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Education, Training, Skills, Jobs—Connecting the Dotted Line

—Notes from Bangladesh*

Manzoor Ahmed*

Abstract

Unemployment and under-employment are obstacles to eliminate poverty and attain Sustainable Development Goals by 2030. The paper shows that the TVET graduates in Bangladesh lack practical skills demanded in the employment market and they remain unemployed. The economy and private sector are trapped in low-skills equilibrium and the phenomenon of skill-job mismatch. The problem of job-skill mismatch originates from the deficiencies in foundational skills and inadequate market linkages on the one hand and an inability to address skills requirements of the informal sector and export sector on the other. Despite the reform initiatives which introduced flexibility in the public training policies and processes, the success is far from satisfactory. The paper argues for actionable strategies in four areas of TVET financing, motivated and qualified TVET instructors, strengthening links with industry and the capacity and determination to implement the planned activities effectively.

* An abridged version of this paper was presented at the International Conference on Science of Human Learning, India International Centre, New Delhi, February 4-6, 2016

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A prevailing global paradox is the fact that there are enormous unmet needs of people even as, at the same time, there is a huge wastage of untapped human resources. There are approximately three billion people with unmet basic needs -- 700 million in extreme poverty (with income per day of PPP\$1.90 or less) and another two billion considered to be in poverty (the bottom 40 per cent of the developing world population). These billions are deprived of the minimum requirements for a normal life, such as food, shelter, education and health care and other essentials of life (World Bank 2015).

How can there be a dearth of work until all these people can have their basic needs met? How can there be over 200 million people in the world today willing and able to work but who are unemployed; and 1.5 billion who are involuntarily under-employed or in “vulnerable and precarious” employment? (ILO 2016.) The national and global economic systems fail to harness the technological and organisational resources and, most importantly, the human resources to meet the unfulfilled human needs. The unemployment and underemployment of almost two billion people is the greatest single direct obstacle to eliminating absolute poverty in the world – which is one of the new global Sustainable Development Goals for 2030.

There is a massive mismatch between work to be done and people who need jobs. This gap has to be bridged by skills’ development and policies and actions in order to use the skills in decent jobs that are socially beneficial and personally rewarding. (UNESCO-INRULED, 2012)

One key link between working age people and jobs are skills and capabilities nurtured by education, training and different institutional, non-formal and informal ways of building capabilities of people. Another link is the economic investment and organizational structures that create the demand for productive and rewarding jobs as the instrumentality for combating poverty and enhancing people’s well-being. This paper is about the backward linkages between jobs with skills, training and education – commonly known as technical and vocational education and training (TVET) -- particularly in the Bangladesh context. Only a brief reference is made to the question of the forward linkage between skills and jobs with employment creation and poverty reduction.

The Dilemma of TVET

There is also a dilemma as to what skills and competencies education and training programmes produce and whether these match the needs and demands of the job market. The National Education Policy (NEP) 2010 of Bangladesh envisaged that the share of students in the TVET system would rise to at least 20 per cent from less than five per cent by expanding access to quality vocational education. However, TVET that exists today does not quite provide the skills required by the labour market. TVET completers often lack practical skills that are demanded by employers or that can be applied in the labour market.

Technical-Vocational Education and Training (TVET), or even a broader concept of Technical--Vocational Skills Development (TVSD), alone does not guarantee productivity gains or job creation. A blend of cognitive and non-cognitive skills, supported by favourable policies in economic and social spheres, can enhance the country’s competitiveness and contribute to social inclusion, increased employment and alleviation of poverty.

Many employers do not seem to value skills acquired in existing TVET; they emphasize transferrable and soft skills which TVET or general basic education do not offer effectively. There appears to be a low-skills equilibrium in which the economy and the private sector are trapped. The economy seems to have adjusted to a state of low skill and low productivity of workers at the cost of low productivity of the economy, and generally low earning and underemployment among workers, with or without skills' training (NORRAG-BIED 2015).

Under these circumstances, investment in expanding the existing system, even with some tinkering with efficiency issues and the call for larger numbers of young people to participate in TVET, may not produce the desired results. Structural changes in the system and new thinking about governance, management, resource provision and use, and capacity building at different levels are required.

Researchers have coined a new terminology for the situation of young people caught in a fix due to the state of the economy in both developed and developing countries -- Not in Education, Employment or Training (NEET). This state of inactivity characterises one third of the young people worldwide of roughly the age group 15 to 24 years, according to ILO estimates. A report by a consortium that includes ILO, World Bank and Rand Institute titled 'Towards Solution for Youth Employment (S4YE)' points to the dilemma, which appears to be intractable (S4YE, 2015).

A binary definition of employed and unemployed does not portray the reality in Bangladesh and other developing countries. The poor cannot afford to remain unemployed. The large majority of them are actually under-employed in the unregulated informal economy, eking out bare subsistence from insecure, vulnerable and low-wage work. The challenge is to link education and training with skills and jobs in a way that contributes to creating a sufficient numbers of "decent jobs".

The Workforce in Bangladesh

The workforce in Bangladesh adds up to about 60 million. Over two million young people are entering the workforce each year. Although access to education has grown, the vast majority of the working population is without general education or occupational skill training.

The Labour Force Survey 2010 showed that 41 percent of the 56.7 million workers in the domestic labour market at that time had no education at all and 23 percent had not completed primary education. Thus, almost two-thirds of the workforce had no education or less than five years of primary education. (Analysis of LFS 2010 cited in World Bank 2013, p. xxvii)

The total skills' training opportunities at diploma, certificate and short courses, with some formal education pre-requisites, serve currently under 500,000 trainees each year. These are affiliated with Bangladesh Technical Education Board (BTEB). Another half a million are served by short, flexible duration courses with diverse contents, of varying quality, mostly not regulated by BTEB, and offered mostly by NGOs and private providers. Out of this million participating in various kinds of skills' training, approximately 75 per cent on an average, according to BTEB estimates, are expected to complete the courses, which means the output of trained workers in a year stood at about 750,000 (SDC, Skills Snapshot, 2012: p. 12).

Three points stand out from these numbers:

- i) For a national workforce of around 60 million (with half of these in the 15-24 years' age group), the low and mid-level skills' development provisions for about a million trainees (and 750,000 completers) per year cannot be considered adequate.
- ii) The balance between mid-level diploma and lower-level certificate/basic level training is clearly a problem. With workers overwhelmingly engaged in low-skill work, only a small fraction of such workers are served by the training provisions.
- iii) Inadequacies in numbers and balance in training are symptomatic of weaknesses in market-responsiveness, quality and relevance of the training courses, discussed further below.

Skill Development Needs and Opportunities

One way of looking at the spectrum of skills development is that it should include foundational skills (literacy, numeracy), transferable and soft skills (basic and generic personal and social skills), and technical and vocational skills (directly related to jobs). These skills are mutually complementary and are acquired in different ways -- through formal education and training at different levels; on-the-job through-work experience and vocational/technical training; non-formal training, and informally through family and community and via the communications media.

Defining skills development broadly

A broadly agreed concept of skill development in the context of productive activities of society is relevant for any discussion of skills and poverty. It cannot be narrowly equated, as noted, with formal technical and vocational education and training (TVET) alone. It has to be visualized more broadly to refer to the capacities acquired through all levels and types of education and training which enable people become fully and productively engaged in livelihoods. It also has to enhance the capacity of people to adapt their skills to meet the changing demands and opportunities of the economy and the labour market. And it does not refer to the source of education or training itself, but to the capacities that are acquired through these skills (King and Palmer 2010).

This broad concept of skills development has several important connotations:

First, skills' development is not an isolated and self-contained area of activity. There are important linkages with the general education system of the country covering basic, secondary and tertiary stages, and non-formal and informal education, which influence the characteristics and outcomes of the skills' programmes.

Second, skills development is not confined to institutionalised formal training, labelled as Technical and Vocational Education and Training (TVET). There is a wide range of modalities of delivery, organisational and institutional mechanisms, locus of responsibility, and diversity of objectives and clientele for skills development programmes.

Third, skills development is broader than skills related to economic production or earning a wage. It extends to organisational and management skills, especially in relation to self-employment; life skills that makes one an effective and responsible worker who derives

pride and satisfaction from work; and civic and family life skills that enhance an individual's performance as a worker and as a person.

Fourth, in the context of poverty reduction and rural transformation, the generic skills development issues have to be examined in relation to the broader and multi-faceted transformation of nation and society, especially the disadvantaged rural communities. (UNESCO-INRULED, 2012, pp. 76-77)

TVET enrolment is estimated to be less than five per cent of post-primary formal education enrolment. There is a wide array of informal skill development through on-the-job experience and traditional apprenticeship that has no link with the formal training system. Arguably, the national economy would come to a grinding halt without the informal and traditional skill development network. However, there are concerns about the extent, relevance and quality of these activities as well as the question of protection of young trainees from abuse and exploitation, highlighted by the CAMPE study on youth skills profile in Bangladesh (CAMPE, 2013;).

Job skills and basic education

An assessment of literacy and numeracy indicates that 25 percent of grade 5 students master Bangla, and only 33 per cent master Mathematics competencies required by the curriculum by the end of the primary cycle (grade 5). At the grade 8 level, competencies in Bangla, English, and Mathematics are respectively 44, 44, and 35 per cent. While acquisition of non-cognitive skills is not tested, there are many indications that these are limited (World Bank 2013, p.1).

To increase the proportion of secondary level enrolment in the vocational-technical stream, a vocational/technical secondary level stream has been created for students after grade 8 general education since the 1980s. But the results are, at best, mixed. The general international experience shows that "vocationally" formal secondary schools raises the cost of schooling without achieving corresponding benefit in skill development or better employment prospects for students.

The questions keep coming up about the linkage between post-primary/secondary education and skills development. First, how does secondary education, lower and higher stages of it, contribute to conventional vocational and technical training as well as to emerging non-conventional skills development programmes? Second, to what extent and how can secondary education itself become "vocationally" and complement conventional TVET?

Considerable analytical work has been done on various facets of skills development and its relationship with the educational system, especially at the post-primary level, by the World Bank. This was summarised first more than two decades ago in a policy document – "Vocational and Technical Education and Training: A World Bank Policy Paper" (1991). The same messages have been restated in "Skills Development in Sub-Saharan Africa" (2004). King and Palmer summed it up by noting that the principal proposition about the relationship of school to skill was that making general primary and secondary schools effective in their teaching of language, math and science was a better way of improving workforce skills than making schools technical or vocational (King and Palmer 2007).

However, the Bank's lending and technical assistance have not followed its own recommendations. It has supported countries to opt for a mixed approach, with a degree of

vocationalisation, in the mainstream general secondary education in many countries. The results, on the whole, have not been satisfactory (UNESCO-INRULED, 2012).

There has been a tendency to look for and prescribe easy solutions for the complex problem of preparing young people for the world of work and meeting the changing skills' needs of the economy. The easy prescription is to insert courses in practical and vocational skills in secondary or even primary schools. This is so despite the evidences to the contrary. The burden of evidence is that the most useful vocational/occupational preparation in the secondary school is building a sound foundation of communication skills, mathematics and basic science, which make young people trainable for the employment market (UNESCO-GMR 2012). Curriculum change and investments for vocationalising secondary schools in developing countries, unlike in Western Europe, mostly have not produced the desired results (Lauglo and Maclean 2005)

Labour force survey, conducted in 2010, indicates that employment in what is called the informal economy in Bangladesh is estimated to be around 90 per cent of the total jobs in the labour market. This is work with unregulated work condition and wages, often in exploitative condition, and includes work in family or individual enterprises. It is more prevalent in the rural areas. Women are also more likely to be under informal employment arrangements. The informal sector accounted for more than 40 per cent of the total gross value added in Bangladesh economy in 2010, with the highest contributions in agriculture, fishery, trade, and labour-intensive small manufacturing.

Skills and non-formal, adult and lifelong learning

The EFA Global Monitoring Report team found EFA goal 3, related to meeting the learning needs of all young people and adults through equitable access to appropriate learning and life skills' programmes, as the hardest to define and measure, because of the character and multiple dimensions of this area of learning needs (UNESCO-GMR: 2005).

A point about which most people agree is that literacy and numeracy programmes designed traditionally, emphasizing mechanics of literacy, are quite inadequate for income-earning skills development. These should be accompanied by the acquisition of certain attitudes, knowledge and skills relating to vocations and income-generation, as well as management, entrepreneurship and social, political and cultural life.

Recent research (ILO 2010) strongly asserts that the developing countries' transition to a knowledge-based economy requires a new generation of educated and skilled people. Alleviation of poverty will be determined by people's ability to create, share, and use knowledge effectively.

With regard to skills development covered within EFA, three typologies have been identified, namely basic skills (such as literacy and numeracy), psycho-social skills (reflective, personal and inter-personal skills including problem solving, communication and team work) and

practical /functional skills (manual skills relating to specific vocations or specific changes in personal or social behavior as in health, hygiene and nutrition). This is the same point about the spectrum of skills noted in the previous section. (World Conference on Education For All Declaration, Jomtien, 1990). With hindsight, it can be said that this holistic approach has not been generally applied in literacy and basic education programmes and it remains a challenge for Education 2030.

Recent Policy Initiatives

The government of Bangladesh has prepared three separate policy statements which have relevance to skills development: (i) Non-Formal Education Policy (NFE) Policy 2006, (ii) National Education Policy 2010, and (iii) National Skills Development Policy 2011. All these are related to objectives and strategies regarding different aspects of formal and non-formal education and training opportunities for young people. They also converge in recognizing the importance of skills for life and livelihood through lifelong learning with a poverty reduction emphasis.

The policy initiatives, while pointing at the right direction, are yet to show concrete results in transforming TVET to address the problem of a mismatch between skills and jobs. The problem originates from a combination of two kinds of factors: a) deficiencies in basic foundational skills arising from primary and secondary education quality and the quality of vocational training on offer, and b) inadequate market linkages characterized by a limited participation of the employers in designing training,

Moreover, the TVET system, as it exists, has not developed the capacity to address the skills' need of the informal sector which accounts for 90 per cent of employment.

Another area of concern and policy weakness is the lack of a sufficient and systematic effort to prepare workers for overseas employment and raise their skills' profile so as to improve their earnings and working condition.

Some half a million male workers and 100,000 female workers are estimated to have gone overseas in 2015. Their annual remittance has topped US\$ 15 billion, ensuring a healthy foreign currency reserve for the country. The large majority of these workers going abroad are of low skills, thus working with low wages and in vulnerable conditions. For ensuring demand-supply matching for migrant workers from Bangladesh in terms of skills and competencies, it is necessary to develop relevant training structures that will be responsive to the needs of the destination countries.

The National Technical and Vocational Qualifications Framework (NTVQF) has been developed in order to assess comparability of qualifications acquired from different institutions and by different means. This is also necessary to align the qualifications acquired by trainees with the changing occupational and skill profiles in both domestic and international labour markets. The Bureau of Manpower Employment and Training (BMET) has the task of exploring the skills' demand in major destination countries for our workers. It is also trying to assure that the current needs for short-term courses for the workers migrating abroad are met well. Further, specific efforts are needed to develop skills that match the demand and are relevant to market practices in destination countries.

There are other relevant points regarding skill development and TVET participation of young people.

- i. A strong preference is evident among young people for general secondary education rather than TVET. This is a function of non-availability of TVET facilities in rural areas, the cost of attending TVET, and the perception of youth and their families about social esteem and extra economic benefits of TVET.
- ii. A significantly lesser proportion of girls in post-primary education participate in TVET as compared to boys. Non-availability of facilities close to home, cost of attending, and social perception about appropriate jobs for females may be all causing this situation.

- iii.. Community Learning Centres (CLCs), of which some 5,000 are run by well-known NGOs, could be a vehicle for bringing flexible and need-based skills' development and lifelong learning opportunities to young people, but remain under-emphasized in policy and strategy considerations.

Strengths and Weaknesses of the TVET Sub-system

Reform and development initiatives have led to some flexibility in the public training system through non-regular short-term training on the basis of cost-recovery. The Bangladesh Technical Education Board (BTEB) administers well-developed exit examinations, though the focus remains on the theoretical aspects of training. Some training providers have established linkages with industry. Availability of short market-responsive courses for those not finishing grade 8 has increased. (ADB 2012).

Examples are growing of industry initiatives in training through public-private partnerships in skills' provision, especially in the readymade apparel sector. The technical training centres (TTCs) under the Bureau of Manpower Employment and Training (BMET) display several departures from an over-centralised bureaucratic pattern. TTCs are free to market their products and use the income thus generated. (Ibid.Ch. 2, pp.32-33)

On the other hand, constraints, often carried over from the past, of different kinds have impeded the desired progress. Recent studies, including those of the World Bank and the Asian Development Bank (ADB), have identified these weaknesses, which can be grouped under several headings.

- Top-down organisation and management in skill training programmes and institutions
- Quality and relevance deficiencies
- Weak market responsiveness
- Disparity and inequity in training opportunities
- Teachers' numbers, skills and performance
- Inadequate resources to ensure quality and inefficient use of these resources
- Information and data system limitations for effective management
- Misdirected and mismatched student motivation and expectations.

The last problem arises from students enrolling in the courses by default in the absence of institutions and courses of their choice and not fulfilling expectations about remuneration and types of jobs after graduation.

Towards a Framework for Bridging Skills, Jobs and Fighting Poverty

A broad definition of skills' development as a part of human capability enhancement requires comprehensive and coordinated attention to the spectrum of skills comprising foundation skills, transferrable skills and job-specific skills. This broad view needs to be taken as the conceptual framework for exploring policies and actions in the TVET sub-sector (or, more appropriately, the TVSD sub-sector). Within this framework, specific action areas can be identified.

Intensified efforts on policy responses and actionable strategies are needed in four areas: TVET financing, shortage of motivated and qualified TVET instructors, strengthening links with industry, and the capacity and determination to implement the planned activities effectively.

The Secretariat of the National Skill Development Council (NSDC) has been engaged in preparing an Action Plan and Roadmap for skills' development. The priorities of the Secretariat include developing a TVET data system, undertaking a national skills provision and skills' providers' survey; forming at least 20 sector-wise Industry Skills Councils (ISCs), adoption of an NSDC Act; and establishing pilot model institutions in the seven divisional cities.

The work of NSDC in these vital matters is in progress but continues at a slow pace. It is hindered by limited staff and resources as well as its working mechanism in carrying out its responsibility of coordination among all the ministries involved in skills' training. These obstacles need to be removed to enable NSDC to do its job. Similarly, BTEB and BMET also need to be supported to carry out their assigned roles effectively (NORRAG-BIED 2015).

Moreover, forging the link effectively between skills and jobs and ultimately fighting poverty calls for a broader perspective as argued below.

The SDG 2030 Goals

It must be noted that education, training, skills and employment have been featured prominently in the Sustainable Development Goals (SDG) 2030 adopted by UN in September 2015. Goal 4, on education and lifelong learning, have two targets on "equal access for all women and men to affordable and quality technical and vocational and tertiary education" (Target 4.3) and substantial increase of "youth and adults who have relevant skills, including technical and vocational skills, for employment, decent job and entrepreneurship" (Goal 4.4).

Goal 8 is to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all." Among the targets under this goal are "full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value (Target 8.5); substantial reduction by 2020 of youth "not in employment, education or training" (Target 8.6); and, by 2020, developing and operationalising a global strategy for youth employment and implementing what is called the "Global Jobs Pact of the International Labour Organization." (Target 8.b).(UN 2015).

The SDG 2030 agenda recognises the challenge regarding the backward linkage of jobs and skills with education and training, but leaves open the forward linkage between skills and jobs with poverty reduction policy and strategy.

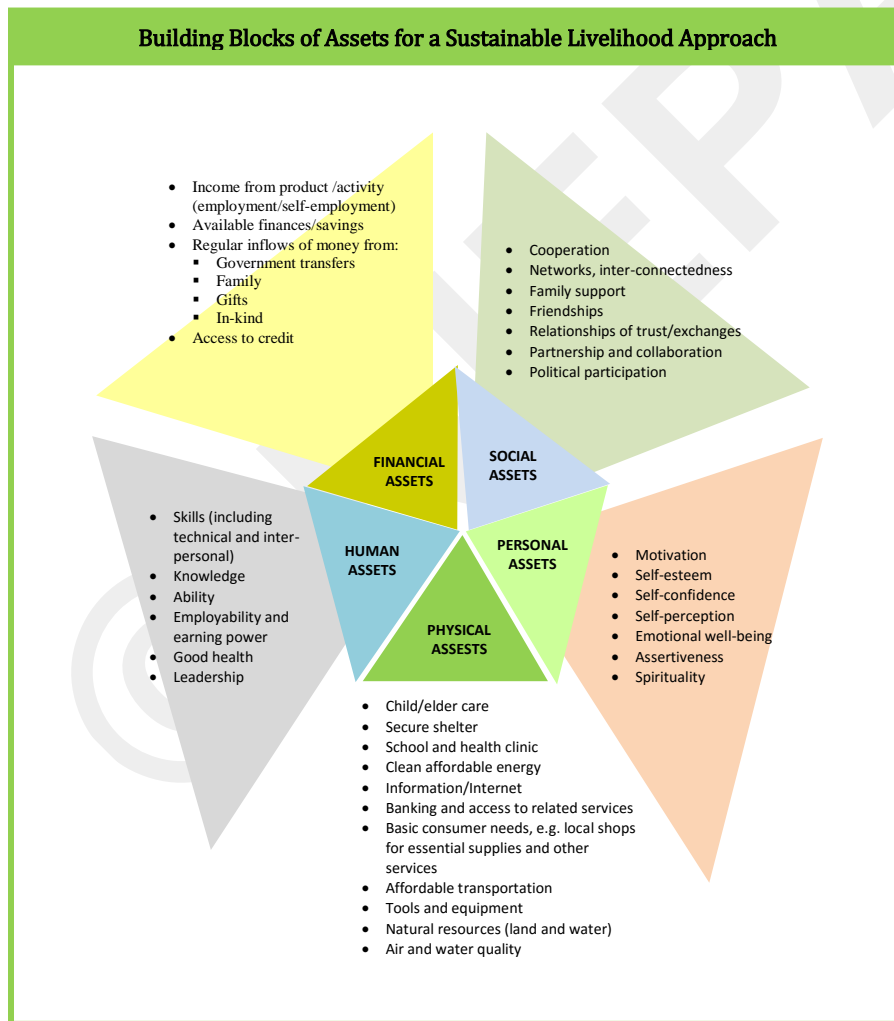
A sustainable livelihood approach

It has been argued that skills and capacities of people, specific and generic, and education and training provisions as well as other non-formal and informal means of acquiring skills and capacities constitute a critical asset for poverty reduction and national development. But the question that arises is whether these are enough when one considers poor people dependent on the informal economy in rural and urban areas and improvement of their life and livelihood prospects.

Poor households attempt to adopt livelihood strategies that respond to varying combinations of human, social, natural, physical and financial capital that they may muster. The blend of

assets – skills and education, as well as social networks, and access to other resources, such as land, water, social services, infrastructure, credit, or cash from remittances – and coping with risks and vulnerabilities, to which households are exposed, are key elements in the strategies they can adopt. No single category of assets, per se, is sufficient to yield the many and varied outcomes that people seek.

FIGURE 1



Source: Adapted from J. Murray and M. Ferguson (2001): "Women in Transition out of Poverty", Toronto, Women and Economic Development Consortium, p.17, cited in UNESCO-INRULED, 2012.

The principal question is – what is the bridge that connects the different forms of assets, skills and capacities of people being one of them, so that a coordinated and integrated blend of the various assets can be brought to bear on the endeavour of fighting poverty and changing life prospects. A sustainable livelihood approach (SLA) can be this bridge.

The discourse on SLA arose in the context of wider shifts in approaches to development through the 1980s and 1990s towards a focus on human well-being and sustainability rather than only on economic growth. Chambers and Conway, in their 1992 research on “sustainable livelihoods”, expressed the multifaceted nature and complex set of relationships in SLA (Chambers and Conway: 1991).

Central to the idea of SLA is the range of assets that poor people can or should be able to draw on and bring to bear on their own effort to change their condition. At least five categories or blocks of capitals or assets can be identified -- human, physical, financial, social, and personal as shown in Figure 1.

Skills, knowledge and capabilities are highlighted under the human capital block. However,

although not specifically mentioned, knowledge, skills and information are important in relation to the other blocks for these assets to be put to use effectively. More importantly, an integrated approach is necessary in making the different assets contribute to the common objectives of turning knowledge and skills into productive work, and productive work improving people’s lives.

Can SLA be a way of addressing the issue of building the bridge between skills, jobs and poverty reduction? The protagonists of SLA would not offer it as a panacea. Nor can the obstacles and constraints to eliminating large scale poverty in the world, with their structural and historical roots, be underestimated.

Difficulties and complexities are not good enough reasons to neglect or ignore the relevance of the idea, considering the high stake in well-being, rights and dignity of a large part of humanity.

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Open Education Resources (OER) for Skill Development —An Open University Perspective

Ashok Kumar Gaba*
P. Prakash#

Abstract

Workforce development is one of the key issues for the economic development of a country, especially the developing countries. To achieve this goal, it becomes necessary to update the existing knowledge and skills of the workers through continuous training programmes. This task seems intricate because most of the workforce is in the unorganised sector. It consists of people located at different places and it is difficult for the government to control such a scattered workforce. Moreover, most of them are low-paid and have no secure jobs. For instance, an estimated workforce of 464 million is in the unorganized sector in India. It is difficult to enhance their existing skills and competencies as per the need of the industry through the formal system. Providing high-cost equipment and lab facility to such a huge workforce are other obstacles to their development. The present paper discusses the alternative strategy for providing vocational and skill training by using Open Education Resources (OER). For substantiation, the authors sought opinion on the uses of OER from learners pursuing different courses in Indira Gandhi National Open University (IGNOU), India. Findings of the study reveal significant results on the uses of OER for skill development. The paper proposes a model of skill development for the Open University System.

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Introduction

The use of open educational resources (OER) in the teaching-learning process has become a subject for discussion among scholars across the globe since the last decade. Scholars have argued on its uses in terms of terminology, advantages and limitation. They defined OER as 'technology-enabled, open provision of educational resources for consultation and adaptation by the community of users for non-commercial purpose'. Butcher (2011, p.6) emphasized that OER is not identical with open learning, resource-based learning and open publishing. It is enabled by new technology that allows use of different media. According to him "OER specifically refers to teaching and learning materials that can be incorporated for pedagogic purposes through scholarly articles". The Paris OER declaration (UNESCO, 2012) stated that ". . . the term Open Educational Resources designates teaching, learning and research materials in any medium, digital or otherwise, that resides in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions (p. 1)". A Wikipedia article on OER summarised the concept of OER as 'the OER movement organized from developments in open and distance learning (ODL) system and in the wider context of culture of open knowledge, open source, fee sharing and peer collaboration which emerged in the late 20th century'.

Review of Research

Scholars have conducted various research studies on the uses of OER in a different context. A brief summary of research reviews, relevant to the objectives of the present study, has been examined. Kanwar et al (2010) described OER useful, particularly for the education system in developing countries, as it saves time for content development, helps in sharing of knowledge, provides capacity building resources for educators and improves educational quality at all levels. Most of OUs in developing countries are facing problems in quality assurance. Effective use of OER can provide a solution to this problem. The advantage of OER is that it meets all the principles and the philosophy of open learning system as described by Commonwealth of Learning COL (2011). Farrow et al (2015) found that implementation of OER can improve students' performance.

Textbooks/self-learning printed materials (SLMs) of open universities/distance teaching institutions contribute a significant share of the total cost of higher education. The burden of this cost rests on the shoulders of students, parents, and those who support them. Research indicates that average recurring cost of the SLMs varied from programme to programme. It ranges from 60 to 90 per cent of the total institutional cost (recurring) of distance learning programme (Gaba et al 2011). Thus, OER has the potential to save a significant amount of money. Hilton et al (2014) stated that "if these savings were realized by only five per cent of the 20,994,113 students in the U.S. who enrolled in college during the 2011 fall semester; the total savings would be approximately one billion dollars per year".

Open Universities (OUs) in India are spending a huge amount of money on printing of SLMs; and the same can be saved if OER is adopted. This strategy will help save time and eliminate unnecessary duplication of what already exists. Further, it will also reduce the cost of copyright negotiation and clearance. Hence, it becomes necessary to study further about the cost benefit/comparative analysis of using OER in comparison to unit cost of OUs

programme. Unit cost can be calculated from institutional and student point of view in terms of printing and distribution of SLMs, counselling sessions, practical sessions, evaluation of assignments/projects etc..

A few research studies have argued about the uses of OER and pointed out issues like limited internet connectivity, accessibility of internet to every learner, and also the relevance and quality of the content. Issues like language, culture, and infrastructure were also raised by scholars (Lecercler, 2011). Cobo (2013) established that online content was increasing in Spanish and Portuguese languages over time in addition to the English language. Studies on OER content accessibility in other languages, particularly from developing countries, have not been reported so far. Allen and Seaman (2014) reported that according to perception of faculty, the most significant barrier to more widespread adoption of OER was that too much time and efforts were required to locate and evaluate the material. Apart from it, the accessibility of digital technology among learners with high speed bandwidth is an emerging issue. Don (2012) has also highlighted that faculty incentives; business model and accessibility are other emerging issues while using OER in higher education institutions across the globe. DeLangen (2013) suggested that business model for OER must be straightened with the strategy of an organization. Faculty members, as producers and adopters of OER, must have appropriate incentives. Much has already been written on quality issues (Dhanarajan, 2013, Mishra, 2013, Pawlowski, 2007 and WikiEducator, 2009). The scholars argued that the definition of quality of OER is subjective and contextually dependent. They concluded that responsibility for assessing the quality of OER, used in teaching and learning activity, should be inherent within the institution, programme/course coordinators and individual educators responsible for delivery of the programme.

The review of related studies reveals that there are mixed reactions among the scholars on the use of OER in the education set-up. It is quite possible that a specific OER, adopted by an individual institution, may not be relevant to others even though it may be widely used. For example, www.oerafrica.org is established for higher education institutions across Africa. Recently, OUs across the world initiated the use of OER for delivery of programmes. The Open University is a world leader in the development of OER through its institution-wide OpenLearn initiative (<http://www.open.ac.uk/openlearn>). OpenLearn is the Open University's web access point for its open and free online resources. It was established in 2006 and has become an integrated part of The Open University (<http://www.open.ac.uk/about/open-educational-resources/openlearn>).

Most of the countries in the world are in the process of using it through different approaches. For instance, Massachusetts Institute of Technology (MIT) has created a platform i.e. Open Courseware (OCW) wherein faculty can place their own lecture notes online for free use. Virtual University for Small States of the Commonwealth adopted different approaches to develop courses collaboratively using free authoring web resources. However, utilisation of these resources in the developing countries is slower than in developed countries excluding China, India, Japan, Vietnam and Indonesia. The Philippines Open University (UPOU) adopted multiple Path Approaches. Research evidence reveals that individuals have different learning styles and preferences. It leads to learner-centred approaches. Therefore, OER will be useful and helpful to an individual (Robert et al., 2015). Kanwar (2015) stated during the OER workshop held at Papua New Guinea on March 26 that:

“The students of Bunda College of Agriculture, Malawi, had no text book on Communication Skills and were entirely dependent on lectures. Now they have textbook, 75% of which is based on OER harvested from the web and supplemented with locally relevant activities, examples and assignments. A lecturer at the University of Jos, Nigeria discovered this textbook and adopted it, an instance of south-south collaboration”.

Her views can be considered by Open Universities across the globe for the delivery of skill development programmes. Research further established that OER can enhance skills through ODL system. For instance, Anuruddhika et al (2015) examined teacher and students' perception on learning experiences obtained through OER based e-learning course. The study concluded that the overall global trend towards online learning and OER integration facilitates enhancement of teacher and student learning and develops skills in relation to English language and computer usage. It has been established that OER is helpful in enhancing skills. Although not many studies on its impact have been reported so far, yet its importance cannot be ignored.

OER Initiatives in India

The Ministry of Human Resource Development (MHRD), Government of India (GOI) has also initiated various schemes related to OER. One of them is National Program on Technology Enhanced Learning (NPTEL) which initiated OER in the areas of basic sciences and engineering sciences. This project was being carried out by seven Indian Institutes of Technology (IITs), Indian Institute of Sciences and other premier institutions around the country. The other initiatives were Ekalavya project launched by IIT Bombay, and E-Grid by IIT Kerala. In Ekalavya project, content was developed in various Indian languages which were disseminated over the internet. It had developed Open Source Educational Resources Animation Repository (OSCAR) that provides web-based interactive animations for teaching. OSCAR provides a platform for student developers to create animations based on ideas and guidance from instructors. Both projects were funded by industry (Kumar, 2009). Recently, MHRD, GOI has started the project titled 'Study Webs of Active Learning for Young Aspiring Minds (SWAYAM). SWAYAM provides an integrated platform and portal for online courses, using Information and Communication Technology (<http://mhrd.gov.in/>). The National Institute for Entrepreneurship and Small Business Development (NIESBUD), an apex body established by Ministry of Micro, Small & Medium Enterprises, GOI, organised workshops on using OER for creating skill development courses on November 10, 2014 and June 6, 2015. The advantage of these open materials is that anyone can legally and freely copy, use, adapt and re-share them.

Indira Gandhi National Open University (IGNOU), in collaboration with the MHRD, GOI, initiated the development of a knowledge repository during 2005 to store, index, preserve, distribute and share the digital learning resources, developed by the ODL institutions in the country, called eGyanKosh. The other initiative by IGNOU was FlexiLearn. It was an open course portal wherein one can register and explore courses for free participation. At present, these activities are under review due to policy reasons.

Studies on evaluation of past initiatives have not been reported so far. But, it has been observed that OER has not received much attention from the teacher and student

community. It may be due to not having OER policy in place and also because it has not been integrated with curriculum framework in teaching-learning process. The GOI has recently issued guidelines for content development and implementation of MOOCs in higher education institutions.

OER for Skill Development

National Knowledge Commission of India has identified lack of skills as the major hurdle in overall economic development of the country. The National Sample Survey Organisation (2009-10) data shows that the total employment in India is 465 million (covering both organized and unorganized sectors). Of the total workforce (465 million), 94 per cent (435 million) are in the unorganized sector. A total of 246 million workers are in the agriculture sector alone (www.mospi.nic.in) which accounts for 50 per cent of the country's Gross Domestic Product (GDP). The unorganized sector has low productivity and usually paid lower wages. It becomes a huge task for policy-makers to provide skill training to everyone in the unorganized sector. More resources viz. more labs/workshops, master trainers etc. and money to enhance their existing skills and provide new skills are needed. It is not possible to train all of them through the existing formal system and available infrastructure. Therefore, there is need for the alternative system to meet the target of providing skill training to diversified workers in this sector. The Ministry of Labour, GOI has categorized the unorganized labour force under the following four groups:

- Occupation-small and marginal farmers etc. (Farmer category based on the total land holding in hectares i.e. size of land holding).
- Nature of employment-attached agriculture labourers, bonded labourers, migrant workers etc.. (The income level of these workers is low and employment is quite irregular).
- Specially distressed categories- toddy tappers, scavengers etc.; and
- Service categories- fisherman and women, barbers, vegetable and fruit vendors, newspaper vendors etc..
- In addition to these four categories, there exists a large number of unorganized labour such as cobblers, Hamals, Handloom weavers, ladies' tailors etc. (GOI, 2012).

Like India, other developing countries are also facing similar problems. Hence, the need of the hour is to recognize its significance at all levels and assess as to what can be achieved through the use of OER in open and distance learning (ODL) system. An increasingly multi-model delivery mechanism is now being used to enable the learner to take advantage of the flexible learning environment. There is a need to understand the role in supporting and promoting the principles of ODL in the fields of Vocational Education and Training (VET) and Skill Development. Another advantage of the ODL system is that employees (in-service) can also learn skills at their own pace and place without sacrificing their present job. ODL, with the integration of multiple technologies, has made the non-conventional mode as effective as the conventional system of education and training. ODL system can develop skills, capacity building and enhance employability among trainees. There is need for extensive use of Information and Communication Technology (ICTs) in distance education which must be enhanced in MOOC's platforms. The document 'National Policy on Skill Development-2015' of GOI has also highlighted the use of modern training technologies for

providing skill training to learners scattered across different regions of the country. OER helps in providing access of resources to students who are otherwise deprived of work commitments, topographical distance (straight line distance) or adequate prior-learning experience in getting skill training. In view of this, the authors used 'Open Skill Training Resources (OSTRs)' in place of OER in the present context. OSTR will be developed specifically for skill training programmes. Against this backdrop, an attempt has been made to seek students' perception on its uses while conducting a short survey. It is to be clarified here that sampled students were not using OSTR at the time of studying their respective programmes in IGNOU.

Objectives of the Study

The objectives of the short survey were to identify learners' perception on:

- (a) learning and teaching using open educational resources; and
- (b) the impact of the use of OSTRs on learners' performance.

Research Design

The authors designed a questionnaire, consisting of 32 questions, related to the objectives of the study. The questionnaire was e-mailed to 351 learners during July 2014. The study was limited to the distance learners registered in IGNOU for three vocational programmes only. Background information, including telephone/email addresses, were compiled from their respective registration forms.

Findings and Discussion

The data analysis of the survey reveals that:

- Most of the students pursuing vocational studies belonged to urban area (62.3%), were male (78.1%) and unmarried (68.3%). About half of the respondents (49.4%) were in the age group of 21-25 years followed by 31-35 years (23.8%), 26-30 years (17.0%); and 36-40 years (9.8%).
- Almost all of them had smart phones (93%). As many as 43 per cent of them possessed laptop/ desktop with internet facility. Sixty three per cent of them had knowledge of basic computer skills.
- The majority of the respondents were not aware of the term OER (91%). The findings confirm the earlier study (Hurt L., 2013).

Learners' Views on Using of OSTR for Skill Development in Open University (n=351)

Respondents were 'in agreement' with the statements on the using of OSTR for skill development in the OU:

- It will be less costly than text books (72%).
- It will help to share ideas among fellow students (67%).

- It will enhance existing skills (67%).
- OSTR will be helpful to students in submission of assignments than the existing system (59%).
- It will help in trainees' job performance (57%).
- It will enhance marks/grades in assignments/project/final examination (57%).
- It will help in hands-on experience and apprenticeships (53%).
- It may reduce the problem of getting study material in time (49%).
- They will prefer to learn through OSTR than SLM (47%).
- It will be easy to communicate with the teacher (44%).
- It will create more confidence than SLM (43%).

The analysis of the respondents' perception on using OSTR reveals that it will have positive impact on skill development of an individual. The findings of the present study are on the line of earlier studies i.e. 'learning perception on ICT, in general, and OER, in particular' (AI-Fahad, 2009, Hurt L, 2013, Stodel, et al 2006, Burbules et al 2000, Gaba and Sethy, 2010, Nettles, et al 2000, Serrano et al 2000). Learners perceived that the advantage of using technology in teaching-learning process is that it can be used anytime, anywhere and will enrich students' learning experience (AI-Fahad, 2009). The findings of the survey i.e. 'content of OER will be good' confirm previous study. Open and distance learning is on the brink of change due to rapid transformation of digital technology. Learners can access quality course material from anywhere and anytime. The analysis of students' perception on OER supported the notion that could work independently. OER is perceived as an effective means for enhancing skills. The findings confirm earlier studies that ICT develops students' cognitive skills (Stodel et al 2006). Use of OER will motivate students to sit online. It can also develop their study and IT skills. Bates (1996) noted that "the potential for developing higher order skills, relevant to a knowledge-based society, is a key driver in developing computer-based distance education courses". Serrano and Alford (2000) concluded that e-learning empowers learners to engage in language-content learning activity and to develop their higher-order critical thinking. It may be applicable at the time of using OER by learners for enhancing their skills. However, a few learners had apprehensions about its uses for skill development in the absence of high speed internet connectivity. These findings are on the line of the study reported by Bhandigadi et al., (2015).

The study found that using OSTR for skill development will be cost-effective; it will help in sharing ideas among fellow students and enhancing their existing skills. To recognize existing skills i.e. 'prior learning' among workers in unorganized sector and enhance their skills, as per National Skill Qualification Framework (NSQF), are major issues among policy-makers in India (<http://msde.gov.in/nsqf.html>).

Recognition of Prior Learning and OSTRs

Recognition of prior learning (RPL) is a form of assessment that acknowledges skills and knowledge gained through formal training, non-formal or informal training, work experience, and life experience. In other words, it is a method of assessment that considers whether the trainees/learners can meet the assessment requirements for a competency or a set of competencies that they already possess. OSTRs can play a crucial role in recognition of

prior learning as per NSQF's requirement. RPL, through OSTRs framework, will help measure the knowledge and skill levels of the workforce that can play a pivotal-role in addressing the skill gaps of the Indian workforce. The proposed initiative measures important areas of knowledge and underlying skills used at the workplace:

- RPL will recognize trainees' hidden skills; learning acquired prior to structured learning and enable a way to access relevant training. It also enables greater flexibility through OUs system and preference to be well-established in skill training programme which can be re-designed through OSTRs.
- For the employer, RPL is a cost-effective and efficient method to build the skill levels among trainees. At present, there is a need to make accessible industry-relevant skills' training and certification to millions of workers as per NSQF requirement.

A Framework of OSTR for Open Universities

The framework of skill development curriculum for OUs should be competency based. These competencies will help the trainees realize the tasks in various work situations that are mainly related to three learning objectives: (a) knowledge of the vocation, with focus on the educational concepts related to the vocation; (b) skills to perform the various tasks required of the vocation; (c) attitudes towards the vocation. Knowledge and skills are developed through well-designed vocational programmes whereas attitudes can be inculcated over a period of time. OUs can play an important role in improving knowledge of a particular skill development programme.

Design and development of competency-based curriculum is crucial for improving the quality of vocational education programme. OUs can adapt and adopt or reuse vocational materials available through OSTRs. It should be translated into local languages as per requirement of the local needs across the country. Competencies may also include cognitive and affective domains. Skills acquired from OSTRs can be certified by OUs as per NSQF requirement .

Features of a skill and competency-based vocational programme for OUs through OSTRs should be:

- *Relevance of OSTRs:* Competencies to be achieved from the job description of a particular vocation for which the training programme is designed.
- *Employability through OSTRs:* Job description should be drawn from or identified on the basis of job opportunities, covering both wage and self-employment categories, available to the trainee searching through available OSTRs on web.
- *Certification of skill competencies:* Actual performance of the competency is the primary objective of the vocational education programme. National skill testing model can be redesigned as per the local needs.
- *Competency-based training programme* allows trainees to progress through the training programme at their own pace using an e-training model.
- *On- the- job training through OSTRs:* Expert workers can describe their job better than fresh trainees. Those workers whose performance is better at their workplace are real experts on that type of job. Although fresh or first-rate supervisors and managers may know a lot about the work developed, they usually lack the necessary

level of expertise to conduct a good analysis of their job. Use of OSTRs can upgrade their existing skills from time to time.

- OSTRs can be used to analyse occupations at the administrative, professional, executive, technical and operational levels.

Skill-based programmes could be offered through the blended learning approach. For hands-on experience, existing model of programme/work centre can be adopted. These centres could be equipped with various support materials so that the learners can gainfully acquire the skills that the centre can impart through OSTRs. It will enable the learners to do self-study and work individually, supplemented with multi-media package (CD/DVDs/YouTube/Haptic devices/Radio/TV programmes). Blended learning approach will allow trainees to self-study and this will be supplemented with group-work, workshops, tutorials and other structured activities. ICT will allow the learner to use OSTR on computer, via the Internet. This may be in self-study mode or interaction with peer and teacher through chat, e-mail, web-cam, voice-mail, etc.. The proposed model, which is cost-effective, will be suitable for an Open University perspective. Chang et al (2014) established that blended e-learning has significant positive effects on self-assessment, cognition and skill.

Certification of skill development programmes

OUs should focus on understanding of applications and the achieving of skills while formulating certification guidelines as per NSQF requirements. NSQF also needs further treatment for inclusion of more occupation standards. It is also true that evaluation procedures cannot be generalised for all the skill-based programmes. It may vary from vocational trade to trade. Hence, there is a need for the development of standard norms for evaluation. It may create problems among OUs to develop new competency testing model for evaluating skill-based programmes. NSQF has also suggested certification of competency on these lines. OUs can develop the evaluation procedure to evaluate achievement of competencies of vocational trade (skill and practical) using OSTRs as per guidelines issued by the statutory bodies of the government from time to time.

Conclusion and Suggestions

To conclude, the study is based on the primary and secondary source of information. The findings of the short survey may not be generalized, and should be treated as preliminary findings. There is a need for further research on its impact and cost-effectiveness. Scholars have addressed some challenges in past research studies like languages and cultural barriers, accessibility of technology and internet, intellectual property rights, sustainability and funding, while using OERs in different platforms. Despite these challenges, there is still an advantage of using OSTRs in OUs. It allows a large number of learners to access course content framework and get support from their fellow students for preparing assignments/projects and practical activities. Funding model depends on the directly operational mechanism adopted by OUs. In the past, skill development programmes in different countries were provided on-the-job by the employers for their own workers. But, with the passage of time, skill required by an employer becomes more complex. OSTR can solve this problem by reducing the cost.

(Please Note: Views expressed by the authors are their own and not attributed to the organisations where they are presently working in)

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Educational Inequality in India — Evidence from 71st NSSO Round

Swati Dutta*

Abstract

The present paper analyses the pattern of educational inequality in Indian states. Inequality in educational attainment indicates whether development in education sector is pro-poor or pro-rich. Education Gini is used to measure educational inequality. The paper has used NSSO 71st data. The estimate shows that there exists a high extent of educational inequality. Decomposition of inequality is done intra state and interstate as well as for intra sector and inter sector. Moreover, educational concentration index is used to understand the channels of inequality in India in terms of performance of education. This will help us to know whether educational inequality is pro-poor or pro-rich in nature.

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Introduction

Education plays an important role as it stimulates the capacity of innovation, productivity and economic growth as well as the overall health status of a country. Education also has an effect on the welfare of future generations through inter-generational transmission as better educated parents tend to have more educated and healthier children (Dreze and Sen, 2002, pp. 38–40). Further, better-educated individuals earn higher wages, experience lesser unemployment, and work in more prestigious occupations than their less-educated counterparts (Cohn and Addison, 1997). Millennium Development Goal 2 and Goal 3, which seek to “Achieve Universal Primary Education” and “Promote Gender Equality and Empower Women,” are devoted to educational attainment and equity on a global level. Sustainable Development Goal 4 also emphasises on inclusive and equitable quality education while seeking to promote life-long learning opportunities for all by 2030. However, even though access to education is among the basic human rights, huge educational gaps exist between various groups within countries, as a result of which education is hindered from effectively and optimally playing its role of promoting welfare of target groups. Inclusive growth has gained importance among the Indian policy-makers. The Twelfth Five-year Plan envisages universal access for children to school, increased access to higher education and improved standards of education, including skill development (Planning Commission 2013). Various policies have been adopted to reduce education inequalities. Sarva Shiksha Abhiyan (Education for All) and Mid-day Meal programmes were launched to promote school education and literacy.

However, hitherto the main focus has been on measuring the average level of education as an index of educational attainment. This is especially relevant for developing countries like India, where marked disparity in educational attainment exists between the rural and urban population, between males and females, and among social groups and religions. Educational infrastructure is distributed unequally between rural and urban areas. Students in rural areas suffer from scarcity and inadequate accessibility of schools, as well as poor quality of education, and are forced to travel large distances.

India has progressed in terms of some of the indicators such as primary school enrolments (Kingdon 2007). At the same time, studies show that inequalities in education are still at a high level (Kingdon 2002; Kingdon 2007; Pal and Ghosh 2007; Desai and Kulkarni 2008; Bandyopadhyay and Subrahmanian 2008). Additionally, school and classroom experiences are important factors in the non-retention and poor performance of the children. Concentration of secondary and higher educational institutions in urban areas limits the participation of rural people in schooling. There are substantial variations in educational outcomes across the states. In this background, it is important to examine the pattern of inequality in educational attainment in Indian states from the 71st round NSSO data.

Distributional aspect of education level of the population has important economic consequences, affecting, for example, income distribution and economic growth (Checchi, 2000; De Gregorio and Lee 2002; Park 1996; Lopez et al. 1998). On the other hand, Barro (1999) finds that primary education is negatively related to inequality as opposed to higher education. Wells (2006), and Alderson and Nielsen (2002) find that higher secondary school enrolment leads to lower income disparity. Mughal and Diwara (2011) found that average

years of schooling, public spending on primary, secondary and tertiary education clearly lead to a more equal society. This paper will examine pure inequality in education, also referred to as univariate inequality in education, which is different from socio-economic inequality in education. This paper used education Gini to find out the extent of inequality that exists across Indian states.

Further, overall inequality is decomposed into intra- and inter-group components. This helps us to determine the extent to which the observed inequality is a result of inequality between the rural and urban sectors or a consequence of inequalities within the rural or urban sectors.

Gini coefficient attempts to measure the pure inequality rather than socio-economic inequality in educational attainment. There are several reasons as to why inequality in education should rather be measured in respect of different socio-economic groups. Educational concentration index is used to understand socio-economic inequality in terms of educational outcome. These analyses will help us understand the channels of inequality in India in terms of performance of education. Further, it will also help us to know whether educational inequality is pro-poor or pro-rich in nature.

In so far as the remaining paper is concerned, while Section 2 discusses data sources, and Section 3 the methodology and variable selections, Section 4 highlights and discusses the empirical results with Section 5 being the concluding part.

Data

This paper utilises 71st round unit level information from household surveys conducted by the National Sample Survey Organisation (NSSO) of India. The survey provides information at the household and individual levels. Each round features information on diverse household characteristics such as residence (rural or urban), membership of social groups, religion, monthly household expenditure; and demographic characteristics of individuals like age, gender, education, and marital status. The survey also provides information on the level of general and technical education attained, current attendance in educational institutions and type of institution attended. The NSSO classifies information on educational attainment of an individual under one of the following 10 categories: (i) not literate, (ii) literate without formal schooling (iii) literate below primary (iv) primary (v) upper primary (vi) secondary (vii) higher secondary (viii) diploma/certificate holder (ix) graduate and (x) post-graduate and above. The NSSO surveys are nationally representative household surveys, and follow stratified multi-stage sampling design. The first stage units are the census villages for rural areas and the NSSO urban frame survey blocks for urban areas. Hamlet-groups (or sub-blocks) constitute the intermediate stage. The ultimate stage units are households, both in the rural and urban areas. The age group of 15 years and above is considered for calculating educational inequality. Most studies on human capital generally consider the age group of 15 years and above since this age group corresponds well with the labour force (Barro and Lee, 1996; Castello and Domech, 2002).

Methodology

Educational Attainment

Educational attainment rate is defined as the percentage of population (aged 15 and above) with a particular educational level. To examine the attainment rate, we classify the individuals into the following seven educational levels: (i) illiterate and literate with non-formal schooling, (ii) below primary (grade I-II), (iii) primary (III-V), (iv) upper primary (VI-VIII), (v) secondary (IX-X), (vi) higher secondary (XI-XII), and (vii) graduation and above. According to the education system in India, the years of schooling for each of these education levels are 0, 2, 5, 8, 10, 12 and 15.5 years respectively. Table A1 in the Appendix gives the pattern of years of schooling across Indian states. Years of schooling are not the same in all the states. For example, Chhattisgarh has three years of Montessori School before the start of the 1st standard in the school. Maharashtra also has four years of primary school. These facts are taken into account while calculating years of schooling.

Measurement of Educational Inequality

To measure educational inequality, we use the education Gini index which is analogous to income Gini. The Gini index is a well-known and most widely used measure of inequality. Although economic inequality is measured by income gini and health inequality measured on the basis of health expenditure, the measurement of the inequality dimension in education is based on educational attainment (Sahn and Stifel 2003). The education gini coefficient is generally being used to quantify inequality by using either school enrolment or school attainment across country (Maas and Criel 1982, Thomas et al. 2001, Zhang and Li, 2002, Sahn and Younger, 2007).

The index satisfies the four important principles of anonymity, population independence, scale independence, and transfer principle (Ray, 1998). Like the conventional Gini index, the education Gini index ranges between the values 0 (0 per cent) and 1 (100 per cent). A Gini index of zero represents perfect equality, while an index of one represents perfect inequality. The higher the value of the index, the greater is the inequality. By using the gini coefficient, inequality across various sub-groups like gender, rural-urban, social groups, regions can be compared. Further, the gini coefficient can also be used to compare the inequality at the state level.

$$EGINI = \frac{1}{\mu} \left[\sum_{i=2}^n \sum_{j=1}^{i-1} x_i \cdot x_j |S_i - S_j| \right]$$

EGINI is the education Gini based on the schooling attainment distribution (Lo'pez et al., 1998; Castello and Dome'nech, 2002)

μ is the average years of schooling for the population concerned

x_i and x_j represent the proportions of population with certain levels of schooling

S_i and S_j are the years of schooling at different educational attainment levels
 n is the number of categories in the schooling attainment data

However, Gini coefficient has some limitations. The index is neither easily decomposable nor additive across the population sub-groups. Gini coefficient is a summary measure of overall inequality that does not indicate as to how the inequality is distributed across various socio-economic classes. For example, two states may have very different educational outcome distribution but have the same gini index. This is because the Lorenz curves can have different shapes and yet yield the same Gini coefficient. In this context, educational concentration index (CI) is used (Siteal, 2005). The index is used for the Indian data to reckon two kinds of inequalities in educational attainment (years of education) – one across economic classes and the other across socially identified groups such as the Scheduled Tribes, Scheduled Castes and others. There is an important policy implication that can be drawn from a focus on inter-group inequality in educational achievement. If we consider equality of opportunity as a desirable goal, we should equalize the educational achievements of all socio-economic types, but not equalize the achievements of individuals within types, which differ according to effort expended (Roemer, 1998).

CI ranges between -1 and +1 with a negative (positive) value representing pro-poor (pro-rich) inequality. If all the years of education are obtained exclusively by the highest economic class, CI will have a value of +1. In general, with N economic groups, CI can be expressed as

$$CI = \frac{2}{h} \sum_{n=1}^N p_n h_n R_n - 1$$

$$R_n = \sum_{i=1}^{n-1} p_i + p_n / 2$$

$$h = \sum_{n=1}^N p_n h_n$$

where h = average years of education for the whole population, p_n = proportion of the n th group in total population; h_n = average years of education in the n th group; R_n = relative rank of the n th group; $n = 1, \dots, N$.

Decomposition of Educational Inequality

The total inequality is the sum of intra-group inequality and inter-group inequality (Shorrocks and Wan, 2005). There may also be possible that inequality can occur due to interaction between intra-group and inter-group which is called overlap inequality (Frick et al, 2006)

The Gini decomposition by sub-groups can be written as

$$G = \sum_{i=1}^n s_i G_i o_i + G_b$$

where s_i is the population share of group i , G_i is the gini coefficient within group i ; o_i is the overlapping index and G_b the between group inequality.

Results and Discussions

The distribution of the population aged 15 years and above by education level indicates that there exists huge variation not only in the proportion of literates across genders and rural-urban, but also in the completed educational levels among literates with the increase in level of education. In urban areas, the proportion of illiterate is 13 per cent whereas in rural areas it is 28 per cent. The gender gap in illiteracy is also significant. In rural areas among the literates, below primary and primary schooling constitute a major proportion (20.39 per cent) and, in urban areas, the proportion of graduation and above is highest (22 per cent). The proportion of graduate and above is very low in rural areas. Table 3 clearly indicates the exclusionary nature of the education system for four major social groups across gender. It is seen that literacy rate among Scheduled Tribes (59 per cent) is below the all-India average (68.25 per cent) as well as lowest among all the social groups in India. The gender gap in literacy is also consistent across social groups. The gender gap in literacy rate is highest among the Scheduled Tribes and it is more severe in rural areas. This calls for more detailed estimation of educational inequality.

TABLE 1

Proportion of Population (aged 15 years and above) Across Education Level

	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
Illiterate	28.03	13.03	21.7
Below primary	7.53	5.14	6.48
Primary	12.86	9.5	11.4
Upper Primary	17.65	15.47	16.69
Secondary	14.6	17.72	15.98
Higher Secondary	10.96	16.58	13.44
Graduation and Above	8.47	22.66	14.45

TABLE 2

Proportion of Population (aged 15 years and above) Across Education Level by Gender

	<i>Male</i>	<i>Female</i>
Illiterate	14.14	29.72
Below primary	6.3	6.67
Primary	11.26	11.56
Upper Primary	17.98	15.35
Secondary	17.74	14.13
Higher Secondary	15.62	11.11
Graduation and Above	16.96	11.46

TABLE 3

Literacy Rates among Social Groups

		<i>SC</i>	<i>ST</i>	<i>OBC</i>	<i>Others</i>	<i>All India</i>
Rural	Male	73	66.8	78	84	72.3
	Female	52.6	46.9	62	72	57.9
	Total	62.8	56.85	70	78	64.7
	Gender ratio	1.39	1.42	1.26	1.17	1.25
Urban	Male	82	71	85	91	83.7
	Female	61	51.5	75	85	74.8
	Total	71.5	61.25	80	88	79.25
	Gender ratio	1.34	1.38	1.13	1.07	1.12
Rural +Urban	Male	75.2	68.9	81	88	75.7
	Female	61.3	49.2	68.5	78	62
	Total	68.25	59	74.75	83	68.85
	Gender ratio	1.23	1.40	1.18	1.13	1.22

Source: 71st NSSO Unit Level data**Educational Inequality**

Table 4 shows the educational inequality, measured by gini index, for major Indian states. The gini index at national level is 0.40 per cent. In rural India, the gini index is 0.46 and in urban area, it is 0.32. In other words, the rural area has the higher educational inequality than urban areas. Nagaland (0.23) has the lowest educational inequality followed by Kerala (0.25). On the other hand, Rajasthan, Bihar, Andhra Pradesh, Uttar Pradesh and

TABLE 4
Educational Inequality in Indian States: A Gini Index

	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
Andhra Pradesh	0.57	0.37	0.48
Arunachal Pradesh	0.48	0.25	0.4
Assam	0.37	0.26	0.35
Bihar	0.52	0.39	0.48
Chhattisgarh	0.51	0.33	0.44
Delhi	0.27	0.26	0.26
Goa	0.3	0.25	0.28
Gujarat	0.46	0.31	0.39
Haryana	0.43	0.32	0.38
Himachal Pradesh	0.34	0.23	0.32
Jharkhand	0.54	0.34	0.46
Jammu & Kashmir	0.48	0.38	0.43
Karnataka	0.49	0.33	0.42
Kerala	0.27	0.26	0.25
Maharashtra	0.41	0.27	0.35
Madhya Pradesh	0.52	0.33	0.44
Manipur	0.28	0.23	0.26
Meghalaya	0.4	0.22	0.33
Mizoram	0.27	0.2	0.25
Nagaland	0.26	0.19	0.23
Odisha	0.48	0.32	0.44
Punjab	0.42	0.28	0.35
Rajasthan	0.55	0.39	0.49
Sikkim	0.37	0.31	0.35
Tamil Nadu	0.45	0.31	0.39
Tripura	0.37	0.3	0.35
Uttar Pradesh	0.51	0.38	0.46
Uttaranchal	0.36	0.23	0.31
West Bengal	0.48	0.33	0.41
All India	0.46	0.32	0.4

Jharkhand have the highest educational inequality. These states also have high proportion of Scheduled Caste and Scheduled Tribes who are deprived of educational attainment. Further, persistence of poverty is also high in these states. Consequently, most of the children from

poor economic backgrounds are deprived from school attainment. Besides, school infrastructure is also poor in these states. Most of the schools have only a single teacher (Mehrotra, 2006). Another issue of concern is teacher absenteeism. The absenteeism' rate is highest in Jharkhand and Bihar (Agrawal, 2014). In the rural areas, Andhra Pradesh, Rajasthan, Jharkhand, Madhya Pradesh and Bihar have the highest educational inequality. On the other hand, in the urban areas, Rajasthan, Bihar, Uttar Pradesh, Jammu & Kashmir and Andhra Pradesh have the highest educational inequality. The gap between rural-urban inequalities is highest in Arunachal Pradesh, Jharkhand and Andhra Pradesh and lowest in Delhi, Kerala and Goa, among others.

Inequality Decomposition

The intra-state inequality in education is also high in India. Table 5 presents the decomposition results by states. It shows that intra-state inequality contributes a major share (57.26 per cent) of the overall inequality. Further, inequality due to interaction between intra-state and inter-state is also a serious issue. It contributes 37.34 per cent of the overall inequality.

The main reason for intra-state inequality in education is migration. Across India, 17 per cent migration is inter-state in nature and happens for the purpose of education. The remaining 83 per cent of migration is across same / different districts of the same state which indicates that there exists inequalities within the state in terms of education infrastructure; the urban centres are perceived to have much better infrastructure (Chandrasekhar and Sharma, 2014). Some states, such as Rajasthan, Madhya Pradesh, and Uttar Pradesh have high proportion of SC and ST populations. A large proportion of these groups do not have access to schooling within a reasonable distance. Though about 90 per cent of the population might have acquired access to (primary) schooling in rural areas, around 10–15 per cent of the SC/ST groups are still deprived of schools (Mehrotra, 2006, p. 20). In other words, in many cases, access to school itself is a major problem. Further, these locations are bereft of basic infrastructural facilities like transport and communication. This also ties in with parental anxiety, with parents unwilling to send their daughters to schools that are located far from their villages. In such a scenario, girls drop out from school almost immediately. Besides, even where primary schools are available, non-availability of middle and high schools in the vicinity places further limitations on the educational motivation and aspirations of children. Further, Bihar and Jharkhand have less than 10 higher education institutions per lakh population. UTs other than Delhi and Chandigarh do not have universities and have less than 20 higher education institutions per lakh population; Karnataka, Andhra Pradesh have more than 60 institutions per lakh population. Further, there exists huge variation in the performance of government institutions and private institutions. Between government institutions, there also exists quality differences. There are also local private institutions which have very poor infrastructure. In addition, policy interventions and political environment are also quite different across states.

Table 6 highlights the decomposition of educational inequality by sector. As it happens, 28.97 per cent of the total educational inequality is due to intra-sector inequality. On the other hand, inter sector inequality contributes only 19.61 per cent of the total educational inequality. Intra sector inequality is mainly due to the demographic factor. For instance, in

both rural and urban areas, female and male populations have dissimilar educational distribution. Similarly, social groups such as Scheduled Tribes (STs), Scheduled Castes (SCs) and other remaining groups; and religious groups such as Hindus, Muslims and Christians have entirely different distribution within rural or within urban sectors. The average number of years spent in school is lowest among STs (5.2 years), followed by SCs (6.6 years). In general, females, STs, SCs and Muslims groups have low educational attainment in both the sectors. There are also inequalities within these demographic groups. For instance, females belonging to ST group and females belonging to general (or non-Scheduled Caste) group will have a different educational distribution in the rural as well as in the urban sectors. For example, Valmiki or Musahar children, or Sahariya children, face greater discrimination from others, including from other Scheduled Caste or Scheduled Tribe students.

Another important reason is income inequality among the rural and urban households. Individuals from low-income group or poor households from both the rural and urban sectors are more vulnerable. The reason is that poor households are unable or unwilling to send their children to school because of various factors, such as financial constraints, or for making them help in domestic work or, for that matter, sending the children for work in order to supplement the household earnings. . Further, many girls stay at home to take care of their siblings when their parents go for work. The poor households often face credit constraints which prevent them from financing the education of their children, particularly at higher levels of education. Though elementary education is free in government schools, there are always hidden costs associated with it (Tilak, 1996). The private education is costly and beyond their reach.

TABLE 5

Educational Inequality Decomposition at State Level

	<i>Gini coefficient</i>	<i>Percentage contribution</i>
Intra state	0.23	57.26
Inter state	0.06	14.94
Overlap	0.15	37.34

TABLE 6

Educational Inequality Decomposition across Rural-Urban

	<i>Gini coefficient</i>	<i>Percentage contribution</i>
Intra Sector	0.11	28.97
Inter Sector	0.08	19.61
Overlap	0.20	51.42

Educational Concentration Index

Table A3 and A4 present the concentration indices for economic status related inequality in different states of India. The first point to be noted is that the state's economic status related inequality is more among the females than among the males, and inequality is generally higher in urban areas than in rural areas. While the economic status related inequality is the least among the rural males, it is the highest among the urban females. In other words, the economic status of the household matters more in the case of a female's educational attainment than for a male; and it matters even more if the female happens to live in the urban area. There are negative relationships between the concentration index and the average years of education (Table 7). Hence, when there is increase in average years of education it reduces the inequality in educational attainment.

Further it is noticed that educational inequality due to social caste is high in rural areas and mainly in rural Rajasthan, Bihar, Odisha and Andhra Pradesh. However, Bihar, Chhattisgarh and Uttar Pradesh have also educational inequality due to social caste in urban areas too. We also find strong negative correlation between the average years of education and social group related inequality in both rural and urban areas (Table 8). We find a strong correlation between the two types of inequalities across the states of India. The values of the correlation coefficients between the two types of concentration indices are 0.88 for rural India and 0.64 for urban India.

TABLE 7
Correlation Coefficient Between Economic Status Related Concentration Index (CI)
and Average Years of Schooling

	<i>CI_rural male</i>	<i>CI_rural female</i>	<i>CI_rural person</i>	<i>CI_urban male</i>	<i>CI_urban female</i>	<i>CI_urban person</i>
Average years of Education_ rural male	-0.34					
Average years of Education_ rural female		-0.44				
Average years of Education_ rural person			-0.41			
Average years of Education_ urban male				-0.54		
Average years of Education_ urban female					-0.61	
Average years of Education_ urban person						-0.58

TABLE 8

**Correlation coefficient between social group based concentration index (CI)
and average years of schooling**

	<i>CI_rural person</i>	<i>CI_urban person</i>
Average years of Education_ rural person	-0.65	
Average years of Education_ urban person		-0.59

Conclusion

This paper examines the pattern of educational attainment and inequality across Indian states, in terms of gender, social groups, and religious groups in 2014-15. We have used gini coefficient to measure pure educational inequality. Besides, the paper emphasizes the importance of reckoning inequality in socio-economic group terms while advocating the use of an 'education concentration index'. There is a spatial disparity in terms of school attainment. The gender gap in literacy is also consistent across social groups. The gender gap in literacy rate is highest among the Scheduled Tribes and it is more severe in rural areas. Educational inequality index indicates that rural area has higher inequality than urban areas. Females are more unequal in terms of educational attainment than their male counterparts. Our decomposition analysis reveals inequality within states as well as inequality within rural and urban areas. Further, inequality is more among the females than among the males, and inequality is generally higher in urban areas than in rural areas. The concentration index is used to calculate inequalities in educational attainment (years of education) – one across economic classes and the other across socially identified groups such as the Scheduled Tribes, Scheduled Castes, other backward class and others. We find a strong correlation between the two types of inequalities across the states of India. We also find, as one would expect, that the inequality index values are negatively correlated with the average years of education.

While the economic status related inequality is the least among the rural males, it is the highest among the urban females. It is noticed that educational inequality due to social caste is high in rural areas. In actual policy context, to reduce educational inequality, it is important to improve the average educational attainment. Thus, to improve the educational attainment, there is a need to emphasise on reducing the barriers to access the educational institute for primary, secondary and higher secondary education as well as higher education.

Appendix

TABLE A1
Average Years of Schooling in Indian States

	<i>Rural</i>			<i>Urban</i>			<i>Rural+Urban</i>		
	<i>Male</i>	<i>Female</i>	<i>Person</i>	<i>Male</i>	<i>Female</i>	<i>Person</i>	<i>Male</i>	<i>Female</i>	<i>Person</i>
Andhra Pradesh	6.07	3.93	4.99	8.88	6.97	7.93	7.45	5.42	6.43
Arunachal Pradesh	6.63	5.22	5.97	10.63	8.55	9.61	7.99	6.43	7.24
Assam	7.23	5.82	6.56	9.86	8.61	9.27	7.88	6.51	7.24
Bihar	6.99	3.88	5.53	8.97	6.51	7.79	7.68	4.81	6.34
Chhattisgarh	9.04	7.54	8.31	10.07	9.49	9.81	9.71	8.77	6.77
Delhi	9.74	7.45	8.72	10.56	9.66	10.14	10.51	9.52	10.05
Goa	8.62	8.07	8.33	9.93	8.84	9.38	9.25	8.42	8.82
Gujarat	7.17	4.63	5.93	9.46	7.8	8.66	8.28	6.14	7.27
Haryana	8.11	5.29	6.75	9.84	8.01	8.97	9.93	6.56	7.8
Himachal Pradesh	8.99	6.94	7.95	10.96	9.86	10.40	9.37	7.50	8.42
Jharkhand	6.32	3.77	5.07	9.57	7.54	8.62	7.73	5.34	6.58
Jammu & Kashmir	7.21	4.78	6.04	8.99	6.97	8.02	7.94	5.69	6.89
Karnataka	6.69	4.61	5.65	9.42	7.74	8.59	7.99	6.09	7.07
Kerala	8.92	8.39	8.64	9.27	9.05	9.15	9.09	8.74	8.9
Maharashtra	7.73	5.41	6.61	10.14	8.66	9.42	8.89	6.99	7.97
Madhya Pradesh	6.42	3.86	5.19	9.67	7.64	8.70	7.93	5.61	6.81
Manipur	9.72	7.47	8.64	11.13	9.09	10.11	10.31	8.18	9.27
Meghalaya	6.42	5.87	6.15	10.14	9.43	9.76	7.61	7.11	7.36
Mizoram	7.86	7.00	7.44	9.78	8.87	9.31	8.84	7.99	8.4
Nagaland	9.97	8.64	9.32	11.11	9.82	10.47	10.41	9.09	9.75
Odisha	6.41	4.61	5.64	9.62	7.55	8.61	7.51	5.48	6.52
Punjab	7.31	6.06	6.71	9.66	8.97	9.33	8.43	7.45	7.95
Rajasthan	6.87	3.59	5.15	8.99	6.23	7.67	7.79	4.57	6.23
Sikkim	7.40	6.49	6.97	8.91	8.18	8.55	7.92	7.09	7.52
Tamil Nadu	7.24	5.47	6.34	9.34	7.88	8.60	8.28	6.67	7.45
Tripura	6.86	5.31	6.10	9.04	7.94	8.48	7.72	6.41	7.07
Uttar Pradesh	7.03	4.28	5.71	8.99	7.34	8.18	7.77	5.44	6.65
Uttaranchal	9.02	5.84	7.52	11.07	9.75	10.44	9.93	7.62	8.83
West Bengal	6.24	4.71	5.49	9.16	7.84	8.51	7.67	6.27	6.98
All India	7.17	4.99	6.11	9.53	7.93	8.75	8.21	6.29	7.27

TABLE A2

Average Years of School among Social groups

ST	5.2
SC	6.6
OBC	6.8
Others	8.7

TABLE A3

Educational Concentration Index for Indian States: Economic Status Related

	<i>Rural</i>			<i>Urban</i>			<i>Rural+Urban</i>		
	<i>Person</i>	<i>Male</i>	<i>Female</i>	<i>Person</i>	<i>Male</i>	<i>Female</i>	<i>Person</i>	<i>Male</i>	<i>Female</i>
Andhra Pradesh	0.15	0.12	0.19	0.15	0.13	0.18	0.2	0.16	0.25
Arunachal Pradesh	0.04	0.04	0.03	0.02	0.04	0.05	0.06	0.08	0.06
Assam	0.06	0.06	0.07	0.11	0.11	0.1	0.09	0.09	0.1
Bihar	0.13	0.1	0.2	0.17	0.15	0.2	0.16	0.12	0.23
Chhattisgarh	0.06	0.06	0.05	0.18	0.16	0.2	0.12	0.12	0.13
Delhi	0.08	0.06	0.12	0.13	0.13	0.13	0.12	0.12	0.13
Goa	0.12	0.11	0.14	0.05	0.06	0.04	0.07	0.08	0.08
Gujarat	0.13	0.11	0.18	0.11	0.1	0.12	0.15	0.13	0.2
Haryana	0.13	0.11	0.18	0.16	0.15	0.19	0.17	0.14	0.22
Himachal Pradesh	0.09	0.07	0.11	0.09	0.07	0.14	0.09	0.07	0.12
Jharkhand	0.12	0.11	0.15	0.13	0.13	0.16	0.15	0.13	0.19
Jammu & Kashmir	0.08	0.05	0.13	0.16	0.13	0.2	0.1	0.07	0.16
Karnataka	0.06	0.04	0.07	0.1	0.09	0.12	0.13	0.11	0.16
Kerala	0.07	0.06	0.09	0.07	0.07	0.07	0.07	0.06	0.08
Maharashtra	0.07	0.07	0.06	0.11	0.1	0.12	0.12	0.11	0.15
Madhya Pradesh	0.09	0.07	0.12	0.14	0.12	0.17	0.16	0.13	0.21
Manipur	0.03	0.03	0.04	0.04	0.03	0.05	0.04	0.04	0.06

Contd...

Meghalaya	0.09	0.08	0.11	0.05	0.04	0.05	0.12	0.11	0.13
Mizoram	0.12	0.11	0.13	0.07	0.07	0.06	0.11	0.12	0.12
Nagaland	0.1	0.09	0.11	0.04	0.04	0.05	0.09	0.08	0.09
Odisha	0.11	0.08	0.13	0.17	0.14	0.23	0.15	0.13	0.18
Punjab	0.11	0.1	0.12	0.13	0.13	0.13	0.14	0.13	0.15
Rajasthan	0.17	0.14	0.22	0.14	0.11	0.17	0.18	0.15	0.24
Sikkim	0.09	0.09	0.08	0.05	0.05	0.06	0.08	0.08	0.09
Tamil Nadu	0.14	0.12	0.16	0.12	0.09	0.15	0.15	0.12	0.19
Tripura	0.06	0.07	0.04	0.15	0.15	0.15	0.1	0.11	0.09
Uttar Pradesh	0.12	0.1	0.14	0.17	0.15	0.19	0.15	0.13	0.19
Uttaranchal	0.06	0.05	0.08	0.08	0.07	0.09	0.08	0.07	0.11
West Bengal	0.12	0.11	0.12	0.14	0.14	0.14	0.17	0.16	0.18
All India	0.12	0.1	0.15	0.13	0.12	0.15	0.16	0.14	0.2

TABLE A4

Educational Concentration Index for Indian States: Social Status Related

	<i>Rural</i>	<i>Urban</i>	<i>Rural+Urban</i>
Andhra Pradesh	0.11	0.05	0.08
Arunachal Pradesh	0.03	0.02	0.03
Assam	0.05	0.03	0.04
Bihar	0.15	0.14	0.15
Chhattisgarh	0.05	0.11	0.08
Delhi	0.03	0.05	0.04
Goa	0.08	0.01	0.05
Gujarat	0.1	0.09	0.10
Haryana	0.1	0.09	0.10
Himachal Pradesh	0.06	0.07	0.07
Jharkhand	0.13	0.07	0.1
Jammu & Kashmir	0.03	0.03	0.03

Contd...

Educational Inequality in India

Karnataka	0.07	0.05	0.06
Kerala	0.05	0.06	0.06
Maharashtra	0.08	0.05	0.07
Madhya Pradesh	0.12	0.11	0.12
Manipur	0.02	0.02	0.02
Meghalaya	0.07	0.01	0.04
Mizoram	0.01	0.01	0.01
Nagaland	0.01	0.02	0.02
Odisha	0.15	0.05	0.10
Punjab	0.09	0.08	0.09
Rajasthan	0.12	0.11	0.12
Sikkim	0.02	0.03	0.03
Tamil Nadu	0.04	0.05	0.05
Tripura	0.06	0.04	0.05
Uttar Pradesh	0.1	0.12	0.11
Uttaranchal	0.02	0.1	0.06
West Bengal	0.06	0.07	0.07
All India	0.08	0.07	0.08

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School Climate

— Friendliness of Physical Climate in Elementary Schools and its Implication for Educational Leaders (in Special Reference to North-East Region of India)

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Sawaranlata Das‡

Abstract

The purpose of this study is to review the school climate in terms of friendliness of physical climate in respect of classrooms, playground, toilets and drinking water, library, fencing, and computer services in elementary schools of North East India and overlook its implications to educational leaders. It was fully dependent on the raw data collected by National University of Educational Planning and Administration (NUEPA). The data are related to the eight States of the North East Region (NER) of India and addresses the gaps for further measures and for pinpointing key areas for urgent intervention. Accordingly, the Gender Parity Index has indicated a promising progress with most of the States logging 0.95 and above. The results have revealed that children with disability gaining access to education in NER constitute only 5.5 per cent of the country. On the physical indicators, Assam needs to take measures for maintenance of the dilapidated urban as well as rural schools. Among all States of the north-east region, Meghalaya and Assam lag behind in terms of toilet facilities for boys and girls, with their performance being below the average of all States of India in this regard. Sikkim tops the list for providing access to drinking water while Meghalaya, where 38.39 per cent of the schools are still without water, figures at the bottom of the

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list. The availability of playground in urban schools in the NE States is lower than the country average of 69.59 per cent. School boundary in almost all the NE States, barring Nagaland, is below the national average. With regard to library facility, Mizoram figures at the top among the NE States while Meghalaya has the least access. With regard to providing students access to computers, Sikkim notches the first place in the region, both in the urban and rural context, while even substantially surpassing the country average reported. These are key reminders for educational leaders to take appropriate measures in order to make the physical climate of the schools friendly and conducive for children in the North East Region of the country.

Introduction

A school is a place where teaching- learning takes place. It is the second home for the child and some researchers call it a temple of learning (Sidhu, 2015). Thus, as a social institution, it should have a healthy climate being friendly for the child. A school climate is a perception and feeling about the school. Sometimes it is invisible but has visible impact on the school community. School climate is viewed as an “atmosphere for learning” and a positive climate a “good place to be” (Walters, 2015). National School Climate Council (NSCC, 2007) has given a more comprehensive and most widely used definition as “the quality and character of school life” (p: 5). It is the practice and experience of the school community and, at the same time, it reflects the norms, values, goals, relationships, instructions, organizational structure, leadership and decision-making in the school. These make the school climate as an input, process and result. The quality of life in school depends on the facets that are available in the school environment that can be the dimensions of the school climate.

According to NSCC (2007), a school climate has different dimensions that can impact the teaching-learning both positively or negatively. These recently recognised and accepted dimensions of the school climate are the physical, social and academic dimensions.

The physical dimension may include the appearance of the school set-up, availability of resources and safety and comfort. The social part is about inter-personal relationships, treatment and decision-making in the school while the academic dimension is about quality of teaching learning or instruction, achievements, assessment and reporting.

The paper focuses on the physical dimension of the school climate as one of the key elements in determining the student friendliness of the elementary schools. It is based on Loukas (2007) outline of the physical dimension of school as:-

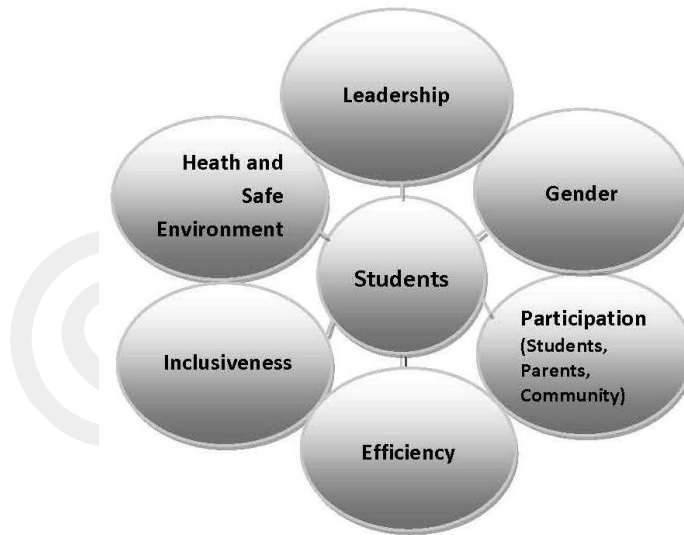
- Appearance of the school building and its classrooms,
- School size and ratio of students to teachers in the classroom,
- Order and organisation of classrooms in the school,
- Availability of resources and
- Safety and comfort.

A school can be healthy and friendly for students if it puts students at the centre and tries to make the school conducive for teaching-learning. A healthy and friendly school climate has a role of motivating students to develop to their full potential.

The term school-friendliness is a very elusive term that is open to interpretation in different ways for different people in different contexts. The term is also relative in terms of its interpretation. A student-friendly and healthy school takes into account the well-being of students in terms of their social, psychological and emotional safety and physical security of the areas regardless of ethnicity, race, gender, religion, location, etc.

Beyond the physical dimension of school climate (physical set-up and their appropriateness), friendliness can have the attribute of being gender-sensitive, which can be assessed against gender parity and equality in enrolment and availability of gender-friendly facilities. All these are related to the right issues of students and availability of equal opportunity for all children. It is aimed at encouraging schools and education systems to move progressively towards quality standards of education (UNICEF, 2010). The key thematic areas of friendliness have been demonstrated in Chart 1 where the researchers have taken some select indicators only.

CHART 1
Indicators of Student Friendly Schools



In order to be friendly, a school needs to have a positive or healthy school climate. A healthy school climate is one that promotes students' development to be productive, contributing and satisfying life in a democratic society. Thus, healthy school climate includes norms, values, and expectations that support people feeling socially, emotionally and physically safe (NSCC, 2007). School climate, as the personality of the school, is a way of

perceiving, thinking and acting that allows school community to have a sense of belonging and concern for the school community. Among the dimensions of school climate, physical dimension is part and parcel and an expression of the presentation of the school building and classrooms, the size of the school and the students'/teachers' ratio in the classroom; the organization of classes in the school; the effectiveness of the tools and teaching resources and security and safety (Rapti, 2012).

A school which is friendly respects the rights of students, and makes education Accessible, Available, Acceptable, and Adaptability (4 As) (Tomasevski, 2004), follows student-centred teaching methods, focusing on quality results, gender sensitiveness, relevance, context-based but flexible with respect for diversity and inclusion (irrespective of caste, gender, disability, religion and others), continuous capacity-building of teachers and involvement of parents and target community in the management of schools. In line with this, the Right of Children to Free and Compulsory Education Act (2009) of India enshrines all these key parameters to be fulfilled for the well-being and benefit of children.

The Right of Children to Free and Compulsory Education Act, 2009 Chapter III (3.1.) confirms that 'every child of the age of six to fourteen years shall have a right to free and compulsory education in a neighborhood school till completion of elementary education'. Likewise, the basic framework of governmental obligations is outlined through a series of measures to guarantee children the right to education which is articulated in international human rights treaties, national constitutions, and domestic laws like acts, orders and notification (Tomasevski, 2004).

In order to ensure these rights of children, the roles of leadership, especially educational leaders, is fundamental. Schools, as organizations, exist if and only if they have successful leaders. Thus, it is a way of influencing individuals and groups within an organization, helping them in establishing goals, and guiding them towards achievement of those goals, and, thereby, allowing them to be effective (Nahavandi, 2008).

The issue of educational leadership involves working with and guiding teachers towards improving educational processes in educational institutions. It needs to understand and be able to act in the context, organization and leadership of the school, as well as the inter-relationship among these three elements. A single input by a leader can have multiple outcomes. Success, therefore, will depend on which element and in what sequence the educational leaders choose to spend time and devote attention on (Mulford, 2010). Hence, educational leaders who are working at different levels, be it state, district or school, are expected to play their roles so that school climate will be more healthy and friendly for students.

A healthy school climate promotes students' ability to learn and achieve academically. More specifically, it has a role in upholding learning skills, that include skills in innovation, critical thinking, problem-solving, communication and collaboration, life and career skills like flexibility and adaptability, initiative, social and cross-culture skills, productivity and accountability, leadership and responsibility, which are very critical for 21st century learning (NSCC, 2007). Those educational leaders, who are successful, can develop their districts and schools to effectively support and sustain the performance of headmasters, parents, teachers and students. These practices may include strengthening district and school cultures, modifying school structures and building collaborative processes that match the changing nature of the school's improvement agenda (Leithwood et al, 2004). Thus, they will work in creating and sustaining a competitive school, empowering others to make

significant decisions, providing instructional guidance and developing and implementing strategic and school-improvement plans. Likewise, Dimmock (2003) argued that leadership of learning-centred schools emphasise on creation of an organizational culture that values learning for all and a positive, collaborative climate of human relations; allocation of human, financial and physical resources that supports learning for all.

Objectives

The researchers analyzed the NUEPA/U-DISE 2014/15 data with the objectives of:

- Examining the student-friendliness of physical climate in elementary schools of NER,
- Identifying the gaps for further intervention in each State and
- Pinpointing key strategies and areas of urgent intervention.

Rationale

EMIS-NUEPA has compiled elementary schools data of the States based on four thematic areas, with each, in turn, having its own indicators. These include school-related theme (26 indicators), facility-related theme (18 indicators), enrolment-related theme (13 indicators), and, finally, teacher-related theme with 15 indicators. EMIS-NUEPA has invited researchers to analyse the data as per their areas of interest. Thus, the researchers took this opportunity and selected a few of the pertinent school climate indicators, as per the conceptual framework. These are intended to give an insight to policy-makers and implementers to take evidence-based decisions and measures for the benefits of students. Overall, this will lead to a positive school climate, school improvement and, ultimately, to school effectiveness based on the analysis of available data. It can again lead to and give insight for further researches, decisions, interventions and strategies based on these concrete evidences.

States of North East India

North East India is a region comprising of eight States commonly known as the “8 Sisters” which comprise Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The area is usually known as the true frontier region. The region has international borders with the four neighbouring countries of Bhutan, China, Myanmar and Bangladesh. It is also known as one of the most ethnically, faithfully, culturally and linguistically diverse region in Asia, with each State having its own distinct culture and tradition and together hosting more than 166 tribes speaking a wide range of languages.

MAP 1
North East Region



Limitations

The study focussed on elementary schools in general and has not discussed in detail about lower and upper primary schools separately. The study fully depended on quantitative secondary data based on the data of Unified District Information System for Education (U-DISE) of National University of Educational Planning and Administration (NUEPA). The research also addressed only some key indicators of student friendliness of the physical climate that is expressed only in terms of fencing, classrooms, toilets, water, library, and computer services.

Method

The study utilised quantitative approach where it generated the data from NUEPA/U-DISE 2014/15 report and some qualitative data from policies, circulars and proclamations of the Central government and States. Based on the available data, the researchers detailed the unique achievements or gaps of the States to enable others to learn and benefit from such information. Thus, the researchers reviewed the available documents related to the States and the themes were also viewed in the States' and national contexts. The first stage in this study was the conducting of extensive review and reading of available documents at the national (India) level. In so doing, it identified potential themes from U-DISE data presented in tables, maps or /and graphs.

Review of policy and strategic documents, amendments, circulars, reports and other relevant literature and legal frameworks in the education of children and their rights were done as a reference points for the analysis. Data capturing template/ frame of analysis was crafted to guide the researchers in summarising the available online data though there was a need to evolve continuously while the researchers were studying the data as well as preparing the report.

Analyses and Findings

This section is the synthesis of the substantial findings of the report to illustrate the physical climate of schools and commitment of the Educational Leadership in making elementary schools healthy and friendly for students in the region, and identifying the gaps for further pinpointing key areas of urgent intervention. Accordingly, key thematic areas of physical dimensions (like fencing, playground, water, toilet, classrooms, library, and computer) were identified for the following presentation of the data.

Demographic Data of North East Region

The demographic data is the data regarding the total number of districts, blocks, villages, schools, enrolment and number of teachers in each State and at the Region level.

TABLE 1
Demographic Data of North East Region

<i>States</i>	<i>Districts</i>	<i>Blocks</i>	<i>Villages</i>	<i>Schools</i>	<i>Enrolment</i>	<i>Teachers</i>	<i>Students per school</i>	<i>Teacher students ratio</i>
Arunachal Pradesh	20	99	2,912	3,903	325,293	21,085	83	1:15
Assam	27	145	21,802	65,141	5,853,278	296,609	90	1:20
Manipur	9	35	2,425	4,858	508,056	38,081	105	1:13
Meghalaya	11	41	6,144	13,175	756,455	43,170	57	1:18
Mizoram	8	36	847	3,067	214,175	18,747	70	1:11
Nagaland	11	47	1,493	2,963	354,310	29,050	120	1:12
Sikkim	4	29	760	1,274	110,808	13,625	87	1:8
Tripura	8	69	1,085	4,818	577,215	47,255	120	1:12
Total	98	501	37,468	99,199	8,699,590	507,622	88	1:17

As depicted in Table 1, North East Region encompasses eight states, with a total of 98 districts between them. The highest number of 27 districts is in Assam while Sikkim has the least number of districts. Incidentally, both Meghalaya and Nagaland have the same number of 11 districts each. After Assam, Arunachal Pradesh has the highest number of districts (20). Assam also maintains its lead position through the highest number of Blocks (145), villages (21,802), schools (65,141) with the highest enrolment (5,853,278) as well as number of teachers (296,609). When we see the distribution of teachers in NER, 58.4 per cent are in Assam with Meghalaya and Tripura each having nine per cent of the total population. As it happens, the number of teachers and enrolment depends on the number of schools and this, in turn, depends on the number of villages, blocks and districts. Thus, this is not the real indicator for students'- teacher ratio. It should not be interpreted as scarcity of teachers in this state that has fewer number of teachers compared to others like Sikkim and Mizoram.

Student Enrolment and Gender

The students' enrolment was calculated taking into consideration the schools managed by department of education, tribal and social welfare departments, local bodies, others and Central government (NUEPA, 2015). Based on this calculation, Table 2 has been drawn up from the raw data of NUEPA.

TABLE 2

School Enrolment and Gender Parity Index

<i>States</i>	<i>Primary School enrolment</i>			
	<i>Boys</i>	<i>Girls</i>	<i>Total</i>	<i>GPI</i>
Arunachal Pradesh	1,14,392	1,09,652	2,24,044	0.96
Assam	20,41,143	20,08,500	40,49,643	0.98
Manipur	1,79,865	1,75,432	3,55,297	0.98
Meghalaya	2,69,873	2,69,212	5,39,085	1.00
Mizoram	75,268	69,942	1,45,210	0.93
Nagaland	1,23,466	1,17,637	2,41,103	0.95
Sikkim	35,158	31,514	66,672	0.90
Tripura	1,91,172	1,83,290	3,74,462	0.96
NER	30,30,337	29,65,179	59,95,516	0.98
India	6,76,09,101	6,28,92,034	13,05,01,135	0.93

The calculation of percentage of enrolment in States depends on the population of school-age children. However, it can be seen that the gender parity index has become 1.00 in Meghalaya. As indicated in Table 2, the five States of Arunachal Pradesh, Assam, Manipur, Tripura and Nagaland have better gender parity index than that of the country viz. 0.93. It was only Sikkim, with the lowest gender parity index of 0.90, and Mizoram (0.93) that were relatively lower than the other States in this regard. This once again serves as a reminder to all educational stakeholders to work on gender sensitisation while making schools girl-friendly. In terms of the overall enrolment in the country, NER contributes 4.6 per cent, with girls accounting for 4.7 per cent and boys 4.5 per cent. The overall gender parity index in NER is encouraging at 0.98, which is better than the index for the country as a whole (0.93). Though the current status of the index is promising, strengthening the current practices is a key role that educational leaders will need to play.

Inclusion/ Disability

The Right of Children to Free and Compulsory Education Act 2009, (3.2) provides that a child suffering from disability should have the right to pursue free and compulsory elementary education. It urges educational leaders and teachers to ask for a fundamental change in how we think of learners and the process of learning. It is fully the responsibility of the school to facilitate context-based curriculum that can be accessed by all students, especially CWD. A good school is one that understands the individuality of each pupil (Hussain, 1962 in Aggrawal, 2013).

TABLE 3
Children with Disability

<i>State</i>	<i>Children with Disability enrolled in schools</i>		
	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Arunachal Pradesh	3,964	3,676	7,640
Assam	50,461	37,798	88,259
Manipur	4,667	3,728	8,395
Meghalaya	3,809	3,052	6,861
Mizoram	3,823	3,319	7,142
Nagaland	2,955	2,505	5,460
Sikkim	580	398	978
Tripura	2,032	1,477	3,509
NER	72,291	55,953	128,244
India	1,332,079	985,776	2,317,855

As depicted in Table 3, Assam has created access to education for more children with disability while Sikkim has provided access to the least number of such children. It is actually difficult to compare the percentage of children who got access and children who are still behind within States and at national level, since we do not have the statistics of all children with disability (CWD) in each State as a baseline or bench mark. However, in all the cases, the number of boys (56 per cent) was greater than girls (46 per cent). Among CWD who got access to education, NER constitutes only 5.5 per cent of the country. However, this statistical figure points to an emerging change in the attitude of the community about CWD as the reason they are being sent to schools. Thus, educational leaders and teachers need to be proactive in the management of these children and devising a mechanism where basic facilities can be availed by them so that they find the school environment physically healthy and friendly. Further, the school environment should be attractive and conducive enough for their parents /guardians and their brothers and sisters to develop the confidence and courage to send the children to schools. Additionally, facilitating and encouraging rigorous awareness sessions, discussions and trainings can be intervening points for educational leaders.

The Physical Dimensions of School Climate

Physical dimensions of school climate are among the important factors that can determine the healthiness of schools. Some of the key indicators of the physical climate dimensions have been presented in the following sections.

Classrooms

Classrooms are like homes for students. They feel at ease and at home whenever they are in their class and school. As such, the classrooms need to be attractive, conducive, well-ventilated and generally be in good condition.

CHART 2
Condition of Classrooms at States' Level

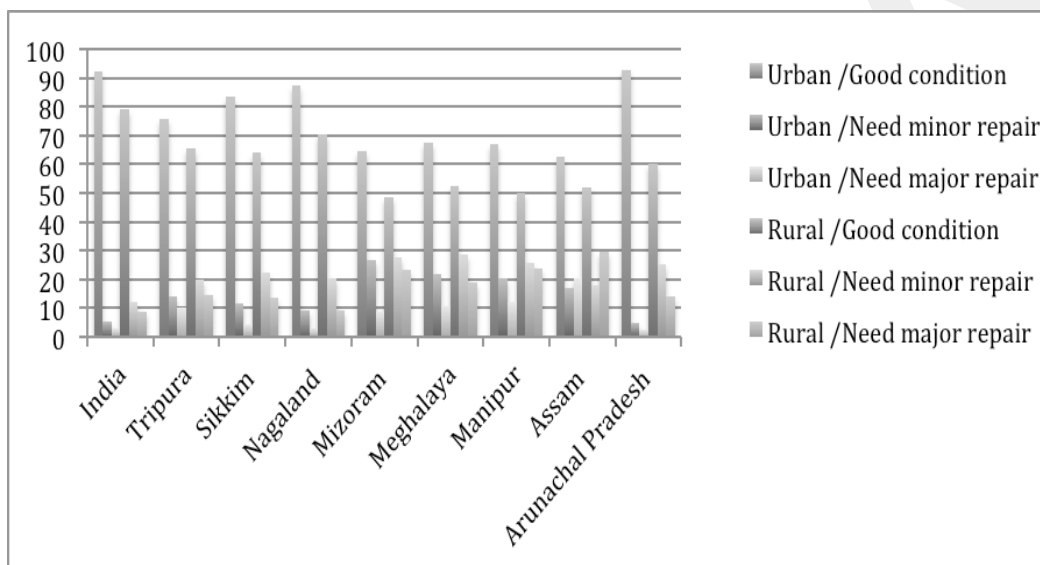


Chart 2 shows the existing condition of classrooms in NER. Thus, classrooms have been categorised into three broad categories viz. classes in good condition, those that need minor maintenance and those that need major maintenance. Accordingly, Arunachal Pradesh, Nagaland, Sikkim and Tripura have high numbers of classes in good condition. On the other hand, the highest number of classes that need major maintenance are found in Assam, with 20.33 per cent in urban and 29.85 per cent in rural, Manipur (12.42 per cent in urban and 23.87 per cent in rural) and Mizoram (8.65 per cent in urban and 23.31 per cent in rural).

The existing status of schools serves to pinpoint and highlight the need for educational leaders to take measures for making the schools physically healthy and friendly by earmarking a budget for renovation/maintenance, mobilising local resources and, finally, preventing any possible physical or health-related risks and damages to children.

Availability of Toilets

It is universally agreed that the provision of proper and adequate sanitary facilities is essential (Krishnamacharyulu, 2014). It is an essential prerequisite for any public gathering site. Thus, schools as providers of the public service of education need to have toilets. In this

context, the availability of toilets in Mizoram, Sikkim and Tripura was almost 100 per cent for boys and 97 per cent and above for girls. However, it would have been more impressive if it were 100 per cent for all.

TABLE 4
Availability of Toilets (in per cent)

<i>States</i>	<i>Boys' Toilet</i>		<i>Girls' Toilet</i>	
	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>
Arunachal Pradesh	99.48	96.56	98.2	95.84
Assam	92.38	79.05	74.54	52.88
Manipur	99.21	95.32	98.46	93.81
Meghalaya	78.35	67.79	71.52	59.79
Mizoram	100	100	97.45	96.67
Nagaland	99.57	99.56	97.65	94.23
Sikkim	100	99.91	98.88	97.28
Tripura	100	99.95	95.05	99.82
India	97.75	95.05	92.82	86.13

The availability of toilets was least in the case of Meghalaya at 78.35 per cent for urban and 67.79 per cent for rural in the case of boys and 71.52 per cent and 59.79 per cent respectively for girls. This was followed by Assam (at 92.38 per cent for urban and 79.05 per cent for rural) for boys as against 74.54 per cent and 52.88 per cent respectively for girls. Their performance was below the aggregate of all States of India in both gender and location. The situation calls for the intervention of educational leaders at the earliest possible.

Availability of Drinking Water

The availability of water in schools, especially for girls, is not something that can be compromised. It is one of the rights of children and a prerequisite for their health while being a key indicator of school friendliness.

TABLE 5
Sources of Drinking Water

States	<i>Hand Pump</i>		<i>Well</i>		<i>Tap water</i>		<i>Other</i>		<i>None</i>	
	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>
Arunachal Pradesh	4.63	7.85	6.68	3.59	76.35	55.98	3.86	11.95	8.48	20.60
Assam	52.75	62.53	11.23	9.74	24.38	2.91	4.68	7.31	7.02	17.51
Manipur	5.37	4.95	3.99	7.92	35.28	16.29	53.53	57.88	1.84	12.91
Meghalaya	0.89	2.65	8.39	15.31	65.31	26.40	7.75	17.25	17.66	38.39
Mizoram	56.98	36.07	.55	2.03	33.81	29.38	7.32	21.52	1.33	10.95
Nagaland	1.71	2.85	17.31	13.15	41.67	31.58	30.13	28.18	9.19	24.25
Sikkim	0	0.42	0	0.25	96.84	89.74	3.16	6.53	0	3.05
Tripura	25.83	38.83	2.3	13.71	67.52	29.56	1.53	5.85	2.81	11.75
India	26.90	57.34	4.84	4.53	54.73	22.22	11.94	11.57	1.56	4.32

Based on the data mentioned in Table 5, regardless of the source of drinking water, Meghalaya is the State providing the least access to water for the school community, with 38.39 per cent of rural schools and 17.66 per cent of the urban schools in the State without drinking water. Following Meghalaya is Nagaland which has 9.19 per cent urban schools and 24.25 per cent of its rural schools without access to water. Likewise, Arunachal Pradesh (8.48 per cent in urban and 20.60 per cent in rural) and Assam (7.02 per cent in urban and 17.51 per cent in rural) provide the third and fourth least access to water for the school community. Sikkim is the best State in this regard, providing 100 per cent drinking water access to urban schools and 97 per cent to rural schools. Mizoram accounted for the next best performance with 98 per cent urban and almost 89 per cent rural schools having access to water. Tripura (97 per cent in urban and 88 per cent in rural) and Manipur (98 per cent in urban and 87 per cent in rural) occupied the middle rank among the the eight sister States of North East Region. Based on the available data, the main source of water for schools in Arunachal Pradesh, Meghalaya, Nagaland, Sikkim and Tripura is tap water whereas handpump is the principal water source for schools in Mizoram and Assam. On the other hand, Manipur uses other sources which may be springs, ponds and rivers. In general, barring Sikkim, the availability of drinking water in elementary schools of NER States is below the aggregate performance of all States (India), which is 98 per cent in urban and 96 per cent in rural schools. At all States' level, handpump is the main source of drinking water (57.34 per cent) for rural schools and it is tap water (54.73 per cent) for urban schools. This is a basic gap that educational leaders should take note of as it can significantly affect the friendliness of schools, especially for girls, and the health of children, and make them susceptible to water-borne diseases.

School Boundary Fence / Walls

School boundary is one of the contributing factors for creating a trustworthy school environment. Beyond its physical connotation, it has a greater psychological bearing. On the face of it, school wall provides protection from physical attacks while delineating the boundaries of a school. Beyond these physical attributes, it has a positive psychological impact on students and teachers, especially among girls and female teachers, in that it infuses a sense of safety, protection and security. As depicted in Table 6, almost all the States performed below the aggregate of the country with the exception of Nagaland, which accounted for 67.58 per cent in the case of rural schools.

TABLE 6
School Boundary Fence / Walls

States	Schools having Boundary wall (in %)	
	Urban	Rural
Arunachal Pradesh	79.18	50.31
Assam	59.99	26.14
Manipur	61.5	26.30
Meghalaya	50.06	17.00
Mizoram	75.39	49.01
Nagaland	85.04	67.58
Sikkim	61.05	34.35
Tripura	65.47	15.68
India	86.1	60.84

Within the NER, Nagaland has more fenced schools both in urban (85.04 per cent) and rural schools (67.58 per cent), followed by Arunachal Pradesh with 79.18 per cent and 50.31 per cent respectively. The third highest fencing of schools was achieved by Mizoram (75.39 per cent in urban and 49.01 per cent in rural). The least fencing was reported in urban schools in Meghalaya (50.06 per cent) and in rural schools of Tripura at 15.68 per cent. These are all indicators that need to be taken cognizance of by educational leaders.

Availability of Playgrounds

The shortage of playgrounds in schools has been a matter of concern for the Department of School Education and Literacy, Ministry of Human Resource Development. Accordingly, vide its circular dated October 26, 2012 to States, it has explained that the intent of inclusion of playground as an infrastructural requirement for schools is to ensure that children have sufficient open space for sports and other physical activities during school hours. Thus, schools, especially in metropolises, big cities and other crowded localities having a paucity of

open areas, can make adequate arrangements in adjoining playgrounds/municipal parks, etc. for children to play outdoor games and engage in other physical activities.

TABLE 7
Availability of Playgrounds

<i>States</i>	<i>Playground</i>	
	<i>Urban</i>	<i>Rural</i>
Arunachal Pradesh	46.79	38.28
Assam	46.18	54.78
Manipur	65.49	52.08
Meghalaya	44.60	32.02
Mizoram	60.20	53.07
Nagaland	49.15	39.12
Sikkim	50.53	68.45
Tripura	57.03	61.73
India	69.59	58.13

As depicted in Table 7, the availability of playgrounds in Sikkim, Tripura and Assam was better in rural schools than urban ones. In the remaining States of NER, higher percentage of urban schools have access to playgrounds. The States of Manipur (65.49 per cent) and Mizoram (60.20 per cent) were relatively better in urban schools compared to the other Sister States. In rural schools, Sikkim (68.45 per cent) and Tripura (61.73 per cent) have ensured more playgrounds in their elementary school While notching better performance in this regard than the aggregate of all States of India. However, the availability of playgrounds in the urban schools of NER States is lower than the country aggregate of 69.59 per cent.

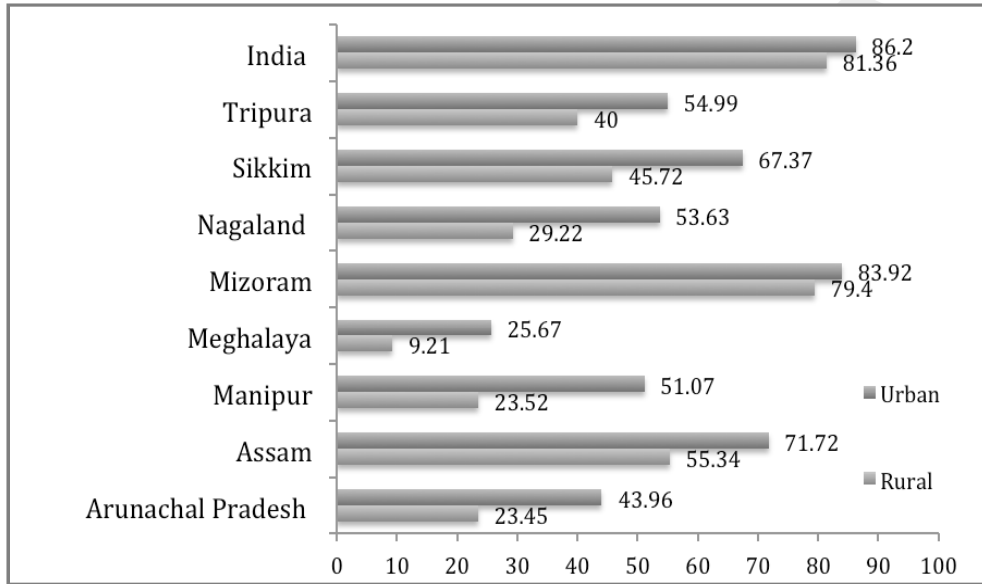
Availability of Library

Library is not an end in itself and rather is a means to our end. It is an instrument for educational excellence and gateway to knowledge, a means of self-learning for each individual of the society (Krishnamacharyulu, 2014). Library is not only a place where children can get books and computers but also a centre of communication or interaction, investigation and a means of developing the reading habit in children.

Based on Chart 3, in all States, the number of schools having library is higher in urban, with the highest number found in Mizoram (83.92 per cent in urban and 79.40 per cent in rural). However, all the States of NER are having far below the country level (86.20 per cent in urban and 81.36 per cent in rural) of schools with library facility. The least number of schools with library facility in the NER is found in Meghalaya (25.67 per cent in urban and 9.21 per cent in rural). This is one of the gaps that the States need to work on in the coming

years to enable children have access to library services as in other States of the country since equity is one of the concerns as well as the right of children.

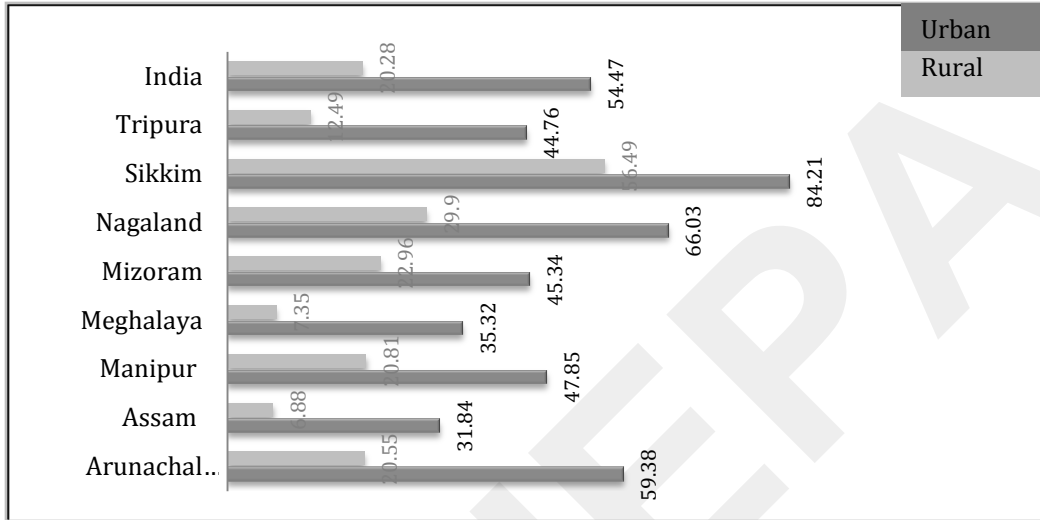
CHART 3
Schools having library in each State



Access to Computers

Computers are taking over the world which is swiftly jumping from traditional teaching reliance on textbooks to the use of today's superfast technology (Ramani, 2015). Computer is now becoming the key media in the teaching-learning field. It has grown to be an attractive teaching aid, laboratory, and library, even a teacher with pre-designed programs in either asynchronous and/or synchronous ways. It has the advantage of motivating students to deal with complex situations, transforming academic experiences, providing a flexible learning process to individuals, developing critical thinking, besides providing recreation with the aid of games/puzzles, etc. (Ramani, 2015).

CHART 4
Availability of Computer



As depicted in Chart 4, in all States, the availability of computers in urban schools is better than rural. Among States of NER, Sikkim created the highest access to computers both in urban (84.21 per cent) and rural (56.49 per cent), which is, incidentally, by far greater than even the country aggregate reported (54.47 per cent in urban and 20.28 per cent rural). Sikkim was followed by States like Nagaland (66.03 per cent), Arunachal Pradesh (59.38 per cent), Manipur (47.88 per cent) and Mizoram (45.34 per cent) in having better performance in urban compared to other States in NER. On the other hand, Assam (31.84 per cent in urban and 6.88 per cent in rural) had the least access to computer services for elementary schools students, followed by Meghalaya (35.32 per cent in urban and 7.35 per cent in rural). Arunachal Pradesh and Nagaland States performed better than the aggregate of the States both in the urban (59.38 per cent, 66.03 per cent) and rural (20.55 per cent, 29.90 per cent) school contexts respectively.

Conclusion and Recommendations

A friendly and healthy school climate takes into account the well-being of students, in terms of their social, psychological and emotional safety, and physical security of the area and a gender-sensitive environment where students feel socially, emotionally and physically safe. These are again the rights of the students that call for the concern of teachers and educational leaders. These demands for addressing the key thematic areas of school friendliness encompass the provision of at least a healthy and safe school environment, besides aspects of inclusiveness, gender participation, leadership and efficiency. The physical dimension, which is part and parcel of the overall school climate, manifests itself in the presentation of the school building and classrooms, the size of the school and the

students'-teacher ratio in the classroom besides the organisation of classes. These underline the roles of leadership, especially educational leaders, as it is a way of influencing individuals and groups within an organization, helping them in setting up goals, and guiding them towards achievement of those goals. As it happens, a single input by a leader can have multiple outcomes on the performance of headmasters, parents, teachers and students.

The researchers have selected key indicators to study school climate, in terms of friendliness of physical climate, from the data provided by NUEPA 2014-15 through U-DISE and analysed them in line with their availability at each State of North East Region (NER) of India and all States (pan India) levels. The data was analysed with the key objectives of examining the student- friendliness of the physical climate in elementary schools of NER, identifying the gaps for further measures and pinpointing key areas of urgent intervention on the basis of comparison made among the eight sister states and with the aggregate score of the country. Thereafter, the key findings were reported from the data analysis.

The overall gender parity index of the North East Region is promising and has attained an average 0.98 which is better than the overall index of the country (0.93). There are also efforts to bring children with disability to schools as a result of which 128, 244 CWD had joined schools, in the process contributing around 5.5 per cent of the country's enrolment report. However, in order to strengthen the momentum, educational leaders need to work more on building awareness, training of teachers and making schools disability-friendly so that parents and guardians are convinced to send their children and wards to schools.

The physical dimension of school climate has encompassed classrooms, availability of toilets and water, fencing, playground, library and computers. Based on these indicators, Assam is the State with the highest number of classes that need major maintenance (20.33 per cent in urban and 29.85 per cent in rural) followed by Manipur with 12.42 per cent in urban and 23.87 per cent in rural, and Mizoram (8.65 per cent in urban and 23.31 per cent in rural). With regard to toilets, the availability in Mizoram, Sikkim, and Tripura was almost 100 per cent for boys and 97 per cent and above for girls. The least availability of toilets was observed in Meghalaya, followed by Assam, even as the overall performance of the region in this regard was below the country performance. These observed gaps necessitate the rigorous efforts of the educational leadership in

- Reassessing and prioritising further the needs, critical gaps of schools,
- Earmarking a budget and mobilising resources to renovate/ construct more classrooms, playgrounds, toilets and other schools facilities that can enhance the friendliness of the schools
- As mere construction of classrooms, playgrounds and toilets, per se, will not make schools students'-friendly, the appearance of the school building and its classrooms, school size for each construction, order and organization of facilities in the school and ratio of students to teachers in the classroom should be as per the standards of the country.

In respect of availability of water in schools, it was least available in Meghalaya, followed by Nagaland, whereas Sikkim had the highest availability of water with access to 100 per cent of the urban schools and 97 per cent of rural schools, followed by Mizoram at 98per cent in urban and almost 89 per cent in rural schools. Thus, educational leadership

would need to give due attention to WASH interventions that can address the basic needs of water, sanitation and health-related issues.

With regard to the availability of library in NER schools, it was far below the country level (86.20 per cent in urban and 81.36 per cent in rural). The States require to address the gaps in aspects of library, playground, fence and computer to achieve equity in the region in line with the rights of the child.

In general, it is recommended that education leaders work in collaboration across schools which implies sharing resources, knowledge transfer and mutual learning. Working in this way, they can automatically become catalysts for change and development and take on the prime task of leading a change. Consequently, one of the major implications of collaborative ways of working between schools is the redefinition, relocation and reconceptualization of leadership within and between schools, and its implementation as well. This can help in changing the conventional wisdom of leadership as role or position to alternative interpretations of leadership and the beginnings of a 'paradigm shift' away from orthodox thinking about leadership practices in schools to transformative leadership.

The researchers have also included key remarks for educational leaders under each sub-heading, clearly articulating their existing status, their importance and outlook. Thus, the researchers have concluded that States need to make appropriate interventions, as per the gaps indicated and suggestions proposed, to ensure that the physical climate of schools becomes healthy, motivating and friendly for students.

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Book Reviews

AHMED, Rusmini Ku, (2014): *Preparing Schools for the Future: Moving Away from Conventional Approach*. (2014): Malaysia: Institut Aminuddin Baki, Ministry of Education. Pages: 78. (paperback); ISBN: 978-967-0504-31-1.

With the aim of moving towards building a high-income Malaysia, the book attempts to describe the need for imparting 21st century skills among children in order to prepare them in an age of Information Technology that is changing the world of education.

The first chapter discusses the challenges faced in Malaysia. It begins with the description of challenges in meeting the needs of the 21st century, using 'skilling for learning', proposed by Trillings and Fadel (2009), to focus on the ability to acquire and apply knowledge; and its know-how for application using soft skills such as problem-solving, communication, teamwork, use of technology, and innovations to be included in the curriculum. The author discusses the challenges in achieving the goals that necessitate redefining pedagogical approaches. For this purpose, the author maps the generational shift for learning from what she refers to as Baby boomers of 1946-1964, Generation X; Generation Y, Generation Z, and Generation Alpha in the most recent times to embrace good moral values for preparing children to create a civic-conscious nation. These challenges are centred around preparing students to learn with children coming from diverse cultures from across the globe.

In the second chapter, the author narrates the experiences of her learning walks during field visits to schools. She describes how traditional or conventional teaching prevails in an overwhelming manner even today wherein teachers are forced to compromise with using the effective pedagogical skills and competencies to fulfil expectations of the education department. In this context, she discusses several traditional approaches to teaching and learning in the Malaysian context. She concludes this chapter by highlighting the differences between 20th and 21st century classrooms.

The third chapter dwells on the soft skills required for 21st century schools through reviewing the existing literature wherein the important soft skills are identified as problem-solving, communications, working in teams, social skills and leadership skills, and critical thinking. In the light of the new demand for acquiring 21st century soft skills, the fourth chapter focusses on the rethinking of teaching-learning, including curriculum and evaluation, while describing as to how it should emphasize on adopting new technology, including video games and activities with which children connect easily, student population diversity, collaborative learning and dialogue, feedback and an environment that views students as creators of knowledge. In the fifth chapter, the author 'puts together' five critical aspects of 21st century learning viz. quality teachers, competent school leaders and professional development, quality schools, close collaboration and networking community, visionary policy-makers.

The book contains five short chapters, of which the first and the third chapters summarise the existing literature. At the end of every chapter author uses a generic term 'Summing up' and mentions 'Putting together' in the final chapter. It reflects rather a casual approach while writing the book. The second chapter describes the author's field work in an extremely superficial manner that has very little connection with the other chapters in the book. In other words, the effort towards building a perspective for the study, and drawing policy implications that the book is expected to do involving an in-depth collection of data and its thorough analysis is missing. For a document of this nature which intends to address the country's ambition to move towards a high-income category of nations, positioning the results within the current economic and social discourses as theoretical framework is crucial. This is lacking, resulting in weak prescription of suitable policy. In fact, the uniqueness of 21st century skills, that is often seen as necessary for today's students, is not discussed in depth, barring just a passing mention. These are already being dealt with in the changing pedagogies of today in many countries. Thus, it is difficult to identify the new contribution of this book to the knowledge world which the author seeks to emphasise as 21st century skill. Notwithstanding this, this book may be regarded as an introduction to 21st century learning skills for the beginners. The author has partially attempted to address the need for change in Malaysia's education system through this book.

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ALTBACH, P.G. (2016): *Global Perspectives on Higher Education, Baltimore*, Johns Hopkins University Press, ISBN: 978-1-4214-1926-8 (Hard Cover), Pages:332, Price: \$ 34.95

In the past two decades, higher education systems, policies and institutions are being transformed by globalisation through the widening, deepening and speeding up of worldwide integration. There are new actors, new rationales, new programmes, new regulators and the new context of globalization. Globalisation has become a formidable force for change as evidenced by the development of Indian higher education sector. These developments have given rise to challenges and opportunities alike.

Globalisation has affected each country in a different way due to a nation's individual history, traditions, culture and priorities and also affected education, particularly the higher education sector, to a great extent. Globalisation is pushing higher education towards greater international involvement. This process is often known as internationalisation of tertiary education. Higher education has become a market-oriented activity attracting foreign capital, inviting competition and producing more profit than the other sectors. Knowledge has become international goods to be traded and it transcends national

boundaries faster than capital and people. Thus, we can regard Globalisation as the root cause of changes taking place in the higher education.

Philip Altbach's 'Global Perspectives on Higher Education' provides impressive insight into the way globalisation and internationalisation have, to a large extent, impacted and changed higher education. In the opening chapter, he started with a discussion on the emergence and reality of contemporary internationalisation, which is more widespread and deeper than earlier experiences due to the globalisation of economies and academic systems. Further, it has moved beyond its niche area of exchanges and study abroad to international branch campuses, joint degree programs, university partnerships and many other global initiatives.

Under the global context, the author has examined in depth the academic revolution in higher education during the past half century while analysing various factors that have impelled the current academic revolution. These include mass higher education, globalisation, the advent of the knowledge society and the importance of research universities, and information technology. These factors have, in turn, created additional changes such as the rise of the private sector and privatization; the accountability movement, including today's emphasis on measuring the outcomes of higher education; distance education; and others.

The authors briefly explain the wide-ranging discussion of trends in global higher education that have been influenced by massification and the demands of the global knowledge economy. The challenge is to recognize the complexities and nuances of the global higher education context- an academic world fraught with inequalities in which market and commercial forces increasingly dominate. The traditional domination of the north over the south remains largely intact. Ameliorating inequalities in the context of mass higher education is not an easy task. It is observed that inequalities among national higher education systems as well as within countries have increased in the past several decades. Globalisation has divided the world into centres (which are English-speaking countries like the USA, the UK and Canada etc.,) and peripheries (developing and underdeveloped countries); the centres grow stronger and more dominant and the peripheries become increasingly marginalized. Centres and peripheries provide an analytical context for academic relationship.

Worldwide educational inequality is enhanced by the policies of advanced economies to encourage the best talent to come, and contribute to those countries' higher education and technological development. It is not surprising that much of the global information technology infrastructure, including the massive open online courses (MOOCs), is largely controlled by the advanced economies and by multinational corporations.

The book focuses special attention on four large countries, the BRICs (Brazil, Russia, India, and China) because of the emerging global economies. These countries see higher education as a key ingredient to future economic development, and have developed impressive plans for their universities. Observers worldwide- pointing to impressive plans and especially in China, increased spending on higher education and improved performance in research, patents and publications- have been optimistic about the future prospects of the BRICs. The author's analysis shows that BRIC countries face quite significant challenges in their efforts to build world-class higher education systems.

The author emphasises that research universities in developing countries will need to select fields of research that are affordable and linked to national needs and priorities. Appropriate links with private sector companies, including multinational corporations, may be necessary and a balance between applied and basic research will need to be worked out. The author is very emphatic in observing that Asian academic institutions follow Western trends.

With India and China building sophisticated economies and having experienced high levels of economic growth, both countries are according priority to higher education to produce highly educated personnel and high-quality research. Chapter 16 provides a comparative assessment of the development of the higher education system in two countries, the challenges being faced, and what the future holds. Their higher education systems are already among the world's largest- with China first and India second in terms of enrolments- and they are major exporters of students to other countries. Although the original booms of China and India were fuelled largely by cheap labour and inexpensive low-end manufacturing, the situation has changed to a considerable degree and the economic future of both countries depends on a better educated workforce. Universities are central in the race to provide respective workforces with skills to make them competitive in the global knowledge system. However, significant quality problems continued to exist in less selective colleges and universities in both countries.

The author concludes with essays on the academic profession and on students- the two central elements of university everywhere. The author analyses the determinants of academic salaries in 28 countries. He finds that most important determinants include rank, seniority, academic qualifications, and publications with rank and seniority often carrying the most weight. Another trend apparent in this research was the extent to which salaries vary by institution type, geographical location, and discipline. Research universities invariably offer higher salaries than teaching institutions. Barring few exceptions, public universities tend to pay better and offer superior conditions than private universities. There are many variations because of historical circumstances, level of socio-political development, and political and educational systems. Effective movements by students depend on external circumstances for their success: on the media and on acceptance by key social groups of the legitimacy of the activist movement. Student movements, by themselves, are never powerful enough to overturn a government. The movement depends on its goal and tactics and on the perception of legitimacy that it manages to create. Student movements seem to go through cycles. Since the 1960s, in most industrialized nations, student movements have been neither active nor successful. The collapse of communism had a profound effect on leftist student activism. Marxism was one of the main ideological backbones of many student movements, and it was largely discredited by the failure of most of the world's state socialist regimes.

Further, the impact of globalisation on higher education can also be seen on curriculum development, as new curriculum is mainly based on the large academic system of the north, especially USA, UK and France. While developing countries are facing crisis due to continued expansion, deteriorating standards, limited resources, political involvement etc., therefore the changes in curriculum, as a result of globalization, cannot hold good.

We can say that the internet has major implications for higher education; the process of development is still taking place. The authors also discuss about the ubiquitous role of the

English language in research communication and it is increasingly the dominant academic language, with widespread implications.

This book is essential reading for researchers in the field of higher education, for policy-makers and for higher education institutions.

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ABRAHAM, George (ed.) (2011): *College Autonomy in India — Performance and Prospects*,
Authorspress, Delhi

The Indian higher education sector has been predominantly characterised by the affiliating pattern. That such a system might promote uniform mediocrity by preventing diversification of courses and customisation of syllabus, virtually converting colleges into tutorial institutions and making teaching-learning process a mere examination qualifying process, was realised by the Education Commission as early as in the mid-1960s. Yet the actual process of giving autonomy to colleges began in 1978, with 12 colleges in Tamil Nadu being accorded the autonomous status. The book entitled 'College Autonomy in India—Performance and Prospects', edited by Abraham George, is a collection of 25 well-written articles on different aspects of autonomy. Barring four articles, which are more specific to Kerala, the rest of the articles delineate the historical evolution of autonomous colleges in India, their growth, performance, challenges, prospects etc..

In the first article of the volume 'The History, Evolution and Relevance of College Autonomy in India', Xavier Alphonse S.J. gives a brief historical evolution of college autonomy in the country. After delineating the ills of the affiliating system, he mentions the objectives and advantages of autonomy. He lists the best practices in autonomous colleges. He also gives specific suggestions to achieve further improvement in the functioning of autonomous colleges.

Mani Jacob, in his article 'College Autonomy—A Historic Educational Innovation', describes college autonomy as the most significant innovation introduced in the Indian Higher Education sector and analyses the strategies adopted while switching over from the affiliating system to one of autonomy.

In his article 'Advantages of Autonomous Colleges', S. Ignacimuthu S.J. argues for autonomy as it allows an institution to innovate, review and redesign their programmes, introduce choice-based credit system and value-based education etc.. For improving quality of education, teachers should be given the opportunity for their professional development. At the same time, there should be a transparent system of appraisal of teachers to ensure their integrity and accountability.

Francis Soundararaj, in his article 'Academic Autonomy for Change Towards Quality', concentrates on the academic dimension of autonomy and provides a detailed account of the

construction of an integrated curricular model in an autonomous institution as part of the strategy for academic development and quality assurance. He feels that academic autonomy, envisaged by the UGC, is so designed as to help institutions do away with the dead academic practices of an obsolete system of higher education discarded by many countries long ago.

S.P. Thyagarajan, in his article 'Autonomous Colleges and Relationship with the University, State Government and the UGC', mentions seven principles which he calls good and quality practices. While discussing the role of the university, state government and the UGC in relation to autonomous colleges, he stresses the need for achieving autonomy with accountability. In this context, he lays emphasis on the development of a code of ethics for the members of the teaching community.

In her article 'Autonomous Colleges-Prospects and Challenges', Mariamma A. Varghese, while focusing on three dimensions of autonomy namely, academic, administrative and financial, suggests college autonomy as a partial solution to the general problem of universities lagging behind in the pursuit of academic excellence. She emphasises that in order to establish the credibility of autonomous colleges, norms of performance are to be laid down. Again, these institutions should have minimum interference from the political system to be able to function effectively.

A. Sukumaran Nair, in his paper 'Institutional Autonomy for Quality Improvement of Higher Education', argues that in order to attain international standards and compete with advanced countries, colleges have to be made free from dull uniformity, which have been maintained for several decades at the cost of quality. He supports the view that giving greater freedom to educational institutions and making them socially accountable is a better method of ensuring quality than exercising rigid controls over them. He feels that there is a need to frame a common code of conduct and operational procedures at the national level with regard to granting autonomy alongwith adequate safeguards against the misuse of autonomy.

D. Peter Jayapandian, in his article 'College Autonomy', observes that under the affiliating system, the teacher plays only the secondary role in the whole process of teaching, learning and evaluation whereas the primary role of the teacher is restored under autonomy.

S. John Britto S.J., in his article 'Teaching, Research and Extension in Autonomous Colleges', argues that by redesigning their academic strategies, autonomous colleges have the potential to make significant contributions in the domains of teaching, research and extension. However, he mentions that teachers need to be most resourceful and innovative in ensuring the optimum implementation of these strategies.

B.S. Ponmudiraj, in his article 'Autonomous Colleges in India—A Step Towards Quality Assurance', explains how autonomy can help an institution improve quality through reforms in curriculum, teaching-learning, leadership and governance and particularly in evaluation systems.

Annamma Philip and Ordetta Mendoza, in their article 'College Autonomy-A Privilege to Practise', hail college autonomy as it allows teachers enjoy greater freedom to be innovative and to make classrooms vibrant by using technology-based teaching and learning methods.

Nirmala Jeyaraj, in her article 'College Autonomy—Gains and Constraints', reminds that autonomy involves academic freedom, coupled with responsibility, requiring self-regulation. She also mentions some of the constraints and limitations in the autonomous system. She

suggests setting up a good control and monitoring system in curriculum design, teaching and evaluation for ensuring proper use of freedom.

A. Albert Muthumalai S. J., in his article 'Academic Autonomy', gives an account of the efforts undertaken by the Loyola College, Chennai, which was conferred autonomous status in 1978, towards quality enhancement through curriculum modification, skill formation, value education and outreach programmes.

K. Nimala Prasad, in her article 'Challenges and Problems of Higher Education in India—The Role of Self-Financing Autonomous Colleges', suggests some reforms in the teaching, learning and evaluation mechanism. She lays special emphasis on skill training, increased industry-institution interface, promotion of entrepreneurship and optimum use of information and communication technology etc. in the context of an autonomous self-financing institution.

M. Thavamani, in her article 'Autonomy—An Analysis', describes autonomy as a healthy way to reform higher education in the country. The article highlights the qualities to be expected of the institutions willing to become autonomous. It also mentions the importance of accountability in the autonomous scheme.

In her article 'Autonomy for Colleges in the 21st Century—Relevance, Challenges and Suggestions', Philomena Cardoza highlights the shortcomings of the affiliating system and the advantages of autonomy. She stresses on promoting human, ethical, social and spiritual values for the overall quality improvement of education imparted through autonomous colleges.

S. Sivasubramaniam's article 'Some Glimpses on the Style and Functioning of Autonomy in Colleges' argues that total teamwork by all the stakeholders is essential for the successful functioning of an autonomous institution. The author stresses on the importance of effective grievance-redressal mechanisms for the successful functioning of autonomous institutions.

R. B. Lal, in his article 'Autonomy: Prospects and Challenges', discusses mainly about university autonomy which involves both administrative and academic freedom. He calls for systematic transfer of best practices by evolving a process of identifying, learning and adapting outstanding practices and processes from any organisation, anywhere in the world.

Articles included in Part II of the volume highlight the need for introducing autonomy in the state of Kerala besides dealing with the salient attributes and issues related to academic autonomy in India. M.V Pylee's article 'College Autonomy: A Must for Higher Standards' briefly mentions the changes in the higher education scenario and explains the importance of college autonomy in the changed context.

B. Ekbal, in his article 'Autonomous Colleges', sketches briefly the evolution of the concept of autonomous colleges in India and the experience of Kerala with the scheme. He analyses the relevance of college autonomy for the state and gives an account of what is to be done for its introduction at the college, university and state government levels. Ninan Abraham, in his article 'The Autonomous College', discusses the benefits of shifting from affiliation to autonomy and analyses the major issues involved.

Cyriac Thomas, in his article 'Autonomy for Colleges in Kerala', gives a detailed account of the evolution of autonomous colleges in India and the initiatives already taken for the introduction of autonomy in the state of Kerala.

J. V. Vilanilam, in his article 'Why are We Still having the Burden of Affiliation in the 21st Century? Why not Autonomy?', while advancing a forceful argument in favour of introducing academic autonomy in Kerala, calls for a radical change in the system of affiliation.

In the concluding article 'Academic Autonomy for Colleges in Kerala—Proactive Initiatives and Planning Need of the Hour', Abraham George describes the major apprehensions and misconceptions regarding the scheme of autonomy while attempting to provide clarification to these apprehensions and issues. This article also provides broad guidelines with regard to the planning and preparation to be undertaken by colleges aspiring to become autonomous.

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COLLINI, Stefan (2017): *Speaking of Universities*, London-New York: Verso Publisher, ISBN: 978-1786631398, 304 pp., £ 16.99

If I have to summarise Stefan Collini's latest book, *Speaking of Universities*, in a sentence I would say: it is a polite but firm rebuttal of the global trend of converting higher education from a public good to private, for profit, commodity.

Historically, there has been a discernible evolution of the concept of knowledge in human society. For the ancients, knowledge was conceived as having an intrinsic value. It was Socrates who first proclaimed: 'virtue is knowledge'. His student, Plato, however, reversed the statement and declared: 'knowledge is virtue'. Nevertheless, the essence of both the assertions remained the same: knowledge is an end in itself. The idea continued till the Middle Ages. Therefore, when the universities began in medieval Europe, Pope Gregory IX described them as "wisdom's special workshop". However, after renaissance, in the newly emerging modern world, the 17th century British philosopher Francis Bacon made the paradigm shift and announced: 'knowledge is power'. It was a paradigm shift because for the first time in the history of human thought, he, by anticipating the 19th century utilitarianism, maintained that knowledge is a means to an end. In other words, knowledge has a utility value. Afterwards, utility aspect of knowledge continued to be stressed in the modern society though it took different forms in different contexts. For instance, in the totalitarian regimes of the early 20th century, it took the form of: 'power is knowledge'. That is, those in power decided what knowledge was or what was worth knowing. For instance, in Germany during the 1930s, the Nazis repudiated the theories developed by the Jewish scientists, declaring them as not worth knowing. Likewise, in Soviet Russia, Karl Marx was the acknowledged source of knowledge. Still, however, knowledge continued, to an extent, to be perceived as the public good. The society valued and supported the institutions imparting knowledge. However, now, in the neo-liberal world, which emerged in the late 20th century, a new concept of knowledge is in vogue: 'knowledge is a marketable commodity'. Hence, it has

ceased to be assumed as a highly valued public good. Instead, it is believed to be a 'for profit' private good. In the neo-liberal economic philosophy, people are treated as economic agents; the most important relationship is the one between the buyers and the sellers. The consumer is the king; his or her choice is now sovereign. The role of government in this conception of modern society is largely that of a regulator. And the main concern of the regulator is to ensure that there is a perfect competition in markets, serving the interests of the consumers by providing higher quality goods and services at lower prices. Not surprisingly, in such a milieu, the universities are now increasingly perceived more as business enterprises than centres of learning, and the students are viewed as customers seeking value for money. There is an acute competition among the universities of the world to attract foreign students. And the government assumes a progressively more active role as the protector of the consumers, systematically imposing new regulations for funding, governance, and assessment, ostensibly for market corrections.

In this depressing context, Stefan Collini is one of the most powerful dissenters relentlessly challenging the dominant neo-liberal philosophy followed in the realm of higher education, mainly with reference to Britain. Stefan Collini, a Professor Emeritus of Intellectual History and English Literature at Cambridge University, and a Fellow of the British Academy, has been intensely engaged in public discourse about the contemporary British universities, by contributing to the *London Review of Books*, *Times Literary Supplement*, *Guardian*, and the *Nation*. His latest book, *Speaking of Universities*, like his previously published *What Are Universities For?* (2012), is a severe critique of the policies adopted by British governments since the mid-1980s. Those who have read *What Are Universities For?* will find that Collini's latest book is also written with the same perspective; highlighting the disastrous policies of British governments towards the higher education of the country. Not surprisingly, therefore, a reader will find a sort of continuity of the main arguments in both the books, though in the latest book, he has elaborated upon his views in the context of more recent (post-2012) developments.

Speaking of Universities consists of 11 chapters, mostly presented as talks, lectures, and articles by the author between 2011 and 2016, classified in three parts; Part I: Analysis, Part II: Critiques, and Part III: Occasions. Obviously, therefore, the book lacks coherence.

Although the issues discussed in the book pertain to Britain, the book has global relevance mainly because many of the trends observed in the field of higher education of the United Kingdom (UK) are also found in several other countries such as USA, New Zealand, Australia, the Netherlands, and India, just to name a few. For instance, in Britain, Collini observes, there were 46 universities educating about 3, 50, 000 students in 1990. After 26 years, there were more than 140 universities with over two million students. But, as he notes, in recent decades there has been an enormous surge in the numbers both of universities and of students, all over the world. Apart from these quantitative changes, the qualitative changes taking place in the British universities in the past two or three decades, discussed by Collini, also are not peculiar to Britain. Procedures regarding, particularly, funding, assessment, quality control, and forms of governance of universities have changed drastically in many parts of the world. Hence, the experience of the UK can be a valuable guide to the policy-makers of several other countries, including India, slavishly following the neo-liberal economic policies and emulating some reforms, voluntarily or otherwise, introduced by some advanced countries in the sphere of higher education.

In the context of British universities, Collini asks some searching and pointed questions, such as: What is the university for? What are the consequences of 'commodification' of higher education? What are the consequences of the government measures introduced for academic accountability?

According to Collini, the consequences of the neo-liberal policies adopted by the UK in the field of higher education are counterproductive in several respects. Recounting how higher education in the UK has strayed from its original ideals, Collini is very much distressed by the extensive and fundamental changes in the recent policies of the British governments. He thinks that these changes threaten not only the previously institutionalised healthy academic practices, but also Britain's economic, social, political and cultural life.

Collini, to be sure, is not opposed to change; quite the contrary. But, examining the recent changes in the historical and comparative perspective, he finds them injurious to the well-being of the British academic life. His reference point is the Humboldtian ideal, developed in the 19th century Europe, stressing "... the pursuit and transmission of knowledge and its elaboration into *Wissenschaft*: the professional autonomy of the scholar was essential to this model, and teaching was often conceived as a form of apprenticeship..." (p.17). The model was successfully adapted by different Western countries with minor alterations compatible with their local milieu. The core values of the Humboldtian ideal, however, were elitism, professional autonomy, academic freedom, focus on humanities and pure sciences, and search of knowledge for the sake of knowledge. According to this ideal, the university was a privileged place manifestly devoted to disinterested inquiry. It was a place where the pursuit of knowledge was more important than any other utilitarian consideration. Although the students were prepared for future employment in the university, it was incidental; their training in critical, original, and creative thinking was the primary goal. The university was, therefore, much smaller and more intimately associated with dominant elites. It had a very limited role to play in the society and its economic development.

This ideal continued to be influential for a century and a half. Almost upto the mid-20th century, this ideal of the university was followed. After 1945, however, the university system started expanding numerically and attracted greater attention from both government and society; building pressure on the traditionally valued features of the university. But from 1980s onwards, perceptible changes started taking place. Their primary role, as engines of economic growth, is coming to be acknowledged, and their activities becoming more closely aligned with the needs of industry, finance, and commerce. Their financing is falling in line with the principles of a market economy, with debt-conscious students seeking value for money and research-users commissioning and paying for research projects. "...Customer 'choice' is now sovereign, and each agent is responsible for his or her economic salvation..." (p.158). "...Consumer satisfaction is recognized as the true test of success in a competitive marketplace. Management has replaced administration, with senior management team at the apex of an executive structure and all institutions now having a proper business plan. And internally, professional schools and vocational biomedical disciplines are coming to have a preponderant weight commensurate with their position as the chief income-generating programmes." (p.21-22).

Thus, since the mid-1980s, places still known as universities are being 'reformed' and reorganized; subordinating them to the society's economic needs. They have now emerged

as centres of applied expertise and vocational training. The universities conduct themselves more like business enterprises in a commercial marketplace rather than centres of erudition. A strange role-reversal has taken place whereby instead of the society serving the needs of the university, the university is expected to serve the needs of the society. The universities are now considered as the engines of economic growth of the society. Research is valued only if it contributes to technological innovations and teaching is appreciated if it prepares the students for lucrative employment. Thus, a fundamental tension has developed between intellectual, open-minded, inquiry and the more immediate instrumental aims.

Collini questions this ideological shift. Hence, he is extremely critical of successive British governments' disastrous policies towards the British universities and higher education, linking higher education and economic prosperity. He is not happy with the assumptions underlying the policies of the governments. Collini argues, with anecdotal evidence and detailed analysis of government documents, that the government policies are counter-productive and futile. The government bureaucrats and businessmen have destroyed traditional academic self-government, and the client vice-chancellors enthusiastically implement the latest government directives, replacing traditional self-government by the top-down control of a 'senior management team'. Traditionally, the university administration, including the vice-chancellor, was supportive to the academic staff. Now, administration has become 'management', which is becoming larger and more powerful, and the academic staff is subordinated to it. Consequently, there is a decline in teaching quality and autonomy of the university.

Collini is highly critical of the Research Excellence Framework (REF) introduced by the British government and the proposed Teaching Excellence Framework (TEF). He is not against accountability. But he argues, on the basis of his personal experience, that the instruments introduced in the name of accountability for measuring the academic contributions of individual academics, departments, and schools, are expensive and time-wasting. According to Collini, due to the REF and underfunding, the expansion of student numbers, teaching is undervalued by universities. Collini is also not in favour of the British government's policies for privatising the higher education, by making it easier for private providers to set up a university and acquire degree-awarding powers. He observes that the losers will be those students from ordinary families who will begin their careers with a huge burden of debt and winners will be the private for-profit colleges.

He offers a strong and powerful defence of the traditional role of pursuing knowledge as an end itself. He asserts that universities cannot simply be treated as the instruments of economic prosperity. Such a focus does not serve the needs of the state or individuals. According to him, intellectual quality and creativity is the core of the university. And for the long-term benefits of society, the primary focus of universities should be on extending and deepening human understanding along with supporting economic growth. He, therefore, disapproves of the fact that arts and humanities courses are being removed from the universities due to the cuts in funds by the British government. Collini thinks that this kind of philistinism is myopic, since these disciplines have intrinsic value for pure intellectual inquiry. In his opinion, academic research and the education of students should not be excessively concerned with narrow economic outcomes. He also stresses the importance of self-governance of the universities while acknowledging the tension between professional autonomy and public accountability. Interestingly, he uses an appendix for a concluding

note, making an appeal to re-establish the original purpose of higher education with appropriate public financing.

However, he believes that it is difficult to change the public discourse. But he favours a polite approach. He thinks it is not useful to adopt an offensively aggressive approach for this purpose, which would only alienate the policy-makers.

This book is a timely wake-up call. The message is loud and clear: No, Sir! Higher education is NOT a marketable commodity. Although the book is mainly focused on the British universities and highlights the harmful effects of the higher education policies of the British governments, it is extremely useful to the Indian academics and policy-makers, since we in India also emulate many academic policies of advanced countries in the name of globalisation and neo-liberal economy.

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