterized by low participation rates, and scores on indicators of equity, quality and richness of informal education environment even lower than the countries following in the preceding category (the extremely low levels of per student public educational expenditure in Sierra Leone render that country *sui generis*).

All but one of the countries are low income countries.

Comparison with Harbison and Myers' (1964) Taxonomy

As Harbison and Myers' taxonomy is based upon a composite index (the sum of gross secondary education ratio and five times gross tertiary education enrollment ratio) a direct juxtapositioning and comparison with the taxonomy contained in this article are impossible. However, as far as a comparison is possible the following could be noted. The countries included in Harbison and Myers' lowest category (level I or underdeveloped countries) are in the taxonomy of this article in the lowest three categories (III, VIII, IX). The exception is Saudi Arabia, which has moved up to category V in this article's taxonomy. According to Harbison and Myers' (1964:54, 58) the countries in their lowest category at the time of their research, typically had gross primary and secondary education enrollment ratios of respectively 20 per cent and 3 per cent. A comparison with the current gross primary education enrolment ratios (Table 2) shows the extent of the spectacular education expansion drive the past half century.

The countries in Harbison and Myers penultimate category (level II or partially developed countries) fall in categories V and VI of the classification developed in this article. The exception is Malaysia, which shot up to category III. Countries included in Harbison and Myers' level IV (semi-advanced countries) fall in categories III, IV and V of the taxonomy in this article. Exceptions are India (which fell to category VI) and Spain and Italy (which went up to category II) and Norway (up to category I). Harbison and Meyers' level I countries (advanced countries) fall in categories I and II in the taxonomy developed in this article. The exception is Argentina which fell to category V.

Comparison with Wolhuter's (1997) Taxonomy

While the taxonomy contained in this article (146 countries, fifteen indicators, nine categories) are not identical to that of Wolhuter (1997)(135 countries, fifteen indicators, eight similar to the ones used in this article, nine categories) a comparison does reveal something about changes in the international spectrum of educational development during the past decade and a half. At the tail end of both taxonomies, adult illiteracy lingers on. While there has been a spectacular push towards universal primary education and universal secondary education (the Jomtien Declaration, Dakar Declaration and the Millennium Development Goals have probably played their role in this regard) and the expansion of higher education, a comparison of primary education pupil-teacher ratio points to a global

polarization of educational quality. In the 1997 taxonomy the mean primary school student-pupil ratio of the first ten categories were sixteen and seventeen, and that of the last category thirty-three. In the taxonomy in this article the mean ratios in the first two categories have improved to eleven and fifteen, while that of the last category has deteriorated to forty-four. The distribution of countries between the nine categories has remained remarkably constant. Those in the upper categories in the 1997 taxonomy are still there. Similarly countries in mid-range and lower-end categories have remained in these categories.

Holistic Patterns

Heartening is the momentum of the drive towards universal primary and secondary education, as is the global massification of higher education. At the same time, the global pattern and – as far as the taxonomy in this article was compared with earlier taxonomies – the dynamics of global education development show some reasons for concern. The geographical agglomeration of countries in upper taxa (Western Europe, North America, Asia-Pacific) and those in the lowest taxa (Sub-Saharan Africa, Middle-East, South-West and Southern Asia), pointing to a clearly geographically bloc defined pattern of global educational stratification, does not bode well for global peace and for cosmopolitanism. This is aggravated by the congruence between level of educational development and Huntington's (1993) civilization blocs (*cf.* the Western-European-Northern American-Asia-Pacific Countries concentration in categories I and II; the Eastern European countries in category III, the Latin American countries in category V; the Islamic countries in category V, and the Sub-Saharan Countries in categories VII, VIII and IX). Furthermore the borders the categories I and II countries run to a large extent co-terminus with that of the Anglophone world (where English is either the official language, such as in the USA or EU or lingua franca or/and universally understood such as Israel), and it is also between the first two categories and the others where the global digital divide lies. In view of the place of English in knowledge production, academic interchange, scientific literature, the global economy and international political power relations; the academic protectionism for which China and India are notorious (*cf.* Wildavsky, 2010:6), it seems as if hot on the heels of the global homogenization of universal primary and secondary education, the threat of a new polarization and marginalization is emerging.

Conclusion

A global-wide universalisation of primary and secondary education, and massification of higher education is taking place. On the other hand there seems to be a polarization of educational quality, and a deep global divide (aggravated by the fact that it corresponds to a large extent with a crucial global linguistic border) is threatening to marginalize a large part of the global population.

A valuable supplement to the taxonomy would be taxonomies sensitive to dimensions of inequality besides gender-equality (the sole dimension of inequality included in this study employed in this classification), especially – in an age of the neo-liberal economy – to socio economic inequality and – in an age of increasing multicultural societies – to ethnicity. Similarly, in view of the indications of a trend of global polarization, running contrary to the trend of global universal participation in primary and secondary education, taxonomies

further explicating global patterns of educational quality would be valuable. The steep gradient of global digital inequality and the importance thereof for twenty-first century education, make the further unpacking of global patterns in this facet of educational development imperative.

To return to what has been stated in the opening paragraph of this article, taxonomies revealing the dynamics of international educational development would be very illuminating. Especially invaluable would be taxonomies positing various models of educational development, suitable for different contents, and signposting ways to proceed to such corresponding levels of educational development.

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THE
INDIAN
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VOLUME 47 NUMBER 1 JULY, 2011

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Journal of Educational Planning and Administration
Volume XXV, No. 3, July 2011, 249-255

RESEARCH NOTE

Comparative Education

A Neglected Discipline in India

R.P. Singh*

Introduction

The teaching in India of comparative education as an area of specialization is barely six decades old. In fact, what started as an introduction to the British education system flowered in the early 1950s to the teaching of two additional systems of education, those of the USSR and the United States of America. The introduction to these systems also had a political meaning. In the post-independent period a belief gradually developed into a strong conviction that a country's greatness depended largely on the type of education system it had. Indeed, the development of a nation and a highly literate/educated society came to be seen as interchangeable terms. These two systems of education, therefore, emerged as alternate models of development – one upholding the democratic traditions and the other offering a socialist ideology. In the late 1960s, a school of thought arose which emphasized the teaching of systems of education that had some significance for India, such as those of Japan, the Philippines, Ceylon, Nepal, etc. Today, a wide variety of systems are being taught, both European and Asian, but no one teaches education systems from either Africa or the Middle East. The Japanese system remains the most popular system of education in several Indian universities for postgraduate students of education.

It should be noted that comparative education has acquired neither the status nor the degree of specialization that it has in Europe or the United States. Teachers in India have little knowledge of foreign systems and, in most cases, have not even read the great authorities on the subject. Their teaching is thus reduced to presenting a descriptive image of the functioning of education at different levels in a given country. No in-depth or critical analysis of the system is done and it seems that little efforts are being made in relating education with the society. An Indian teacher of comparative education is totally dependent upon Western authors for authentic data. The unimaginative teaching of comparative education in postgraduate courses in India is a living testimony to the ignorance or indifference of the teachers and the irrelevance of the subject for the student. As a nation we have not learnt to develop insights in academic matters. We seem to have forgotten the great

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Vedic tradition wherein the development of intuition was the highest goal and nurturing of intellect the greatest virtue.

Teaching of all educational subjects in India lacks both elan and vision. Few teachers keep themselves up-to-date and are anxious to renew their knowledge in a changed perspective and even fewer make efforts to contribute to their respective fields. Of course teachers seem to belong to a few well-recognized schools of thought such as Left and Right and the Indifferent. In the area of comparative education no one seems to have shown any great interest. The National Council of Educational Research and Training (NCERT) was the first national agency to have a senior faculty member designated as Associate Professor of Comparative Education (Senior Research Officer) who was supported by two more members of the staff. Their job was to keep the NCERT and the Ministry of Education (MHRD) informed about the major changes taking place in the major European and American countries. Recent interest in higher education abroad has grown largely because enormous number of parents and their wards find the Indian system of education indifferent to the needs of modern society. They have also discovered that Indian universities rarely have regular academic sessions and the examination results are highly unreliable. They also see for themselves the way students are encouraged to grow in foreign universities – something Indian systems never learnt. Our teachers shy away from discussing their subject and refuse to enter into a dialogue on academic areas. The Comparative Education wing of the NCERT was supposed to become a torch bearer to the departments of teacher education where this paper was taught. They were also supposed to produce studies in this area so that university teachers, who had no such facilities, could be kept informed about the major changes or educational movements elsewhere. In the absence of European literature, Indian scholars were to be encouraged to produce their own.

The same group offered comparative education as an area of specialization equivalent to the present-day Master's programme at the postgraduate level. At least two groups of students, about ten in all, specialized in this area during those two years. As a result of a sudden policy change, this department was closed down and its staff accommodated elsewhere on 'humanitarian' grounds. This was the end of a forward step and since then comparative education, at least as an area of specialization, has been forgotten at the national level. In its present transformed form the old set up is called the International Relations Unit (IRU) and is principally concerned with nominating people for visits abroad or welcoming foreign delegation of educationists, etc. The current functions of the IRU do not include any encouragement of studies in education of the organization of academic programmes. The perception of the IRU in the eyes of others is that it is an administrative body to help individual or group visits to or from foreign countries. The head of the unit is not required to have any knowledge of other education systems and in the past few years the activities of the IRU appear, unfortunately, to have fallen into the category of public relations. If this is the case at the national level, where almost all large organizations are gradually opening IR units on the same lines as described already, at the state level the situation is far worse. Visits to foreign countries by state officials are neither preceded nor followed by any academic activities like seminars or conferences. A visit abroad has acquired a typical Indian perspective, which may be regarded as being tantamount to a favour granted to a malleable officer.

In university departments of education, comparative education is rarely considered as an area of specialization. Therefore, with or without notice, a teacher can be asked to start

taking classes in this area. No one is prepared to give this subject a moment's thought that a little higher level could be reached than mere description of a system or to refer to data produced by I.L. Kandel, Nicholas Hans, G. Bereday E. J. King or Brian Holmes as illustrations, and not as something definitive. Also, these references are available only in a few departments where English is still read or is the medium of instruction. But where regional languages predominate, comparative education literature could be compared to materials produced in some ancient classical language.

The various reports published by UNESCO on its Member States provide no in-depth perspective, but they do supply data for a knowledgeable person. However, such reports are not easily available or, because they are not produced in India's regional languages, also not easily read. They are thus no longer very helpful in keeping comparative educationists informed.

The way examination papers on comparative education in universities are designed also contribute to disinterest in this area. For example, it is not a compulsory area at postgraduate levels in education and the questions set require no fresh data or individual reflections; therefore, familiar questions elicit stock answers.

Research

Interest in the education systems of other countries is as old as human travel. Travellers, soldiers, scholars and traders alike have left records on the conditions in countries they visited and the facts they noted, including their impressions of India's education system. A few such well-known names are: Plutarch, Arrian, Strabo, Megasthenes, Fa-Hien, Yuan Chwang, I-tsing, Al-Biruni, Ibn-Batuta, Maroco Polo, Nicolo Conti and Duarto Barbosa. Unfortunately, we have no records of Indians having ever shown any such interest. There are, however, records that Indians gave scripts to people from countries like Tibet, Bhutan, Indonesia, Sri Lanka, etc., and there are also records of India's influence in different areas of scholarship like mathematics, logic, astronomy, linguistics, etc., on numerous countries of Asia and Europe. When Muslim rulers came to occupy India's throne, they brought their own foreign scholars who were fond of citing court manners and standards of education in Baghdad, Cairo, Isfahan, etc. Because of the use of foreign languages, however, this information did not spread among Indian scholars. Furthermore, interest was confined to a few historians who couched this information in a specialized language.

We are a little better placed when we come to modern times, of India's contact with the West. If the missionaries and administrators had nothing but contempt for Indian morals, religions and education, they did leave a few documents which establish the fact that India had a better comparative record in educational matters than Europe until as late as the nineteenth century.

In the last two or three centuries of India's foreign domination a host of Indian scholars went abroad and compared India's education system with others. The major finding of these scholars was that whereas the United Kingdom was spending huge amounts of money on its own people, India was being economically exploited and kept educationally backward as a result of colonial policies. In other words, interest in the education systems of other countries arose as a result of political consciousness and not as a discipline. Sir Syed Ahmad Khan, Gopal Krishna Gokhale, Bal Gangadhar Tilak, Madan Mohan Malviya, Lala Lajpat Rai and Mahatma Gandhi, to name only a few, made repeated references to Indian education as

an area of total neglect compared to what was happening in Great Britain, the United States, Germany or the USSR. The USSR evoked much stronger feelings in India for political and historical reasons, and Nehru and Tagore wrote extensively on its educational achievements. The United States also inspired a few scholars to present comparative figures in education. We carry in the resent publication a paper on Lala Lajpat Rai, which will endorse the statement made by me only a few lines up.

Comparative education as an area of scholarly research has not attracted many Indian scholars. Indeed, like teaching, comparative education research has not attracted many Indian scholars either. Indeed, like teaching, comparative education research has developed as an accident of India's colonial past. Living in a colony, Indian scholars, novelists, religious leaders and political scientists could not help making comparisons with the education system of their colonial masters. It should not therefore be surprising if the first major references to other systems of education were a result of colonization. We may also note that there were pockets of Indian territory which had also been subjected to foreign rule, like Goa, Daman and Diu by the Portuguese, and Chandra Nagar, Pondicherry and Mahi by the French, but no references to these two systems within the subcontinent were ever made, and even now no study of these two systems have been attempted. Most of the subcontinent was under British rule so earlier references exist only in relation to the British system of education.

The variety and typology of the aforesaid references could themselves constitute a good subject for research study. For example, Prem Chand, a famous novelist, had deplored the state of primary education in India and had stated that it was not so in Great Britain. Similarly, Lala Lajpat Rai, a political leader, wrote in 1911 that India's educational provision did not compare with countries like Japan, Germany or the United Kingdom and the reasons for this neglect lay squarely at the door of the British colonizers. Arya Samaj and latter-day Muslim organizations condemned British efforts in the area of education as they influenced adversely the religious and cultural sentiments of Indians. They thus endeavoured to provide admixture of old and new curricula in their own institutions. The entire 'national school' movement of the early twentieth century started as a protest against the British education system. The Congress Party demanded mass education in India along the lines of the British Elementary Education Act of 1870. The Communist Party of India held up the Soviet example of providing education to all, as a model for any government. Although putting together such references may not exactly constitute research work in comparative education, this kind of dissemination of information about other systems of education shows the modest beginnings and positive motives of early writers and thinkers in this field.

A few more facts may be noted here. The rise of Germany and Japan also became reference points in India's academic circles, as they remain the guiding stars of any academic discussion today. This is largely ascribed to their excellent systems of education. Thus both before and after independence, references to these countries were made a little more seriously than to any other nation in the world, including the United Kingdom. Through scholarship schemes (called Associateship of the University Of London Institute Of Education), small volumes are written on the British systems of education but such works are rarely read and referred to even less.

Serious research efforts in comparative education began in two different institutions. Under the United States Agency for International Development (USAID) and similar schemes, American scholars made a few in-depth studies of India's education system. The

Maharaja Sayajirao University of Baroda, the Asia Publishing House, Bombay, and the NCERT provided these scholars with facilities. The first publication to survey research needs in comparative education was a book on research needs in the study of comparative education (Singh, 1968), which provided a basis for conducting research in this area. Surveys in educational research edited by late Professor M.B. Buch (the fifth survey onwards is the responsibility of the NCERT, New Delhi) started covering comparative education from the second survey onwards, i.e from 1979. Another publication (Pal and Saxena, 1985) mentions research in this area. The only publications by NCERT in this area are Singh (1969b) and Kerawalla (1979).

If the total contribution of NCERT in the comparative education field is peripheral, it is almost completely neglected elsewhere. It is true that NCERT had a golden opportunity to pioneer work in this area, but policies and personalities were quick to close down that department which had just started doing its work. This period spanned less than three years (1966-69) when even an advanced-level diploma course equivalent to the masters was offered.

Table 1 shows the total number of doctoral dissertations in this area as compared with others conducted during the period 1950-85 at M.S. University of Baroda is less than impressive.

In Kurukshetra University very few researchers have cared to work in this field at Ph.D. level in this department. Out of about ninety doctoral dissertations submitted to the University so far, only three doctoral dissertations have been of comparative nature. The titles of these are: (i) A Study of the Impact of Western Educational Thinkers on Modern Indian Education (Neshla, 1980), (ii) Tagore and Whitehead's Ideas on Educations—A Comparative Study (Rita Sinha, 1984), (iii) A Comparative Study of the Educational Systems based on the Philosophies of Karl Marx, Mao Zedong and Mahatma Gandhi (N. Subhash Chandra Singh, 1988). Out of these three, only the last one strictly falls in the category of Comparative Education. Similar is the status of research at M.Ed., M.A. (Education) and M.Phil. (Education) levels. Only two researchers have bothered to study the adult education programmes in a comparative perspective prevailing in China, USA, UK, Philippines and India at M.Ed. level. One researcher has studied the vocational education programme in India and USSR comparatively.

TABLE 1

Doctoral dissertations awarded at the Maharaja Sayajirano University of Baroda, in relation to total number of Ph. Ds in comparative education of Ph.Ds

Years	Number Awarded Year	Year	Number
1950-64	11	1976	1
1965-69	13	1979	1
1970-77	108	1982	1
1978-85	129		
Total	261		3

The M.S. University of Baroda has the distinction of publishing the first survey of educational research in India in 1977. The fact that it has no entry on comparative education in that area shows that this discipline did not attract scholars and also that those responsible for the survey could not appropriately place comparative education as an academic pursuit of any substance. The second survey carried an entry by the present author, which reflects upon the Indian contribution to this area.

At the national level several study teams went abroad and reported their findings. Under this category Raja Roy Singh's report Education in the Soviet Union (1962) and K.L. Srimali's Report on Rural Institutes in Denmark (1954) are quite well known. Recent efforts to pattern agriculture universities on the Land Grant Colleges of the United States and the interest India has shown in the GDR's work experience scheme are the direct results of educational borrowings from abroad. The co-operation of Columbia Team in the founding of the National Council of Educational Research and Training (NCERT) is also a part of India's borrowing from the USA. The UGC in India is more or less patterned on the University Grants Committee in UK except for the bureaucracy one has become and the other remains not only academic but functional too. Besides, the Indian Institutes of Technology and numerous other areas and institutions in medical sciences, technology, space research, etc., should be seen against the background of international education also known as comparative education. Instead of declining, the movement in this direction is on the increase. For example, the Education Commission (1964-66) in the body of its text quotes a Russian publication in polytechnic education and thereby draws upon it to get ideas for India's efforts to introduce vocationalization of education and the work-experience scheme. This, however, is not a solitary instance. Our entire examination reform movement has foreign origins.

One 1973 study covered here under comparative education, is entitled 'A Comparative Sociological Study of Students' Behaviour in Aligarh Muslim University and Tehran University', by M.H. Farhd. To say the least, it does not belong here.

The third survey contains a somewhat longer chapter on research in this area than the second survey. There were sixteen Ph. D level studies and four research projects.

Research methods adopted by the studies include descriptive survey, Descriptive Statistical and area studies, historical and sociological approach, case-study method and experimental method

The fifth survey has cumulative updated figures, which speak more eloquently than the rest of this section. During 1981-90, there were seventy-four studies on Comparative Education compared to thirty-five during 1971-80 and nil during the earlier decades.

MS University, Punjab University, SP University, Vallabh Vidyanagar figure at the top with fifteen to sixteen other major universities where studies on comparative education were conducted includes Delhi University, Bombay, and AMU.

It should thus be obvious that if there is any area in education faculties in Indian universities that is treated with scant attention, it is comparative education. Furthermore, most of the research being conducted today in this area is motivated by the fact that students from foreign countries find it an easy subject. While visiting scholars have produced a few excellent dissertations, the work remains largely non-analytical and inapplicable. No efforts have been made to propose theories or methods. In fact, no methodological analysis by any Indian scholar has been made thus far. With the increasing complexities of India's educational endeavours, no one seems to be aware that a few reflective educational

comparisons, both in thought and practice, are immediately called for. It is, in fact, not money that is in short supply but the 'will' to work and the necessary supporting vision.

We had hoped that once Knowledge Commission was set up there will be many models and studies proposed. But our present day Minister of Education has not bothered to upgrade the knowledge of those who should know better. For instance, not even a single paper has been brought out by the MHRD on how and why other countries have offered to their poor education without lowering its standards. What was and is obvious to anybody interested in education per se is that no comparative studies have been undertaken to find out why there is no reservation of seats for the poor and the backward anywhere in the world while India can not do without this reality. It is not that Britain does not have poor or the Americans have come out of this sad reality. Without bothering to find out why Indian system of education cannot even have a regular session any where within the country; while all advanced countries have their academic session predictably regular. Compare our university teachers with their counterparts in the West you will immediately notice that they come in the morning to the department and do not leave it before evening and even later. Similarly, their academic output is not only of some quality and regular. We have very little to show on that count. Interestingly, while our poor and the backward bring down the standard of education to be able to survive in the system it never happens either in the USA or UK. It is an interesting area to undertake research. Knowledge Commission should have come out with numerous studies of this genre. What is wrong with getting our teachers rated? Why can we not ban politics from our colleges and universities? The legacy of the colonial days needs a re-look at our system.

It is possible to suggest numerous areas of research in this area but then we are neither trained to do research nor do we have the ability or finance for such projects. We are so fond of becoming a 'world class' system but we have neither any idea of a world class system nor the ability to match the effort. One does not become world class without effort or the inclination. Therefore, the areas our scholars choose for comparison studies are either shallow or irrelevant.

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INDIAN JOURNAL OF AGRICULTURAL ECONOMICS
(Organ of the Indian Society of Agricultural Economics)

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Journal of Educational Planning and Administration
Volume XXV, No. 3, July 2011, pp. 257-276

RESEARCH NOTE

Impact of Alternative and Innovative Education Programmes[†]

A Study of Bridge Course Centres in Bardhaman District

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Rajarshi Majumder

Abstract

Education is the basic requirement and the 'Fundamental Right' of the citizens of a nation. Elementary Education system also serves as the base over which the super-structure of the whole knowledge system is built up. This calls for bringing all children under coverage of Elementary Education, which sadly has not been possible yet in India. Policy makers have responded through various programs – two latest examples of which are the Sarva Shikhsa Mission and the Right to Education Bill. The former have been hailed as a successful instrument to remove all ills plaguing the elementary education system in India through some of its alternative, innovative, and flexible programs. In this paper we examine the performance of one of the Flagship programme under SSA – the Bridge Course Centres – in selected areas of West Bengal to evaluate its performance, identify the shortcomings, and suggest some steps for improving them. This is extremely important as the SSA is now being extended to Madhyamik Shikhsa Mission and mistakes of the former should not be repeated in the latter.

[†] This is part of a broader study on Impact Evaluation of Various Implemented Schemes of SSA in Bardhaman undertaken by the second author. The authors acknowledge financial and logistical support provided by SSA, Bardhaman for conducting the survey.

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Introduction

One of the key ingredients of Human Development as envisaged by social scientists, reiterated by UNDP, and accepted by national, state, and regional governments is education. More specifically, greater access to knowledge in its various dimensions is critical to building of human capabilities, enhancement of freedom, and empowerment of people. The Millennium Development Goals (MDG) adopted and ratified by India also speaks of universalisation of primary education and promoting gender equality in education. The Jomtien Conference of 1990 established the goal of achieving basic *Education for All* (EFA) by the year 2000 and provided a vision to include early childhood care and education, programs for out-of-school children, literacy programs for adults, equity in providing access to all children, and ensuring acceptable learning levels within the policy frame for education. Education is also perceived to be the primary means to overcome social discrimination (Omvedt, 1993), and the present market based global village puts up a barrier in front of those who 'cannot read or write or count, and cannot follow written instructions' (Sen, 1998).

In spite of such objectives, Universalisation of Elementary Education (UEE) in India is still a distant prospect as revealed by recent figures (GOI, 2008). Half of all women and nearly one-third of men in India are illiterate. There are wide disparities in educational attainments across states and between genders. While the often-discussed state of Kerala has reached almost universal literacy, several pockets of Bihar, Rajasthan, and Uttar Pradesh have female literacy rates below 20 per cent (Census of India, 2001). About 20 per cent of all children were out of school in 2001, posing a serious challenge to the process of social and economic development (DISE, 2008, 2009). According to the same reports, while the Gross Enrolment Ratio (GER) in the country has crossed 90 per cent, the Net Enrolment Ratio (NER) is below 75 per cent. The NER for girls is reported to be about 60 per cent, over 25 percentage points lower than that of boys. 42 million children of the age group of 5–14 years in the country were out of school in 2004-05 (SRI-IMRB, 2005). An average of nearly a quarter of the children enrolled across the primary grades repeat classes. At the national level, only 56 per cent of the children enrolled in Class-I survive to Class-V (DISE, 2009). India is thus grappling with serious problems of inadequate access, poor quality and inefficiency in the schooling system.

Under such circumstances, the Sarva Shiksha Abhiyan (SSA) launched in India in 2001 aimed to extend useful and quality elementary education to all children in the age group of 5–14 years before the end of 2010. The SSM programme includes specific schemes for the development of pre-primary education, education of female children, and education of children belonging to SC/ST community, education of mentally and physically challenged children, education of school dropouts and displaced children. These schemes are implemented through *Bridge Courses Centres, Remedial Courses* and *Back to School Camps.*

In this paper we seek to examine the effectiveness of Bridge Course Centres in universalisation of education, the problems faced by these centres, and some possible suggestions. The study was conducted in Bardhaman district of West Bengal during 2008-09 as a part of evaluation of SSA schemes in the district.

Background of the Scheme

While there has been some success in enrolment of children in schools, Dropout Rates (DOR) are still remarkably high in India and half of the enrolled children do not study beyond Class-VIII. Even after opening new schools in unreserved habitations by way of formal schools, many children who were dropouts, never enrolled, working, or living in isolated villages/hamlets, specifically girls, need flexibility in school timings to adjust to domestic demands of work, sibling care and household chores. For such children, a facility has been provided under SSA through the Bridge Course Centres under the alternative and innovative educational programs (AIE) – schooling facilities that are more contextual, location specific and flexible. The objective of this scheme is to provide a short refresher course to children of older age; especially those never enrolled (NE) and dropouts (DO) and thereafter mainstream them back to formal schools. The course aims to wean children away from work, enabling the family to relocate work done by children amongst the adults. Duration of the course was six months initially, but has been extended to nine months from 2007-08. At the end of the course, the children are evaluated, and admitted to formal schools in appropriate classes. Two levels of bridge courses are being run in the district under the SSA – Primary Centres for placing children in Classes I-IV, and Upper Primary Centres for placing children in Class-V. The scheme is run with active involvement of the Village Education and Health Committee (VEHC) and the local community. The VEHC and the local community have freedom to determine timing, duration, venue, and holiday pattern for the BCC as per learners' convenience, aiming at transacting four hours of learning per day on an average. The centres are supported by Block Resource Centres and District Level Resource Organizations appointed by District office of SSA. Priority is given to small and remote habitations with at least twenty Out-Of-School children in the relevant age group.

Teachers use the teaching-learning material (TLM) provided by SSA and develop their own TLM as well from locally available material. These include pictures for story-telling, cards for letter recognition and counting, etc. The method of teaching differs from centre to centre, depending on the educational status of children.

Methodology

The methodology followed in this paper is in accordance with the standard requirements for socio-economic surveys – monitoring 10 percent of the Bridge Course Centres as samples. Out of the total 605 BCCs presently functioning in a district, the survey has been conducted in 75 BCCs with representation from almost all the blocks of the district (Table 1a and b).

A Stratified Random Sampling Technique was adopted to identify the sample BCCs. As is the norm in any monitoring activity, our random survey method sought to ensure that the findings are representative of the reality. We covered both Primary and Upper Primary BCCs. In all the surveyed BCCs, at least 10 per cent of the enrolled children were interviewed. In total, 530 learners were interviewed which is about 4 per cent of the total number of learners enrolled at that time.

TABLE 1
A: Survey Coverage of Bridge Course Centres in Bardhaman District – Primary

Indicators		Existing	Surveyed
Number of Community Development Blocks (Rural)	Aggregate	14	14
	East	4	4
	Central	5	5
	West	5	5
No of Bridge Course Centres	Aggregate	105	25
	East	32	7
	Central	38	9
	West	35	9
No of Learners	Aggregate	2056	205
	East	660	66
	Central	684	68
	West	712	71

B: Survey Coverage of Bridge Course Centres in Bardhaman District – Upper Primary

Indicators		Existing	Surveyed
No of CD Blocks (Rural)	Aggregate	29	29
	East	9	9
	Central	11	11
	West	9	9
No of Bridge Course Centres	Aggregate	500	50
	East	151	15
	Central	210	21
	West	139	14
No of Learners	Aggregate	11812	325
	East	3627	100
	Central	4519	125
	West	3666	100

Source: Office of the DPO, SSA-Bardhaman, and *Field Survey, 2008-09*

As per norms spelt out by SSA (in its website *www.ssa.nic.in/ssaalt.asp*), the functioning of the BCC should be evaluated on the following lines:

A. Quantitative Indicators
   a) Children's enrolment;
   b) Regularity of Attendance;
   c) Numbers admitted to formal schools.

B. Qualitative Indicators
   a) Class Room Environment;
   b) Teachers' Competence and relationship with children;

We have kept these indicators in mind when evaluating the BCCs. At a spatial level, the district has a varied geography and socio economic conditions – amply reflected in the three sub-regions – East (CD Blocks – Kalna-I, Kalna-II, Katwa-I, Katwa-II, Ketugram-I, Ketugram-II, Mongalkote, Monteswar, Purbasthali-I, Purbasthali-II), Central (CD Blocks – Ausgram-I, Ausgram-II, Bhatar, Burdwan-I, Burdwan-II, Galsi-II, Jamalpur, Khandoghosh, Memari-I, Memari-II, Raina-I, Raina-II) and West (CD Blocks – Andal, Barabani, Durgapur-Faridpur, Galsi-I, Jamuria, Kanksa, Pandabeswar, Raniganj, Salanpur). Wherever possible, we have tried to bring out the relative situation in these three sub regions so that policies may be streamlined according to local conditions. It must be noted here that the Eastern and Central sub-regions are predominantly agricultural in nature, while the Western sub-region is dominated by Mining, Quarrying, and Manufacturing activities with sparse agriculture. Keeping these economic characteristics in mind will help us understand the results better.

Survey Results and analysis

Outreach and Coverage

One of the major objectives of SSA is to ensure that all children of six to fourteen years age are enrolled either in formal schools or in EGS and AIE Centres. Reasons for the children to be out of school are:

a) Household work and Sibling Care
b) Engaged in work due to poverty
c) Migration
d) Unwillingness of Parents
e) Gender related reasons (problems related to early marriage and absence of separate toilet facilities in school), and
f) School too far or School not attractive

To counter those factors, 605 BCCs were started in the district, focussing on areas and cluster of villages where a primary Child Census had revealed high incidence of Out of School Children (OOSC). During 2008-09, approximately 14,000 learners were enrolled in the BCCs across the district. The coverage of the BCCs is quite extensive and is dispersed across most of the blocks in the district. We have surveyed 75 BCCs, giving adequate representation to spatial spread.

In addition, five Residential BCCs are also run in the district. We visited two such centres to explore how they are different from the non-residential BCCs.

Enrolment

The enrolment in the seventy-five surveyed BCCs is 1732, i.e. about twenty-four learners on an average in each BCC. Of these, 606 are in primary level BCCs and 1126 are in Upper Primary level BCCs. While majority of these learners are Drop Out from schools, a substantial number, especially in the primary level BCCs, has never been to schools (Table 2). There is regional variation, and whereas the central region follows the overall trend, in the eastern and western region incidence of never enrolled students is substantially higher. The situation is grave in the western region where about 85 percent of the learners in the primary level BCCs have never been to school. This indicates that the basic enrolment drive in this region has not been up to the mark. For the upper primary level BCCs too, almost 50 per cent of the current learners were never enrolled in school in this region.

TABLE 2
Survey Findings – Type Distribution of Learners in BCCs

Area	% of Learners in Primary BCC		% of Learners in Upper Pr BCC	
	Drop Outs	Never Enrolled	Drop Outs	Never Enrolled
Aggregate	56.3	43.7	67.1	32.9
East	37.5	62.5	91.7	8.3
Central	78.2	21.8	67.3	32.7
West	14.1	85.9	52.3	47.7

Source: Field Survey, 2008-09

The age, gender and spatial spread of the interviewed learners are given in Table 3. It is observed that there are more girls than boys in the centres, especially in the upper age groups. This is reflective of the fact that incidence of non-enrolment and dropout is more among girls than boys, especially in the upper primary stage.

TABLE 3
Survey Findings – Age and Gender Distribution of Interviewed Learners

Indicators	Boys	Girls	Total
Number of Learners Interviewed – Total	254	276	530
Numbers in 5-8 Age Group	68	36	104
Numbers in 9-10 Age Group	76	72	148
Numbers in 11-12 Age Group	59	84	143
Numbers in 13-14 Age Group	44	58	102
Numbers in 14+ Age Group	7	26	33

Source: Field Survey, 2008-09.

Regularity of Attendance

One of the most important objectives of the BCCs is to instill regularity and discipline among the children so that when they are mainstreamed, they do not face problems in sticking to the routine of the formal schools. Since irregularity and subsequent lagging in class studies is a major reason behind dropping out of schools, this aspect is crucial. The situation is not comfortable in this regard, especially in the primary level BCCs.

It is observed that in the primary level BCCs, only about 30 percent of the students are regular in their attendance (Table 4). Attendance is higher among girls than boys, and in the western region compared to the other two. In the central region however, boys are more regular than the girls.

TABLE 4
Survey Findings – Enrolment and Attendance in Surveyed Primary BCCs

Region	Number of Learners Enrolled			Learners Attending Regularly (%)		
	Boys	*Girls*	*Total*	*Boys*	*Girls*	*Total*
Aggregate	307	299	606	34.5	39.3	36.8
East	87	93	180	27.0	50.0	33.3
Central	116	105	221	38.9	30.3	34.8
West	101	104	205	28.6	52.4	40.5

Source: Field Survey, 2008-09.

In the upper primary level BCCs, about 56 percent of the students are regular in their attendance (Table 5). Here, attendance is higher among boys than girls, and in the western and eastern regions compared to the central. In the eastern region, girls are more regular than the boys. Thus, attendance is more regular in the upper primary section, reasons for which are discussed latter.

TABLE 5
Survey Findings – Enrolment and Attendance in Surveyed Upper Primary BCCs

Region	Number of Learners Enrolled			Learners Attending Regularly (%)		
	Boys	*Girls*	*Total*	*Boys*	*Girls*	*Total*
Aggregate	544	582	1126	63.8	50.0	56.6
East	186	159	345	60.0	66.7	62.8
Central	134	192	326	42.9	29.6	34.1
West	224	231	455	84.2	63.2	73.7

Source: Field Survey, 2008-09.

Mainstreaming

The most important aspect, the raison d'tre, of the BCCs is that of mainstreaming. The sole proclaimed objective of the centres is to wean back the out-of-school children to formal

schools. The situation is not very comfortable in the district in this regard (Table 6). Of the total 1732 learners in the seventy-five centres, about 680 children were mainstreamed in the academic year 2008-09 of which 375 were from Primary BCCs and 305 from the Upper Primary BCCs.

TABLE 6
Survey Findings – Performance of the Learners in Surveyed BCCs

Percentage of Learners	Primary BCC	Upper Pr BCC	All Total
Good Performers (mainstreamed in current session)	61.9	27.1	39.2
Average Performers (may be mainstreamed by next session)	17.4	35.1	29.7
Poor Performers (cannot be mainstreamed)	20.7	37.8	31.1

Source: Field Survey, 2008-09.

Thus only about 40 per cent of the enrolled students could be mainstreamed by the BCCs in 2008-09. This leaves about 900 learners still not capable of returning to the formal schools in the surveyed BCCs alone – 233 in the primary level and 821 in the upper primary level. In proportionate term, this implies that about 40 percent of the learners in primary BCCs and 72 percent of the learners in the upper primary BCCs will not be mainstreamed even after completion of the scheme. In contrast, BCCs in Andhra Pradesh and Karnataka have been able to mainstream about 70-74 per cent of enrolled students, while the success in Assam and Tamil Nadu are about 57 and 47 per cent respectively.[1] Among the larger states, only Madhya Pradesh has a lower figure of about 30 per cent of enrolled children being mainstreamed. Thus the figure of 40 per cent mainstreaming in running year and about 30 per cent possible mainstreaming in the next academic year is only moderate success for the district. The effort still leaves about 10,000 out-of-school children in the whole district! This story is slightly better in the western region and poorest in the eastern region. The factors responsible for such ordinary performance are explained latter.

Residential Bridge Course Centres

In spite of efforts to bring in all out-of-school-children under the coverage of formal schools or EGS/AIE centres, there are a handful of children scattered over different places who have been left out. The number of these children in their habitation does not fulfil the minimum requirements for opening a BCC in the locality. For these children the SSA had promulgated the provision of Residential Bridge Course Centres. These centres were to be set up in a central and accessible locality, and as far as practicable near to hamlets where there are OOSC uncovered by any educational facilities. Students would be staying in these centres, provided food and lodging, and continuing learning in an integrated atmosphere. While there are forty-five such Residential BCCs (RBCCs) in the state, five RBCCs are functioning in the district, enrolling a total number of 216 students, 138 of whom are boys and seventy-eight are girls. Visit to two of these centres revealed that the learning aptitudes

of the learners in the RBCCs are much better than the other BCCs. Since these children are staying in the centres, they have no opportunity to work or engage in other activities as done by their counterparts elsewhere. This provides them better scope to prepare their studies and the success rate is therefore higher. It was observed that out of 246 learners enrolled in the RBCCs in the district during 2008-09, 203 (about 84 per cent) were mainstreamed and put in formal schools. It can therefore be inferred that the performance of the RBCCs are much better than the non-residential BCCs.

Other than the educational aspects, RBCCs are also instrumental in taking care of the nutritional level of the children by providing them food. This has close linkage with the health standards and is a clear example of convergence of outreach programmes. Students in RBCCs were also engaged in different extracurricular activities like dancing, singing, recitation, etc. To motivate the students the centres organize cultural events performed by their own students. In addition to formal learning, students are also provided training for manufacturing various handicrafts, embroidery, sewing, pottery, etc. This may help those students who do not continue formal schooling to become self-employed in near future. The experiment of RBCCs is thus a remarkable success in the district.

Factors Affecting Performance

To understand the performance of the BCCs in the district in terms of mainstreaming, several factors were examined. Let us discuss them briefly.

TABLE 7
Survey Findings – Background of Learners in Primary BCCs

Percentage of Learners with		Boys	Girls	Total
Family Size Greater than 4	Aggregate	70.7	75.0	72.8
	East	70.4	100.0	76.7
	Central	72.2	72.7	72.5
	West	71.4	76.2	73.8
No other Literate in Family	Aggregate	22.4	17.9	20.2
	East	53.0	50.0	51.3
	Central	19.4	12.1	15.9
	West	28.6	23.8	26.2
No other School goer in Family	Aggregate	39.9	39.3	39.5
	East	55.0	50.0	53.3
	Central	30.6	30.3	30.4
	West	57.1	52.4	54.8

Source: Field Survey, 2008-09.

Background of the Learners

The study cannot be complete unless we explore the socio economic background of the learners. This is necessary for better understanding of the problems faced by these children,

their prospects in continuing studies, and the methods needed to retain them within the education system. It is observed that more than 73 per cent of the children are from large families, with average family size greater than four (Table 7 and 8). This leads to added responsibilities on them in the form of household work, looking after their siblings, or in simpler forms, leaving schools early to work and add to the family income. Obviously, these children are more likely to dropout from formal schools, become irregular in BCCs, and even if mainstreamed, they would find it difficult to continue. This phenomenon is more evident in the eastern region, and among girls compared to boys.

If we look at the educational background of the parents, we find that of the total number of learners interviewed by us, more than 20 per cent of primary level learners and 18 per cent of Upper Primary level learners have no other literate in the family. Thus, being first generation learners, they find it very difficult in convincing their parents about the necessity of continuing formal education. In addition to the lack of family support and encouragement, they don't have the privilege of being tutored by their parents. Thus they are at the mercy of the teachers in school unless they can arrange for private tuitions. This again involves substantial cost, which acts as a disincentive towards formal schooling.

TABLE 8
Survey Findings – Background of Learners in Upper Primary BCCs

Percentage of Learners with		Boys	Girls	Total
Family Size Greater than 4	Aggregate	70.7	68.8	69.7
	East	68.0	72.2	69.8
	Central	57.1	63.0	61.0
	West	84.2	73.7	78.9
No other Literate in Family	Aggregate	25.9	12.5	18.9
	East	28.0	16.7	23.3
	Central	28.6	14.8	19.5
	West	21.1	5.3	13.2
No other School-goer in Family	Aggregate	48.3	31.3	39.3
	East	56.0	38.9	48.8
	Central	50.0	25.9	34.1
	West	36.8	31.6	34.2

Source: Field Survey, 2008-09.

The incidence of parents' illiteracy and first generation learning is substantially high in the Eastern Region – more than 50 percent for the primary level learners and 23 percent for the upper primary level learners. This explains the lack of success of the scheme in this region as illiterate parents are reluctant to send the children to formal schools and the family environment is also not conducive for learning, leading to poor performance of these children.

TABLE 9
Survey Findings – Parents Background of Learners in BCCs

Percentage of Learners with Parents as	Aggregate	East	Central	West
Agricultural Worker	48.7	47.8	67.3	23.8
Industrial Worker	8.5	2.2	8.2	12.5
Mining Worker	7.6	0.0	0.9	21.3
Others (incl. Self-employed)	32.2	47.8	21.8	37.5
Unable to Work	3.0	2.2	1.8	5.0

Source: Field Survey, 2008-09.

Apart from the earlier generation, the factor of sibling education is also very important in the success of these innovative schemes. It is sadly observed that about 40 percent of learners of both primary and upper primary levels do not have any other school going children in their family though they have siblings in six to eighteen age group. This also reduces their scope for continuing education. This factor is also more worrisome in the eastern region compared to the other two. The parents are mostly working as agricultural and casual labourers (Table 9). Only in the western region, there are substantial numbers of industrial/mining workers. The income level of the families involved is also quite low – average per capita income being Rs. 600 per month only (Table 10). Only 25 percent of the families are getting more than Rs. 4000 per month. Thus the economic condition of the learners is quite adverse and is one of the main reasons behind discontinuity of schooling by these children. The situation is poorer in the eastern region compared to the other two.

TABLE 10
Survey Findings – Percentage of Learners in BCCs across Family Income

Monthly Family Income	Aggregate	East	Central	West
Less than Rs. 1000 pm	5.1	0.0	4.5	8.8
Rs. 1000 – Rs. 2000 pm	14.8	23.9	15.5	8.8
Rs. 2000 – Rs. 4000 pm	55.1	43.5	56.4	60.0
More than Rs. 4000 pm	25.0	32.6	23.6	22.5

Source: Field Survey, 2008-09.

The learners were also asked to rate the performance of their instructors and the environment of the BCC. It was observed that almost all of them have high esteem for the instructors. Interactions with the VEHC members also reveal that the instructors are doing their job sincerely and adequately. Thus, it is evident that the success of the BCC scheme is mixed – while there are evidences of quite a good job being done by the instructors in the BCCs, the socio-economic background of the learners makes it difficult for mainstreaming them.

TABLE 11A
Survey Findings – Reasons for being Out of Formal School – Boys

Percentage of Learners Left due to	Aggregate	East	Central	West
Financial Problem	12.1	3.8	18.0	10.0
Household Work	18.1	34.6	8.0	20.0
Working to Earn	26.7	23.1	24.0	32.5
Poor Performance	3.4	7.7	4.0	0.0
Lack of Interest / Incentive	15.5	11.5	20	12.5
Parents not Interested	6.0	3.8	10	2.5
Poor School environment / Ill treatment by Teachers	18.1	15.4	16.0	22.5

Source: Field Survey, 2008-09.

Reasons for being Out of Formal School

The situation would become clearer if we look at the problems cited by the interviewed learners regarding their non-attendance in formal schools (Tables 11a and b). While 37 percent of the surveyed learners were never enrolled, the remaining 63 percent were once enrolled but has left thereafter. Of those who have dropped out, the reasons for doing so are mixed. While 27 percent have dropped out due to financial problems, 19 percent have done so due to remunerative work, and only about 3 percent cite poor performance in the formal schools as their main problem. The problems are diverse in the three regions. While finance is the main problem in the central region, in the western region working status of the children is the main problem. It should be noted that *financial problem* and *working to earn* are two different aspects. In the former, the parents are unable to bear the cost of education of children while in the latter the children have to work to supplement family income. These can however be viewed as two stages of poverty, the latter more acute than the former. Thus, about 46 per cent of school dropout is because of one form of poverty or other.

TABLE 11B
Survey Findings – Reasons for being Out of Formal School – Girls

Percentage of Learners Left due to	Aggregate	East	Central	West
Financial Problem	40.8	20.0	60.0	22.5
Household Work including Sibling Care	10.0	15.0	8.3	10.0
Working to Earn	10.8	25.0	6.7	10.0
Poor Performance	3.3	5.0	5.0	0.0
Lack of Interest / Incentive	10.0	15.0	6.7	12.5
Parents not Interested	13.3	10.0	8.3	22.5
Poor School environment /Ill treatment by Teachers	11.7	10.0	5.0	22.5

Source: Field Survey, 2008-09.

The reasons are also different for the boys compared to girls. For the boys, having to work to earn is the main reason in aggregate, while for the girls, financial problem is the main reason. This indicates that with the first hint of poor income situation, girls are

withdrawn from schools, and only if the situation worsens, boys are withdrawn and then sent to work. Sacrificing the education of the girl child is therefore much more prevalent. This has serious implications for the overall socio-economic situation – not only for the present but for future generations as well. This phenomenon is more evident if we look at the factor of *Parents not Interested*. While 13 per cent of girls reveal that their parents are not interested in sending them to formal schools, only 6 per cent of boys say so.

TABLE 12
Linkage between Parents' Profession & Reasons for Drop out

Gender	Reasons for being Out of School	Parents' Profession					
		Agricultural Worker	*Industrial Worker*	*Mining Workers*	*Casual & SE*	*Not Working*	*All Total*
All Children	Financial Problem	33.3	33.7	45.2	27.8	9.6	26.6
	Household Work	33.3	10.9	23.8	5.6	18.0	14.5
	Working to Earn	16.7	15.4	14.3	38.9	20.4	18.5
	Poor Performance	0.0	0.0	0.1	0.0	0.1	0.0
	Lack of interest	0.0	12.7	2.4	5.6	18.0	12.6
	Parents not interested	0.0	8.2	7.1	5.6	16.2	10.2
	Poor School Environment	16.7	15.7	2.4	16.7	13.2	14.0
Boys	Financial Problem	0.0	10.3	37.5	21.1	5.3	10.7
	Household Work	50.0	12.7	43.8	0.0	26.6	19.5
	Working to Earn	50.0	21.4	18.8	47.4	27.7	26.1
	Poor Performance	0.0	3.2	0.0	0.0	5.3	3.5
	Lack of interest	0.0	19.8	0.0	10.5	14.9	15.7
	Parents not interested	0.0	9.5	0.0	0.0	5.3	6.5
	Poor School Environment	0.0	23.0	0.0	21.1	14.9	18.0
Girls	Financial Problem	50.0	54.6	50.0	35.3	15.1	42.0
	Household Work	25.0	9.2	11.5	11.8	6.9	9.7
	Working to Earn	0.0	9.9	11.5	29.4	11.0	11.2
	Poor Performance	0.0	3.6	7.7	0.0	4.1	3.7
	Lack of interest	0.0	6.4	3.9	0.0	21.9	9.7
	Parents not interested	0.0	7.1	11.5	11.8	30.1	13.8
	Poor School Environment	25.0	9.2	3.9	11.8	11.0	10.0

Source: Field Survey, 2008-09.

TABLE 13
Family Income, Family Size and Reasons for Drop out

Gender	Reasons for being Out of School	Monthly Family Income (₹)				Family Size			
		1000 or less	*1001-2000*	*2001-4000*	*4001 or more*	*< 4*	*Between 4 to 8*	*> 8*	*All Total*
All Children	Financial Problem	38.5	15.6	27.3	30.4	32.1	25.4	12.5	26.6
	Household Work	26.9	12.2	10.7	22.4	17.0	14.8	0.0	14.5
	Working to Earn	11.5	31.1	15.9	16.8	17.6	18.3	25.0	18.5
	Poor Performance	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	Lack of interest	11.5	8.9	15.6	8.8	7.6	14.5	18.8	12.6
	Parents not interested	0.0	17.8	11.8	3.2	8.8	9.4	25.0	10.2
	Poor School Environment	11.5	14.4	13.8	14.4	12.6	14.2	18.8	14.0
Boys	Financial Problem	13.3	6.1	13.0	9.1	16.7	9.1	0.0	10.7
	Household Work	46.7	10.2	14.5	30.3	26.9	18.2	0.0	19.5
	Working to Earn	20.0	36.7	19.9	31.8	19.2	27.3	44.4	26.1
	Poor Performance	0.0	0.0	5.3	3.0	0.0	5.5	0.0	3.5
	Lack of interest	20.0	12.2	21.4	6.1	10.3	16.4	33.3	15.7
	Parents not interested	0.0	16.3	5.3	3.0	7.7	5.5	11.1	6.5
	Poor School Environment	0.0	18.4	20.6	16.7	19.2	18.2	11.1	18.0
Girls	Financial Problem	72.7	26.8	39.2	54.2	46.9	40.8	28.6	42.0
	Household Work	0.0	14.6	7.6	13.6	7.4	11.5	0.0	9.7
	Working to Earn	0.0	24.4	12.7	0.0	16.1	9.8	0.0	11.2
	Poor Performance	0.0	0.0	4.4	5.1	8.6	1.7	0.0	3.7
	Lack of interest	0.0	4.9	10.8	11.9	4.9	12.6	0.0	9.7
	Parents not interested	0.0	19.5	17.1	3.4	9.9	13.2	42.9	13.8
	Poor School Environment	27.3	9.8	8.2	11.9	6.2	10.3	28.6	10.0

Source: Field Survey, 2008-09.

Inter-linkage between Reasons for Drop Out

Let us now try to explore whether there is any inter-linkage between the various reasons for drop out identified by us. Whereas financial problem was observed to be the most important reason for being out of formal school, for the casual and self employed workers and the unemployed, children are out of school mostly because they are themselves working (Table 12). For the agricultural and mining workers, household work is an important factor affecting children's schooling. Poor school environment is affecting schooling of the boys from mining families and girls from agricultural labourer households.

As for family income, in the lower income families, as expected, financial problem emerges to be the main culprit, especially for the girls (Table 13). Factors like disinterest of the parents and poor school environment emerge as crucial for the higher income groups.

Lack of interest among parents is a major factor for large families, especially for the girls, while for the smaller families financial problem is the main reason behind drop out from formal schools (Table 13). For the boys, working to earn is more predominant in large families.

TABLE 14
Family Educational Status and Reasons for Drop out

Gender	Reasons for being Out of School	Percentage of Literates among Family Members				
		< 25	*25-50*	*51-75*	*> 75*	*All Total*
All Children	Financial Problem	22.5	27.6	27.7	26.9	26.6
	Household Work	10.1	13.8	17.7	15.7	14.5
	Working to Earn	15.7	19.2	18.5	19.4	18.5
	Poor Performance	0.1	0.0	0.1	0.0	0.0
	Lack of interest	10.1	16.3	10.0	11.1	12.6
	Parents not interested	12.4	5.9	16.2	9.3	10.2
	Poor School Environment	21.4	15.3	5.4	15.7	14.0
Boys	Financial Problem	7.1	16.0	4.4	9.4	10.7
	Household Work	16.1	15.1	28.3	24.5	19.5
	Working to Earn	19.6	26.4	32.6	26.4	26.1
	Poor Performance	12.5	0.0	0.0	3.8	3.5
	Lack of interest	8.9	22.6	15.2	9.4	15.7
	Parents not interested	7.1	1.9	17.4	5.7	6.5
	Poor School Environment	28.6	17.9	2.2	20.8	18.0
Girls	Financial Problem	48.5	40.2	40.5	43.6	42.0
	Household Work	0.0	12.4	11.9	7.3	9.7
	Working to Earn	9.1	11.3	10.7	12.7	11.2
	Poor Performance	0.0	4.1	7.1	0.0	3.7
	Lack of interest	12.1	9.3	7.1	12.7	9.7
	Parents not interested	21.2	10.3	15.5	12.7	13.8
	Poor School Environment	9.1	12.4	7.1	10.9	10.0

Source: Field Survey, 2008-09.

If we consider the educational status of the families in terms of the proportion of the family members being literate, we find that for families with low literacy score lack of interest among parents and poor school environment are major problems (Table 14). On the

other hand, for high literacy score families, household, and remunerative work are the two main reasons.

It is thus obvious that the reasons for drop out are quite diverse and depends on family background. Therefore, intervention programmes must also be diversified and properly targeted to prevent school dropout and plug the flow of students into BCCs at the source.

Problems Faced by BCCs

The centres are also facing certain problems that are hindering their teaching-learning process. The problems can be divided into infrastructural problems, student level problems, and other problems (Table 15).

Infrastructural Problems

It is observed that for the primary BCCs the most important problem is lack of building/space. This is followed by non-availability of drinking water and electricity. On the other hand, the main problem of the upper primary BCCs is lack of electricity followed by non-availability of blackboards and buildings. The infrastructural requirement needs to be catered to by the administration through coordination between SSA, VEHC, and Local Self Government organizations.

TABLE 15
Survey Findings – Problems Faced by BCCs

Percentage of Centres reporting following problems	Primary BCC	Upper Primary BCC	All Total
Infrastructure – Building/Space	25.0	8.0	15.6
Infrastructure – Electricity	25.0	12.0	17.8
Infrastructure – Drinking Water	25.0	8.0	15.6
Infrastructure – Toilets	5.0	8.0	6.7
Infrastructure – Blackboards	10.0	12.0	11.1
Irregular Students	15.0	28.0	22.2
Working Students	30.0	64.0	48.9
Learners Busy in Household Work	40.0	24.0	31.1
Lack of Incentive to Learners	15.0	16.0	15.6
Lack of Guardian Awareness	10.0	20.0	15.6
Over-age Students	0.0	8.0	4.4
Timing not Correct	20.0	16.0	17.8
Placement Problems	5.0	12.0	8.9
Poverty	5.0	24.0	15.6
School far away	0.0	16.0	8.9
Language Problem	20.0	8.0	13.3

Source: Field Survey, 2008-09.

Student Level Problems

A significant number of instructors from these centres argue that there are serious problems at the level of the students that prevent smooth functioning and good performance of the BCCs. At the primary level, many children are busy attending domestic duties or engaged in some remunerative work. This hampers their regularity at the BCC. For the upper primary level, 64 percent students are working at some level or other. This keeps them busy and they do not find time to study at home. As a result, though these children have registered themselves at the BCCs, their performance is not satisfactory and it is unlikely that these children can ever be mainstreamed. Moreover, in the BCCs, they are supposed to encapsulate within nine months all that are taught in formal schools for a year. Added to this is the fact that the learners in the BCCs are the weakest of the lot (since they are school drop outs/never attended). So, just the four hours of learning in BCCs without any study time at home is not enough for them to be mainstreamed. This raises questions about the timing and the teaching method of BCCs, which needs to be addressed at the policy level.

Other Problems

Some other factors have also emerged as roadblocks in smooth working of the scheme. A major problem is the timing of the scheme. Most of the current centres started in January-February and hence will continue till September-October. However the academic session in all schools in West Bengal start around May-June. Hence it becomes impossible to place the students in formal schools after completion of the bridge course. Lack of guardian awareness and acute poverty of the families are also critical issues that are affecting the learners' progress and continuity. This needs to be tackled at the social strata through awareness generation and poverty eradication programs. Another problem specific to the western region is that of language. While a large number of children, especially the poor among them, are from Hindi speaking families, the whole scheme is being run with Bengali-speaking teachers and TLM. This is making the learning process unattractive and cagey for the children. They are unable to associate the lessons with their family/societal environment, not finding them worthwhile, and neither are they getting any help from their family members in this regard. This needs to be addressed urgently. At least for the hamlets where most of the out-of-school children are Hindi speaking, the teachers and the TLM should be in Hindi or English.

Conclusion

Performance

To summarize our study, the performance of the BCCs in Burdwan district is mixed. This innovative scheme has been able to bring back about half of the out of school children to the formal schools. These BCCs are also observed to provide quite good learning opportunities to the marginal children so that even those who are not mainstreamed are learning some basic textual reading, comprehension, and mathematics. The flexibility in timings are allowing many of them to continue with their 'works' – be it household chores, domestic duties, or working as agricultural labourer, and yet coming to school at fixed timings. This inculcation of routine and discipline is indeed another success of the scheme.

Most significant success of the scheme is that most of the learners are now attracted towards education – they want to continue their studies. Creation of such eagerness and enthusiasm is very important in not only mainstreaming these out-of0school children but also for their retention in formal schools. This has happened because of close personal linkage and association between the instructors and the learners.

However, this success is not uniform across grades or region. The performance is substantially better in primary level compared to upper primary, and in the central region compared to the others. This difference is due to specific problems faced by the upper primary level BCCs and the Eastern Region.

Problems

Identified problem areas of the scheme relate to low percentage of mainstreaming – not because of faults of the scheme or performance of the centres, but because of socio-economic conditions of the learners. It is true that infrastructural requirements need to be fulfilled. The timing also should be such that the course ends just in time for a new academic session so as to enable smooth transition of the students from the BCCs to formal schools. But the main problem is that the socio-economic conditions of the learners are quite adverse. A large number of them have large families, meagre family income and no other literate/school-goer in the family. This makes formal education quite prohibitive. In addition, distance from formal schools also makes it sometimes virtually impossible for the kids to continue education in the mainstream. This problem is more acute for the Hindi/Urdu speaking children who are present in substantial numbers in the western region of the district. For example, young girls need to travel more than eight kilometres to attend Hindi medium high school in Raniganj block. It is no surprise that dropout is quite high in this region.

The problem of guardian's lack of interest in sending their children to the centre regularly or to formal schools after completion of the bridge course is also a critical aspect. Under economic duress they look at their sons as earning members and to their daughters as replacements for their working mothers. Consequently the continuity of education of learners is quite questionable. They are sending children to BCCs because it is flexible, allows them to complete family chores, and is short term. Unless the parents are enthusiasts, the learners in BCCs will not move to formal schools, more so for the girls.

Another problem that we have identified is the lack of coordination between the upper primary centres and the high schools where these learners shall be placed. Formal high schools are refusing admission to learners from BCCs on ground of over-age, lack of proper certificate or simply on grounds of poor quality of these students. While there is no escaping the fact that most of the students from the BCCs are not at par with those studying in formal schools for four years continuously, we must keep in mind that schools have a moral responsibility to accommodate these marginal students also. These issues have to be sorted out at the administrative level.

Suggestions

We would like to put forward few suggestions for improving the effectiveness of the scheme.

First, as we have mentioned earlier, the timing of the course should be such that it ends by April-May so as to place the students in formal schools at the beginning of academic

session. The decision to start BCCs in January was purely administrative and emanated from the *program implementation calendar* of the local SSA authorities. However, the authorities are now aware of the problem and are thinking of shifting the schedule appropriately.

Second, better coordination between formal schools and the BCCs is extremely important. The VEHC and the local PRIs have to play a more pro-active role in this regard. The performance of the Shiksha-Bandhu has to be closely monitored and expanded to make her the coordinator of such administrative issues.

Third, provisioning of light tiffin to the learners (two biscuits and a boiled egg perhaps) in line with Mid-day Meal in formal schools would look after their nutritional level and also act as an incentive. It was often found during field visits that many children are enrolled in local primary school, visit it during the mid-day lunch hour only, but come to the BCC for actual learning. Some researchers have argued that under such situations mid-day meals should be provided to all children irrespective of their attending educational institution or not, as in practice it is already delinked. However, such formal delinking will severe the thread that at least binds the children to the local school and teaches them to value school enrolment and attendance, at least for the food if not for the learning. Extending the midday meal program to the BCCs will create an added incentive for the out-of-school children to come back under the umbrella of educational system. Some scholarship may also be offered to the learners at the BCCs so that they attend classes regularly and not go off to work to supplement family income. At present the state government provides ₹500 per month as scholarship to meritorious but poor students of class V-X in formal schools. Even if half of that rate is allowed for the learners in BCCs (and other EGS/AIE centres), a sum of about ₹30 million per year will cover the budget for scholarship of all the out-of-school-children in the district.

Fourth, supply of all TLM, books, and blackboards should be done within fifteen days of commencement of classes. Without these, the quality of teaching and the performance of the learners would suffer, as observed by us in many cases. In addition, at least for the hamlets where most of the out-of-school children are Hindi speaking, the teachers and the TLM should be in Hindi or English.

Fifth, in the summer and monsoon days, lack of proper building is acting as a major problem. All primary school buildings and ICDS centres, even local Panchayat Buildings, may be used for the BCCs, and this have to be ensured by the administration. The locations of the centres should also be conducive to learning of young children and have to have adequate drinking water and sanitation facilities.

Sixth, an experiment like residential BCCs was observed to be highly successful during field visits. These may be replicated – with at least one such centre in each block initially. NGOs and multilateral agencies like DFID, UNDP, and UNICEF may be approached for this purpose. These may also be linked with National Social Service (NSS) schemes of local colleges or schools so as to ensure regular availability of teaching personnel.

Seventh, some vocational training may also be imparted at the upper primary level in association with local SHGs. This will prepare the children with some earning skills so that they can enter ITIs after completing Class-8 from formal schools. In addition, the learners who are unable to be mainstreamed would also imbibe some life-sustaining skills after completion of the course from BCC.

Eighth, as was mentioned in the section on methodology, we have tried to bring out regional and social variations in the problem of school dropout and the conditions of

learners in the BCCs. Since the programme has substantial flexibility in it's implementation, authorities must take local factors under consideration while planning and executing the scheme. This is to be done by the *district level resource organizations* and the local VEHCs in consultation with the district SSA research section. It is heartening to note that during our field survey signs of such modulations and fine-tuning at the local level were already evident. This needs to be pursued further and formalized at the institutional level.

At a more long-run prospective one may think of running these throughout the year where children will come at their suitable times and learn at their suitable pace. At the end they will sit for public examinations conducted by appropriate authorities (DPSC for primary level and WBBSE for higher levels) and on successful completion obtain certificates in that regard. In other words, open schooling system and BCCs may be merged and brought at par with formal schools. After all, we are to test whether a student has the adequate knowledge or not, not wherefrom she has acquired it. Gradual spreading out of such a system will not only expand our education network but also make learning enjoyable and fruitful, in addition to catering to the needs of the marginal children.

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Note

Data on performance of BCCs in selected states are obtained from: ***Andhra Pradesh*** - *http://ssa.ap.nic.in/Alternative%20schooling.pdf*; ***Assam*** - *http://www.ssaassam.gov.in /Sanjyogi %20Siksha%20Kendra.htm*; ***Karnataka*** - *http://www.schooleducation.kar.nic.in /ssa/pdfdocs/ EGS&AIEProgress05.pdf* and *http://www.schooleducation.kar.nic.in/ssa/pdfdocs/npegel.pdf*; ***Madhya Pradesh*** - *http://www.educationportal.mp.gov.in/Oosc/Public/ssrs/oosc_Report_Viewer .aspx ?RName=Ver_oosc_Summary Report* and *http://ssa.nic.in/misdoc/mis-08-09/Madhya %20Pradesh%20-%20TISS%20Mumbai%20_Final_.pdf*; and ***Tamil Nadu*** - *http://www.ssa.tn.nic.in /Docu /Interventions.pdf and http://www.ssa.tn.nic.in/Schemes-E.htm;*

Journal of Educational Planning and Administration
Volume XXV, No. 3, July 2011, pp. 277-295

Book Reviews

Donald E. HELLER and Madeleine B. d'AMBROSIO Eds. (2008): **Generational Shock Waves and the Implications for Higher Education.** Edward Elgar, Cheltenham, UK, Northampton, MA, USA. ISBN: 978-1-84844-049-4, Pages 191.

The Context

Educational communities all over the world are constantly engaged in reforms and renovation of higher education system to address the evolving changes in economic domain, social systems, technological development, market conditions, employability of graduates and so on. In addressing the impact of changes the institutions review the assumptions and practices relating to higher education and put in place new arrangements in new or revised curricular structure, degree nomenclatures, teaching and learning methods. Sometimes new departments and programmes are established. Most countries have come to recognize that the higher education system plays a key role in economic growth. At the same time the issues of social equity and inclusion find a prominent place. Global competitiveness requires serious attention to the quality and excellence of the academic programmes. These issues are being articulated in India also in a variety of forums resulting in some concrete measures.

In addition to these issues, a somewhat unusual set of considerations is presented in the book under review. It highlights the fact that the attitudes and behaviour pattern of successive generations also seriously impact the approaches to higher education and the outcome. The book is based on a National Conference convened by the organisation TIAA-CREF (Teachers Insurance and Annuity Association - College Retirement Equities Fund). The participants in this conference consisted of several presidents, provosts, and other senior level leaders from the higher education community. The issues addressed by the participants relate to small community colleges as well as to large research institutions.

Typology of Generations

The participants identified five different generations starting from the beginning of twentieth century up until now. The classifications are as follows:

1. The GI Generation (members of US armed forces and stands for 'Government Issues'): This generation consists of persons born between 1901 and 1924, now aged eighty-seven to hundred and ten. These persons witnessed the World War-I
2. The Silent Generation: These are persons born between 1925 and 1942, now aged around sixty-nine to eighty-six. These people witnessed a great economic depression and World War-II.
3. The Baby Boom Generation: Born between 1943 and 1960 now aged around fifty-one and sixty-eight, who grew up as youth in the aftermath of World-War-II.
4. Generation X: Born during 1961 to 1981 and now aged thirty to fifty.

5. The Millennial Generation: These are persons born since 1982 and now up to the age of twenty-nine.

Difference in Generational Characteristics

While most participants seem to have generally agreed to the above classification of generations, there were some who had reservations about it. The Conference addressed the characteristics of each generation in terms of their habits, preferences, attitudes, expectations and behaviour and the manner in which the educational system had to take into consideration their implications for higher education. For instance, one paper concludes that the GI and Silent Generations preferred top down hierarchy; conscious of devotion to work and family life; and accepted slow and steady career paths. The Baby Boomer Generation was also comfortable with top down hierarchy, but was motivated by money, title, recognition and promotion and preferred upward mobility. The Generation X was generally skeptical of everything; preferred flat organizational structure; were motivated by freedom, fun and fulfilment; and willing to take risks in career paths. The Millennial Generation which is currently in schools and colleges is more technologically savvy than the previous generation and are more amenable to non-conventional models of teaching and learning. These students focus on multi-tasking and integrated technologies and are not comfortable with classical modes of instructions. This generation is forcing colleges to explore how to serve them effectively and transform themselves to meet these new demands.

The members of one generation would generally be the faculty members of the institutions serving the students of the X generation. The characteristic differences between generations require some adjustment in the relations between the faculty and the students. For instance, the Faculty members of generation X would have to engage the students of millennial generation (who use technologies far more and have access to huge amount of information and data obtained from various domains using the internet facilities) differently from how they themselves were taught. The faculty members of Boomer Generation are now moving into retirement stage but are continuing as faculty after the elimination of mandatory retirement. Hence educational institutions will have the impact of three generations simultaneously.

The differences in the characteristics in the generations also result in the structural aspects of the academic institutions. For instance, in 1969, four out of five faculty members in US institutions were men. By year 2000, two fifths of all faculty were women. In earlier generations, the academic women were predominantly single, while in the new generation they are mostly married, have children, and some time have dual careers. Similarly, in 1969 barely 10 per cent of the faculty was foreign-born, typically of European origin, mostly refugees from Nazi Germany or old Soviet Union. In recent years the number of foreign faculty especially in sciences and engineering are between 55-60 per cent and come from East Asian origin (Chinese), or South Asian origin (India).

These characteristics raise several questions for the present educational system catering largely to the Millennial Generation to be addressed by the older faculty as well as the educational administration. These questions relates to the nature of strategies to attract and retain students; nature of changes in teaching-learning processes to engage the attentions of the students; the modification necessary in the curricular structure to cater to the new generation; how best to use the developments in communication technologies; and

considerations relating to demographic changes and gender gaps; and the socio-economic status in the composition of students. This would require special attention to policy reforms to meet changing societal expectations.

Policy Considerations

In a thought provoking article King Alexander, who was the president of California State University and several other universities of USA, discusses the issues of policy reforms. He has pointed out that the access to college and university has become a rising dilemma in the Unites States. He notes that there is a steep decline in social mobility dramatically affecting higher education in US. One reason is the widening disparity in the income levels between the upper and lower income groups. 'Colleges and Universities that were thought to be the principal engines of Society to provide opportunity and stimulate economic mobility have, in large part failed to perform as earlier expected in the last couple of decades'. Wealthy Universities both private and public, spend huge sums on their students whereas, a large number of public institutions struggles to provide educational opportunities to meet the need of the students. Disproportional financial relief is available to middle and affluent families compared to the low income groups.

Relevance to India

The observations and inferences contained in the book may not necessarily be totally applicable to the educational situation in India because of the vast differences in the structure, ownership pattern, enrolment criteria and socio-economic and regional differences. However, it will be pertinent to note that in India also there are observable differences among persons belonging to successive generations in terms of the attitude, dress, use of language, adherence to cultural practices, use of technical devices, and so on. In so far as higher education is concerned, the differences in educational experiences between the generations of people born after independence are very significant. For instance, they were taught by earlier generation teachers who were oriented towards British education system, whereas the students were more influenced by the nationalism advocated by their leaders. The generation from the 70s were affected by the economic policy reforms leading to greater privatization of higher education. They were also willing to live with corruption and many educational malpractices. The present generation in schools and colleges is more technology savvy, experience greater exposure to media and international events and are unlikely to patiently endure inadequacies and improprieties in the educations system. They will also be more demanding of access to educational opportunities. They would expect newer curriculum and teaching-learning methods to meet their aspirations. The impact of this book, though is strictly related to US context, is still relevant to us in provoking the recognition of the generational factor in higher education reforms and that we cannot take the younger generation for granted.

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V.D. MADAN (2002): Higher Education Beyond 2000 : An Omni Tech Approach, Part A – Systemic Perspectives; Part B – Omani – Tech Paradigms. ISBN 81-7391-464-8, Hardbound, Pages XVIII+452, Price ₹995

The monograph under notice, Higher Education Beyond 2000 : An Omni-Tech Approach in two parts is broadly centred around the exploration, conceptualization and designing of an Omni-Tech Education Approach in terms of its Systemic Perspectives and Technology Paradigm. The capacity of distance education and the potential of Information Technology together constitute the basis of such a model. It endeavours to link education with information and communication technology on the one hand and with spirituality on the other which is the gate way of imbibing a much desired value system in the new century. Part A of the monograph is centred around the systemic perspectives of Omni-Tech Education in five chapters, while Part B of the sequel examines some of the modern trends in information technology and their application for higher education.

In the foreword to Part A of the sequel R.P. Sharma observed that higher education in its conception and operation is undergoing transformation thoroughly reflected in its objectives, programmes and pedagogical nuances. It is trying to keep pace with the social mobility proliferation of professions, knowledge explosion unleashing a new wave of technological sophistication and a sea change in the structure and functions of social institutions. In this scenario a formal system perched on the conventional mode of pedagogical dispensation has to make room for alternative methodology which is ministered by technologies. This calls for same conceptualization of mental and physical resources catering to the needs of vast population. In the Foreword of Part B of the sequel, Jack Hawley pointed out that the radical changes in the higher education that will be brought in during the twenty-first century are already beginning to take shape. Technology will force a paradigm shift. A crucial problem now is a nano second speed with which the education system will have to respond to India's revolution in information technology. A feature of the paradigm is a provision for all important spiritual and character building of higher education.

Three key parameters are identifiable for higher education of the twenty-first century: The need and demand for lifelong learning; the requirements of the learners for alternative types and modes of education provisions; and the impact of media on the changing patterns of the educational process. These parameters are bound to influence the shape and structure of future higher education. Moreover, Education Massification, Technology Explosion and Knowledge Globalization are the three major factors responsible for the systemic shift of education from the conventional approach to the new emerging paradigm through the distance education made. The proposed Omni Tech Education System (OTES) is destined to achieve the three primary goals of education; increased accessibility; higher productivity and greater flexibility. Commenting on the present state of higher education, it is observed that the education system will have to overcome its credibility crisis by answering students' keenness to acquire knowledge and competence, teachers' commitment to contribute to the educational growth of their institutions, and the administrator's sincerity for smooth functioning of the educational institutions. Moreover, the foundational goals of education at any level should be the mental development for intellectual attainment and wisdom,

material development for survival and prosperity and moral development for dignity and quality of life.

Due to the limited access to the conventional system, an alternative system of distance education or open university emerged. The open learning mode lays focus on the overall methodology of distance education which comprises: self learning print materials; multi-media inputs; academic support through counseling/tutoring and academic evaluation and student assessment. In India, the experiment of Distance Education (DE) in the form of School of Correspondence courses and Continuing Education, Delhi University emerged in 1962 as the Campus for Open Learning. Some universities are offering Distance Education Programme along with conventional programmes in a dual mode. The first Open University was opened in Andhra Pradesh in 1982, and Indira Gandhi National Open University (IGNOU) was setup in September 1985. At present about fifty educational institutions are offering programmes in the distance mode. The IGNOU is responsible for the promotion of open university and distance education in the education pattern of the country and determination of standards in such systems through Distance Education Council, established by the university as a statutory authority. The University has adopted an integrated multi-media instructional strategy. There is a concern in distance education mode about the quality of instruction and high dropout rate. In a New Year message to the university students, IGNOU Vice-Chancellor, V.N. Rajasakharan Pillai observed that in twenty-five years IGNOU has bridged the gap between teachers and students with its quality study material. The self-learning study materials are of such excellence that you can prepare yourselves easily and feel as if your teachers are seated beside you. The Open and Distance Learning Pedagogy is driven by Information and Communication technologies, and personal contacts with experts in subjects. The University also organizes Video Conferencing sessions with the learners. (*The Hindu*, January 10, 2011).

The proposed Omni-Tech Education model's focus is on technology based pedagogy modes. It intends to bridge the gap between teachers and learner through technology. It has to make intensive and extensive use of information technology in its basic pedagogic components. Besides, it has to establish a mechanism for maintenance of standards in terms of quality and credibility. OTES has a strong potential to provide need-based, work based, employment based education to all categories of people in accordance with their respective choice of programmes, pace and progress of learning. It will provide programmes in academics, professional and vocational areas with emphasis on updating and enhancement of skills. It has the vital role in improving the quality of education and upgrading morality through spirituality. There is a need to work in collaboration with industry, to know their requirements and to provide training programmes for job entrants and workers in the industry. The advancement of telecommunication has brought a revolution in the field of education. With various non-print inputs electronic media, communication modes and computer system are going to be used as means of the Omni-Tech approach. It will make use of information technology tools such as audio/video talks, viewing of video/television programmes, computer-assisted-learning, use of Internet and e-mail etc. There is a discussion about the need and areas of research in OTES and training of personnel for the system. The author also mentions the advances in Information Technology and their application in education.

In a subsequent paper, V.D. Madan (2008) – Quality Assurance in Higher Education; Exploring an Omni Systemic Approach with a Focus on Distance Learning, pointed out that

academic evaluation is central to the systemic quality pursuits in higher education. The evaluation areas generally identified for this purpose are; educational programmes and courses; teaching – learning pedagogies; the process of academic support and services etc. The quality framework envisaged under academic valuation ought to be a three-tier procedure; quality scrutiny of courses and curricula, quality assessment of the teaching-learning monitoring pedagogies and the quality audit of outcomes (*Journal of Educational Planning and Administration,* October 2008, p. 418).

About spirituality, Madan writes that a strong grounding in the three important traits of information technology, education proficiency and spiritual awareness is essential to achieve the goals of Omni Tech Education. Discipline, dedication and duty are the three fundamental attributes of the basic value system which forms the pillars of quality assurance in its approach. Adherence to five human values of truth, righteousness, peace, love and nonviolence with complete dedication to serve the humanity without self interest are the key elements of spiritual awareness. The system of five spiritual axioms has to be conceptualized as the core value based education system. It is emphasized that an ideal blend of moral and spiritual training for generating value based environment through Heart (Foundational Aspect); academic excellence for intellectual/mental development and acquiring wisdom through Head (pedagogical Aspect); and professional dexterity for vocational development through Hand (Functional Aspect). The spiritual system of Omni Tech approach is essentially based on educational transformation through the emulation of the model of Sai Education. It takes its inspiration from Vedantic philosophy without adherence to religious rituals and practices. Recently, the importance of ethics and values in education was emphasized by Kapil Sibal, Minister for Human Resource and Development while delivering the 88th Convocation Address of Delhi University (*Hindustan Times*, February 27, 2011).

P.K. Doraiswamy in a review of two books; *Distance Education Technologies in Asia* and *Policy and Practice in Asian Distance Education in Asia*, edited by Jon Beggaley and Titen Balawati (Sage) concluded that over dependence on any single technology like the Internet must be avoided; and an adequate student support system and facilities for training specialist teachers must be created (*The Hindu*, December 28, 2010).

There is a move to link 800 universities and 26,000 colleges in the country through a fiber optic network to create a free information high way. There is a need for convergence of technologies to provide interactive modules on television screens so that anyone could access them. Free flow of information and knowledge could help to develop self-testing modules and self appraisal procedures (*The Hindu*, February 28, 2011).

In sum, this sequel is an exposition of a technology-based distance learning approach of higher education beyond 2000. Technology is bound to influence all levels of education in the times to come. The sequel will be of interest to educational administrators, teachers and students of education. Prof. V.D. Madan deserves the gratitude of readers for his endeavour.

A useful contribution.

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Klien B. STEPHEN (2009): Learning – Principles and Applications (5th Edn.). Sage Publications, New Delhi. ISBN: 978-1-4129-5652-9, Pages 519.

Learning: Principles and Applications seeks to provide students with an upto date understanding of learning. Written in an easy to read style and format, Stephen B. Klein has tried to showcase the relevance of basic learning processes through Vignettes, 'Before You Go On' sections, 'Applications' sections, 'Section Reviews' and 'Critical Thinking Questions'. It includes supplements like 'Instructor's Resources' and 'Companion Student Site'. The key terms written at the end of each chapter help the readers to recapitulate the entire chapter. The book is accompanied by robust ancillaries like glossary, references, credits and sources, author index and subject index. It makes learning more meaningful.

The book includes both classic experiments and contemporary studies of animal and human research. What makes it different from other books is its use of pedagogical features that motivate deeper level of information processing. The book is best suited for under-graduate studies in learning and behavioural changes. The book is divided into fourteen chapters.

Chapter 1 entitled *'An Introduction to learning'* discusses the historical perspective of the nature of learning process. Insight into the basic learning principles through a description of the research findings and theories of Thorndike, Pavlov and Watson is given. Associationism Theory of Thorndike established that animal behaviour could change as a consequence of experience. His law of readiness proposed that motivation was necessary for learning to occur. The research by Pavlov suggested that definite rules determine which behaviour occurs in the learning situation. Watson showed that an emotional fear response could be conditioned in human beings. The chapter ends with a discussion on the ethics of conducting research.

Chapter 2 describes *'Traditional Learning Theories'* which deal with global theories that emerged in the 1930's. These include several views which attempt to explain all aspects of behaviour and nature of learning. Two major theoretical approaches have been proposed to explain the nature of learning process. Two very different S-R (Stimulus – Response) associative theories exist. One proposes that reward is necessary in order to learn an S-R association, while the other proposes that the only necessity for response to occur is in the context of stimulus. The approaches have been advocated by Hull's 'Drive Theory', Spence's 'Acquired Motive Approach', Guthrie's 'Contiguity View' and on the other hand by Skinner's 'Behaviorist Methodology' and Tolmen's 'Purposive Behaviourism'.

Chapter 3 describes *'The Modification of Instinctive Behaviours'* which explains how addictive behaviour reflects the combined influence of 'instinctive' and 'experiential' processes. Loren (1969) suggested that instructive systems enhance the ability to adapt to the environment. According to him, the ability to learn from experience and respond differently to varied environmental circumstances is programmed into the genetic structure of a species, providing the flexibility needed to adapt to changing conditions.

The chapter focuses on the influence of instinct on addictive behaviour and on other behaviours. Lorenz and Tinbergen proposed that a specific interval tension exists for each major instinct. The chapter also describes two learning processes, 'Habituation' and 'Sensitization' which can alter instinctive behaviours. A number of variables affect its occurrence.

Chapter 4 includes *'Principles of Pavlovian Conditioning'* that involves the 'classical conditioning process' which is the ability of environmental events to produce emotional reactions that in turn motivate 'instrumental behaviour'. Conditioning involves the pairing of a neutral environmental cue with a biologically important event. The different techniques such as Pavlov's 'surgical technique', 'sign tracking', 'eye blink conditioning', 'fear conditioning', and 'flavour aversion learning' are also explained to investigate the conditioning process. The chapter also deals with 'extinction method' of eliminating conditioned response and the higher order conditioning, sensory pre-conditioning and vicarious conditioning to elicit the conditioned response indirectly.

Chapter 5 describes *'Theories and Applications of Pavlovian Conditioning'*. This chapter deals with new theories devised by Pavlov to investigate the principles governing the 'acquisition' and 'extinction' of a conditioned response. The concluding part of the chapter also explains the applications of Pavlovian conditioning such as 'systematic desensitization', an 'intense craving' and the 'conditioning of an immune system response'.

Chapter 6 *'Principles of Appetitive Conditioning'* includes the use of 'reinforcement' and/or 'non-reinforcement' to alter undesired behaviour. B. F. Skinner (1938) conducted an extensive investigation into the influence of reinforcement on behaviour. According to him, the environment determines contingencies and people must perform the appropriate behaviour to obtain a 'reinforcer.' The variables influencing the development or extinction of reinforcer seeking behaviour is also described in this chapter.

Chapter 7 *'Theories and Applications of Appetitive Conditioning* discusses Premack's 'Probability – differential' theory, Timberlake and Allison 'Response deprivation hypothesis', the 'Momentary Maximization' theory and 'Delay – Reduction' theory. The latter part of the chapter includes three stages of 'contingency management' viz 'assessment', 'contracting' and 'implementation'.

Chapter 8 discusses *'Principles of Aversive Conditioning'* and examines when punishment can suppress undesired behaviour. The chapter also describes the factors that affect whether a person learns to avoid 'an aversive event' (p. 189). 'Escape conditioning' is examined and is followed by a discussion on avoidance learning and punishment' (p. 189). The discussion indicates that one can learn how to escape from 'aversive situations' (p. 196). However, if possible, one should avoid rather than escape an aversive event. The chapter concludes with the description of factors that determine whether or not punishment will effectively suppress behaviour.

Chapter 9 *'Theories and Applications of Aversive Conditioning'* examines why punishment has been effectively used to eliminate behaviour. It discusses the processes that enable a person to learn to avoid 'aversive events' (p. 217). It describes the use of response prevention or flooding to eliminate 'avoidance behaviour' (p. 217). The Principles that determine punishment's suppressive effect on behaviour have been used to modify behaviour in 'real-world settings' (p. 228).

Chapter 10 *'Stimulus Control of Behaviour'* discusses the impact of the stimulus environment on behaviour. An individual may respond in the same way to similar stimuli, a process called 'generalization'. Individuals may also learn to respond in different ways to different stimuli. The process of responding to some stimuli but not others is called 'discrimination learning'. One way to appreciate the difference between the 'eliciting function' of a conditioned stimulus and the 'occasion – setting function' (p. 254) of a discriminative stimulus is to examine the properties of a Pavlovian occasion-setting

stimulus. Researches have proposed several very different views of 'the nature of discrimination learning'.

Chapter 11 describes *'Cognitive Control of Behaviour'* and explains the cognitive processes that affect how and when we behave. Psychologists investigating cognitive processes have focused on two distinctively different areas of inquiry. Many psychologists have evaluated an individual understanding of the structure of the psychological environment and how this understanding or expectation acts to control his/her response. Other psychologists have evaluated the processes that enable an individual to acquire knowledge of the environment. This research has investigated learning processes such as concept formation, problem solving, language acquisition, and memory. The relevance of cognitive learning for understanding the causes of depression and phobias is also a relevant part of this chapter 'Modeling' has been found to be an effective means to change the expectations and eliminate phobic behaviour.

Chapter 12 discusses the *'Biological Influences on Learning'* process. It examines several instances in which biological character and the environment join to determine behaviour. A person's biological character also affects other types of learning functions to organize reflexes and random responses. A wide variety of instinctive behaviours occur 'at excessive levels' (p. 321) with an 'internal schedule' (p. 321) of reinforcement, the highest levels occur in the time period following reinforcement. Regarding the 'Nature of Imprinting' (p. 324) evidence indicates that both instructive and associative processes contribute to the imprinting process. The concluding part of the chapter describes the biological processes that provide the pleasurable aspects of reinforcement.

Chapter 13 explains three major *'Complex Learning Tasks'* and explores how 'to identify concepts, solve problems and learn to use the language'. First, we explore how concepts are formed. A concept is a symbol that represents a group of objects or events with common characteristics. Recognizing the attributes that define concept helps us organize our world and respond appropriately to the members of a particular concept. Secondly, it discusses that a problem exists when obstacles prevent us from attaining a desired goal. To reach the goal we must overcome these obstacles by selecting the most effective solution to the problem.

Finally we examine the structure of language and how we learn to use it. Language allows us to communicate with others, facilitates the learning process, and enables us to recall information, beyond the limits of our memory stores.

Chapter 14 discusses *'Memory Processes'* that describe the storage and encoding of our experiences, the retrieval of those experiences, and 'forgetting' as a result of storage or retrieval failure. The psychologists use two primary ways to test memory. Explicit methods involve overt (observable) measures of memory. Implicit methods assess memory indirectly. A three stage view of memory storage is suggested by Atkinson and Shiffrin (1971). They have suggested that there are three stages in the storage of information: sensory register, short-term store, and long-term store. Several alternatives to the Atkinson - Shiffrin model have also been described. According to Baddeley's (1993) 'Rehearsal systems approach' working memory acts to enhance the organization and increase the retrieval of our experiences. In 2003, a fourth component to his theory of working memory was introduced.

The process of 'memory retrieval' has then been discussed. In 1983, Underwood suggested that memory can be conceptualized as a collection of different types of information. Each type of information is called a 'memory attribute' (p. 410).

The chapter concludes with a discussion on 'forgetting' (p. 413). One cause of the failure to remember is the absence of a 'stimulus' associated with memory; 'interference' is another cause of forgetting. There are a number of mnemonic techniques, the effectiveness of each stems from enhanced organization of information during the storage process.

The book is a comprehensive study package for the students to absorb, analyze and apply their knowledge in day to day life.

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R.P. SINGH (2010): Dialogue with Teacher Educators – Teaching Content, Modes and its Nature. Shipra Publications. ISBN: 978-81-7541-491-4, Pages 284, ₹850/-

Teacher education institutions are considered the 'power plants' for every country as these determine the levels of quality and excellence in every field of human activity and endeavour. These institutions deserve to be cared for with great sensitivity and affection by the nation. It is the teacher educators in the teacher preparation institutions who determine the quality of teachers and the quality of the school education. It is in schools that future leadership is prepared in different sectors including social, political, economic and also the scientific and technological centers of creation, dissemination and utilization of new knowledge. If one is to name a single sector that has the potential to contribute most in preparing human resources for future, one could say, unhesitatingly, it is the teacher and hence, the teacher training institutions and the teacher educators. The volume *Dialogue with Teacher Educators; Teaching Content, Modes and its Nature* is authored by one of the retired professors of the NCERT in his eighty first year. He has seen and often participated in several significant post-independence initiatives in teacher education within the organization he has served as an academic. Interactions give ideas and the NCERT provides ample opportunities for the same. The abundance of ideas and information contained in this book clearly indicate how enriched and full of diversities is the academic spectrum in the field of education and teacher education. There is a general desire amongst educators to suggest ways and means to bring forth positive changes within the system and the author of this volume is no exception. He too attempts on familiar lines and wants to see improvements in the institutions and the academics working there. Once this is achieved, only then one could expect professional and qualitative improvement in the preparation and performance of teachers and improvements in comprehensive aspects of quality in education. The objectivity in drawing conclusions is often over shadowed by generous usage of 'I' and 'me'!

Though the book is titled *Dialogue with Teacher Educators*, it is a highly opinionated presentation in which there is little credit given to other viewpoints that exist in the field and have considerable acceptability. At no stage it has been mentioned that any formulated and formalized research has been conducted in which a direct dialogue was established with teacher educators. In the absence of the same, it would be best to confine the claim to one's

own experience, interactions with fellow teachers and teacher educators and the library. The canvas covered is too wide to remain well knit and comprehensive. This is visible right from the chapter classification. Certain widely known and much researched conclusions have been reiterated. These are well understood by the professionals in the field and may not appear new to them. The issue of medium of instruction is under discussion for decades together but no solution has been found to create conditions that would enable children to get initial education only in their mother tongue. Increasing numbers of children are being forced to begin their pre-schooling in an alien language. The author claims in the preface 'I question the common assumption that if Macaulay had not come or written his minutes, the teaching of English language would not have become either compulsory or popular. I have argued that this is not so.' This claim itself is suspicious. Every alert teacher educator knows it well that English is spreading even in all those countries which were never under British rule or influence. Further it would be unfair to the teacher educators and even the teachers of the country to state that they still blame Macaulay. In fifties and sixties, Macaulay was often referred to in educational discourse just to emphasize how necessary was the search for alternative policy on education and subsequent change in the system of education. This hope lasted till Kothari Commission Report was translated in to National Policy on Education of 1968. Its implementation practically ensured that the policy makers were not interested in change. No sensible person concerned with education now blames Macaulay. In fact people praise him for being true to his masters, for presenting to the Indian subjects of the British Empire a policy that continues to hang around their neck even today. The Blame lies totally with Indians and no one else and this is not a new fact discovered after 'research'. The simple truth is that what Macaulay did was the best for his masters, the then rulers of India. It was for the Indians to have set up their own system when such an opportunity arose after independence. That India ignored all the conceptualizations and experimentation conducted by Gandhiji in the pre-independence days for free India is a hard fact that must be acknowledged and accepted. It is often lamented that teaching through the mother tongue is being relegated to the background and English is being inflicted upon children as the medium of instruction rather ruthlessly. It is certainly of little relevance that Macaulay could not Christianize India though he had anticipated that after English education, no Hindu would remain attached to his religion. What really needs to be discussed and 'researched' is the simple dilemma facing people: How to make their children learn through their mother tongue and also acquire proficiency in English? It is the proficiency in English that has given opportunity to young persons from India to make their presence felt in the global arena. There has to be some global language but that need not be at the cost of initial education in the mother tongue which is the birth right of every child.

As regards caste and education, one does not find any new assertion or outcome. Some well known statements and facts are repeated like: 'The caste rivalry was largely due to the question of primacy in the society, which eventually led to the birth of organized religions like Buddhism and Jainism'. It would be too naïve to accept that the caste system alone was the motivation resulting in the birth of new religions. One wonders why Sikhism has not been included in this 'rationale'. The fact is; caste system did damage social cohesion in the country and inflicted serious discrimination against the vast majority of Indians in one way or the other. The British used it to widen the divide within and succeeded in ample measure. There were certain myths regarding the education being the sole prerogative of the upper caste and its denial to lower castes. Several of these were factually corrected by the

researchers conducted by Dharampal, which, strangely enough, finds no mention in this chapter. Discussions on the educational backwardness of Indian Muslims, the findings of the Sachar Committee Report have been examined by the author. The Committee findings are controversial and did generate considerable debate even within the Muslim community. The learned author asserts two aspects: that Muslims ruled India for seven centuries and obviously got all the benefits which were not available to Hindus. Whom are we blaming for backwardness? His second assertion is: why not compare chief educational backwardness of Indian Muslims with those in Bangladesh and Pakistan; the two Islamic countries which were a part of India? Examine this logic: 'They have Muslim majority and rulers are also Muslims. The "mischievous" Hindus are thus denied avenues to play any adverse role in these polities. Therefore ideally placed, Muslims should have attained higher rates of literacy than their counterparts in India. But is that so?' In support the author cites 2007 UNESCO national educational ratings; India at 100 (out of 129); Bangladesh at 107 and Pakistan at 128. Such discussions on caste and education of Muslims could be of little value to those who are interested in the educational advancement of every child in the country. The country has already suffered too many controversies in the educational arena and it must carve out a path that pragmatically provides for education and health care of every child taking into account his/her special requirements; which could be social, cultural or economic. There are diversities and variations of umpteen types and these shall have to be responded to accordingly if the equality of opportunity is to be offered to every child. The child is interested in his future and not in the historical past that leads to intellectual exercises and debates.

Scoring points fit for debates could not necessarily contribute in comprehensive policy formulations. Take the case of education of the scheduled castes and scheduled tribes and also the girl child, there are severe deficiencies in the achievement of the stated objectives and targets but the intentions are never in doubt. There are social factors and cultural constraints that need to be better understood in specific contexts and responded to accordingly. The fact remains that early marriages are taking place, female infanticide is not decreasing, that girls are still not treated on par with boys in a large chunk of population in India. The severity of each of these concerns must have its implications for education, teachers and teacher educators. The author quotes from Rig-Veda 'Let our mother (Teacher) equipped with divine qualities acquire extensive knowledge of sciences and related activities teach us children and inspire our intellect and actions'. One needs to know the practical strategies to convert this ancient conceptualization into real practice. If teachers really satisfy this scale of expectations, there would not remain any trace of malice, ill will and hatred and the world would become a far better place to live. But wherefrom shall we get such teachers? The answer should emanate from research, surveys and studies in the current context. The state of affairs of the researches in education is known to all and by no standards it is even tolerable. That the system permits institutions and individuals to play havoc with the quality could be substantiated by umpteen examples. There are reports that The Dravidian University in Hyderabad has awarded over eight thousand doctorate degrees in two academic sessions; 2007-08 and 2008-09! Obviously, all these were guided; examined and approved by learned professors of this university and the sister universities. Then, whom does one blame for it and of what use is it? In the days of serious dependence on institutional networking gaining wider acceptability, are Indian academics, including teacher

educators, not still clinging to the nexus and mutual networking that sacrifices quality? One would be so happy to get this premise fully repudiated on facts. But that may just not be!

The first section of the book attempts to present a vast spectrum of concerns, concepts, practices and innovations. It also covers how education is used by the elite and the ruling class ; and how certain sections get advantages while others are disadvantaged. The essential nature of education is its dynamism and capacity to respond to the expectations which keep changing with generations. There is ample evidence of the strong historical base in the presentation; the philosophical aspects have also been brought in to strengthen the contentions of the author at several places. Section II of the book deals with the modes of teaching. One would very much like to see a situation in which 'Indian classrooms are on the verge of being revolutionized'. As it is, technology in classroom instruction has already entered in a big way. Unfortunately this situation prevails only in a very small percentage of schools, mostly the high-fee charging Public Schools. Several surveys conducted by government bodies and also independent agencies still bring out the state of neglect of school education. Mere availability of one or two computers in a school does not mean its transition to a 'revolution'. What worries one is the pace of change in schools and the well established slackness of the system which remains unperturbed even when significant steps like implementation of the Right to Education Act are implemented. The challenge is manifold. How to get well-trained teachers 'reach' the school and the classrooms regularly and punctually? How to motivate the functionaries of the education departments to realize the significance of the opportunity they have got to prepare the future generations? Indian scientists have done their part, India compares very well with global players in the arena. All ICT support is now available to conduct countrywide class rooms, open and distance learning and also for imparting new skills and upgrading skills that may have become outdated. The major concern for the mode of teaching is not the availability of ICT support but to awaken the system from its slumber. This is the concern that planners and implementers generally avoid as it is the toughest proposition to bring about a change in it. The author has discussed some very relevant aspect of teaching, learning, the support system and the gap areas. One sees the continuity of these in the third section which discusses the nature of teaching. It would be of relevance to quote the following (p. 276): 'Interestingly enough, even those supposedly radical authors timidly agree with the basic function of teaching that I have been trying to say. Teaching merely helps one "to learn how to learn" so that he adjusts in the world around himself. Life changes, so does teaching and its content but the latter cannot ever stop the former.' The education systems that really understand and appreciate this aspect succeed in empowering their next generations to move ahead. Delays result in stagnation and that is certainly unacceptable.

It would be in the fitness of things that this book is widely read by teachers and teacher educators. They shall get an assortment of ideas and inferences that may help them to formulate comprehensively their own perceptions of the current concerns and the anticipated changes in future. The author deserves appreciation for producing this volume.

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Jean SPENCE, Sarah AISTON, Maureen M. MEIKLE Eds. (2010): **Women, Education, and Agency, 1600–2000**. Routledge, ISBN: 978-0-415-99005-9, Pages: 296

Historical knowledge makes a crucial contribution to our understanding of contemporary questions. It is tempting therefore to read the past through contemporary sensibilities and with a view to making a case for specific approaches to professional practice. It involves working towards personal and social change by breaking down barriers to participation in society, particularly discrimination on the grounds of race, gender, class, disability, age, sexual orientation or religion. The essays highlight the fact that women formed networks aimed at addressing various local and most often gender-related problems that limited their quality of life. As women develop strategies through networking, their resistance seems to become increasingly significant for the ongoing transformations of the gender order.

The book provides a historical insight into women's agency and activism in education from the seventeenth to the twentieth century. The collection is designed to recover the variety in the voices of women inhabiting different geographical and social contexts while highlighting commonality and continuity with reference to creativity, achievement, and the management and transgression of structures of gender inequality. The essays in the book empirically describe and theoretically discuss the idea of agency in the context of women's social practices of networking and to examine how the participants either reproduced or transformed the gendered structures that shaped them. However the editor could have interpreted the participants' networking agency as acts of protest against everything that limited their living conditions.

As rightly emerges from the chapters, education has the potential to confirm both the social mores as well as initiate discontent and become a means of change. Historical accounts of girls' education have often emphasized change over continuity and have documented progress. However this approach has been challenged by women historians of the 1970s and 1980s as they have challenged the terminology of 'revolution', and have asked instead, why so little had actually changed? The essays have explored how education encouraged women to achieve political ideals and individual ambitions. They also draw attention to the obstacles and exclusion and social censure of the contemporaries faced by women. Profound questions are raised about education, social change and women's capacity both as individuals and as social beings. The chronological presentation of the chapters offers a journey through the historical narrative of women's struggle to achieve agency. The hallmark of the book is the combination of a global perspective and historical period spanning four centuries.

An attempt has been made in the book to bring to light peculiarities of women's agency as midway between formal educational institutions and institutions of care and social service. Their marginality, exclusion and secondary status has relegated their educational achievement to the background instead of setting it in the mainstream educational setting. Due to their assumed role in care giving women have expressed their educational agency within related institutions of social care and development in which the tensions of their public role can be more effectively resolved. This explains why Ramabai's and Rokeya's

concern for the welfare of the poor and the marginalized was central to their educational perceptions.

The book has captured the biographical material and women's own perspectives that can go a long way in articulating a female history of education as the boundaries between the private and the public in women's lives have been so fluid. Writing in the seventeenth century, Wollstonecraft regarded female education as fundamental to improving the mind, rather than for ornamental accomplishments and projected it as a key to public service and citizen's rights and duties. (Joyce Senders Pedersen, p. 40). It is in this spirit that Sukufe Nihal championed the ideal of modern Turkish women and the creation of a modern Turkish State. (Aynur Soydan Erdemir, p. 132).

The centrality of education is the common theme in all the essays and an attempt has been made to demonstrate how an improvement came about in the status of women. The question of a 'feminine' identity has been brought to light by highlighting the equation of science with' masculinity' and the binary opposites in operation e.g. mind/body, reason/instinct, rational/emotional etc which have projected women as incapable of handling science and mathematics disciplines. (Ruth Watts, p. 49 and Claire Jones, p. 149). Though a group of women in England in the late eighteenth and nineteenth century contributed to a scientific culture the fact that they were not allowed to become members of scientific societies (Ruth Watts) speaks volumes about the discriminatory attitude towards them. Women mathematicians at Cambridge in nineteenth century were described as 'faithful followers', 'diligent' who paid 'meticulous attention to details' but who were 'not capable of great creative work'. Though Cambridge women targeted Mathematics in their campaign for intellectual equality with women, paradoxically it came to be viewed as a subject which would preserve a woman's femininity which other disciplines (natural sciences) might threaten. (p. 163).

The essays highlight the fact that male scholars have consistently questioned the ability of the female mind to conceive science and the ability of women to undertake extensive research. Thus the female mathematicians in Cambridge unlike their male counterparts, did not take part in the strenuous physical drill that was regarded as an important part of mathematical training. Women were forced to undertake gentler physical training amidst fears that their mental and physical training might rob them of their fertility. (Claire Jones, p.149). Conceptions about femininity and female roles denied women right to education and banned women from universities in nineteenth century Russia, forcing them to seek higher education outside the mother country. These Russian female students in European universities (Zurich and Paris) deconstructed the myth of inferior female intellectual abilities and gained an education in disciplines like medicine, law, mathematics, chemistry and philosophy. The Russian women represented the first example of mass academic mobility which is being encouraged today as Bologna process. (Marianna Muravyeva, p. 86). Even when women were given recognition for their intellectual capacity it was at the expense of their femininity and were complimented for possessing a 'masculine brain' as is reflected in Barbara Wootton's memoir. (Anne Logan, p. 215). A constant theme running in most of the essays is an 'ambiguity towards the female intellectual as is reflected in the experience of the female humanists of the renaissance like Anna Maria van Schurman. Being learned and being intellectual were in principle incompatible and even exceptionally intelligent women continued to remain intellectually inferior to men. (Barbara Bulckaert, p. 23).

Religion has been central to the foundation and development of educational institutions and particularly non conformist faith groups pursued the ideal of equality of women. The Quakers and the Unitarians pursued the issue of equal educational opportunity for women (Katherine Storr, p. 176). The centrality of religious belief, discourse and positioning is revealed in the educational achievements of Ramabai and Rokeya in nineteenth century India. (Barnita Bagchi, p. 71). Entry to the most prestigious institutions has remained problematic both in relation to professional societies as well as in institutions of higher education. Women's educational agency is often practiced in informal and marginal circumstances, outside of the mainstream, formal institutions. Educated women are able to play more active roles in subjects which are in a state of flux and still evolving like criminology in Britain in 1930s (Anne Logan, p. 204). This consignment of women 'to the fringes' complimented their lower status in the public sphere.

The essays have highlighted the importance of 'networks' and friendships, formal as well as informal in advancing women's education. Friendships with men have played a key role in facilitating access to learning as Johnston's assistance helped Wollstonecraft with a home and social life which centered on a circle of progressive intellectuals, professionals and artists who gathered at his home and influenced her thinking, (Joyce Senders Pedersen, p. 40). Besides friendships with men the essays also outline the importance of associations with like-minded women. Female friendships, networks or communities have enabled women to develop support systems and new institutions giving rise to the notion of gendered social capital. (Bagchi, p. 79). Some of the essays have considered the private sphere of the family in exploring the development of women's agency. Belonging to a progressive thinking family was of great benefit to some of the women studied in this collection and enabled them to face the challenges of the public sphere. Phillipa Fawcett's mathematical abilities were recognised by her family and special coaching arranged for her helped her become a future mathematician. Jane Marcet, scientific writer was given the same education as her brothers, as was Anna Maria van Schurman. Pandita Ramabai was fortunate enough to have a father who imparted advanced sanskritic learning to the whole family, including his wife and daughter. Sukufe Nihal also was imparted elementary and secondary education through private schools and private tution. While exploring the positive side of the role of family the book also draws attention to the fact that girls' education was largely informal e.g. in the case of Mary Wollstonecraft her education was not made on the same basis as her brothers' and books and conversations were her main source of information. Mary Sommerville was also self-taught unlike her brother

An attempt has been made in the book to trace the history of individuals and groups of women who through education wanted to make a valuable contribution to the society. The essays empirically trace how women had to transcend the social structures and lay claim to equal citizenship. However to trace feminism over a span of four centuries entails multiplicity of perceptions as the meaning of feminism has shifted with time and place. The book has given a very broad meaning of feminism without going into the nitty gritty of plurality and existence of a range of traditions that existed from 1600-2000. An attempt has been made to find inter-linkages between educational opportunities and gender inequality. There has been an attempt to establish linkages between agency with reference to education and agency with regard to the pursuit of female rights, citizenship, equality and freedom. However the essays are lacking in deeper reflections on specific cultural and social

conditions and the structures that operate within female agency and which have played an important role in altering women's social position.

The book could have paid attention to the variety of ways in which contemporary feminists negotiated and reconstituted conceptions of the female mind and its relationship to the body. While recognizing similarities, the authors could explore how in each country the higher education debates and the underlying conceptions of women's nature were shaped by distinct historical contexts.

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Stephen P. HEYNEMAN Ed. (2009): **Buying Your Way into Heaven: Education and Corruption in International Perspective.** Rotterdam/Taipei: Sense Publishers, ISBN: 978-90-8790-727-3, Paperback, Pages 158

Corruption has been epidemic that has not left any country or any sector in any society. The World Bank has estimated that the worldwide cost of corruption costs the world to the extent of one trillion dollars ($1,000 billion) per year. Education sector which is expected to be a noble activity, nurturing young minds with universal human values of truth, righteousness, peace, non-violence, and love, and shape the children into responsible noble citizens of the future, is also not exempted from the global cancer of corruption. Corruption can operate at different levels of an education system and there are various types of corruption and the costs of corruption are huge. These costs are difficult to estimate accurately in the field of education. The book under review documents the extent of corruption in education sector in a few selected developing countries.

Heyneman defines corruption in education to include the abuse of authority for both personal as well as material gains. While corruption is generally examined in terms of finances, it can actually happen in four ways: (i) through its education functions, (ii) through the supply of goods and services, (iii) through professional misconduct, and (iv) in the treatment of taxation and property.

However, most of the nine chapters in the book under review focus on professional misconduct and unravel corruption in three major areas: sexual misconduct, private tutoring and other practices involving cheating, bribery, nepotism, etc. According to Salihu Bakari and Fiona Leach, sexual exploitation of women by male teachers seems to be very common and normal in Nigerian educational institutions. For a non-Nigerian reader, the extent of sexual favours that teachers demand and enjoy in return for grades, etc., seems to be astounding. John Collins describes the practice of sexual violence in and outside the schools in Sub-Saharan Africa. In Sub-Saharan Africa, sexual violence is interpreted different ways, including some as 'justifiable' violence. For example, different concepts of rape are identified: rough sex, friendly rape, justifiable rape (by a friend or peer) and unjustifiable rape (from a stranger). Both studies on Nigeria and Sub-Saharan Africa suggest that sexual

violence – ranging from normal sex and rape, to different kinds of violence, is quite common in educational institutions, and is also perhaps largely accepted as normal.

Private tutoring which is a very widely prevalent phenomenon, according to Mark Bray's several studies, is described by Walter Dawson as another form of corrupt practice in the education system. Dawson concentrates on Vietnam only in this regard, though this is prevalent in many developing as well as advanced countries. Private tutoring is regarded as a corrupt practice only if the teacher codes ban such a practice. But in a few countries teachers are free to offer private tutoring and make money. Whether it is officially regarded as a corrupt practice or not, it is widely acknowledged that this has several ill effects on the education systems. Cheating and bribery are the two corrupt practices that Dennis Mccornac analysed in a very short chapter on Vietnamese higher education. Heyneman discusses falling moral standards among the teachers in the universities in Georgia, Kazakhstan and Kyrgyzstan. Apart from plagiarism, cheating in examinations, and forgery, the inability of the teachers to teach values to the students, or the inability of the universities to become inclusive, democratic, or lack of autonomy, lack of transparency in university administration, and lack of good governance are some of the important issues Heyneman and Bojan Maricik discuss in two separate chapters. Bojan Maricik examines these issues in the context of countries in Southern Eastern Europe which were subject to social, political and economic transition after the fall the Berlin Wall.

Transparent mechanisms can reduce corruption to a good extent. Sjur Bergan only discusses the issue of transparency and the European higher education area as instrument to promote transparency. Pasi Sahlberg tries to argue that international organisations fight corruption in education.

As Sjur Bergan observes, "it would be audacious to declare any country or any institution free of corruption" (p. 127). But all the studies on corruption in the book under review and in a few others, there are only a very few, (e.g., Muriel Poisso, *Corruption and Education*, Paris: International Institute for Educational Planning, 2010) concentrated on developing counties, as if corruption is a monopoly of developing countries. Corruption in education is not confined to developing countries. When one reads the accounts presented by Donald E. Hall (e.g., How to destroy a Department? Paper presented in the World University Forum, Davos 2010) one wonders whether he was referring to universities in Nigeria, though he was actually referring to British universities. Corruption involving sexual favours, and bribery, is widely prevalent in most developed countries as well, though the magnitude could be different. So to give an impression that this is a problem of the developing countries only, is not necessarily correct. It is quite possible that many international organisations in their zeal to succeed and/or to cut down long bureaucratic delays in developing countries have had resorted to corrupt practices, including bribery. That international organizations sometimes influence and even distort findings of policy research on developing countries is also well known (see e.g., Jones, P.W. World Bank *Financing of Education: Lending, Learning*. Routledge, 1992). Hence, to say that these organisations fight corruption may also be totally correct. One may not say that the international organisations have actually introduced corruption in developing countries, though this might have also happened in some countries, but certainly some of the organisations have contributed to perpetuation of corruption in developing countries.

But for the narrow selection of countries for the study of corruption in education, and a narrow selection of dimensions of corruption, the book is a very important one in

highlighting the problem. The problems posed by corruption in education have been neglected for too long. There are very few documents available dealing in a comprehensive and systematic manner with the various aspects of corruption that exist in the field of education. Though the book focuses on only a few dimensions of corruption, the book becomes a very important contribution, on a well known but less documented and researched area.

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Journal of Rural Development
Editor and Chairman: Shri Mathew C Kunnumkal, Director General

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Journal of
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The Asian Economic Review

Journal of the Indian Institute of Economics

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