Empowering Education in Today's India

Edited by

Jesu Pudumai Doss Sahayadas Fernando Maria Charles Antonysamy

Don Bosco Youth Animation - South Asia New Delhi 2015 Title : Empowering Education in Today's India

Editors : Jesu Pudumai Doss,

Sahayadas Fernando,

Maria Charles Antonysamy

Subject: Education / Youth / India / Empowerment / Right to Education

Language : English

First Edition : 2015

Price : ₹ 360/- (€20, \$25)

ISBN : 978-81-929640-2-7

No. of Pages : 304

Printed by Bosco Society for Printing & Graphic Training

Okhla, New Delhi – 110 025, India

+ 91 11 26910729, e-mail: boscopress@gmail.com

Sponsored &

Published by: Don Bosco Youth Animation - South Asia

B-32, SPCI House, Dashrathpuri

Palam-Dabri Road, New Delhi - 110 045, India

Tel: +91 - 11 25392816

Email: dbyasouthasia@gmail.com

www.dbya.org

Copyright © 2015 Jesu Pudumai Doss, Sahayadas Fernando, Maria Charles Antonysamy

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, like electronic, photocopying, recording or otherwise without the prior written permission of the editors.

TABLE OF CONTENTS

Foreword - Dr. Tom Kunnunkal, S.J.

Presentation - Spokey Wheeler & Kavita Anand

In	Introduction – Jesu Pudumai Doss, Sahayadas Fernando, Maria Charles Antonysamy		
1.	Right to Education in India: A Historico-Legal Perspective		
2.	Post-Modernism and Education in Indian Context Today		
3.	Educating the Poor in India: A Critical View		
4.	Indian Youth Policy: Through the Lens of Ian Gough's Five I's		
5.	Exploring the Concept and Content of Education for the Empowerment of Youth		
6.	Holistic Development of Young People in our Education		
7.	Educating the Young towards a Wisdom Way of Knowing and Living 137 Jerome Vallabaraj		
8.	Human Enhancement and Education to Moral Values in India		
9.	Religious Resources for an Empowering Education of the Young 185 Sahayadas Fernando		

10. The Methodology of Indian Education: An Autoethnographic Assessment . Sahaya G. Selvam	. 203
11. Skill Development for Youth in India	223
12. Educating the Young Towards a Critical Digital Competence	241
13. Educating Parents to Eradicate Delinquency	263

Introduction

Education is empowerment. It enables the person to draw out all the potentials in view of living a dignified life in the society. Under favourable conditions, education affects all vital aspects of one's life and brings them to a balanced maturity. First among them is the initial knowledge of reality that surrounds. When a child is suitably educated, there is a good possibility of knowing the name of each thing, of distinguishing one known thing from another and of feeling at home amidst them. As the knowledge grows, the growing child associates each reality with a distinct emotion. The capacity to express the right emotion is the first *possession* of reality. It enables the child to interact with the external ambient and the caring adult world.

At the dawn of adolescence, the self-centred cognitive dimension of education gets more and more inward or self-focused. With the expansion of knowledge of one's own body and the partial discovery of body-based feelings, the personal preferences become a top priority. An unknown world of emotions, reactions and evaluations begin to shape the personality. Along with the academic input, an adolescent learns to integrate one's life within the context of others, especially with their peers. The adolescent needs an education that capacitates him/her to combine well the longing for intimacy as well as the paradoxical desire for solitude. It should impart the rudimentary but necessary enlightenment on what is good and bad, right and wrong. In this regard, the witness of parents, siblings, peers and teachers is fundamental to shape one's moral vision of life. A sort of conscious contact with religious realities too must have an adequate space during this phase. When the adolescent receives such an education, it empowers him/her to enter into the world of adults with the feeling of being "well prepared".

Strangely, despite all the preparation, the adolescent has the feeling of being suddenly thrown into an unknown world of young adults. At this moment, one has to make important choices, mostly in the academic field – the choice of subject and the area of specialisation, the feasibility of pursuing a direction according to one's liking and capacity, the bewildering presence of many professional possibilities that one leaves behind, the immediate future and long-term consequences of a choice etc. A realistic knowledge of one's intellectual capacity is of vital importance. Proper information before making any life-determining choice, from both experts and experienced people empowers the young adult with self-confidence. The hard work and sacrifice hitherto put in to

obtain the academic results appears meaningful and valuable. In addition, the right guidance enables them to perceive the involved adults as trustworthy people who care for them. There is a feeling of being in a secure world. From this springs new energy to face the new world.

Once the academic-related choices are finalised, youth begin to live in a very new world. At this stage, the professional knowledge becomes their priority. A major part of their day and life goes for acquiring academic excellence. They study in view of the career in the near future. It is during this phase that they consciously mingle with classmates from different creed, castes and languages, especially in the metropolitan cities. This necessitates acquiring new relational skills. One's own religious perceptions and moral convictions enter into a dialogical rapport with those of others. At times, such exchange enlarges the horizon of their thinking and thereby enriches their lives. It is also possible that they learn to respect 'The Other' and at the same time maintain their own identity and affiliation of various sorts. Or else, they just adapt themselves to the different worlds according to practical convenience. They also gradually begin to participate in the political community, with their own critical questions and utopian aspirations. Constant rapport with the complementary sex in a pluri-sex educational ambient adds another essential dimension to their growth and maturity. In other words, what has been learnt rather spontaneously until now becomes a matter of personal choice. One has to make conscious and free decisions with regard to integrating the personal, relational, religious and moral, and political realms.

Well, naturally, one might question whether every young person really goes through all these phases of empowering education and that too so smoothly. Realistically speaking, it is not so! Undoubtedly, there have been concerted efforts to make education empowering in the post-Independent India. The Government of India has framed many educational policies and enacted many laws, especially in the recent times. Yet, millions of children in India do not even get the basic primary education, let alone a quality education. Today's parents are ready to sacrifice anything to offer their children the best education possible. Our society, however, has too few "resources" to give them a proper/holistic education. It is also clear that many children do not have the *backbone* of early education — a proper family. In fact, one of the biggest challenges of our nation is that the family itself is changing, and we are not paying sufficient attention to its repercussions.

In addition, the present curriculum enables a number of children to be equipped with modern technology in their learning environment. The continuous contact with such technologies, especially of Internet-based communication, empowers their routine life. On the other hand, millions of children in India do not even have the bare minimum materials necessary for learning, which impoverishes their education. Furthermore, how many children enter the adult world of work by skipping their adolescence! The institutes of higher education across India have scaled great heights in offering highly professional skill to our youth. However, not everyone can afford to step into these institutes.

Even those who "complete" all the stages of education, do they feel "empowered" by the education they have received? Do they feel equipped to enter into the world of work and of creating stable relationships? What is the contribution of those who pass out of our renowned institutions towards the transformation of society? It is said that a good teacher takes a hand, opens a mind, and touches a heart. Does the education that the young people receive today enable them to attain maturity in the personal, relational, political, religious and moral aspects of human life? Or, have academic excellence and professional specialisation become the only goals of education?

This volume attempts to raise critical questions regarding the quality of education that our young people receive today in the educational institutions in India. It looks at education of the young from various perspectives and proposes ways to make education a true instrument of empowerment of the young, both personally and socially. Finishing the prescribed syllabus alone should not be the primary objective of education at any stage. Education should aim at empowering the *person* who is being educated and should provide all that is needed to make him/her fully human — both as an individual person and as a member of the society.

The 13 articles in this book could well be grouped into three broad categories. The first group of 4 articles presents a critical reading of the present legislations and policies in the Indian educational scenario and the prevalent problems in our educational system. The second group of 5 articles could be termed as important aspects of a wide-framework for an empowering education in India, such as the meaning of empowerment in education and its psychological, sapiential, moral and religious aspects. The last group of 4 articles present some particular aspects of the empowering education, such as new methodology of education, skill development, critical digital competence and parental influence on education.

The opening essay of Jesu Pudumai Doss presents the historical moments and legal milestones that helped in shaping the statutory recognition of the 'Right to Education' in India, especially through the 'Right to Education Act of 2009'. The author questions whether these legal parameters have truly enabled a 'Right to Education' for our children. The author argues that the legal provisions on the 'right to education' (including the RTE Act) have been inadequate, since they have systematically 'overlooked' including all children and all aspects of a quality education within them. Unfortunately they also allow the governments to excuse themselves for the non-fulfilment of education targets and hardly seek to evaluate (and take to task) the 'government run schools', which often deliver a very poor level of education. As long as such flagrant violations are excused, the empowering education of children in India would remain merely a dream.

Also Stanislaus Swamikannu makes a critical reading of the national educational policies and practices in today's India. In order to overcome the lacuna in them, he proposes a postmodern deconstruction of the education system of India. He argues that it would go a long way in destabilizing the entrenched structures and breathing a fresh air into the system and thereby leading to a manifold syllabus suited to the various groups of students.

Along the same lines, C. Antonyraj focuses on the lack of sufficient attention to the primary education in India even after so many years of our Independence and its inevitable impact on socio-economic development after the Independence. He argues that education is the catalyst of social change and it should begin by providing universal quality primary education. In particular, such a high quality primary education should empower the poor and the marginalised children.

Casimir Raj Motcham discusses the situation of youth from the perspective of National Youth Policies in India and their relevance to the empowerment of the young. He does so, however, through the parameters of the well-known "five I's" suggested by Ian Gough – Industrialisation, Interest, Institution, Ideas and International Environment. Through a scientific qualitative research, he applies them to the Indian situation and points out the progress made until now and the remaining shadows in the implementation of these youth policies.

After having critically discussed the present Indian situation of education, the next set of articles delves into various aspects of a framework of empowering education. The development of India depends on the quality of youth. And one of the chief ways to improve the quality of youth is to empower them

with education and skills. Hence Amala Jeya Rayan explores the meaning of 'youth' and 'empowerment' and points out the various essential components of empowerment of youth. However, it should be a type of education that empowers the young with Knowledge, Skills and Values.

Joseph Jeyaraj looks at empowering the young from the perspective of psychological development. He narrates rather in detail the various stages of development from childhood until young adulthood and presents the importance of favouring a holistic development – one that integrates intellectual pursuits, emotional experiences, moral and spiritual experiments and social adjustments.

Jerome Vallabaraj brings to our attention a similar concern by inviting the educators to go beyond the cognitive-knowledge-based education to wisdom-based learning and living. Hence, after examining the existing models and purposes of education, he underscores the necessity of educating the young to a wisdom way of life and suggests a series of guidelines for promoting such an education.

The critical analysis of Arnald Mahesh cautions against the degeneration of moral values in educational contexts due to biotechnological development such as "Human Enhancement." After explaining the various ways in which it takes place, he holds that Human Enhancement can be used for good and noble purposes. However, it involves various ethical concerns and places many moral values at stake, especially in the Indian context. Hence, to empower young people with proper education, he argues for the inclusion of appropriate moral education.

The article of Sahayadas Fernando complements the moral perspective with a religious one by arguing that right perspective on religions is fundamental to the education of the young. According to him, the education of the young in today's multi-religious society like India necessitates a critical re-look at the relationship between religious and progress of society. Instead of portraying religions always through the lens of conflicts and communalism, young people must be educated to see them as primordial resources for shaping their lives and the destiny of young India.

Sahaya G. Selvam approaches the Indian education from a quite unconventional perspective. Through a systematic recalling of his own school years and the subjects studied, he raises critical questions regarding the Methodology involved in the Indian educational system. In the light of his

exposure to international educative experiences, he makes a series of proposals for an empowering education.

Not only mere intellectual knowledge but also employment-oriented skills are needed for imparting empowering education to today's youth. This is the central thesis of Maria Charles Antonysamy's article that enunciates the challenges in skill development in India and the national skill development policies and practices.

An important aspect of education of youth is undoubtedly the proper use of mass media. For a substantial part of the day, young people are in touch with modern means of communication. This poses many challenges to both young people and their educators. Hence, Joseph Sagayaraj Devadoss focuses his reflections on how young people are to be properly informed, formed and empowered so that they can use the digital media intelligently and critically.

During the entire process of education, the parents also play an indispensable role. The family is the backbone of a child's holistic growth. When a favourable family ambient is missing, then the growing child encounters enormous difficulties in shaping its personality and often its societal insertion becomes very challenging. Through a scientific qualitative empirical research, M. Xavier demonstrates the correlation between parenting style and juvenile delinquency in India. Very insightful are the recommendations that he outlines to reduce criminal behaviour of young people and to improve the care of young people on the part of parents and the governmental organisations that deal with juvenile justice.

Empowering Education in Today's India is indeed a fruit of investigation and reflection of young researchers, professors and experts on education. We are indeed grateful to these thirteen authors for their generous collaboration and intellectual contribution for this book. We are indebted to Rev. Dr. Tom Kunnunkal, SJ, Founding Chairman of NIOS, for proposing the Foreword for this book. We thank Spokey Wheeler and Kavita Anand, noted educationists, for their words of presentation of our book. We gratefully acknowledge the generous help offered by Mr. Antony Arulraj in reading through the manuscripts and offering valuable suggestions. We are much obliged to Fr. Francis Xavier, SDB, for the cover-page design. Sincere thanks to the efficient staff of Don Bosco Youth Animation - South Asia for bringing out this volume promptly and in an elegant manner.

It is our hope that the essays of this book, which offer a critical view, an adequate framework and practical suggestions in dealing with the educational challenges of the modern Indian society, also enable further reflection and action among educators and educationists, law makers and citizens towards making the empowering education of all children in India a reality.

Jesu Pudumai Doss Sahayadas Fernando Maria Charles Antonysamy

Chennai, 16 August 2015

Bicentenary of Don Bosco's birth (1815-2015)

The Methodology of Indian Education: An Autoethnographic Assessment

Dr. Sahaya G. Selvam¹

1. Introduction: Method and Objectives of this Chapter

There are basically three possible approaches in scientific enquiry.² The third-person approach in science is informed by a positivist epistemology where truth is said to be what can be objectively observed. Physical sciences and life sciences adopt this methodology and derive their conclusions by means of measurements and statistics. Numbers offer an advantage of objectivity. The second-person approach believes that objective observation is not really possible, since the observer always causes her/his shadow on the observed. Hence truth is actually a construction of the interaction between the observer and the observed. Ethnographic methods presuppose the social constructivist epistemology that underpins the second-person approach. Research in developmental psychology and education adopt this approach because studying children and learners entails a direct interaction with them.

First-Person approach, on the other hand, uses autobiographical data to generalise on the experiences of people in similar situations. Most studies on consciousness are based on the first-person methodology: if this is how I feel, then by extension, even other human beings could be feeling this way in similar situations. Scientifically, the first-person approach is more controversial since individual experiences are very private and unique, and they cannot act as the substrate for generalisation. The methodology employed in the present chapter is a first-person approach. Despite its limitations, the first-person approach offers a possible means of reflecting on individual experiences in a particular context

¹ The author is a Salesian priest of the Province of Eastern Africa. His education includes three separate undergraduate degrees (in Philosophy, Sociology, and Religious Studies) and two graduate degrees (in Philosophy, and Psychology of Religion). He holds a PhD degree in Psychology from the University of London. He has authored several youth training manuals, most popular among them being *Scaffoldings: Training in Christian Life Skills* (Published by Paulines, Nairobi, 2008). His books on spirituality include *Jesus Experience: The Core of Christian Life Journey* (Published by St Paul's, Mumbai, 2011). Currently, he co-ordinates the graduate programmes at the Institute of Youth Studies, Nairobi, Kenya.

² Vasudevi Reddy, *How Infants Know Minds* (Cambridge, MA: Harvard University Press, 2008), 2.

and then to extending it to the experiences of the cohort of the individual, and finally evaluating the experiences in such a way as to abstract some conclusions. More specifically, the method of this paper is akin to what has been referred to as "autoethnography".³

Following the description offered by Ellis,⁴ in this paper, I reflect on my own educational experiences in India and attempt to assess them from an outsider perspective with an aim of proposing some recommendations for education in contemporary India. How did the school-education that I received in India prepare me to be academically successful and to live a fulfilled life outside India? What are the strong points and weak ones of the Indian methodology of education? The focus here is methodology of school-level-education, that is, the first 12 years of study covering the primary and secondary levels of education. By extension, I am also asking: how do the first two levels of education prepare person like me to go through the three cycles of tertiary level education (Bachelor's, Master's, and Doctorate), to reach high ranks in academic profession, and to enjoy what they do?

2. Reflexivity: What do I bring to this paper?

Since the first-person approach attempts to draw conclusions from autobiographical material, some narration of my educational background here is in order. This is reflexivity: 5 what do I, as a person, bring to this paper in an attempt to "scientifically" reflect on the situation of education in India?

All my primary and secondary school education⁶ was completed in Tamil Nadu, passing through three schools, from 1972 to 1984, covering a period of

³ Leon Anderson, "Analytic Autoethnography." *Journal of Contemporary Ethnography* 35/4 (2006) 373-395.

⁴ Carolyn Ellis, *The Ethnographic I: A Methodological Novel about Autoethnography* (Walnut Creek: AltaMira Press, 2004).

⁵ See, Katja Mruck and Franz Breuer, "Subjectivity and Reflexivity in Qualitative Research - The FQS Issues," *Forum Qualitative Sozialforschung / Forum: Qualitative Sozial Research*, 4 (2003), in http://www.qualitative-research.net/index.php/fqs/article/view/696/1504 (accessed: 07 August 2015).

⁶ The terms "primary" and "secondary" are near universal ways of referencing to studies prior to university education. It should be noted that in India, depending on the states, terms such as "elementary", "middle", "higher secondary" are being used.

12 years of schooling.⁷ My first seven years of education were carried out fully in Tamil language, English being a subject of study from Year-3, following the curriculum of the State Board of Education. The latter five years of education were carried out in English language, Tamil being the second language, following the curriculum of the Tamil Nadu Matriculation Board of Education. All the 12 years of schooling was completed in Catholic Schools: first years in a day-mixed-school; two years in a boys' boarding-school; and last five in a boys' residential school that also had day-scholars.

When I had just completed five years of age, I started off in a parochial school from Year-1 to 5, without having to go through any pre-schooling or kindergarten. Those days (early 1970's) kindergarten was not common in our part of the world. Since our fishing-village had no school by then, I had to walk to school. It was a distance of about three kilometres. One memory of those days was that when the school year began in the month of June, we used to be a throng of children often walking together along the sea-shore to the neighbouring village. However, already by the month of August when fishing was in high season our numbers would dwindle down to a handful. The most affected were boys. Thanks to a strict father who would not allow me even to swim in the sea, I was one of the few boys of my age who completed class five from my village! And this was in the late 1970's! Notice the reasons for drop out from school among the fishing community those days: distance from home, traditional vocational skills which needed no education, and lack of appreciation of education among parents.

Having completed my five years of primary education, I moved on to a large school in the district headquarters. Here I completed two years of my upper primary. The school had a population of over one thousand students. This school that was under the management of the Jesuits was known for discipline of the highest degree, often exerted by means of the cane. One could see dark green lines of blood-clotted marks on the back-thighs of boys, below the edge of the short trousers that they wore! The school excelled in studies and sports. Private tuitions were conducted within the school premises for which the students paid directly to the teachers, and usually the boys who took these tuitions scored higher marks in the respective subjects. Notice the elements that made this school the best school in the district: corporal punishment, tuition, and an attempt at holistic education.

⁷ It should be noted that in the British System as is the case in some countries of the Commonwealth (such as Tanzania and Uganda) the total number of years in school cover 13 – seven years of primary, four years of ordinary level of secondary, and two years of advanced level of secondary.

For what is referred to in India as "high school" and "higher secondary", I moved to another school – and this time, over 700 kilometres away from home. This school was one of the upcoming Don Bosco schools. On hind-sight, for quality of holistic education, this school could have been among the best in the state those days. The student number was around 300; there was a high level of discipline – without the use of cane; there was no culture of tuition – even though it is possible that the day students had access to them; there was plenty of co-curricular activities – sports, talent shows, exhibitions, cultural days. In all, it was a wonderful time! This school brought the best out of me.

As for my tertiary level of education I list only the secular degrees, even though the ecclesiastical degrees and the ambience in which they were carried out have played an important role in forming my mind and person, influences of which have overflowed to my secular studies. My background in philosophy has played an important role in understanding methodologies; nonetheless I will not focus on this. I have a Bachelor's degree in sociology and history from one of the Indian universities which I completed through distance education. I also acquired another Bachelor's degree in religious studies from a Kenyan University. I completed a Master's degree in psychology from the University of London in UK and went on to pursue a PhD in psychology from the same university. All this was carried out as a full-time student. At the same time, I had a position as a research associate at the Institute of Psychiatry, King's College, UK. This gave me access to tremendous interactions with scholars and academic resources. They contributed to my self-confidence as a scholar. While in London, as a PhD candidate, I had opportunities to easily shift to Oxford or Cambridge, which I declined purely for reasons of logistics. The point for reflection here is: how did the 12 years of school education in India prepare me to successfully complete all the levels of tertiary education across three continents? What were the strong points of the system of education in India that stood by me in international academic ambience? What were the challenges that I faced in this endeavour which could have risen out of the gaps in the Indian education?

In the first part of this article, I deal with my impression of how particular subjects of study were imparted to the learners when I was a school-student in India, pointing out strong points and weaker ones. I also attempt to enumerate what I have seen in similar contexts elsewhere in the world. For this I draw examples from the four Commonwealth countries that I have lived in and from several others that I have visited. Towards the end of the chapter, I discuss some

general orientations of education that I had received together with their challenges and opportunities.

3. Mathematics and Science: Are they still elitist endeavours?

As regards the question of which civilisation invented the zero the jury is still out. Was it the Sumerians who used a complex numbering system as early as 2700 BCE? Or was it the Babylonians or the Egyptians? Most scholars acknowledge that the Indian mathematician Brahmagupta, around 650 CE, was the first to formalize arithmetic operations using zero. He used dots underneath numbers to indicate a zero. So India did play a vital role in operationalising zero in its various forms: in digits and in binary numbers. Similarly, India has a long history of science and astronomy. We boast about historical facts, for example, that we had a Sanskrit name for the galaxy that planet earth is part of: *Akash Ganga*. How does India's educational system today sustain this rich tradition?

I studied maths and science throughout my 12 years of school life. How much of it I did understand as being practical to life is a big question. It is not that I did badly in these subjects. The awareness that science and maths are everywhere around me came much later in my life. Perhaps it is meant to be that way. May be it was the way these subjects were taught that mattered. For instance, up to this day I have a pretty good understanding of the classification of animal kingdom including remembering the names of most phyla. This is because the teacher who taught us biology in Year-8 made us buy pictures of animals from stationer's shop and stick them up in a simple exercise book according to the phyla. That is it; he catered to my style of learning. And I remember it after 35 years.

Take the case of trigonometry, for instance. I realised how useful trigonometry is in daily life only while watching a documentary video at the age of forty. If my mathematics-teacher had taken us out into the field and made us calculate the height of a tree just by measuring the distance between where we stood and the foot of the tree, and the angle from the ground on the spot where we stood to the top of the tree, then all that memorising of "sin, cos, and tan" would not have been a nightmare to me.

So, is the way of teaching science and maths in India still largely theoretical and exam-oriented? No wonder, in the Programme for International

⁸ Robert Kaplan, *The Nothing That Is: A Natural History of Zero* (Oxford: Oxford University Press, 1999).

Student Assessment (PISA), which is a worldwide study by the Organisation for Economic Co-operation and Development (OECD), of 15-year-old school pupils' performance on mathematics, science, and reading, the sampled states that represented India were ranked last but one among the 74 countries that took part in the assessment in 2009. Since then the Indian government has been evading participation by criticising the scope of the test itself. Was the Indian pride hurt by mere facts?

A more important question that I have grappled with in the recent past could also provide an answer to the question of the parity in the performance of Indian students in comparison to their international counterparts. The question is: if ancient India had achieved a great deal in theoretical maths and science, why was this not converted to technology? If we look at the history of technological inventions, almost anything for that matter, you are likely to find that a prototype of these inventions existed in China or the Arab world much before they were improved and made commercial and patented by the West. For instance, the Chinese were the first not only to invent paper, but also a prototype of the printing press. Similarly, many of the surgical instruments that are used in the operation theatres of modern hospitals were invented by the Arab physicians between the 9th and 13th centuries CE. Yet, Indians would boast that the Chinese scholars such as Xuan Zang came to be educated at the Nalanda University in the 7th century CE. What was wrong with the Indian science and maths?

I would like to offer a hypothetical answer to this question. It obviously requires further research. In my opinion, the possible explanation to the problem of science not being converted to technology lies in the stratification of the Indian society. In over-simplified terms, science and mathematics, just as fine arts in their classical forms, were the privilege of the members of the high caste. Some of the Kshatriyas, who were at the second level of the *varna* system, were taught by the Brahmins, but were too absorbed by power and authority to experiment with the knowledge in practical terms. Those who were in the lower strata of the society, who were the down-to-earth people, did not have access to the theories

⁹ OECD, "PISA 2009 Key Findings", in http://www.oecd.org/pisa/keyfindings/pisa2009keyfindings.htm (accessed: 08 August 2015).

¹⁰ Shelton A. Gunaratne, "Paper, Printing and The Printing Press" *Gazette: International Journal for Communication Studies* 63/6 (2001) 459-480.

Azeem Majeed, "How Islam Changed Medicine: Arab Physicians and Scholars Laid the Basis for Medical Practice in Europe" *BMJ : British Medical Journal* 331/7531 (2005) 1486–1487.

that could have been tested at the ground. They basically relied on some trade skills that were passed on from generation to generation without an exponential technological development due to lack of scientific theory. In this connection, it is important to note that technology as we have it today progressed in leaps and bounds only after the introduction of universal education in Europe.

Is it possible that a new form of stratification of the population in relation to knowledge still persists in contemporary India? Do the few elite graduates produced by the IIT's become the canon for measuring the level of science and technology in the country? Do the IIT's still perpetuate a stratification of intellectuals? In my opinion, it is only when the child in the remote village in India has equal opportunity to acquire knowledge and skills to the level that a high caste urban child has that the Indian society is going to progress in leaps and bounds. And this is not really a difficult task. It mostly depends on the quality of teacher-training together with investment in infrastructures. Teachers need to be trained to be committed; they should have understood the practical dimensions of maths and science; they need to be passionate in improvising equipment for practical application even in rural set-ups. This will break the vicious cycle of intellectually poor teachers and low quality education.

4. Cartography: A skill or an ideology?

While being a student in London, often I asked myself: why did the British come to colonise India and rest of the world, and why could not the Indians and African go to colonise Britain? As a hobby, I sought the answer to this question through a variety of disciplines and from across a range of sources: museums and exhibitions, published diaries of explorers, lectures and conferences, history books and documentaries, monuments, cemeteries and road-side inscriptions. The answer to my question was not straight-forward. It ranges from geographical reasons – that include the four seasons, the nature of rain itself, the shape of the earth, and direction of winds and ocean currents; socio-political systems – including the debilitating influence of caste-system in India and the complexity of the Roman empire in Europe; the simplicity of the Latin script and the subsequent invention of the type-set printing press; the list can be endless, but our focus here is education!

In my assessment, there were three important skills that the European education system¹² in general, and the British educational system in particular, right from the medieval times, had passed on to people who had access to education. Firstly, an enquiring mind that made a clear distinction between logical reasoning and mythical meaning-making. The influences of Greek philosophy and Scholastic reasoning need to be acknowledged here. Secondly, related to the first, the learners were trained to keep a systematic record of what they experienced through their senses in order to provide evidence for their logical arguments and conclusions. This eventually developed into empiricism. When photography was still a dream, the students were trained to make meticulous pencil-drawings of what they saw. For instance, the pencil-drawings of human anatomy carried out by Leonardo da Vinci¹³ in the 15th century would contribute to the advancement of medicine, and in the 19th century the systematic pencil-drawings of animals that Charles Darwin¹⁴ had observed during his voyages would provide evidence for the theory of evolution.

These individual examples are typical of the general ambience that existed in Europe since the end of the "Dark-ages" leading up to the Renaissance and the period of Enlightenment. How much of these traditional academic skills that have contributed to the development of a civilisation have been incorporated into the Indian educational system is a subject for research. From my own experience, I can vouch that these skills have been incorporated to some extent, but unfortunately without knowing why they are there. The teachers themselves have no background to these historical details and hence do not manage to pass on these skills to the learners as convincingly as they are being taught in UK to this day!

The third academic skill, to me, is more crucial in understanding the dynamics of colonisation: cartography, the science of map drawing. The skill of map reading and drawing was so very ingrained in the educational system of Europe. The explorers drew maps of the new territories that they visited,

¹² This educational system was basically developed and maintained by Christian monasteries. See, Olaf Pedersen, *The First Universities: Studium Generale and the Origins of University Education in Europe* (Cambridge: Cambridge University Press, 1997); Clifford Hugh Lawrence, *Medieval Monasticism: Forms of Religious Life in Western Europe in the Middle Ages* (London: Routledge, 2015).

¹³ Saunders O'Malley, *Leonardo on the Human Body* (New York: Dover Publications, 1982).

¹⁴ Darwin Charles, *The Origin of Species* (London: John Murray, 1929).

and scholars back in port-cities put them together. The improved maps helped in further exploring new territories. The explorers had a superior understanding of the territories as compared to the natives themselves. And with the help of compass and divider the colonisers could plant their flags nearly all over the world! Today, the streets of most of the developed world are full of maps, and people visiting a town even for the first time get around the town with the help of maps they carry in print or digital form.

In the Indian school education that I and my colleagues went through we drew maps in history the extent of the Maurya Kingdom, the Moghul Empire during the time of Akbar, and the like; and in geography we interpreted contours to identify plateaus and cliffs. They largely remained things that you memorised to get some marks. If, for instance, we had been asked to draw a map of our school or our village, then the experience would have been different. If I had been taught in school to perfect the skill of map-drawing, from mere sketching to drawing to dimensions, then during my first visit to Europe I would not have relied on an Indian friend to take me around. Have you ever wondered how European visitors, even in their first visit, manage to get around India – which is actually poorly marked with sign-posts as compared to Europe? They do their homework before they visit a foreign land. I wonder, what is the status of cartography in schools in India today? Of course, we need to modernise it. Recently, I saw a Year-8 student in the UK working on an assignment: to print out a map of his town-area from Google Maps, then clearly mark where his home was, and mark centres of social amenities such as banks, parks, and post-office in relation to his home.

Speaking of maps, in my first few months out of India I came to learn that the map of India that we are brain-washed with while in school, thanks to the Survey of India, is not an internationally accepted map of India. The Indian approved map of India includes territories that are disputed by Pakistan on the north-western frontier and by China on the north-eastern frontier. Without getting into the nitty-gritty details of conflict with both our neighbours¹⁵ on the border issues, the conclusion that is relevant to our discussion on education is that cartography is not merely the art of map-making, it is about ideologies, and any solid education needs to make learners reflect on this. It has to prepare them to use maps effectively.

¹⁵ Robert G. Wirsing and Robert Wirsing, *India, Pakistan and the Kashmir Dispute: On Regional Conflict and Its Resolution* (London: Macmillan, 1998).

5. Humanities: Thinking and acting globally

Closely related to the above discussion is to consider how humanities are taught in schools in a particular country. Education has a political agenda and particularly subjects of humanities are extremely vulnerable to political ideologies. Humanities in a school context would include subjects of social sciences, such as history, and languages in general and literature in particular. Though in the school context, literature and languages are taught together, I will reserve the assessment of languages to the next section. Let us look at history and literature in this section.

Compared to former British colonies that I am familiar with, such as the Anglophone countries of Africa, the way history is taught in Indian schools is generally open and broad. Of course, what our text books call, "The First War of Independence of 1857," the British historians might view merely as "The Sepoy Mutiny". This notwithstanding, generally the Indian history books have a balanced treatment of colonial history. The African text books tend to be extremely one-sided in their assessment of colonial history, creating a hypocritical attitude towards the West. The African teacher, fully booted and suited, even better than an average teacher in Britain, will emotionally critique the Western influence on Africa through colonialism and neo-colonialism. And the learner, equally booted and suited, will nod their head, knowing well that to survive in the African urban society you just have to appear as westernised as possible.

In this connection, sadly today, most schools in India are trying to compete with each other in the imitation of wearing closed-shoes, ties and blazers as part of the school uniform. I am happy to acknowledge that in the three schools that I studied in, we were not compelled to wear a tie or a pair of closed-shoes. As I have pointed out earlier our educational standard and discipline were not of a lower grade, nor was our self-confidence. Of course, following the British tradition we wore uniforms, but they were simple and straight-forward. It should be noted that the use of school uniform is not something very universal. It is ridiculous that the Indian children are suffocated with all this paraphernalia under the hot climatic conditions. In Britain, of course, to ward off the cold you need to wear closed shoes, tie your neck, and wear thick clothes. Can all Indian schools be courageous enough to indigenise their uniforms, just as some have attempted to do?

Returning to our discussion on humanities, on a positive note, the average Indian student, I tend to believe, is exposed to a wide variety of English literature

– both classical and modern, Indian and global. Our prose, poetry, and "non-detail" readers are well-balanced in their assorted collections. This is highly praiseworthy. At this rate, India is likely to continue to produce writers who will contribute to the global scene in English literature. However, this is possible only if learners are taught not only to appreciate literature – which to some extent is already achieved, but also to produce literature. I once walked into a primary school in England the students of Year-4 were being taught how to write a poem in English. On the white-board I saw terms such as Limerick, Haiku, and Acrostic – some of the types of poetry. The schools I studied in invited us to participate in poetry competitions without any basic training in poetry as if poets fall out of the skies. I will return to this point shortly. There are other confounding factors that need to be considered in assessing the future contribution of Indians to poetry and literature: for instance, if almost every parent wants their children to be an engineer or a doctor, it is likely that there will be a declining in interest in humanities among the next generations.

6. English Language Skills among Learners in India

As said earlier, so far I have lived in four countries of the Commonwealth - counting only those in which I have lived four years or more. I have visited several of them and interacted with the people there. So what is the standard of English language that is imparted through schools in India? This is a very complex question to answer. I suppose, there is a great variation from state to state within India, as it is the case with most dimensions of education. It also depends on the school-system that individuals have gone through, given that in India we do not have a uniform system of education nationwide as most Commonwealth countries have, given also that we have a possibility to be educated in our regional languages – which in itself is not a problem. I have already described my personal journey in terms of the medium of education that I went through. While in the Matriculation School, I was also lucky to be taught by instructors from states other than my own, and in that residential school we interacted in English day in and day out. At the end of the five years of schooling, I was thinking in English and literally dreaming in English. So my rendezvous with English cannot be the norm for an average Indian who finished schooling around 1984. Given such "elitist" background – at least in terms of English language skills – and living outside India for the past 23 years, what has been my experience with the English language?

By the time I was in London, I had already lived outside India for 16 years and had some publications to my credit. Generally, the British listeners appreciated my level of written and spoken English. I had an international accent, they said. However, I did have a lot of difficulty in understanding some of the British accent, particularly of the Scottish and the Welsh people. That was a mind-opener. After all, even the British have their accents and not all the British are English! Names of certain locations in London were familiar to me from the English textbooks back in school: Hyde Park and Thames River. And Baker's Street was familiar too from Canon Doyle's stories of Sherlock Homes. Oh yes, back in India, the quarterly holidays were sometimes referred to as Michaelmas holidays. Ever wondered where it comes from? Michaelmas is the feast of St Michael the Archangel, which occurs on 29 September. The school term from September to December in the UK is actually referred to as the Michaelmas term. From this background, I suppose in India, we used to refer to the quarterly holidays as Michaelmas holidays, just as we call the half-yearly holidays as Christmas holidays.

In my first written assignment for the Master of Arts degree in Psychology at the University of London, this was what the lecturer remarked: "The paper is well-argued. The conclusion flows from the premises.... You might want to acquire for yourself a copy of *The Economist Style Guide*. Try to work on your English, particularly the problems of splitting the infinitive and the use of prepositions." That was a bit humiliating, but I took it as a challenge! So, what is splitting the infinitive? Consider a sentence from this chapter: "Thanks to a strict father who would not allow me to even swim in the sea, I was one of the few boys of my age who completed class five from my village!" The phrase in italics should read: "even to swim in the sea", inserting "even" between "to" and "swim" is splitting the infinitive. This is a common error among most Indian students. Similarly, prepositional use is very tricky in English. Even if we were taught lessons in phrasal verbs paying attention to nuanced meanings according to the change of prepositions that follow verbs, in our own individual writing the mistakes perpetuated by the common usages in our societies could be very persistent.

English is a very versatile language. It is true that every country in the Commonwealth has its own peculiar set of vocabulary and a specific accent. While some of these peculiarities are not wrong in themselves, others are downright anomalies. Teachers play an important role in the perpetuation of these wrong usages. Globally, markers of Indian accent are the lack of clarity in 'v's and

'w'sounds, the hard hitting of t's, and the flat 'a' and 'o' sounds that make "coffee" sound like "kaafi" (this, mostly in Tamil Nadu)! Then, most Indians tend to use "only" very frequently – and often out of place! What the rest of the English speaking world refers to as "photocopy," the Indians refer to as "Xerox" (which is, of course, in the Oxford Dictionary); and what the rest of the world refers to as "cassava" we refer to as "tapioca" (which, according to the Oxford Dictionary is "a starchy substance in hard white grains obtained from cassava..."). Countless are such examples. Even if we continue to use these terms within India, it is good for us to be aware of the international usage and adapt accordingly when we are out of India

One of the most embarrassing, but impressively didactic, experiences occurred during my first year in Kenya when an eight-year old asked me to recite the letters of the English alphabet. She had noticed a peculiarity in my pronunciation. She began to correct me: "It is not 'yem', it is just 'em'; it is not 'yen' but it is 'en'!" That was a good lesson for me. Unfortunately, some of my South-Indian colleagues who have lived outside India even longer than I have, have not managed to pick it up. Perhaps they have not been challenged by someone like the eight-year old Tina! The discussion about Indian English can go on endlessly. The moral of the narrative here is that teachers in the Indian educational institutions have a greater responsibility to ensure that they are aware of the international English usage, and to help their students learn it. I am glad to note that the so called "Wren & Martin", the text-book commonly used in India for English grammar and composition is still in print. This book, in my assessment, is a very useful tool in setting a global standard in the use of English in India.

7. Fine-arts, Handicrafts and Sports: Just events in the timetable?

Fine-arts and handicrafts together with sports, in my opinion, are largely neglected in Indian schools. When we were learners, most of our schools did have physical education teachers. About two-class hours would be set aside in the weekly timetable for sports. But generally what the physical education teacher did was to take the students to the playground in the hot-sun, give them balls to play with, and nothing more. Of course, some schools had school-teams that

¹⁶ See, for instance, Robert Jackson Baumgardner (Ed.), *South Asian English: Structure, Use, and Users* (Champaign, IL: University of Illinois Press, 1996).

¹⁷ Percival Wren and H. Martin, *High school English Grammar and Composition* (New Delhi: S. Chand & Co, 2005).

played specific games and competed in tournaments. Again this created an elitist mentality. Other schools had house-systems, and the houses played matches against each other once a week or so. There was hardly any instruction on physical wellbeing or on the importance of exercise. Aerobics, yoga, or some stretching exercises could be systematically taught in such a way that they are integrated into our daily lives. This could also reduce our hospital bills.

As for handicrafts, when I was in Year-6, I remember being forced to buy a spinner in order to be instructed on how to spin thread out of white cotton. This was an outcome of some enthusiasm for Gandhian values, I suppose. However, I wonder how many learners really picked up something from those spinners. I, for one, never saw a teacher properly demonstrate this skill, leave alone learning to use it. Then, there used to be some design making with strips of colour paper. I never got to do it. One thing that I did learn in these handicraft classes was on how to make an exercise book from scratch. This was when I was in Year-7, I recall. I can vouch that I did enjoy this exercise. Moreover, I still enjoy mending books when the spine is broken. So after all, handicraft classes were not mere waste. I wish we were taught more practical skills similar to binding.

We also had classes in drawing. It seemed that it was just another requirement in the weekly timetable. The teacher came to class and often drew a duck or a flower on the board and we all tried to copy it on to an exercise book meant for this purpose. Often these teachers were not exceptional in art, nor were they specifically trained to teach art. Had my so-called art teacher just invited me to look at things out there as lines, angles, and shades, maybe I would have been an artist. This is what I saw a fine-arts teacher tell his learners in Uganda. His lessons included also concepts such as perspective, lighting, framing, foreground and background. Then the learners went out into the garden and attempted to draw the scenery, buildings, animals and trees. No wonder, Uganda has some of the best artists in the East African region.

Indian schools tend to have talent-shows and competitions in different forms of art: poetry, painting, acting, and singing. These competitions take for granted that these skills are inborn. Usually, the learners who win these competitions are those who have been trained or helped by their family members. Why not offer a broad-based training to all learners in these art forms in order to identify individual aptitudes and talents in primary school, and then offer more specialised training in high-school levels? India has to break the elite-mentality

reserving privileges to some people on the basis of certain pre-determined status Indian society has to become a flat society. Globally, flat societies are the happier societies. This has to begin in schools.

8. India in the Information Age

When the then Prime Minister, Rajiv Gandhi, announced that he would lead India to the Information Age, I was already out of school. When we were in school, computer science was not a subject of option. It was only in 1987, that I saw one of the Don Bosco Schools in Chennai establish a computer lab. A few years earlier, some of the colleges in South India had already started offering degree courses in computer science. The subsequent years witnessed a boom in India's information technology (IT). The government had allowed the import of fully assembled motherboards, which led to the price of computers being reduced. By 1991, India jumped into the open-market economy which allowed Indian software companies to vie for out-sourced jobs in the global market. And the rest is history being made in our own times. States competed to establish IT-parks. School curricula began to include lessons in computer science right from the primary classes. Eventually, even free laptops were being distributed to learners by some state governments. All is well. What is the future of all this? In the conclusion to this paper I will come back to discuss the future. For now, let me focus on two practical issues.

Right from 1987, I had privately learnt computer science, not only in the use of applications but also in programming. The latter skill, of course, I never directly used. In any case, the programming logic has helped me to use computer application more intelligently. Generally, I have kept up with my computer skills up to this day. Thanks to a lecturer, who, way back in 1987 – the same year I started to learn computers forced me to type a paper rather than hand-write it, my keyboarding skills are pretty good. Twenty years later, when I registered for a PhD at the University of London, I had to complete some undergraduate courses in research methods. As part of this course, I had to do a three-hour written exam. The exam was a moment of my sad discovery that I had lost the skill to write with paper and pen for a prolonged duration. It dawned on me that writing with paper and pen is soon going to be a globally redundant skill. It will be needed, of course, may be only to write short notes, therefore, it still needs to be taught at the primary school level. But shouldn't we introduce systematic keyboarding

¹⁸ Ruut Veenhoven, "Freedom and happiness: A comparative study in forty-four nations in the early 1990s" *Culture and Subjective Well-being* (2000) 257-288.

skills in secondary schools? I, for one, insist that my undergraduate students take an online course in key-boarding in their first semester at the university. I am convinced that they are going to save so much of their time in the future.

The second practical issue related to the use of IT in education is the training of learners in the responsible use of the digital means of communication. Following the free distribution of laptops among the university students in Tamil Nadu, what I noticed was appalling. My nieces and nephews at home were mostly using their laptops to watch videos, particularly song sequences from movies – another unexplainable crazy aspect of the Indian culture! Using the valuable encyclopaedias that had been preinstalled by the government needed more effort and, perhaps more follow-up on the part of students as well as educators and parents. In this connection, sometimes I worry over the prospect of the next generation of my students being cyber-wise but book-foolish, with a lot of unimportant information on their fingertips but lacking a coherent set of intellectual skills. Because they are whole-time glued to a mobile device, would they not lack the skill in meticulously reading a book from cover to cover and analysing its contents and style? This is going to be a global challenge to education, but more so in India, given the rise in the use of mobile devices.

9. From Syncretism to Analysis and Synthesis

In this final section before the conclusion, I would like to discuss some overarching intellectual skills that a good educational system needs to cultivate. One of the thought patterns, which is part of the Indian culture, is syncretism.¹⁹ The Indians have a high level of tolerance for paradoxes. We like to put together a variety of things, even of opposite characteristics, in our food, in our dressing, in our spirituality, in our way of thinking. It is part of our worldview and spirituality.²⁰ Our preference for syncretism has served us well: various religious traditions have existed together for centuries in India, and, despite our differences of languages and cultures, we have managed to cultivate a deep sense of nationalism. The Indian mind is like the Indian masala: the more the better and variety is the spice of life! However, when it comes to academic exercise our tolerance for syncretism

¹⁹ Peter Van der Veer, "Syncretism, Multiculturalism and the Discourse of Tolerance", in Charles Stewart and Rosalind Shaw (ed.), *Syncretism/anti-syncretism: The Politics of Religious Synthesis* (London: Routledge, 1994), 196-211.

²⁰ Nava Kishor Das, "Cultural diversity, religious syncretism and people of India: An anthropological interpretation." *Bangladesh e-Journal of Sociology* 3/2 (2006) 32.

could offer a problem, particularly when one is engaged in an academic project in a western university or while working together with a western scholar on a common project.

During my undergraduate degree in religious studies, I wrote an essay for a Swiss professor. His remark was: "the work demonstrates hard work, but there are too many ideas. Why not choose one specific aspect of your topic, use one particular approach, and look at the topic more analytically." Well, I had to painstakingly learn to develop the intellectual skills in analysis and synthesis. Indian students that I have taught show a preference for choosing topics that are too generic in scope for their term papers; they tend to say a lot of things about that topic. This is a text-book approach. However, for short papers it is better to choose a very narrow topic, define the scope and method of the paper, discuss opposing positions, and argue for a case consistently. This is a transferable academic skill that our school-leavers should have

To be fair to the Indian examination system, at the school level often we have a balance between what we in India refer to as "objective type" of questions that basically test our memory for details and "essay type" of questions that test our skills in comprehension and our ability to process concepts. This is positive and it serves well when Indian students migrate to international universities. However, I am not too sure if in our schools we pay attention to skills in analysis and synthesis. We do a lot of exercises in comprehension and summarising (préciswriting). These were just exercises given without a proper instruction on what is the best way of doing them. Similarly, the questions in examinations do use verbs listed in Bloom's taxonomy:21 mention, describe, explain, evaluate, elucidate, critique, apply, etc. Yet, never were we really trained as learners in school on the nuances of these terms and how the questions need to be appropriately answered. Perhaps things have improved in the past 30 years. If not, educational systems need to pay specific attention to these, because education is not about memorising a set of information but it is about acquiring and developing a set of intellectual skills.

²¹ Benjamin Samuel Bloom, *Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1-2* (London: Longmans-McKay, 1974); Lorin W. Anderson, David R. Krathwohl, and Benjamin Samuel Bloom, *A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (Boston: Allyn & Bacon, 2001).

10. Conclusion: Learning to Know

My own experience of education in India that I have recalled here is 30 years old. And I have lived out of India for the past 23 years. The year that I left India coincided with the change of economic policy in India attempting to transit from a mixed socialist to a free-market economy. I have seen many changes in these years in India. For one, schools have increased, so has also the population. My own village has two schools now. During my brief home-visits, I see also that the number of books that children carry in their school bags has increased. I wonder if the sheer increase in the volume of knowledge is preparing them for a successful life in the world of the 21st century!

Globally, the body of human knowledge is fast expanding. We are "on the edge of possibility" as far as education is concerned. ²² Today we have more books and resources than we had 50 or 100 years ago. Or even a year ago. So to be up to date in this decade, I have to read and know more than a person who lived, say, two decades ago. On the other hand, it is also true that I have better access to information due to technology. However, the fast growing body of knowledge still remains a challenge. So our children will surely have to know more than we do to be in the market! Is this realistically possible?

The first solution to this problem would be to increase the number of years of formal, institutionalised learning. If someone studied for 15 years to be a graduate, maybe we should increase it to 17 or 18, since there is more to be learnt. In a sense, this is already happening. The jobs that were filled by graduates 30 years ago are now being filled by candidates with post-graduate degrees. Even someone with a Master's degree does not feel that they have studied enough! But is this a viable solution to handle the fast accelerating body of human knowledge? Merely increasing the number of years of formal education seems ridiculous.

Here is the second possible solution: make the curriculum more packed! Squeeze in more content to be learnt within the same time. This is what is being attempted in most of the developing world. Every time the school curriculum is revised, it tends to become more bulky. Much is added and very little is dropped. In this situation, the students are overburdened and they feel stressed! This could contribute to a downshift in learning,²³ and increase school dropout rates. Besides,

²² Renate Nummela Caine and Geoffrey Caine, *Education on the Edge of Possibility* (Alexandria, VA: Association for Supervision and Curriculum Development, 1997).

²³ Renate Nummela Caine and Geoffrey Caine, "Understanding a brain-based approach to learning and teaching" *Educational Leadership* 48/2 (1990) 66-70.

in the pressure of covering the set curriculum, valuable co-curricular activities are neglected, and education becomes just acquiring information and not a holistic formation

The third solution would be to encourage specialization. After maybe seven to eight years of basic education, let students begin to specialize. Instead of studying many subjects, let them begin to study only a few. The danger with this system is that the lack of co-ordination between human sciences from very early ages could be detrimental to the progress of human knowledge itself. Inter-disciplinary approaches might be wanting.

The fourth solution, and in my opinion the most viable one, could be to train learners for lifelong learning. Schools should focus on enabling the students to learn the art of learning. The school-based training should make sure that the learners have acquired enough skills for them to keep on acquiring knowledge throughout their life. Exams should be aimed at testing if the student has really acquired enough skills to keep abreast of the growth in the body of human knowledge. To test the skills in learning, though, some information acquiring is necessary. A set of basic information is used only as a sample-knowledge to learn how to learn.

This was at the heart of the Report to UNESCO of the International Commission on Education for the 21st Century that spoke of four pillars of Education:²⁴

- Learning to know: "the school should impart both the desire for, and pleasure in, learning the ability to learn how to learn."
- Learning to do: "In addition to learning to do a job or work, it should, more generally entail the acquisition of a competence that enables people to deal with a variety of situations, often unforeseeable...."
- Learning to live together: "by developing an understanding of others and their history, traditions and spiritual values and, on this basis, creating a new spirit which, guided by recognition of our growing interdependence... [helps] manage conflicts in an intelligent and peaceful way."

²⁴ Jacques Delors, "Learning: The Treasure Within", Report to UNESCO of the International Commission on Education for the 21st Century (1996).

• Learning to be: "everyone will need to exercise greater independence and judgement combined with a stronger sense of personal responsibility for the attainment of common goals."

The striking aspect of these pillars is the holistic nature of education. It brings out the intellectual, kinaesthetic, emotional, social and existential aspects of the growth of a young person. This approach safeguards education from producing just "intellectual monsters" or "battery-hens", 25 who are trained merely to do a particular job. Secondly, the above pillars suggest that education is a meta-learning. It is learning about learning.

What I have attempted to do in the present paper is to provide some evidence from my own school-experience to reiterate the importance of integrating *learning about learning* in the Indian school system. The reflection has underscored the necessity for better teacher-training in these dimensions of contemporary education. It has further invited the educational institutions to rather focus on learning for life than just imparting information for scoring high marks in examinations. Well, perhaps the exams themselves have to test if the learners are learning to learn. Are Indian schools ready for this?

²⁵ John Abbott, "Battery Hens or Free Range Chickens: What type of education for what type of world?" *Keynote Address, North of England Education Conference, Sunderland* (1999).