ISSN 2348-084X

COLLEGE POST

the higher education journal

VOL. 19, No. 1 January - March, 2019

Jalianwala Bagh – On April, 13, 1919 Brig. Gen. Dyer of British Army massacred thousands unarmed persons peacefully protesting the arrest of Satpal and Saifudin Kichlu. Their sacrifice, continuous struggle for freedom from colonial yoke by Lala Lajpatrai, Balgangadhar Tilak, Bipin Chandra Pal, Mahatma Gandhi, his associates and others have given us democracy and right to choose persons to represent us in the parliament and have our own government. Let us remember this and vote to choose our representative to parliament intelligently.

Parliament of India

seed...

SEED new initiative in AI awareness for Institutions of Higher Education

The Past Initiatives:
Centre for Higher Education Studies and Training (CHEST) of SEED had organized awareness and Training programme for use of ICT in higher education and trained nearly 125 College Principals in use of ICT in education and introduced ICT lab and programmes for Students. These enabled heads of institutions to set ICT labs and introduce several ICT programme to train students. That was time i.e. late eighties when ICT began to operate in India and in many countries.

The New Initiative
New arrival impacting human life today is Artificial Intelligence, Block-chain, Cloud Computing, Internet of Things and Computer –Biotechnology interface. Among these having very critical and far reaching implications for all and future life of people is Artificial Intelligence. Therefore, Learning how AI works and understanding its implications for our lives is the most important thing today.

Ways to do:
There are ways to participate/ associate with this revolution. First is to understand how it works and what use it can be made without losing out to technology. The other is to participate in the development of technology. First one is the need of every one and the second one is for those engaged in development.

Like introduction of ICT in colleges, it is now important to introduce AI in institutions of Higher Education. Many schools have already introduced this. Universities and colleges, therefore, should not be left behind. In our new initiative the first step is: let decision makers i.e., Heads of institutions get oriented to new technology use. The Second step is work out plans to equip every student in the higher education about the use of this new technology in various domains.

The Proposal:
SEED-CHEST proposes to have series of face to face, Virtual Mode, On-line programme for heads of institutions and followed by this help the colleges to set up AI awareness programmes in colleges so that students are equipped to deal with AI enabled workplaces and it use in different domains of knowledge.

Interested Heads of institutions and faculty members may write to:
The Coordinator, AI initiative,
Society for Education and Economic Development
email: seedicf@gmail.com
Phone: 9868820215, 011 26651196

There is no single fit for all. Programme will be designed in partnership with the interested institutions/persons.

EDITORIAL

EDUCATION, DEMOCRACY AND DEVELOPMENT

After India became independent, it embarked on a long drawn-out journey to achieve the goal of promotion of education of the people and development of the economy and the society. As far education is concerned, it adopted the British system of education with inclusion of Indian knowledge system which already existed. The model of development adopted was through planned process of development until 2017, officially, but practically disbanded soon after 2014. The model of democracy adopted was election of representatives to legislative Assemblies and Parliament through universal franchise of all citizens above the age of 21, and now 18. So also was done at the Local Government and Panchayat level. These three models though linked in many ways, worked independently.

Literacy and elementary education was considered essential for democracy, yet education about nature, form and importance of elections, voting right enhancing understanding of the role and responsibility of elected representatives and role and responsibility of citizens were not part of curriculum at elementary or even higher education level. Even history of freedom movement, social and economic changes during freedom movement were not part of general education at any level. People acquired wrong notions of democracy as was being practiced, through the system of elections, and viewed those in government as big leaders to be praised and worshipped. Photos of leaders, other than the Father of the Nation, were frequently put up in the educational institutions.

At election booth democracy took the form of selection of representatives on the basis of social groups - may be caste, may be business interests, partly on the ideology of socialism, capitalism and added to this was aspect of nationalism of a particular type, say Hindu Rashtra and at the regional level respective state Rashtra and so on. Under this process importance of the individual entity in the election process became a part of the group entity. The group had their own social, cultural and economic interests. Hence the process of election attempted to respond to group interests at the cost of larger interest of the democracy. Since the group became powerful, it also attempted to snatch individual voter's right to franchise through several fair and unfair means. Hence democracy became power, money and muscle game. Whole energy was directed to wrestle power by fair or unfair means and use it to strengthen money and muscle base by being in power or close to power for ensuring future victories in elections. Individual independent voter became helpless and got disenchanted with political parties and the democratic process. A citizen had little choice to influence the outcome of the election and had no place to express their feelings of disenchantment until recently when a concept of 'none of the above' (NOTA) was introduced.

Since economic development, employment and per capita income did not grow as much to sustain independent democratic process, every group vied to get the best of the limited cake though group support during election time. This could be reservation in jobs, academic institutions and power positions. Citizens got fragmented in groups. The process of fragmentation was further strengthened through an attempt by the political parties to "catch them young" by entering into the portal of higher education. This seriously compromised the exploring, experimenting and analytical process by the young mind to influence and shape the process of democracy. A good number of educational institutions struggled to manage students' election in their institutions. Academics and students who could have debated and discussed the strength and weakness of the process independently, did it through the prism of groups or political parties. Thus democratic process got restricted at all the levels and got oriented to a group or sectional interests. Those who believed in democracy as an independent process and individual democratic entity were left high and dry. Therefore, some of them attempted to join the bandwagon which was perceived to serve their interest or to protect their interest, while some kept hoping for the right

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G.D. Sharma

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News

ICF KERALA CHAPTER WORKSHOP

First ICF Kerala Chapter one day workshop on "Embracing Technology on Higher Education- The Challenges and Opportunities was held in collaboration with IQAC of Calicut University on 24th Novermber, 2018. The workshop was inaugurated by Professor K. Mohmed Bashir, Vice Chancellor of Calicut University. Professor G.D. Sharma, President SEED-ICF and former Secretary of UGC delivered a key note address. Dr. P. Mohan, Pro-vice Chancellor of Calicut University, Calicut delivered Valedictory address Dr. M. Ushman, President Kerala Chapter gave presidential remark. Dr. C. Saidalvi gave vote of thanks. The heads/ representatives of about 100 institutions from Kerala Participated in the workshop. Followed by this on the theme of Technology enabled Teaching and Learning Process and Governance of Colleges presentation was made by Dr. S. Senthilnathan, Director, UGC-HRDC, Bharathidasan University Trichy. On the theme "Role of Technology in Assessment Accreditation and Ranking of Colleges" presentation was made by Dr. M. Manoharan, IQAC coordinator , University of Calicut. In the valedictory session award to eminent principals and certificate to participants was given by Dr. P. Mohan and Dr. G.D. Sharma. Vote of thanks was given by Dr. P. Mohamedalli.

ICF MEGHALAYA CHAPTER WORKSHOP

Half day workshop on Challenges before higher education in the emerging AI and IoT technology was held in Shillong, Meghalaya followed by meeting of Council of Principals of Colleges of Meghalaya on 29th November,2018 at Shillong. Dr. C. Massar, Secretary of the Council and State ICF Chapter secretary organized the workshop. Dr. G. D. Sharma, President SEED-ICF made presentation on the theme. Dr. Buddhin Gogoi, State Secretary of ICF and coordinator for North East also joined the meet and addressed the participants. Participants raised several queries and made observation on the theme. Dr. Debashis Chowdhary, Controller of Examination, NEHU, Shillong and former Principal of Women College, Shillong made observation about quality and system of assessment. Vote of thanks was given by Dr. C. Massar and Principal Dr. R R KhorKongor, Principal Thoma Joseph Synod College, Shillong.

GAUHATI UNIVERSITY, UGC-HRDC MEET AT GUWAHATI

In a programme organised by UGC-HRDC Guwahati University, Dr. G.D Sharma interacted with participants of programme on quality assurance in higher education. Dr. Buddhin Gogoi also interacted with the participants of the programme. A meeting was also held with Assam University Guwahati for exploring the possibility of holding regional level meet of Colleges in North East at Guwahati. The response of authorities was very positive.

REGIONAL LEVEL MEETING/ WORKSHOP

As was agreed in 24th ICF Annual National Conference at Jameshdpur that regional meeting/workshop imay be organized in other states, proposal has been made for J&K , Punjab and UP Chapters. There has been positive response from HMV college for holding one day regional seminar on Technology impacting higher education. There has also been positive response from Director CDC, Dibrugarh University for holding one day seminar for North Eastern Region. The technology changes are affecting chances of employment of graduate coming from the portals of higher education. With a view to fully appreciate and understand the impact, it is very important to understand the likely impact of technology on higher education. Regional workshops are planned to understand the impact of the change.

I SHARE COLUMN

College Post has introduced a new column for making achievements of Principals of Colleges known to other fellow principals in the country. Three principals have already shared their achievement. We invite all the member colleges and principals to share their achievement so that others get inspired to do new and innovative developments in their colleges.

DIGITIZATION, EDUCATION AND FUTURE OF HUMAN SOCIETY

G. D. SHARMA *

The paper is an overview of role played by education in the past. It highlights the changes in education and society owing to breakthrough in sources of energy and impact of technology during 1-3 industrial revolutions. It also draws attention to potential of the fourth industrial revolution - the digitization impacting the future of human society.

EDUCATION AS MAKING OF MIND AND CAUSING ACTION:

In the development of mankind education has played a key role. Education has also a potential to cause destruction of people and a good part of this planet earth. The question is which kind of education? And how education is defined? Mankind has progressed tremendously over millennium of years. The Progress is expressed in terms of from Stone Age to agriculture, from agriculture to making of caves and mansions. During that period making of mind and emotions had two types - one is benign the other is cruel. The benign helped development, cruel caused the destruction. But the benign always won over the cruel.

THE SOURCES OF ENERGY AND DEVELOPMENT/DISRUPTION:

We in India have stories of both kinds of education. They are popularly known as Sura- benign and the other as Asura -evil. There are stories that Asuras are vanquished by Suras. You can recall these stories from the Vedic time to Epic times. In that period, it was physical power added with learning of martial and war skills dominated the scene both in the fields of development and destruction through human and animal sources of energy. By very nature of use of human and animal sources of energy development was slow and so was the destruction. It was controllable through education and human emotions.

THE NEW SOURCES OF ENERGY EFFECTING CHANGE:

But a major shift or change you may call it, took place with discovery of new sources of energy that is to begin with fire and water - the steam and from steam to electricity. This breakthrough revolutionised the way we worked and way we lived. This also shifted power to rule people from those who possessed, land, agriculture and resources to maintain an army of people. The first industrial revolution, where machines replaced people from manual labour and semi-skilled labour with the knowledge of production, distribution and services. The methods of fighting wars also changed. The system of education and governance of people also changed. Factories producing large scale production needed large number of semi-skilled and skilled persons. The centralised production process also needed a centralised education process to train a large number of people to man the first and second industrial revolutions. It also gave rise to new system of governance. As the wealth shifted from a few kings to those owning production and distribution process the power of governance also shifted from a few select people to masses in the form liberal democracy.

Mankind has progressed tremendously over millennium of years. The Progress is internal or external fom Stone Age to agriculture, from agriculture to making of caves and mansions. During that period making of mind and emotions had two typer - one is benign the other is cruel. The benign helped development, cruel caused the destruction. But the benign always won over the cruel.

THE COLONIZATION OF STATES/ TERRITORIES:

Those countries which were part of first and second industrial revolution also needed new markets to sell their mass products. In search of new markets they attempted to colonize those territories which were not part of the industrial revolution. The industrial revolution needed both raw material and large number of human resources. Hence colonization was an important method of getting all the three resources- namely human, raw material and market. Along with the centralized system of governance, the industrial revolution also revolutionised the method of controlling large industrial crowd and methods of war.

Like the stories during the period of Sura, Asura and Epics, the stories of this period are of centralisation, mass scale production, search and control of territories which had raw material, markets and human resources- not having knowhow and training in new forms of production and distribution, in a new system of controlling of crowd

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and in new methods of war. Those harnessed new sources of energy and knowledge of large scale production also needed to replace the indigenous way of life of people of that territory through a system of education so that natives can help them to perpetuate control of territories and their resources. This in turn further helped them to acquire more territories and more resources by engaging human resources of colonised territories.

Since the power had shifted from a few people to large number of people through education and liberal democracy, it also gave rise to shift of power from colonial rulers to people in the territories controlled by them. In this story two wars in the European territories and joined by liberal democratic government - constituted by rebellions from Europe - by pushing natives with discovery of a new territory by Columbus -played a major role in the shift of power from colonial powers to people - but not without breaking each of the erstwhile territories on the basis of acquisition of territories and to a some extent on the basis of world views of development - i.e. capitalist and socialists. Exception here was India who provided human resources to fight first and second world wars, but had no say as it was ruled by one of the Allied Powers. India was broken not on the ideological basis of capitalist or socialist world views, but on the basis of religions, before British Rulers left India.

Winners of wars made an attempt to set up new form of world governance to begin with through League of Nations and then United Nations Organization. Under UNO warring nations committed themselves to avoid wars and work for peace while keeping power of allied forces' partners in tact through veto power.

All these developments were taking place when those who were engaged in education and research caused third industrial revolution again mainly in America and Europe. This was followed by some of the countries in Asia. The Second World War also demonstrated the advancement that took place during third industrial revolutions that is through use of Aeroplanes and nuclear war heads. Third industrial revolution progressed and matured through electronics, communication and computers and it started moving towards the fourth Industrial revolution of Digitization, Internet of Things and Artificial Intelligence.

THE SPEED OF PROGRESS TOWARDS FOURTH INDUSTRIAL REVOLUTION:

On a personal note - when I started my research in economics in Bombay University - now Mumbai University, I started working on Facit Machine for calculation, than electric machine and them big room computer centre having 1640 and by the time I completed by thesis it had acquired 386 and faster computer. This is a story of 1969-74. I attended a conference in Seoul -South Korea around late seventies. I found one scholar demonstrating on desktop placed in the conference room sharing data from another computer in USA- this was probably beginning of Internet of Things. By the time I stared working in NIEPA in eighties, I had an opportunity to acquire first Desk Top Apple make computer in NIEPA for data analysis pertaining to teachers in India. By Nineties I had opportunity to set up Local Area Network and before the end of eighties an Internet connection and before the 1995 mobile phone and now mobile phone with data processing, image processing, communication and big memory in the hand with mobile with internet. Why I shared this personal note is to share with you the speed with which things moved during the end of third industrial revolution and beginning of fourth industrial revolution. When we started using internet we had to wait for data to flow in packets now we are in the state that we have to check the flow of unsolicited data or images.

THE USE OF TECHNOLOGY IN EDUCATION :

On educational front developed countries started video lecture, India also started video lectures of eminent teachers. It also telecast the educational programme through Country Wide Class Room as an enrichment education program. The world and India moved toward from video lectures to e-contents and finally now to Massive Online Open Courses.

All this happened within a period to 10 years. But the system of education from primary to higher education still engaged a large number of teachers, because teaching is very human intensive activity world over. It is has changed the nature of work of teachers with the use of advanced technology. It has also changed the nature of interaction with students as also scope of learning through several sources and several teachers. This led to a major change in relationship between a teacher and a taught. This process has taken advanced form in countries which were part of 1-3 industrial revolutions and now causing fourth industrial revolution the -Digitization, AI, IoT and control by Algorithms through big data analysis.

THE NEW FORM OF CONTROL:

In this process of development, let me put a caveat, as many countries/ territories were left out from 1-3 industrial revolution and became net importers of technology and goods by providing cheap labour, raw material and in a way compromised their sovereign power for seeking loan from World Bank/ IMF, political allegiance and opening the domestic market for world trade. Thus the form of control by winner/developed countries over erstwhile colonised countries/territories shifted from physical presence to control through trade and finance.

The liberal world trade is projected as a new Messiah for removal of poverty and development of poor and for struggling economies. In fact the process has further intensified the struggle of former colonies for development,

as they are nowhere near to competitive scale either in technology, education, human resources and conditions of life.

As India has heavily imported the products of first to third industrial revolution from the countries causing these revolutions it along with similarly placed economies, facilitated these (developed) countries through imports resulting into trade deficit for decades. They are also in debt for decades. It is now further facilitating the cause of fourth Industrial revolution by importing and taking pride in being a digital India without having any basis to contribute and market the Indian products abroad.

There are some exceptions. Indian Scholars and Researchers within India have helped development of Space research and Satellites and Nuclear Technology. The rest is a blank space. Notwithstanding - Thomas Friedman's statement that "World Is Flat", India with high rise back offices in Bangaloru, Hyderabd, Gurgoan and Noida, In the field of digitization, India is net importer from computers, mobile phones to Internet space.

FOURTH INDUSTRIAL REVOLUTION - THE DIGITIZATION - AN ADVANCED FORM OF CONTROL

World Economic Forum is attempting studies to understand the implications of fourth Industrial Revolutions in various sectors including Education.. We will discuss education little later. We wish to dwell on what AI, IoT and digitization and interface between bio-technology and computer that can impact the human kind world over. We will than discuss - how it is and likely to affect India and similarly placed economies?

Shift of Power- The IoT: Now power is swiftly shifting from erstwhile sovereign nations owning third industrial revolution technology to a few world technology owners across the sovereign territories. The phenomena of UBER and OLA or similarly placed transport aggregators have world presence. Similarly Amazon.com after selling books world over now wish to enter the retail market world over. Persons without owning a hotel sell hotel space world over. Information economy-known as gig economy is cutting across boundaries of sovereign nations. The internet of things is strongly impacting the jobs and education world over.

Facebook and WhatsApp and similar Apps are influencing education, opinion and emotions of people world over. Block Chain Technology has created new currencies and trade in currencies world over. Demonetization could not touch Bitcoins. Internet of things has changed banking, financial institutions world over. All these are impacting education and employment of people world over without any sovereign intervention or policy actions. Technology giants own the data. It is said that those who own the data own the power. With Bio-technology and biometric data of individuals and with advancement in analytics also own the power to influence "free will" of individuals- the basic tenet of liberal democracy that is of individual choices and human rights.

The latest issue of Economist has reported further advancement in Internet of Things through development of space based internet connectivity through satellites placed in orbit near to earth, thereby flow of data will take place with greater speed and without obstruction of earth based towers or fibre optics. It would make instructions to flow to driverless cars or similar sort of automation or flying of aircrafts and drones. A relative of mine had watch which monitored his heart beat, blood pressure other vitals. And this information was available to central server of his hospital. Hospital through this device in time of distress could help him.

The technology development is unstoppable, but its use can be. Mind you, all these developments are not without human intervention. The technology need more educated and highly skilled persons to man automation. There is report that to fly a drone there is need of more than 35 people and defence establishment of USA is finding it difficult to get educated and trained people for it. It means job will move from relatively less educated and less skilled people to highly educated and high skilled persons. America had managed to get highly educated and trained people from world over to man their establishments. Now technology owning persons will be able to do so. Incidentally the most of technology owning people are in America, Europe, Russia and China. India and similarly placed technology importing economies will stand to lose jobs to automation and cause more misery to its poor population as they cannot afford good education and training to acquire high level of education and skills. The net technology importing countries will not be able to engage them as they are not creating or producing hard or software based technologies at home. Let us briefly discuss these new technologies.

The AI: Let us briefly discuss about progress on Artificial Intelligence and Deep Machine Learning -the world of algorithms. It is said Google chess player plays better than any of the world champion of Chess. The move and calculations are done by algorithms faster than human can do. Wherever faster calculations are required for decision making machines can do better than human. Human make decisions by observations processing of past patterns and experiences added to it sympathy, empathy, fear and greed which machines cannot do. But it can certainly process past patterns, observations through censors and decide and act precisely. There are many standard operations they depend on processing of information, past patterns and experiences and feed instructions very fast and precisely than human can do. All these jobs can be assigned to Robots and 3D printers. Hence good number of cognitive skills jobs can be efficiently and with least cost can be handled by AI Robots. As machines in 1-3 industrial revolution replaced manual

and semi-skilled employees AI will replace people needed with cognitive skills. Hence many of jobs which required human being with little or more cognitive skills will be handled more efficiently and with least cost by Robots. It is said many of manufacturing jobs in China are being handled by Robots and producing large scale quality products with the least cost. And it is flooding the world markets and replacing people engaged in production of those items. The impact is not only in Robot employing countries but countries employing humans for those products in other countries. If Robots are produced in China than there is shift in education and jobs of the people of that country and therefore it causes less unemployment. But if Robots are imported or products are imported, it is a total loss of jobs and income of people. If Robots are engaged in fighting the war, they will do very effectively without any emotion and repulsion owing to war carnage.

If Kalinga war had Ashoka as Robot, world would not have promotion of Buddhism. Hence you can guess the advantage and the danger of Robots being employed as soldiers.

COMPUTER- BIOTECHNOLOGY INTERFACE:

Let us turn to Bio-technology and Computer interface, This development offers a great potential to help human being, but it also presents the threat of causing large scale harm if something goes wrong. This interface will help in reaching out medical help and solving several of health problems by identifying each of individuals' heath record and also monitoring the health issues of an individual at any place on this planet earth. Several groups are working on various health issues embedding the AI into the processes and making available on smart phone to an individual at any place and any time. But algorithm has potential to modify and influence the “free will” of the individual. If that is so than one has to evaluate the trade off between gain and potential threat. The gain is that computers inter-connected through several networks spread of disease or the solution of the same can share information with all the doctors in fraction of second and all doctors could be up to date on that aspect, But all doctors are AI robots and if some mistake occurs it will affect the all the people on the network.

There is yet another dimension if AI biometric chip is attached on the wrist of the individual as the watch narrated above to monitor health, AI chip with several cameras on smart phone observe the mood of the individual and collect data, process it than it can predict the behaviour of an individual that will provide great clue to marketing firms but it can also give clues to those who are in governance. Through messages it can modify the opinion and behaviour of individuals and thereby, their free will.

THE CHALLENGE FOR EDUCATION AND HUMAN SOCIETY:

Challenge for education is: how to respond to these swift changes impacting production and distribution processes, changing job profiles, demanding high level educated people and how to check the impact of technology on " free will" of people. In general the technology will make many people irrelevant as it would need relatively a few highly educated people to man the operations.

However countries which are developing technology will have replacement of jobs and retraining of people in new technology. And to those who are not engaged in jobs, developed countries can provide adequate income to them owing to high income earning through technology. The problems of job and income would be more serious in developing or “struggling economies” as the replacement of job will be relatively less, population growth is high and per capita income is low. Under such situations education system would need to be revamped to respond to technology changes impacting economy, Society and "free will" of people through media, data analytics. If data are in few hands it gives enormous power to people controlling data.

In order to respond to new situations as described above the education system, more particularly, in “struggling economies”, would need to address the following questions:

1. Is the education system flexible enough to provide relevant high quality education to a large number of people in the society?

We make an attempt to reflect on this question. The “relevance” is defined as changes being and likely to be caused by technology changes as also specific context of developing countries. The “quality” is defined in terms of ability to ask questions, solve their contextual problems- these are always nation specific, create new ideas and act on them. The “Flexible” is defined as- education available to students at any times any where through any source. The assessment of the learner is on the basis of outcome of learning and recognition of prior learning. To make education system relevant, qualitative, and flexible we have to attempt the following changes at the policy level

AUTONOMY AND DEGREE AWARDING STATUS TO AFFILIATED COLLEGES:

A large proportion of students at the undergraduate level are studying in colleges. Colleges are affiliated to universities and universities determine the curriculum, method of evaluation and all affiliated colleges have to follow the system. This leaves very little scope of

introduction relevance and flexibility of curriculum as also very little scope for teachers to introduce new ideas. Therefore, first structural change is required to give autonomy to all colleges to determine curriculum, design the process of teaching and learning and evaluation of students. The concept of affiliation should be done away with and colleges be given degree awarding powers. Let there be a new structure or to say layer in system of institutions of higher education. University, Deemed to be universities and colleges having power to award degree to those who successfully complete the courses of studies. Universities should have full autonomy to develop and evolve as a good teaching, research and innovation centres. Apex organizations, like UGC and other bodies should act as facilitators rather than governing and directing institutions what to do or not to do.

THE SYSTEM OF EVALUATION:

The system of evaluation should test the following abilities/ outcome of learning at under graduate and post graduate level:

(1) Understanding and grasp of domain area knowledge,
(2) Application of domain area knowledge in real life situations,
(3) Analytical and critical thinking based on issues arising within and outside the domain knowledge,
(4) Problem solving abilities within and outside domain knowledge,
(5) Ability to think inter related aspects of knowledge and its application in larger context,
(6) Ability to articulate, communicate in written and oral form ideas, view points and solutions of problem effectively to all,
(7) Ability to appreciate and practice democratic values, social justice values and human values,
(8) Ability to reflect, adopt, adapt and change as the situation demands.

This outcome of learning should also be part of proposed National Qualifications Framework; a national level examination like Graduate Record Examination should be evolved and implemented. This examination should be available at any time to students on voluntary basis. It should have centres at every district of the country.

2. Are the processes of education more interactive between teacher and learner as partners in educational endeavour?

This question begs for making the process of teaching and learning more interactive, problem solving, raising relevant questions and attempting a well research answers to questions. The responsibility of teaching and learning should be entirely left to the teacher concerned. However, he/she should inform and put strategy, processes in public domain for students and peer group to see and reflect. There should be peer group advisors for ensuring the standards of teaching and learning. Technology and media should be used in teaching and learning to ensure effectiveness of the process to communicate the knowledge and application aspect of the knowledge.

3. Does it enable students and teachers to understand and grasp the impact of technology and digitization on their opinions and views through the flood of information and opinions on internet /mobiles/apps?

Technology has a miracle like effect. Often teachers and students are swayed by what is given through effective audio and visual communication. Often content is highly edited to give almost real look. It is therefore essential that students and teachers have deliberation and debate on effect of such communication on the society. Any content which provokes and emotionally charge should be handled more quietly in composed manner. There should be always time lag before any action is contemplated based on such content. The process of teaching learning should have built in method of questioning, critical evaluation and impact assessment.

4. Does it enable students, teachers and people at large to discern what is in the larger interest of their immediate and larger human society?

That is to inculcate among students human values/ rights, ability to protect themselves from the influence of technology on "free will" and hacking of their minds. Education besides imparting domain knowledge and its application should also have builtin system of imparting the democratic values, education of human rights. Teach students about method to safe guards themselves and others for violation of democratic values, and human rights.

5. Does it help to build world view and co-existence of several world views?

Education always helps building a world view. The literature students read, the movies they see, television serials they watch always get processed in the brain and often influence the thought processes of people. It is therefore important to discuss different world views and enables students to see larger aspect of each world view.

6. Does it prepare them for jobless or situations or their irrelevance in job markets, but with basic income is being offered by technology giants.

Education should also equip them to engage in creative activities during free time. During the early period when society became rich, people engaged in creative activities, music, art, culture, architecture and so on. Hence education besides domain knowledge should impart values and creative aspects.

7. Does it prepare them to understand, grasp and avoid dangers of technology impacting human society?

Education system should have courses on impact of emerging technology on human society. The new communication technology is global. It has wide and far reaching power to influence happening of certain events. Power of technology is available to every one. Message with audio-visual impact can reach to billions of people in a matter of seconds. This power can be misused and have been misused by the people in the recent past. Besides impacting behaviours of people it also impacts physical and mental health of people. Excess use has caused harm to many people. Technology has tendency to dominate the mind and action. To overcome this, education process should necessarily involve methods to make students free from this domination.

8. Does it give them decision making power to check the misuse of it?

The technology often influences the opinion and decision making power of the people. Technology creates a situation where you are allowed to take decision within a given frame only. Even options given are often not the one which you would like. It is like a store house where several options for a particular product are available to choose from. But the choices are limited to items available. Hence choose or go without it. Most often people make choices from the options given. But the options are very limited and do not exactly provide for your real choice. Added to this aspect are very strong marketing practices to gear your choices to suppliers offerings. Education should strengthen ability of making right choices and to go without it if choices are not met. The ability to take decision to go without it may save you from misuse of information to influence your decision making power.

9. Does the system encourage questioning, innovation and out of box thinking?

Education system needs to transform from teaching to interactive and innovative method of learning process. May be one has to go back to Aristotle and Plato style of dialogue and debate rather than discourses of one hour or more by teachers. The system should reward those who think innovatively and out of box i.e, not to reproduce from text books. It should encourage cognitive flexibility.

10. Does the system of education free learners and teachers from a structured duration of programme of study and evaluation?

The education system be made more flexible from primary to higher education where students can enter and exit any time, under take chunk of the programme, or a module, or a unit of course to suit his or her interest and need of learning a practice. With modern technology this flexibility is possible. The system should enable students to learn from anywhere, any source and offer him/her to be examined about his domain knowledge and skill abilities. A successful candidate may be given awards based on certain national qualification framework.

I have raised a few questions and given some hints on each of these questions. The subject needs a thorough debate and discussion to formulate appropriate response to changes that are likely to take place in future. A new policy of education is an urgent need of the time.

...contd. from page 1

thing to happen in future and endured it.

Let us briefly discuss the role expected to be played by independent Fourth Estate, the press and media. It played its role in the initial period until the editorial and main articles were in central place. It shifted its position and independent role to commercial interests and political interest. Today it is very easy to state which paper, which channel is the mouthpiece of which political party or political hue or business interests. The independent Fourth Estate has become dependent on commercial and political interests largely, the exception here and there apart. They are hardly the voice of people, they are the voice of people who fund them.

Let us also see another independent institution in democracy - the Judiciary. It is a symbol of the independent as also the symbol of the dependent, but alas the final say, it seems, rest with the government. It has attempted to preserve independence but it has also been pressurised through government tactics of delay and insidious pressures. Had this not been so one of the Chief Justices of India would not have tears in his eyes while interacting with an elected representative holding the position of Prime Minister.

We are likely to elect again a new government for India through our parliamentary election. Educational institutions have to transform the process through education of citizens, from mere election and casting votes to making appropriate choices to elect worthy and enlightened representatives, free from sectional interest and vices of money, muscle and crime. They need to educate students and citizens about the fundamental values and culture of democratic society and democratic living. It is a tall order, but only educational institutions can lead them in this direction.

QUALITY ASSURANCE MEASURES TO IMPROVE QUALITY OF HIGHER EDUCATION

PROF DVG KRISHNA*

Paper discusses measures taken by Telangana Council of Higher Education for improvement of quality of higher education in Telangana and role of apex organization in quality improvement of higher education.

The Quality of our future workforce and therefore the productivity and prosperity of our country and state are closely dependent upon the Quality of Higher Education that is imparted to the young men and women today by our universities and institutions of higher learning. The Telangana State, ever since its inception after state bifurcation, has been striving to bring quality and excellence in higher education and to sustain the same in spite of several transitions triggered due to globalization processes. The consistent endeavor of this youngest State of Telangana as the 29th State in the Indian Union is to improve and expand higher education in all areas equitably, recognize and eliminate areas of disparities in access, and emphasize the relevance of higher education for national development.

Quality teaching is now an issue of importance as the landscape of higher education has been experiencing continuous changes in the form of increased international competition, increasing social and geographical diversity of the student body, increasing demands of stakeholders for value for money, and introduction of information technologies.

THE ISSUE OF QUALITY TEACHING:

Quality teaching is now an issue of importance as the landscape of higher education has been experiencing continuous changes in the form of increased international competition, increasing social and geographical diversity of the student body, increasing demands of stakeholders for value for money, and introduction of information technologies. Quality can be regarded as an outcome, a property, or a process and conceptions of teaching quality happen to be stakeholder relative. The impact of research, of the scholarship of teaching and of learning communities on teaching quality is to be considered. The role of the professors, of the department, of the central university and of the state is to be analyzed, as well as the goals and the scope of these initiatives. Choosing reliable and quantifiable indicators to assess the quality of teaching and the efficiency of teaching initiatives is quite a challenging exercise. Teaching should be both research-informed and research-driven. There should be a focus on learner communities because teaching is an iterative process. Learner communities often enhance the relationship between students and teachers, thus improving the quality of the learning environment.

DEMOGRAPHIC DIVIDEND:

It is predicted that by 2020, India will have 116 million workers in the age bracket of 20 to 24 years, as compared to China's 94 million. India has a very favorable dependency ratio and it is estimated that the average age in India by the year 2020 will be 29 years as against 40 years in USA, 46 years in Japan and 47 years in Europe. In fact, we have more than 60% of our population in the age group of 15 to 59 years. This trend is very significant on the grounds that what matters is not the size of the population, but its age structure. It would be a lost opportunity if we don't take advantage of this dividend. This underscores the significance of higher education. India must strive to prepare an educated and productive workforce through a concerted effort to improve the quality and relevance of higher education.

GOVERNMENT AND UNIVERSITY INITIATIVE:

The MHRD maintain focus on higher education in the country, to make it more relevant to the global needs and to remove the inequities in access to education amongst various social groups. Such objectives are sought to be realized by providing adequate inputs and implementing much needed governance and regulatory reforms under RUSA.

The University system, wherein the under graduate, post graduate, doctoral and post-doctoral courses are offered for the award of degrees and doctorates by imparting knowledge on current state-of-the art subjects including arts, humanities, social sciences, law, sciences, technology, engineering etc through coursework, assignments and continuous assessment is the core point of higher education. In recent years a few popular branches of knowledge have been the main focus for some of the universities; thereby leading to emergence of specialized and technological universities. Affiliating system followed by several universities is

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responsible for offering undergraduate courses through colleges located in their respective jurisdictional areas. Designing courses and their combinations, syllabus formulation, conducting examination, awarding degrees and diplomas are the main tasks of the affiliating university in such a scenario.

The affiliating universities also oversee the performance of higher education and enforce measures for improvements to sustain quality according to the timely requirements. Indian universities are categorized in to several types such as central, state, deemed and private.

- There are 46 central universities located in different states and these have been established by the Government of India,
- The 343 state universities (343) are established by the State Governments in their respective states.
- Deemed universities (132) and private universities (226) are established in private sector, the former under the overall supervision of the University Grants Commission (UGC) while the later under the jurisdictional location State purview.

Higher education is increasingly seen as an investment that should contribute to national prosperity in the long term. Therefore the return on the investment must be good. Quality assurance in higher education has become a focus of attention for private universities too. 2003). Students who are paying tuition fees might now be considered as clients of higher education institutions. Students are therefore also very concerned about the quality of the lectures they pay for. As the culture of higher education has become increasingly market oriented, external demands for quality of teaching have increased.

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CHANGES IN STUDENTS BACKGROUND AND EXPECTATIONS:

The student body is changing as also the teaching methods hence modifying expectations regarding teaching. To begin with, in India as in most developed countries, increasing social diversity has transformed the student body at university level. Higher education is no longer reserved to the elite upper castes. Internet has globalised the market place, and institutions now compete for the best students, nationally and internationally. Many senior professors now interact at international level, and consequently must develop new pedagogical strategies. Teaching methods have also evolved. Professors wish to incorporate aspects of on-line learning need to become familiar with new pedagogical methods. Distance education in print form is being supplemented by Internet - based delivery. Mixed modes of learning have become common: the majority of cross-border distance programs now involve some form of face-to-face pedagogical or administrative contact, sometimes visits to study centers. Generally people in remote locations and working adults are the first to experience these new forms of learning.

Vocational training institutions, which prepare learners for careers that are based on practical activities, are now more popular than before. They are now fully considered as an important part of most higher education systems. Lifelong learning now offers a second chance to those who did not attain higher education or to those for whom the knowledge and skills acquired in school are no longer sufficient for a professional career spanning three or four decades. For instance, the European Union adopted in October 2006 a communication entitled "It's never too late to learn", which claims that lifelong learning is at the heart of the ambitious Lisbon 2010-process.

Higher education has changed also because the number of students has exponentially increased, state funding concerns have changed, and the student body has diversified. In the current knowledge era transfer of knowledge is a major contributor to growth and business success. Globalization continues to enhance national and international competition for the best students among higher education institutions, thus further reinforcing pressure for quality teaching and quality assurance. International rankings based on the quality of teaching reinforce the attractiveness of quality initiatives. Moreover, there are more and more students who study at various universities, benefitting from opportunities like The Erasmus (European Community Action Scheme for the Mobility of University Students) Program - a European Union (EU) student exchange program for international scholarships. These students are bound to compare the quality of the teaching received at these different institutions.

EDUCATION FOR CHARACTER BUILDING AND EMPLOYMENT

Education must lay stress on CHARACTER BUILDING, values and ethics of students so that they are prepared not just for a job but for life. At the same time, it is necessary to impart employability skills. EMPLOYABILITY SKILLS are a set of achievements, understandings and personal attributes that make individuals more likely to gain employment and to be successful in their chosen occupations. These skills are transferable skills needed by an individual to make them employable i.e. useful to the prospective employers. Along with good technical understanding and subject knowledge, employers often outline a set of skills that

they want from an employee. Employability training should be designed to give the pupils the best chance to gain employment. The course must cover everything they need to know in terms of getting into work, such as: CV writing, verbal (listening, speaking) and writing communication, teamwork, commercial awareness, analytical and investigating skills, initiative/self motivation. They must be able to accurately interpret what others are saying and organize and express their thoughts clearly. Teamwork is equally important as in today's work environment; all the jobs involve working in one or more groups.

TEACHING METHODOLOGIES:

Effective imparting of knowledge, both technical and liberal, needs effective, result oriented TEACHING METHODOLOGIES. The teaching method is based on the principles and methods used by professors and faculty to encourage and enable student learning. These strategies are determined partly by the subject matter to be taught (e.g. engineering, economics, mathematics etc.) and partly by the nature of the learner. A particular teaching method is appropriate and efficient only in relation with the characteristic of the learner and the type of learning it is required to bring about. Design and selection of teaching methods must take into account not only the nature of the subject matter but also how particular students learn. The present trend is to encourage creativity. Human advancement comes through reasoning. Reasoning and original thought enhance creativity. The most commonly used teaching methods include lectures, group discussions, class participation, demonstration, laboratory experiments, recitation, memorization, or combinations of these.

THE MODELS OF TEACHING:

Teaching can be either instructor centered or LEARNER CENTERED. In teacher-centered learning, teachers are the main authority figure and the students are viewed as passive whose primary role is to receive information (via lectures and direct instruction) with an end goal of testing and assessment. The primary role of teachers is to pass the knowledge they have and the information they possess to their students. Teaching and assessment are viewed as two separate entities and student learning is measured through subjectively and objectively scored tests and assessments. In student-centered learning, teachers and students (learners) play an equally active role in the learning process while teachers continue to be the authority figures. The teacher's role is to coach and facilitate student learning and overall comprehension of material. In this approach, learning outcome is measured through both formal and informal forms of assessment, including group projects, student portfolios, and class participation; teaching and assessments are connected; student learning is continuously measured during instruction processes.

The discipline of PEDAGOGY deals with the theory and practice of teaching. Pedagogy by taking into consideration theories of learning, understandings of students and their needs, and the backgrounds and interests of individual students lays down teaching strategies, teacher actions, and teacher judgments and decisions. Pedagogy indicates how the teacher interacts with students and the social and intellectual environment the teacher and learner establish. Its aims range from furthering liberal education, general development of human potential to the specifics of vocational education aimed at imparting and acquisition of specific skillsets. Instructive strategies should be governed by the pupil's background knowledge, experience, situation, and environment, as well as learner goals. The teaching of adults, especially at postgraduate and doctoral levels as a specific group, is covered under andragogy.

ROLE OF STATE COUNCIL OF HIGHER EDUCATION:

At the State level, the primary authority responsible for overseeing the quality of higher education is the TELANGANA STATE COUNCIL OF HIGHER EDUCATION, a statutory body of the Government of Telangana State. The Council has been satisfactorily fulfilling the educational needs in terms of access, equity and excellence, the three tenets of higher education.

CENTRAL LEVEL ORGANIZATIONS;

At the national level there are various other agencies which perform varied roles in monitoring and sustaining the quality of higher education all over the country. A few of these are as follows:

The universities have grown under patronage of UNIVERSITY GRANTS COMMISSION (UGC) but they have very little in common. The quantum jump in the Higher Education sector is spear-headed by universities, which are the highest seats of learning. A University is established or incorporated by or under a Central Act or a State Act and includes any such institution as may, in consultation with the University concerned, be recognized by the UGC in accordance with the regulations made in this regard under the UGC Act, 1956. Every year, millions of students from within the country and abroad, enter these portals mainly for their graduate, post graduate studies while millions leave these portals for the world outside. The bureaucratic/ administrative procedures should be simplified in the interest of efficiency in order to pave the way for higher standards in education.

AICTE QUALITY IMPROVEMENT SCHEME (AQIS) which is implemented by the ALL INDIA COUNCIL OF

TECHNICAL EDUCATION (AICTE) addresses the issues of quality, the National Policy on Education (1986) and the Plan of Action (POA-1992) which advocated the establishment of an independent national accreditation body.

AQIS includes the following initiatives.

Sr. No	Name of the Scheme
1	Unnat Bharat Abhiyan
2	AICTE Adjunct Faculty
3	Skill and Personality development Programme centre for SC/ST Students
4	Share and Mentor Institutions (Margdarshan)
5	Research Promotion Scheme (RPS)
6	Modernization and Removal of Obsolescence (MODROBS)
7	Faculty Development Programme (FDP)
8	Travel Grant - Faculty
9	Seminar Grant
10	Grant for Organizing Conference
11	AICTE scheme for writing Technical Book in Regional Languages
12	Hostel for SC/ST Students

As per the policy guidelines issued by MHRD, RASHTRIYA UCHCHATAR SHIKSHA ABHIYAN (National Higher Education Mission) focuses on better quality of higher education institutions. The aim is to achieve mass access to higher education with substantially upgraded quality standards.

GERs range from 3.5 in Daman and Diu to 41.4 in Chandigarh. Mass access to higher education is contemplated with GER targets to strike balance among States. The institutional density also shows enormous variation among States, as low as 0.2 in Arunachal Pradesh to 236.8 in Chandigarh. The average enrolments data against the population and institutions across the States again show phenomenal variation.

As per the statistics published by TSCHE, The State of Telangana stands at 12.72 (Approx) in GER and 7.3 (Approx) in Institutional Density. The figures were reportedly calculated approximately based on number of Institutions that existed in united A.P. TSCHE plans to propose targets to achieve excellence. The RUSA in this regard is considered as one of the paths to bring in equity in Higher Education. The State of Telangana adopted Common Entrance Test (CET) to bring in quality in Higher Education. These CETs are conducted both at the entry of undergraduate and postgraduate courses to ensure quality and extend choice of institution. The success of SARVA SHIKSHA ABHIYAN (SSA) and RASHTRIYA MADHYAMIK SHIKSHA ABHIYAN (RMSA) laid strong foundations for primary and secondary education. However, RUSA is a concerted effort for improvement in access and quality in higher education. It is expected that in the next few decades, India is set to reap the benefits of demographic dividend with its huge working age population.

THE FUTURE THRUST OF HIGHER EDUCATION:

The future of higher education must lay stress on INNOVATION and DIGITALIZATION. India is a START-UP hub for several industries, including automotive, IT services, pharmaceuticals, textiles, education, healthcare and manufacturing. It rates high on the Human Resource Development (HRD) index and also has a high literacy rate, Keeping this in mind, the Government's vision is to make India the foremost innovation and knowledge hub. This needs awareness about Intellectual Property Rights across the states, and across industry segments, across Intellectual Property types. Much more needs to be done to strengthen the IP ecosystem.

NITI AAYOG INITIATIVES:

NITI AAYOG now provides encouragement, funding and promotion of RESEARCH AND DEVELOPMENT culture in the country. Atal Innovation Mission (AIM) intends to establish Atal incubation centers across India by providing them with financial support. These incubation centers would support and encourage start-ups to become successful enterprises by providing them the necessary and adequate infrastructure along with high quality assistance or services to start-ups in their early stages of growth.Areas / sectors for establishing incubation ATAL INCUBATION CENTRES (AICs) either in public/private/ public-private partnership mode including higher educational institutes and R&D Institutions are as follows:

i) Agriculture and Allied Fields
ii) Bio Technology
iii) Building Materials/Construction Technology
iv) Electricity, New and Renewable Energy and Environmental sustainability
v) Education
vi) Health and Pharmaceuticals
vii) Information & Communication Technology (ICT)
viii) Sensor Technology
ix) Manufacturing and Engineering
x) Micro and nano electronics
xi) New Materials including Nano Materials
xii) Water, Sanitation and Solid Waste Management
xiii) Housing - Urban and Rural
xiv) Transport
xv) Other emerging areas or of social / national importance

The percolation of information and communication technology has, to a certain extent, facilitated the expansion of horizons. But, innovation, and protection of

the innovation are still in the nascent stages, needing an ecosystem that encourages high- technology, protects it, and facilitates the conversion of the innovative thought to a physical product and most importantly, monetize it. Make in India', 'Create in India' and 'Innovate in India' are all key slogans that are part of the vision set down by the Indian government for shaping up an innovation ecosystem. It is now time for the Indian corporate world to progress beyond the service industries and graduate to the next level of innovation in sectors such as manufacturing, technology, automotive, pharmaceuticals, biotech, financial services and retail, to name a few. Innovation has been one of the key drivers of growth of several developed economies around the world. India, with its 1.2 billion populations, needs innovation not only to scale up to the next level of economic growth but also to address several social, political and economic issues facing the state today.

SCHOOL AND HIGHER EDUCATION LINKAGE:

To extend upward linkages to the successful students of 10+2, higher education has been taking much care of tertiary education. The central and state universities are catering to the needs of the cosmopolitan populations and multiple branches of learning. The geographical distribution of institutions of higher learning is based on the district as a unit in order to cater to the needs of urban/ semi-urban/ rural/ tribal populations. In addition to the conventional courses and institutions, the health, language, culture, agriculture and gender issues are prioritized to establish universities and institutions. Such a focus is necessary as our human resources are distributed widely in urban, semi-urban, rural and tribal areas. With diversified geophysical regions the accessibility has been the priority of higher education.

DIGITIZATION OF HIGHER EDUCATION:

Digital system created more employment than unemployment due to expansion of activity. Now at present whatever the branch of the knowledge, digital knowledge is essential technology. Information technology is the route to any knowledge application. We are likely to witness more automation substitutes for labor across the entire world economy, we have to analyze the impact in developing economies like India.

Digitization of higher education involves the following capabilities:

i) Automation for cost reduction
ii) Standards to facilitate outsourcing, shared services, and partnerships;
iii) Student communication platforms and applications to provide academic maps, planning and advising, early alerts, and progress tracking;
iv) Analytics to measure and improve learning, student success, and institutional efficiency, and other priorities;
v) Support services to help faculty use technology to improve existing courses
vi) Online courses
vii) Support services for research and scholarship in digital environments and collaboration with colleagues across the world;
viii) Technical tools for a competitive edge in pedagogy, student outcomes and experiences, and research and scholarship;
ix) Safeguarding institutional resources, knowledge management and risk mitigation.

The Digitization of higher education has been enabled by rapid technological progress and innovations. It is a necessity for transition of the society from underdeveloped to developing to a developed one. However the technical transformation is to be planned and executed properly.

The three cardinal principles of Education Policy viz., access, equity and quality could be served well by providing connectivity to all colleges and universities, providing low cost and affordable access-cum-computing devices to students and teachers and providing high quality e-content free of cost to all learners in the country. NATIONAL MISSION ON EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY (NMEICT) encompasses all the three elements. NMEICT has been envisaged as a centrally sponsored scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions in any time any where mode. This was expected to be a major intervention in enhancing the Gross Enrolment Ratio (GER) in Higher Education by 5 percentage points during the next Five Year Plan period.

FUNDING OF HIGHER EDUCATION FOR ACHIEVING EXCELLENCE:

In order to achieve academic excellence for economic growth, the funding must be Norm-based and Outcome-dependent: The central funding is strategic and based on State Higher Education Plans (SHEPS), which serve as a benchmark against which the performance of a state and its institutions is graded. Future funding is decided on the basis of past achievements and utilization of funds submitted to MHRD. RUSA incentivizes state actions. Not only is compliance to rules, regulations and fulfillment of norms supported by incentives, but non-performance or non-fulfillment of prerequisites and norms invites reduced allocations for states and institutions. This is intended to make the scheme not only demand driven, but also competitive. States and institutions are encouraged to compete with each other in order to reap the benefits of competition-based formulaic grants.

THE SIGMA EFFECT:

Academic excellence in higher education needs committed teachers and motivated learners. Accreditation should be strictly linked to quality of teaching. A culture of decentralization must be fostered by encouraging self- sufficient self- financing autonomous institutions. In this connection, mention needs to be made of the Harrod-Domar growth model which was propounded by SIR HENRY ROY FORBES HARROD (13 February 1900 - 8 March 1978) the English economist best known for writing The Life of John Maynard Keynes (1951) who is also typically remembered for his contributions to growth theory. Harrod clearly explained the correlation between technological progress and economic growth and used the Sigma model wherein Sigma related capital output to the capital input. The elasticity of substitution between capital and labor (Sigma) is a second-order parameter of the production function but has a first-order effect on economic growth. Although the importance of this elasticity has long been recognized in several branches of economics, it has not received much attention in the growth literature. Many important growth issues depend on the precise value of Sigma. It affects the possibility of perpetual growth or decline, the growth rate and level of steady state income per capita, the speed of convergence to the steady state, the rate of return on capital, the impact of biased technical change, and the relative role of productive factors and technical efficiency in explaining differences in per capita income. This model is particularly applicable in the present context of rapid technological progress.

Higher education is an input for national economic development. UGC at the national level is a significant guiding force in shaping the destiny of education in India. The universities managed by both Central and State Governments look to UGC for financial support and academic guidance. It is generally seen that the affiliated colleges starve for funds and inputs whereas about 80% of the allocated funds go to the prestigious institutions and universities. Thus the university campus students enjoy a greater share of investment by Government but they do not always fully realize the necessity of participating in the teaching learning processes. The private managements, many of them claiming to be philanthropic raise funds from public towards educational development. SIR WILLIAM PETTY, FRS (Romsey, 26 May 1620 - 16 December 1687) the English economist, scientist and philosopher who became prominent serving Oliver Cromwell and Commonwealth in Ireland is best remembered for his theories on economics and his methods of political arithmetic. The goal of full employment was of most importance to Petty, having recognized that labor was one of the major sources of wealth for individuals and the greatest wealth and strength of the Kingdom. In view of this, the public, private and pupils' share of investment must rise and it should be ploughed back for the development of higher education. This alone assures that students will have employability skills and be able to secure gainful employment.

QUALITY ASSURANCE SYSTEM:

All the States including Telangana must ensure that all their institutions adopt NAAC accreditation as the mandatory quality assurance framework, and simultaneously seek to upgrade the overall academic quality by implementing the suggested reforms. They will be encouraged to promote research and innovation in their institutions. Since research focus can be judged both from input efforts and outcome indicators, the State Higher Education Plans (SHEPS) must have a balanced appreciation of both aspects. States and institutions are expected to honestly declare their present status in this area and outline specific strategies for improvement, including the use of information and communications technologies (ICT). There is a need to improve resource allocation for universities to enable good quality research and innovation. Criteria such as the number of research publications, impact factors of journals in which papers are published, citations, the amount of research funding attracted, etc., should be considered for faculty promotions.

One of the quality improvement tools which has been successfully used in many organizations is the formation of QUALITY CIRCLES. A quality circle is a volunteer group composed of workers (i.e. teaching and non teaching staff) usually under the leadership of their supervisor (i.e. a senior professor) who are trained to identify, analyze and solve learning-related problems and present their solutions to university or college management in order to improve the performance of the institution, and motivate and enrich the work of faculty members. True quality circles become self-managing, having gained the confidence. Quality Circles are not only limited to manufacturing firms but for variety of organizations where there is a scope for group based solution of problems. If implemented in the field of Library and Information Science the results and conclusions will be amazing. It will also help the librarians to identify own lacunae and design a better system.

The case study of Indira College of Engineering and Management Library is an eye-opener. Library activities were encountering many small problems frequently. To name few were: 1. Missing Books. 2. Misplacements. 3. Library usage. 4. Delivery of journals. 5. Number of copies per title. 6. Allocation of work among the staff. 7. Purchase related problems etc. A committee was initiated to study the above problems and come out with efficient solutions to meet the requirements of the management by implementing 'Quality Circle Program'. The problems were solved satisfactorily.

SYSTEM OF EXAMINATION ASSESSING QUALITY OF STUDENTS:

Different patterns of Examination Systems like semester, annual are in practice. The conduct of examinations is the domain of universities with an exception to autonomous colleges. The evaluation of student performance is through manual, online and assignments. In a few courses it is through a viva-voce examination. The performance is award either by numerical marks or grade system on different scales. These lead to anomalous comparisons by employers and assessors. Standardization is needed in examination and assessment systems.

Accordingly to the Government policy framework another basic tenet of RUSA is that the decision making is done in an unbiased, apolitical and professional manner, on the basis of the SHEPs and the performance of the states on the predefined parameters. The process of decision making and its result should be transparent and the methods impartial. It is expected that the States would also be as unbiased, apolitical and professional while planning and ushering governance reforms at their level.

In order to effectively implement these reforms, the selection of leadership positions in state universities should take into account the imperatives of merit and performance.

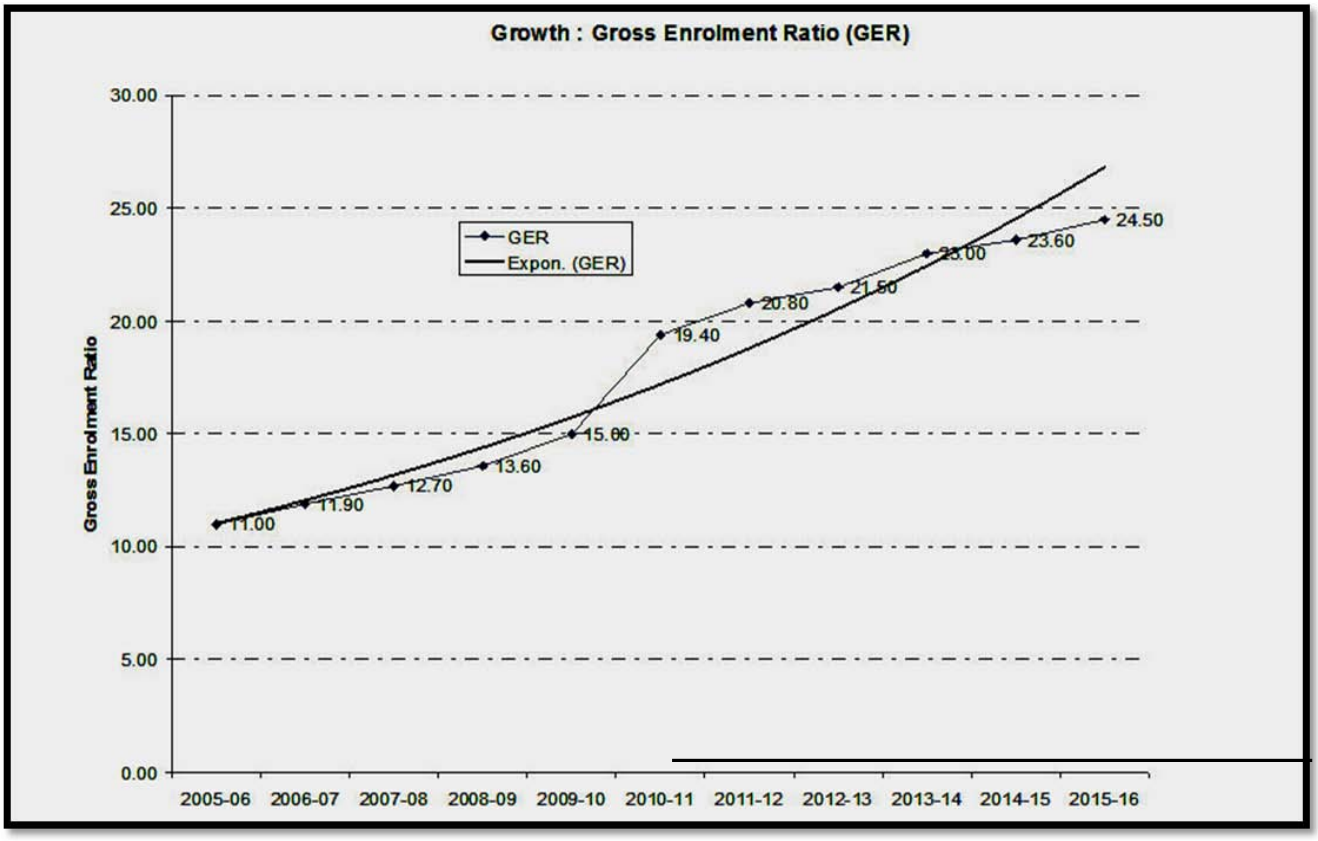
Annexures:

1. Gross Enrolment Ratio (GER) of United AP with other States (Nov.2013)

(Source - TSCHE Statistical Booklet 2015)

Delhi	32.5	Arunachal Pradesh	26.9
Uttarakhand	27.8	Madhya Pradesh	13.6
Puducherry	31.2	Manipur	35.9
Goa	33.2	Kerala	21.9
Chandigarh	13.6	West Bengal	12.4
Mizoram	21.6	Tripura	13.6
Andaman & Nicobar	11.4	Odisha	16.1
Sikkim	24.2	Bihar	10.5
Himachal Pradesh	26.0	Uttar Pradesh	16.3
Maharashtra	27.6	Punjab	19.4
Chhattisgarh	20.0	Rajasthan	18.2
Haryana	24.1	Jharkhand	8.1
Tamil Nadu	32.9	Assam	13.4
Jammu & Kashmir	16.8	Lakshadweep	0.0
Karnataka	25.5	Dadar & Nagar Haveli	3.6
Andhra Pradesh(Uni.)	28.4	Daman and Diu	3.5
Nagaland	21.5	Meghalaya	17.5
Gujarat	21.3		

(Source: UGC)



2. Universities in India

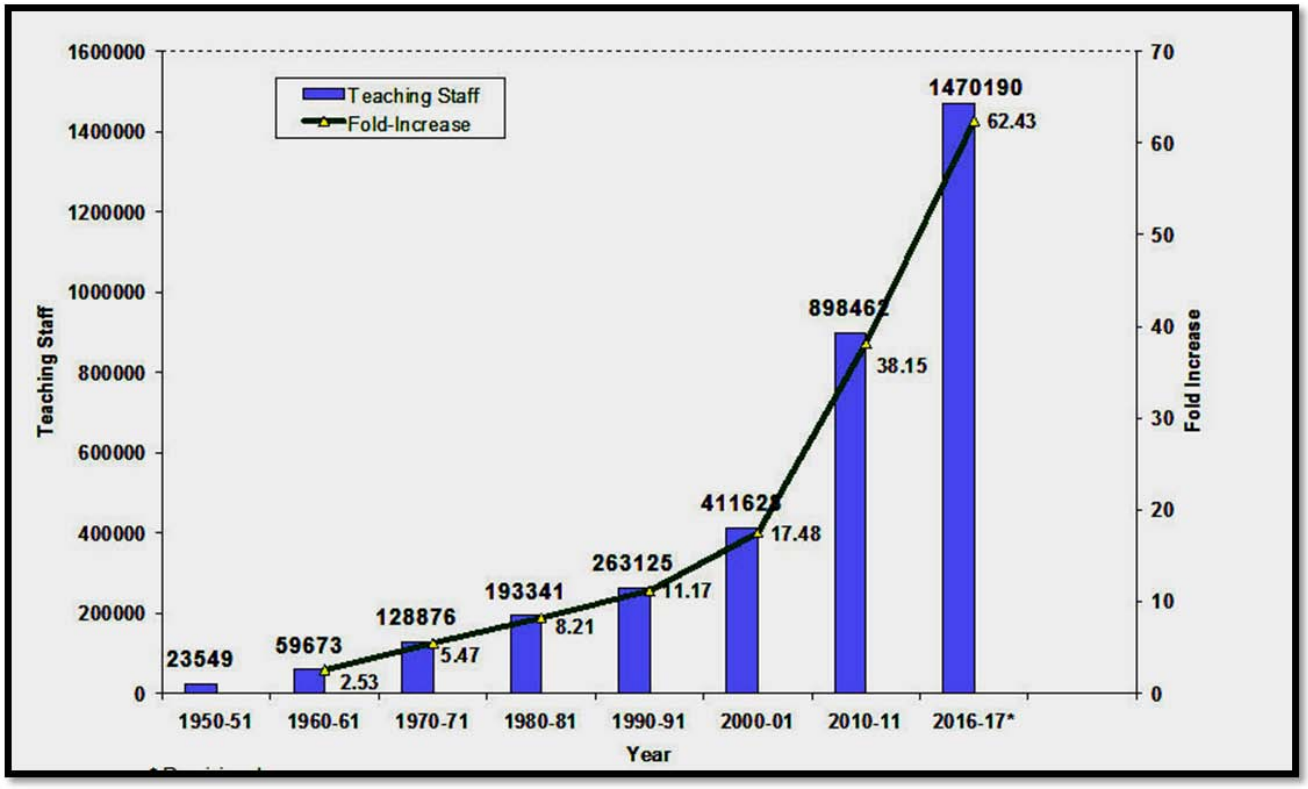
Sl.	State	Central	State	Deemed	Private	Total
1	Andhra Pradesh	0	21	5	0	26
2	Arunachal Pradesh	1	1	1	7	10
3	Assam	2	12	0	4	17
4	Bihar	3	15	2	0	19
5	Chandigarh	0	1	1	0	2
6	Chhattisgarh	1	13	0	8	20
7	Delhi	5	6	10	0	20
8	Goa	0	1	0	0	1
9	Gujarat	1	23	2	23	43
10	Haryana	1	14	6	18	37
11	Himachal Pradesh	1	4	0	17	21
12	Jammu&Kashmir	2	6	0	0	8
13	Jharkhand	1	7	2	3	13
14	Karnataka	1	24	15	12	48
15	Kerala	1	13	2	0	15
16	Madhya Pradesh	2	19	3	15	36
17	Maharashtra	1	20	21	4	43
18	Manipur	2	1	0	1	3
19	Meghalaya	1	1	0	8	10
20	Mizoram	1	1	0	1	3
21	Nagaland	1	1	0	2	4
22	Odisha	1	13	2	3	19
23	Puducherry	1	1	1	0	3
24	Punjab	1	9	2	12	20
25	Rajasthan	1	20	8	40	67
26	Sikkim	1	1	0	5	7
27	Tamil Nadu	2	22	29	0	53
28	Telangana	3	16	5	0	24
29	Tripura	1	1	0	1	3
30	Uttar Pradesh	5	25	10	24	62
31	Uttarakhand	1	10	4	11	25
32	WestBengal	1	21	1	7	24
	Total	46	343	132	226	706

(Source: UGC portal)

3. Number of Universities in various states

Classification of Universities in TELANGANA STATE

A)	Conventional Universities	6
B)	Technological Universities	1
C)	Specialized Universities (9)	
i.	Architecture & Fine Arts	1
ii.	Telugu	1
iii.	Open	1
iv.	Professor Jayashankar T.S Agrl. University	1
v.	Kaloji Narayanarao University of Health Sciences,	1
vi.	Sri Konda Laxman T.S Horticultural Univ.	1
vii.	Sri P.V. Narasimha Rao T.S Veterinary University	1
viii.	Rajiv Gandhi University of Knowledge & Tech.	1



(Source: UGC)

ix.	NALSAR National Law University	1
	TOTAL	16

Educational Universities / Institutes not under the Department

A)	Central Universities	3
B)	National Institutes	2
C)	State Institute (University status)	1
D)	Deemed Universities	2
	TOTAL	8
	GRAND TOTAL	24

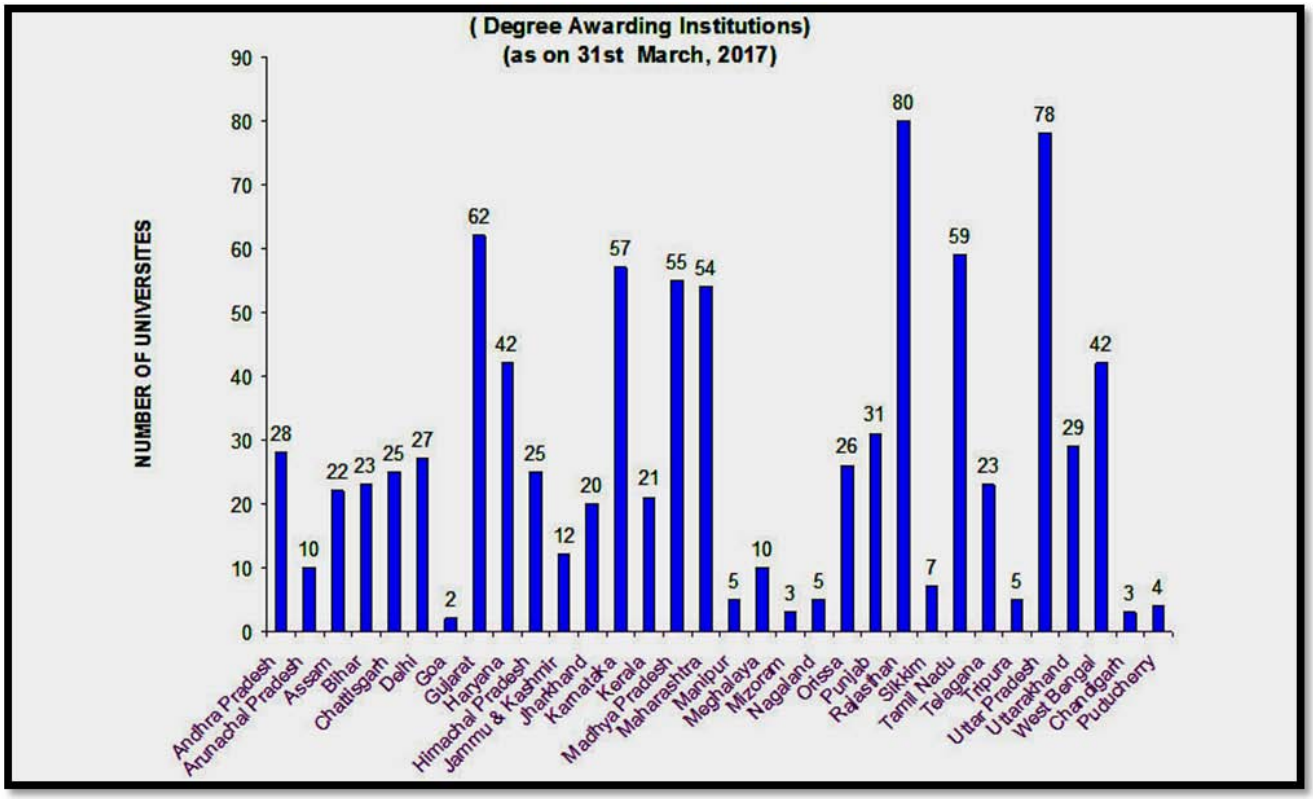
(Source: TSCHE-Stat.Cell)

4- Universities, Faculties and Posts (source - UGC)

Universities, Faculties and Posts in T.S - 2014-15

The figures are dynamic (Source: Stat.booklet)

University	No. of teachers	No. of non-teaching	Pensioners
OU	745	2362	2841
KU	236	506	615
BRAOU	63	370	121
PSTU	56	165	89
TU	42	8	-
MGU	44	7	-
SU	15	19	3
PU	10	2	-
JNTU-H	-	-	-
JNA&FA	29	29	73
RGUKT	-	-	-
TOTAL	1240	3468	3742



THE FUTURE OF EDUCATION IN THE AGE OF ARTIFICIAL INTELLIGENCE

MM PANT*

Author shares speed of development of technology and makes valuable suggestions for education of students in AI enabled environment.

At the beginning of the 20th century, William Gibson had said that "The future is already here, only it isn't evenly distributed".

Now as we enter the 3rd decade of the 21st century, we can say that the "future of education" is already here. But there are many barriers to its even distribution.

The purpose of this article is to spread an awareness, understanding and appreciation of the promise of AI empowered education as a key to success in the 4th Industrial Age:

Earlier this month, from March 4th to 8th, UNESCO held the Mobile Learning week, the 2019 edition of its flagship ICT event at Paris with focus on "Artificial Intelligence and sustainable development".

The themes of this series in the earlier years were:

- 2018: Skills for a connected world
- 2017: Education in emergencies and crises
- 2016: Innovating for quality
- 2015: Leveraging Technology to empower women and girls
- 2014: Teachers
- 2013: Mobile Learning and EFA Goals
- 2011: December: Using mobile Technologies to transform educational process and outcomes

And from February 25th to 28th Barcelona held the MWC (Mobile World Congress) where AI is one of the 6 themes. Another important theme at this event is Digital Trust. Both of these have huge implications for education.

In his recent book, the 4th education revolution, Sir Anthony Seldon has said that " Schools and Universities in the developed world are doing a good job overall at preparing students.....for the 20th Century".

We could extend the applicability of this statement to the good Schools, Colleges and Universities in India as well.

It is clear that in an exponentially changing world which is at the beginning of the 3rd decade of the 21st Century; this is woefully out of date.

"Education will be profoundly transformed by AI. Teaching tools, ways of learning, access to knowledge and teacher training will be revolutionised": Audrey Azoulay, Director General UNESCO.

The success of mobile revolution in India has convincingly demonstrated that this nation can use self and peer learning to adopt mobile and web technologies. Awareness, adoption and internalisation of AI should also be a people's movement. Already there are a number of Smartphones which have AI chips in them, and in the foreseeable future we may expect AI empowered mobile phones to be ubiquitous. And with devices such as Raspberry Pi, Amazon Deeplens and Alexa, Intel's Movidius Neural Compute stick the use and applications of AI will become commonplace.

The success of mobile revolution in India has convincingly demonstrated that this nation can use self and peer learning to adopt mobile and web technologies. Awareness, adoption and internalisation of AI should also be a people's movement.

There are reportedly more than 850 million mobile phone subscribers in India. According to a report by the Internet and Mobile Association of India (IAMAI), mobile internet is largely used by youngsters. With an increase rate of over 10M users a month, there's no doubt that mobile devices are the classrooms of tomorrow. And the future of learning is in the hands of the learners.

I would like to visualise the future by drawing up the contours of an AI empowered educational ecosystem that can be put in place right now and a complete transformation to the new model could be done by the end of the year 2020. In about 20 months from now. Of course continuous improvement would then follow.

A complete mobile based teaching-learning model comprises:

- A set motivated passionate inspiring teachers who have been trained in AInEd.
- Mobiles (perhaps with AI chips in them) in the hands of all (new meaning of EFA) learners
- Mobile Internet access widely available through 4G, 5G or wi-fi
- WhatsApp for content delivery and social learning

All routine administrative tasks would move over to AI solutions provided by the companies that provide Ed-Tech services. Admissions, fee management, attendance

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(through face recognition) safety (with IoT and AI).

Record keeping of credentials would move on to a Blockchain system. Some well known Blockchain frameworks are Bitcoin, Ethereum, and Hyperledger Fabric. Gradubique, is a blockchain network built on top of Hyperledger Fabric that allows instructors from any school to post exam and course grades to the Gradubique network. Employers and graduate schools can extract transcripts from Gradubique. Security is guaranteed by the blockchain technology. Standardization and translation of transcripts can be built into the network, and the distributed nature of the network can make it virtually cost-free.

There are other similar efforts including those by MIT (Blockcerts) and SONY and Fujitsu for Japanese Language Testing.

Clearly for all emerging fields in the 4th Industrial Age, the way to do credentialing would be to deploy Blockchains. This would be for courses in Artificial Intelligence, Machine Learning, Internet of Things, 3D Printing, Robotics, Blockchain.....

The holy grail of education is a model of group instruction that is as effective as a 1-on-1 education, articulated by Benjamin Bloom in 1984 as the 2 sigma problem.

Sir Anthony Seldon in his book suggests how teaching will be transformed by AI over the coming decades:

1. Preparation of material will be done by 'Curation specialists . . whose job it is to work with AI machines to author and identify the most appropriate material for particular student profiles.' p.189
2. Organisation of the learning space: 'Separate classrooms will disappear in time and replaced by pods and wide open, flexible spaces which can be configured for individual and flexible collective learning. Sensors will monitor individual students, measuring their physiological and psychological state, picking up on changes faster and more accurately than any teacher could.' p.191
3. Presentation of material to optimise learning/deeper understanding: 'The flexibility of visual representation with AI allows material to be presented to students which renders much teacher exposition redundant.' p.192
4. Setting assignments and assessing/self-assessing progress: 'Advances in real-time assessment enabled by AI will virtually eliminate this waiting period [the time lag between students being assessed and them receiving feedback on their performance} and ensure feedback comes when most useful for learning.' pp.194-5.
5. Preparation for terminal examinations and writing summative reports: 'All this will be swept away by AI. . . . In its place will be attention to continuous data reporting, and real time feedback that will help students discover how to learn autonomously and how to address any deficiencies on their own.' p.196

Some of the recent AI powered tools that can help manage the diversity in a class are: speech to text that can be used to create the text script of every lecture taken by a teacher with perhaps enough text analysis to aid comprehension, permitting learners to spend the class time trying to comprehend the lecture rather than making notes.

Automatic real time machine translation can help all those learners who are challenged by the language of instruction in the class, and this AI enabled tool can be a great equaliser.

AI will change however the job of the teacher forever. By supporting teaching in all their five traditional tasks. AI will usher in the biggest change the profession has ever seen.' p.206. Interestingly Seldon recognises that remote teaching is a distinct possibility: 'Imminent advances in virtual technologies will mean too that teachers no longer have to be physically present to offer their services.' p.206

While not using education as a context, a recent 2019 book by Richard Baldwin with the title " The Globotics Upheaval: Globalization, Robotics and the future of work" draws attention to this possibility of Remote Intelligence and Artificial Intelligence Disruptively transforming the way we would be working in the future.

The US President's executive order on AI: https://www.whitehouse.gov/presidential-actions/executive-order-maintaining-american-leadership-artificial-intelligence/ issued on February 11th 2019, at section 1(c) states : 1(c) The United States must train current and future generations of American workers with the skills to develop and apply AI technologies to prepare them for today's economy and jobs of the future.

This has been in response to China's aggressive push to lead in the AI space by 2030, for which in addition to R&D, patents and implementation, China has brought AI education into Schools as well.

While planning to flourish and prosper in the 4th Industrial Age, it is important to keep the following aspects of the transition that is happening at present :

1. From scarcity and stability of information/knowledge to an overwhelming abundance in quantity and an exponential growth rate
2. From using technology for massive scaling to using technology for personalisation with space shift, device shift and time shift
3. From mere grading to a Bell curve to providing personalised guidance for continuous improvement and achieving mastery learning
4. From age and stage specific learning to lifelong learning, with AI enabled recommendations for what is worth learning at any point in life

5. A complete transformation of the educator profession. They will 'educate' humans and 'train' software. And operate as independent Professionals, not as salaried employees.
6. AI awareness should be a citizen movement much like mobile usage was earlier.
7. Schools, communities and families can set up " AI experience centres" with infrastructure and resources for hands on learning. Popular devices such as Raspberry Pi, Amazon Deeplens and Intel's Movidius Neural compute stick .....
8. The pedagogy of learning AI at School should build upon the work of Sugata Mitra observing the self-learning abilities of children when provided opportunities for exploration now called "SOLE" for Self-Organised Learning Environment. We can begin by treating learning AI as a continuum from class 8 to university and lifelong continuing professional education.
9. All course content would be held as 'learning objects' in the form of 'reusable learning objects' in " Learning Objects Repositories". They would be tagged with suitable metadata, that could be an update on the established " Dublin Core" format.

   It may come as a surprise to many people that a UGC created organisation, the CEC had taken a lead in creating learning objects, including Short Learning Objects (SLO) several years back.

   Currently, the basic unit of learning is a "course," and the only customization is choosing one course over another. Instead of offering a course composed of ten modules, each with six to eight key concepts, a more granular approach would be to offer 100 "learning objects" on a specific topic-each self-contained in terms of content, exercises, and assessments.
10. Personalization with Recommendation Engines: Once learning is deconstructed into modular learning objects, they can be matched to learners using recommendation engines driven by artificial intelligence (AI)-just as Netflix generates movie recommendations. Based on how the learning objects are tagged the AI algorithm would match learning objects to learners.
11. Delivery as Subscription Services: Learning today is delivered episodically - you get a degree and then you are "done" for several years, until you enroll in a continuing education course. Learning needs to evolve to allow learners to continuously upgrade their skills and knowledge-and not wait several years for a "knowledge upgrade."
12. Certification: Blockchain Ledgers As a learner completes learning modules, an immutable and verifiable record of what has been learnt will be available. Certification must become granular with micro-certification for each successfully completed learning object. These micro-certificates can be stored in a blockchain ledger, which can be selectively accessed by employers.
13. One major shift or if you like disruption that may arise is the emergence of independent educators, who act like professionals (like doctors, lawyers, consultants who do not ordinarily work under employee conditions with a salary, but in an advisory expert role, who may accept a retainership....

    Such persons maybe known as AInEd professionals. Attributes of an AInEd Professional :
    - Lifelong learner
    - Using AI to enhance productivity
    - Deploy AI in education practice
    - Pursue Educational innovation
14. The future of lifelong learning may be " Learning as a Service" (LaaS) model similar to the Software as a Service (SaaS) model where educational delivery models create customised learning journeys for their learners. Existing educational institutions can either lead in the transformation to future ready educational systems or risk being disrupted by a disruptive innovator.
15. The adoption and implementation of AI in education, will not be an instant sous binary transition like a on-off switch. It is more likely to take a few years, and in the transition, education systems will be in different stages of AIEd integration or adoption. We could use the metaphor of CMM or the Capability Maturity Model in the Software Industry. The 5 levels of AInEd implementation:
    - Level 1: Deploying Chatbots for most administrative and some learning tasks
    - Level 2: Personalised content for all learners. Chatbots as teaching assistants go teaching faculty
    - Level 3: AI enabled essay type assessment and using Blockchain for credentials
    - Level 4: AI guided personalised learning paths for continuous professional development
    - Level 5: A completely AI/Blockchain run lifelong learning educational enterprise.

The model of learning that is described above is called " Learning 321" to indicate that it is about learning in the 3rd decade of the 21st Century. This combines ' the soul of an IIT education, the tremendous access enabled by the distance and open learning system, and the untapped potential of the motivated self-directed learner, as demonstrated by the experiments of Sugata Mitra with his model of SOLE (Self Organised Learning Environments).

THE OTHER SIDE OF AI

Max Tegmark, President of Future of Life institute has brought out positive and challenging dimension of Artificial intelligence. This is an adapted article based on his write up on the Artificial Intelligence. He says " Everything we love about civilization is a product of intelligence, so amplifying our human intelligence with artificial intelligence has the potential of helping civilization flourish like never before - as long as we manage to keep the technology beneficial"

The AI revolution has helped taking care of several cognative functions which are generally performed by human being. But has also a tendency to control the human behaviour and human power of decision making. Therefore it is very important to see other side or the flip side of AI. We bring some of the aspects here. Max Tegmark, President of the Future of Life Institute in his paper revealed many important aspects positive and other side of AI. To begin with it is important to understand what is narrow AI and What is general or deep AI.

WHAT IS AI?

"Artificial intelligence today is properly known as narrow AI (or weak AI), in that it is designed to perform a narrow task (e.g. only facial recognition or only internet searches or only driving a car). However, the long-term goal of many researchers is to create general AI (AGI or strong AI). While narrow AI may outperform humans at whatever its specific task is, like playing chess or solving equations, AGI would outperform humans at nearly every cognitive task".

The paper brings out the views of leading scientist about the concern for safe use of AI.

"Artificial intelligence today is properly known as narrow AI (or weak AI), in that it is designed to perform a narrow task (e.g. only facial recognition or only internet searches or only driving a car). However, the long-term goal of many researchers is to create general AI (AGI or strong AI).

"Stephen Hawking, Elon Musk, Steve Wozniak, Bill Gates, and many other big names in science and technology have recently expressed concern in the media and via open letters about the risks posed by AI, joined by many leading AI researchers. Why is the subject suddenly in the headlines?"

This concern is "Because AI has the potential to become more intelligent than any human, we have no surefire way of predicting how it will behave. We can't use past technological developments as much of a basis because we've never created anything that has the ability to, wittingly or unwittingly, outsmart us. The best example of what we could face may be our own evolution. People now control the planet, not because we're the strongest, fastest or biggest, but because we're the smartest. If we're no longer the smartest, are we assured to remain Future of Life institute has taken a position "that our civilization will flourish as long as we win the race between the growing power of technology and the wisdom with which we manage it. In the case of AI technology, FLI's position is that the best way to win that race is not to impede the former, but to accelerate the latter, by supporting AI safety research."

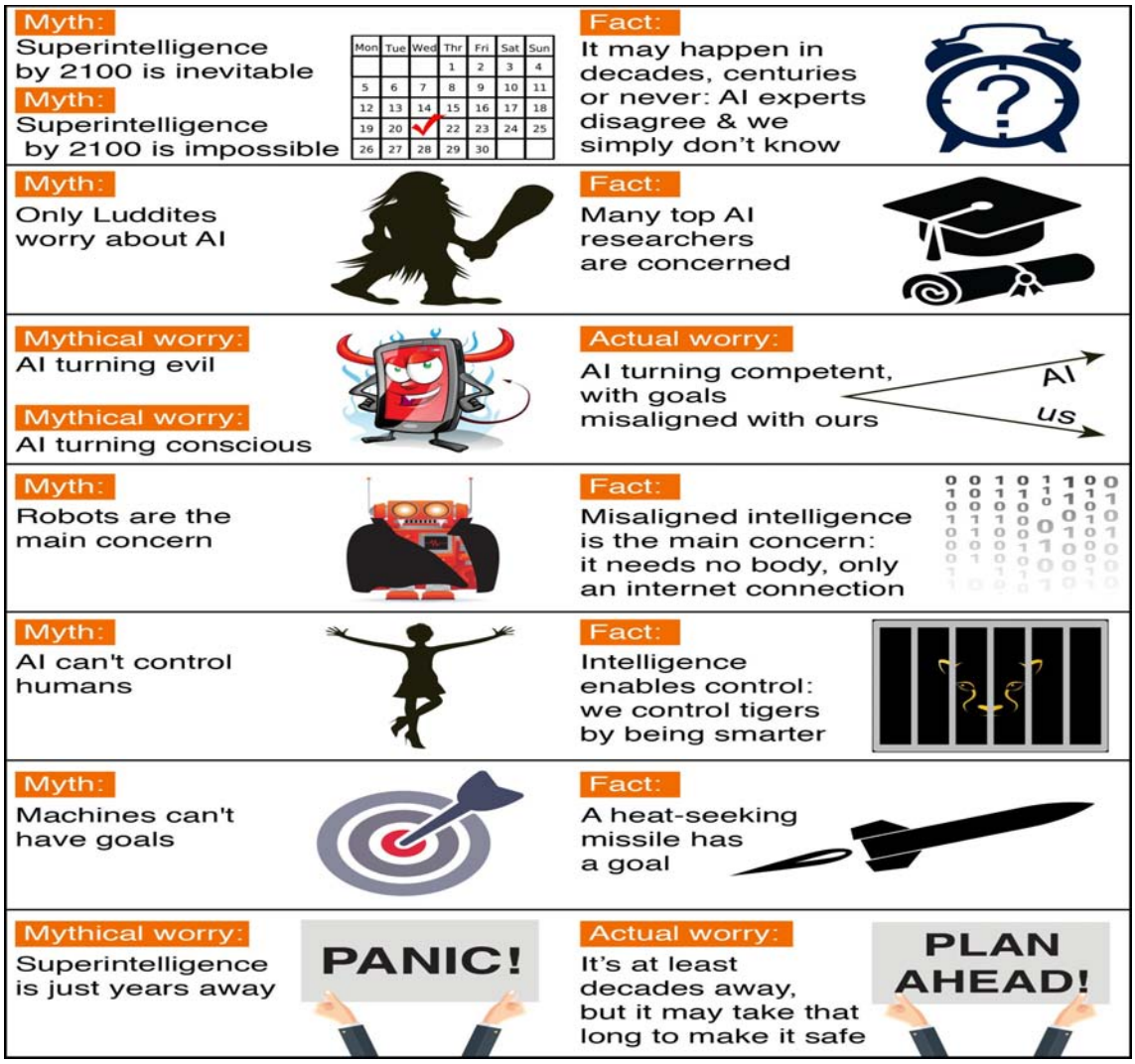
The paper of Tegmark brings out myths and facts to clarify debating position on AI.

MYTHS AND FACTS

A captivating conversation is taking place about the future of artificial intelligence and what it will/should mean for humanity. There are fascinating controversies where the world's leading experts disagree, such as: AI's future impact on the job market; if/when human-level AI will be developed; whether this will lead to an intelligence explosion; and whether this is something we should welcome or fear. But there are also many examples of of boring pseudo-controversies caused by people misunderstanding and talking past each other. To help ourselves focus on the interesting controversies and open questions - and not on the misunderstandings - let's clear up some of the most common myth " This is very effectively presented in the following chart on the next page.

On the time line AI superseding human intelligence there is no certain answer. Max remarks "There have been a number of surveys asking AI researchers how many years from now they think we'll have human-level AI with at least 50% probability. All these surveys have the same conclusion: the world's leading experts disagree, so we simply don't know. For example, in such a poll of the AI researchers at the 2015 Puerto Rico AI conference, the average (median) answer was by year 2045, but some researchers guessed hundreds of years or more."

Further Max suggest we should start thinking on it lest some one take a rabbit out of hat. He remarks "There's also a related myth that people who worry about AI think it's only a few years away. In fact, most people on record worrying about superhuman AI guess it's still at least decades away. But they argue that as long as we're not 100% sure that it won't happen this century, it's smart to start safety research now to prepare for the



eventuality. Many of the safety problems associated with human-level AI are so hard that they may take decades to solve. So it's prudent to start researching them now rather than the night before some programmers drinking Red Bull decide to switch one on."

Max narrates about controversy myths and myths about Risk about superhuman AI.

On controversy myths have says "It may be that media have made the AI safety debate seem more controversial than it really is. After all, fear sells, and articles using out-of-context quotes to proclaim imminent doom can generate more clicks than nuanced and balanced ones".

On superhuman intelligence of AI Max has the following advice to offer: "The robot misconception is related to the myth that machines can't control humans. Intelligence enables control: humans control tigers not because we are stronger, but because we are smarter. This means that if we cede our position as smartest on our planet, it's possible that we might also cede control."

Max invites people to people to join the interesting controversies. He says-"Not wasting time on the above-mentioned misconceptions lets us focus on true and interesting controversies where even the experts disagree. What sort of future do you want? Should we develop lethal autonomous weapons? What would you like to happen with job automation? What career advice would you give today's kids? Do you prefer new jobs replacing the old ones, or a jobless society where everyone enjoys a life of leisure and machine-produced wealth? Further down the road, would you like us to create super intelligent life and spread it through our cosmos? Will we control intelligent machines or will they control us? Will intelligent machines replace us, coexist with us, or merge with us? What will it mean to be human in the age of artificial intelligence? What would you like it to mean, and how can we make the future be that way? Please join the conversation"

(Source and courtesy - Max Tegmark, President, Future of Institute)

We are reproducing editorial of College Post published in 1996 after the Lok habha election. Issues that mattered then also seem to matter in 2019 Lok Sabha election. The question is, have we progressed /regressed or are we standing where we were more than two decades ago?

MELTING POT

Lok Sabha Elections of 1996 have thrown up new agenda. Votes have, in one way rejected any single party to rule, or in other way wanted all the parties to come together and formulate a common programme of development. In other words, ideologies and viewpoints expressed by the different parties are getting melted. Results of the Lok Sabha suggest for the formation of a national government. Head core believer in a single party rule have rejected this view. A new grouping has taken place. All the parties though opposing each other at the regional level, have attempted to come together at the national level on a plank of secularism against a party which has a relatively a large number of Members in parliament (but very far from majority), terming it as non-secular, as the party in question had one of the policy plank of Hindutva, of cause defined in very broad terms. Though it was given a chance but it could not stay on.

Coming together of these parties under an acceptable framework with varying ideological hues but broadly in agreement and depending on the erstwhile majority party and now with larger number of M.Ps is basically an attempt to work out those policies and programmes which will avoid the hard policy planks. But choose those which are commonly acceptable. That is what has been in operation under the common minimum programme.

Another major development has been unearthing of corruption in Indian body polity. The process which was initiated on the eve of the Lok Sabha elections seems to be getting full blown, sparing none irrespective of party belongings. How far, How much, and who is really involved in all these, will finally be known when verdicts of various cases are given by the legal system. One perceptible thing is that the press has made it an open trial, which may be good for cleansing the system, but to the individual concerned these reports may be verdicts before verdicts. In any case these developments, one hope will bring sobriety in the power that be!

India is a milt-religious, multi-ethnic, multi-cultural country. Its strength lies in this diversity. The diversity only seeks people to be tolerant and to live with fellow-feeling in spite of several differences. In an earlier editorial, it was started that any government which assumes power will have to face certain challenges. Anew challenge which has been thrown up specially to the higher education system is to grapple with this dimension of Indian democracy and to educate young students in the concept of democracy should not depend on money power but the goodwill of service to the people and peoples developments through research and generation of knowledge and transmission of the same . While this is being done, institutions of higher education have to impart relevant knowledge, skills and attitude for the development of economy.

Our education system therefore must perform the role of developing, knowledge, research and skills for economic development of the nation and simultaneously has to the role of developing values among the students. Any attempt to undermine the system of education and more particularly higher education either by not allocating adequate resources, or allowing unscrupulous forces to overtake it, may prove to be harmful.

THE NIRF 2019 - HIGHLIGHTS AND ANALYSIS

BHARAT CHANDRA ROUT*

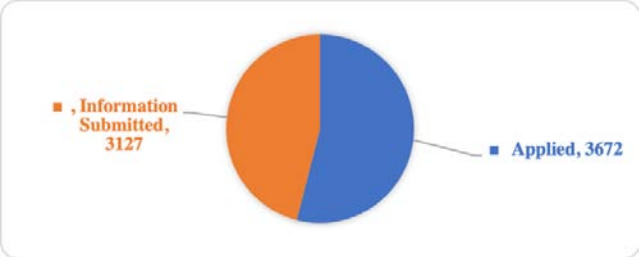
This commentary highlights some of the key aspects of NIRF, 2019 and makes suggestion for better categorization of institutions having comparable level playing field for the purpose of ranking

The National Board of Accreditation (NBA) of the Ministry of Human Resource Development (MHRD) jointly with the help of INFLIBNET brought out the National Institutional Ranking Framework (NIRF) 2019 report ranking the Indian higher educational institutions(HEIs) with aims to instil innovation, encourage competition and excellence among them.

Of 46 percent institutions from among the total institutions who registered and submitted their information for ranking, seven old IITs, two old Central Universities and IISc Bengaluru makes to the top ten in the ranking of overall 100 HEIs placing IIT Madras at the top of the list in the overall ranking of 100 HEIs.

The report considered performance indicators such as, teaching, learning and resources, research and professional practice, graduation outcome, outreach and inclusivity and perception of the peers and employers on the reputation of the institutions. The framework provides ranking separately for overall institutions and for discipline/ trade specific such as for engineering, medicine etc. separately comparing data from both government and private funded and managed educational institutions in various parts of the country.

Figure 1: HEIs applied and Submitted Information to NIRF for Ranking

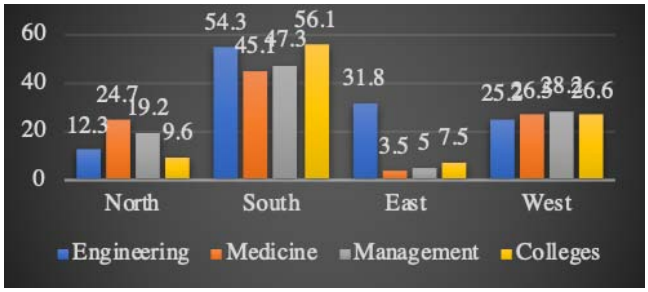


Source: NIRF Report, 2019

REGIONAL DISTRIBUTION:

Regional distribution of the participant institutions to the ranking indicate that 54 percent of the engineering and 45 percent of the medical, and 47 percent of the management colleges from South India took part in the ranking while the same figure for North India is 12 percent, 24 percent and 19 percent respectively.

Figure 2: Region wise Participation in Ranking 2019



Source: NIRF Report, 2019

This is against of the fact that only about 5 percent management, 3 percent medical and 31 percent engineering colleges from Eastern India took the ranking for 2019. Similarly more than 56 percent general colleges from the South took part in the ranking against 7 percent from the Western India.

RANKING POSITION BY TYPES OF INSTITUTIONS

Disaggregated Analysis

As evidenced from table 1 below, 11 central universities, 17 IITs, one IIM, six NITs and five IISERs make to the list of top 100 HEIs in India. Besides, 35 state public universities and 25 state private universities are among the top hundred HEIs in the country. However, it may be mentioned that not a single AIIMSs, NISERs and general colleges figure in the top hundred overall ranking order in 2019.

At a disaggregated level, the overall ranking order reveals that two old central universities (JNU and BHU), IISc Bengaluru and seven old IITs are among the top 10 percent of the ranking order leaving behind a large number of relatively old and new central universities, old state universities and colleges that for many years served the purpose of higher education for many people in the regions.

Similarly, four central universities, four IITs, one IIM, one NIT and two IISERs including six public state universities and two state private universities figure in 11 to 30 ranks at all India level. In other word, three central universities figure between 50 to 100 ranks while two IITs, four NITs, 21 state public universities/institutes and 19 state private universities/institutes figure in between 51 to 100 in the ranking order. The proportion of state level universities/institutes do not figure among the top 10

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Table 1: Ranking interval by types of higher educational Institutions

Types of HEIs	*Rank Interval*					
	Rank <=10	*Rank 11-30*	*Rank 31-50*	*Rank 51-70*	*Rank 71-99*	*Total 1-100*
Central Universities*	3	4	1	2	1	11
IITs#	7	4	4	2		17
IIMs	0	1				1
NITs$	0	1	1	2	2	6
IISERs^	0	2	2	1		5
State public Universities/Institutes %	0	6	8	6	15	35
State Private Universities/Institutes	0	2	4	7	12	25

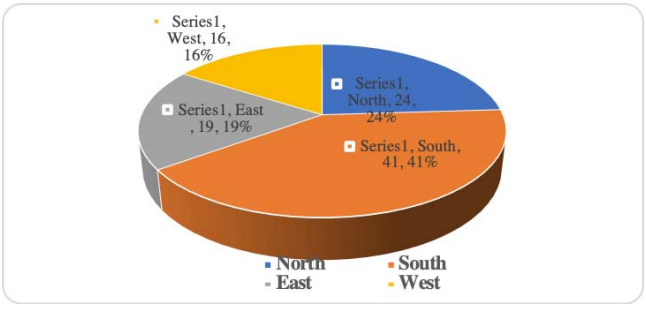
*Note: * includes IISc Bengaluru, ^ includes Homibaba National Institute, # includes Indian institute of chemical technology, VIT, IIES&T, % includes TISS and its branches, $ includes NITTEs*

percent of the ranking order though they slowly catch up with national level technical and management institutions when one looks at ranking beyond the top 10 percent.

Regional Distribution of Ranked Institutions

Regional distribution of HEIs by their rank in the NIRF 2019 illustrates that highest number of HEIs (41%) figure in the top 100 institutions are from South India followed by North India (24%), East India (19%) and West India (16%). This distribution of ranking of HEIs can be corroborated with the data on region wise percentage of HEIs participated in the NIRF 2019. To be precise, around 50.7 percent HEIs alone from the South India took part in the ranking of which close to 40 percent are private HEIs thereby making the region over represented reflecting a higher share of top ranking HEIs. Moreover, private HEIs are more likely to promote marketization of their courses by showcasing their overall ranks and ranks for specific courses/disciplines.

Figure 3: Regional distribution of ranked institutions 2019



Source: NIRF Report, 2019

Research Publications

Indian academics and researchers published about 3.5 percent of the world publications in 2016 a figure that stands abysmally low compared to OECD average. Over the years, this percentage has marginally gone up to 4.05 percent in 2017 and to 4.4 percent in 2018 of the total world publications. Most of these publications undoubtedly comes from the centrally sponsored elite HEIs and universities with very little or no scope for degree college teachers for research and publications.

Table 2: Comparative figures for research publications

Year	*Comparative Research Publications*	
	World	*India (% of World total)*
2017	7491367	3.5
2018	8309449	4.0
2019	9031073	4.2

Source: NIRF Report, 2019

As far as highly cited publications of the top 100 HEIs is concerned, 94 percent of management research publications are highly cited (the highest 25th percent cited frequently) compared to 90 percent publications by pharmacy professionals and 80 percent of the engineering professionals in India. Little above 70 percent of the university faculties' publications are highly cited compared to 74 percent citation in overall. The frequency of citation is a significant indicator of the quality and impact of the research paper and the publisher, and can potentially inform the impact of the research in the field of domain.

On the other hand, more than 66 percent management institutions applied to this ranking do not have any publication record compared to 31 percent colleges, 23 percent universities and close to 15 percent pharmacy colleges in the country. Since management degrees are mostly sought for employment after BBA/MBA etc. and very few candidates opt for research degrees after MBA/BBA, the research publication output hence bound to show a lower trend compared to engineering and university faculties and students. Please see Table 3 on next page.

THE MISSING DIMENSIONS AND CONCLUSION

The ranking of the educational institutions serve many purposes. It can instil a sense of competition, encourage innovations and learning, and provide avenues for academic excellence. However, these outcomes are also

Table 3 : Highly cited publications of top 100 Institutions

Discipline	*Total number of highly cited pub.*	*Highly cited pub. by top 100 Institutions*	*% of total*	*HEIs having "0" Pub.*
Overall (916)	44810	33074	73.8	
Universities (303)	30121	21260	70.5	23.1
Engineering (904)	18245	14549	79.7	6.3
Management (507)	537	508	94.5	66.2
Pharmacy (289)	866	785	90.6	14.8
Colleges				31.4

(Source : NIRF Report, 2019)

strongly associated with other significant factors like infrastructure, resources, management, regional focus, years of operation and experiences, population characteristics of the catchment area, job security etc. Based on the above analysis and from an overall understanding of the methodology in developing indicators of measurement and their outcome (ranking order), following points may have to be considered while doing further exercise in the future.

- First, the teaching, learning and resource parameter (1) does not consider even a single indicator that reflects the institutional performance on teaching and learning. For instance, students' academic achievements, graduation rate, or access to labour market would have been useful to consider. Second, the indicators of the ranking framework support the academic reputation of the already established institutions/universities by unduly emphasizing on the indicators data/information for which data is only available with them. For example, degree colleges spend a disproportionally higher amount of time on teaching than on doing any research. Having a separate indicator based on faculty publications (Parameter 2) unduly emphasize the role of faculties in universities/ institutes vis-à-vis degree colleges.
- The NIRF should consider incorporating sub-indicators like hours of teaching performed by faculties, academic guidance provided etc. in order to provide a level playing field for any meaningful comparison. Third, the indicator of outreach and inclusion can be extended to include rural/violence ridden/ geographically difficult/inaccessible/lack of HEIs in the region and provide them grace points for ensuring education and promoting diversity in the student population and in the institution. Besides regional representation and enrolment of foreign students, outreach indicator can include faculty international collaboration and innovative higher education practices that inform domain areas beyond the country.
- Last but not the least is the idea that a comprehensive ranking of all types of HEIs with diversified background, resources, management, academic reputations, and their purpose of operations actually makes the whole exercise futile. One cannot compare a central universities established in early 1960s with tremendous academic and professional journey of excellence with that of a new degree college in a remote Tribal district of India. Placing all types of institutions in a single framework of measurement neither motivate nor promote competition and excellence in them. It is therefore important to come out with separate set of ranking by types of HEIs through systematic and scientific analysis of the criteria considering the scope, objectives and outreach of each types of institutions in the country. Encouraging competition among degree colleges or among IITs separately would be a productive move towards innovation and excellence among HEIs through ranking in India.

This column brings out briefs of : Ph.D, M.Phil Researches in Education, Economics of Education, Social, Political, Psychology aspects of education conducted in University /College departments. It also brings out briefs on researches done by Research Institutions, Industry and NGOs. This column was introduced from April-June, 2016 issue of College Post. Method of reporting the researches completed and in progress was given in that issue. Interested researchers, professors and Heads of institute are requested to send their brief accordingly. Purpose of this column is to high light the researches in education conducted in university and college departments and in any other institution / industry and NGO for the benefit of policy makers, research scholars, thinkers. Readers are welcome to encourage relevant person and institute to send briefs on research done and being done in education.

This issue brings to you briefs on following researches in Education.

PH.D THESIS

Title - **Education and economic empowerment of women- A study of coastal Karnataka**

Researcher- A Preethi K. Guide- Professor P. Shripathi Kalluraya, Department of Economics, Mangalore University, Mangalore, Karnataka, Completed 2013 upload date 2018

The specific objectives of the study:

1. To critically evaluate the various aspects of women empowerment, 2. To examine the role of education in empowerment of women in terms of personal empowerment, social empowerment and economic empowerment, 3. To analyse the educational status of the women and to compare the empowerment process of women across different levels of education, 4. To describe the economic status of employed women in terms of income, consumption, savings and investment, 5. To provide a framework for the women empowerment through education programmes.

Sample

The study has been conducted on primary data from the sample educated women respondents of 200 each in Dakshma Kannada and Udupi districts. Data was also collected from a controlled group of 200 educated but not working women i.e, 100 each from Dakshma Kannada and Udupi districts through Purposive random sampling technique.

The study examined three aspects of women empowerment namely, personal empowerment, Social empowerment and economic empowerment of educated employed and unemployed women with different levels of education. Several indicators of these aspects were examined by the study.

Key Finding

Personal empowerment: It is found that 'self confidence' level is more among graduate employed women (42.83 average scores) followed by postgraduates (41.67 average scores), professional graduates (40.67 average scores) and under-graduates (37.83 average scores) o 'Self image' among post-graduate employed women is more compared to under-graduate, graduate and professionals of Post-graduate employees score more in terms of 'leadership quality' than other educated women of Professional graduate women are having more 'self awareness' followed by graduates. Other aspects like communication skills, negotiating skills and problem solving skills have also been examined by the study under this category.

Comparison with sample and controlled group

The personal empowerment scores of sample women are much higher than that of controlled group irrespective of educational status. But it is also observed that the scores of controlled group too vary in accordance with levels of education.

Comparison across social group

The general class women are more personally empowered followed by women belonging to OBC, STs and SCs. Even among all social groups, empowerment scores vary with consistency across educational status.

Social Awareness

1. It is found that professional graduate women enjoy more 'respect in the family' followed by post-graduate, graduate and undergraduate employed women, 2. Post graduates enjoy more 'recognition in the society' whereas under-graduates are recognized very less, 3. 'Ability to run the family' is highest among professional graduate women compared to other women which may be linked to their economic earning 257, 4. Professional graduate women 'participate more in public programmes'. In this regard under-graduate women score more (27.67 average scores) than graduate women (24.17 average scores), 5. Professional graduate women are more aware of the society' followed by graduate women. Other aspects like Social Mobility.

Comparison with controlled group

Sample women are more socially empowered compared to controlled group But it is also observed that even under controlled group higher the level of education higher will be the extent of social empowerment.

Comparison across social l group

The general class women score more compared to other social classes But it has to be noticed that their scores along with that of other social groups vary with mconsistency across educational status.

Economic Empowerment

Income of the respondents is positively related to their educational status Higher the education level, higher is

the mcome Professional graduate women earn more mcome followed by post-graduates, graduates and under-graduates. The professional graduates earn average monthly mcome of Rs 37460, post graduates Rs.23720, graduates Rs 22140 and under-graduates Rs.10640 respectively o With regard to 'consumption', majority of graduates, Post graduates and professional graduates' consumption expenditure is between 40 to 60 per cent whereas in case ofunder-graduates it is 60-80 per cent. o With regard to 'saving behaviour' of sample women it is noticed that majority of under-graduates save less than 20.0 per cent of their monthly mcome whereas m case of other women respondent it is between 20-40 per cent.

Comparison with controlled group

The comparative analysis of economic empowerment scores of sample women and that of controlled group shows wide gap between two groups. It is mainly because the latter don't earn at all But it is also observed that the scores of controlled group too vary in accordance with levels of education like that of sample women

Comparison with across social groups

The sample women belong to general class are more economically empowered compared to other social classes Their scores as well as the total scores vary with consistency across educational status Among backward classes, OBC group scores more followed by SCs and STs. For details see main study.

Source and courtesy: www.Shodhganga@iflibent

Ph.D.

Title - **Education and Economic Growth in Idduki District** Researcher- Shjimon PP Guide- Professor Jaleel P.M. Department - Education Department, Mahatma Gandhi University, Kottayam, Kerala 2009 Upload date 7th August, 2014

In the present study the investigator used both primary and secondary data. Hence historical and survey methods were adopted for the study. The sample for the study consisted of 1500 households selected from the area of study. Objectives and hypotheses were formulated, and based on these; appropriate statistical techniques such as Percentages, Test of Significance of Difference Means, Analysis of Variance (ANOVA), Karl Pearson's Product Moment Co-efficient of correlation, Test of significance of the difference between correlations were computed. The tools used for the study are Documents, Questionnaire, Economic Welfare Status Scale and Interview Schedule.

Key Findings

1. PROGRESS OF EDUCATION IN IDUKKI

1. The total number of literates in Idukki increased by 24.85 per cent (Male - 21%, Female - 29.46%) between 1981-1991. But it declined by 8.1 per cent (Male - 6.73 %, Female - 9.83%) in 2001. 2. The overall literacy rate in Idukki increased from 67.44 per cent (Male - 72.15%, Female - 62.55%) in 1981 to 88.58 per cent (Male - 92.11%, Female - 85.04%) in 2001. The literacy rates (Male, Female and Total) of Idukki (Census 1981, 1991, 2001) are lower than that of the state, but the gap is reduced considerably during the latest census. 3. The total number of schools in Idukki increased by 3.68 per cent (LPS - 5.50%, HS - 8.52%) between 1990-91 and 2008-09. But the number of UPS declined by 5.26 per cent during the period. 4. Between 1990-91 and 2008-09 the enrolment in schools of Idukki decreased by 31.52 per cent (LPS - 36.31%, UPS - 32.40%, HS - 23.03%). 5. During 1990-91 and 2008-09 the total number of school teachers in Idukki decreased by 44.11 per cent. The percentage decrease in LPS, UPS and HS is 49.31, 44.12 and 38.53 respectively. 6. The overall drop-out rate in schools of Idukki decreased from 1.86 in 1997-98 to 1.31 in 2005-06. The rate is very high in HS than that of in LPS and UPS. Drop-out rate in Idukki is much higher than the state at all stages of school education. 7. There is considerable progress in higher education in the district but it is much lower than that of the state.

2. ECONOMIC GROWTH OF IDUKKI

1. The Net District Domestic Product (NDDP) in Idukki has recorded ten fold increases between 1990-91 and 2006-07. The Per-Capita Income (PCI) also increased almost at the same rate (9.12 fold). This growth in district income is much higher than that of the state. 2. The decadal growth rate of population in Idukki declined from 26.64 to 6.96 from 1981 to 2001. 3. The percentage decadal variation of working population in Idukki declined from 16.67 per cent to 13.84 per cent between 1981-2001. Work participation Rate in the district increased from 37.77 to 43.30 during 1981-2001. The corresponding improvement for males and females are 51.51 to 58.13 and 23.49 to 28.11 respectively. The work participation rate in Idukki in much higher than that of Kerala in all censes years. 4. The area under cultivation and production of crops like mango, tamarind, pineapple, Papaya, Cocoa, coconut etc in Idukki increased between 1990-91 and 2006-07. But there is a decline in the area and production of crops like rice, sugar, ginger and cardamom. 5. The number of registered working factories and employment in these factories in the district increased by 21.58 per cent and 110.11 per cent respectively between 1990-91 and 2006-07.

RESEARCHES IN PROGRESS

Students Satisfaction Survey- Department of Higher and Professional Education, National Institute of Education Planning and Administration. New Delhi

Higher Education Governance in Bihar-Professor Sudhanshu Bhushan, National Institute of Educational Planning and Administration, New Delhi.

EMPLOYMENT AND EMPLOYABILITY ISSUES

A report published in Times of India quoting Annual Engineering Survey,2019 of Aspiring Minds revealed that only 3 percent of engineering graduates are able to write code and very small proportion are able to grasp the requirement AI, Clouds and machine learning. It also pointed out that Indian students are better than Chinese students in writing code. If future requirement of AI, IoT and Machine learning has to be handled effectively than students have to be trained in new technologies.

The report depicts ability of Indian Engineering graduates in various roles. Please see Graph 1.

Report also compares ability of engineering graduates of India with Engineering Graduates in China and America.

The cause of lack of employbility is seen owing to the way process of teaching learning is conducated in engineering colleges. American graduate spend more time in industry and apply engineering in industry whereas Indian students are boxed in colleges.

Yet another report by Aspiring Minds about employability of engineers other than core IT reveals that 94 % of engineering graduate are not employable in large manufacturing industry. If make in India object has to be met than engineering students need to be effectively trained and manufacturing industry.

It may however, be mentioned that most of manufacturing jobs are also getting automated. Engineering students would need to have duel ability of handing manufacturing work along with ability to handle automated /robotic manufacturing machines.

The issue of employment and employability of higher education graduate is gaining importance in the context of technology changes as also a large number of youth in India are aspiring to enter job market in India.

Recently Centre for Policy Research in Higher Education of National Institute of Educational Planning and Administration In collaboration with British Council Inda organized an Internal Seminar on Employment and Employability in Higher Education at India Habitat Centre, New Delhi on 19-20th February, 2019. Issues discussed in the seminar had very close relationship with various dimension of the problem of employment and employability of higher education graduates. The issues dealt with aspects of Knowledge Economy and changing skill development, Education and Employment of higher education graduates, employment and employability and skill mismatch in labour market, curriculum, pedagogy and skill development programmes, entrepreneurship programme and university-industry relationship, National Qualification Framework (NQF) and training system. Seminar also raised a question for debate on Should Skill formation and employment be major orientation for higher education.

The issue of major orientation higher education begs serious debate. As early as 1976 when first time Census of India published data regarding education and employment of population. The study raised the issue of graduate unemployment and employment of graduates in various sectors of economy. The study projected ability of economy and absorb the graduate in future and likely gap between graduate degree holds and their employment in various sectors. It revealed that unless structural change in education or economy is attempted unemployment of graduate will increase in future. The issue of educated unemployment is still live and has assumed a serious proportion. The recent report of NSSO employment has not been made public for various implications. But issue is very live and serious and could only be ignored at the peril of youth and economy.

The debate is: should higher education produce graduate to perform larger role of exploration, innovation and experimentation or to be bogged down to write the codes of AI or for that matter be able to work for technology giants of developed country operating back offices in developing country, as it has been reported in Annual Engineering Education Survey, 2019(above)?.

The issue is also: is Indian industry demanding good engineering graduates to man and solve their developmental problems and issues? Is Indian industry engaged in production and manufacturing in big way or in trading? Is make in India has taken shape to demand engineering and other graduates to man their operations? Reports on employment is very dampening over the past a few years.

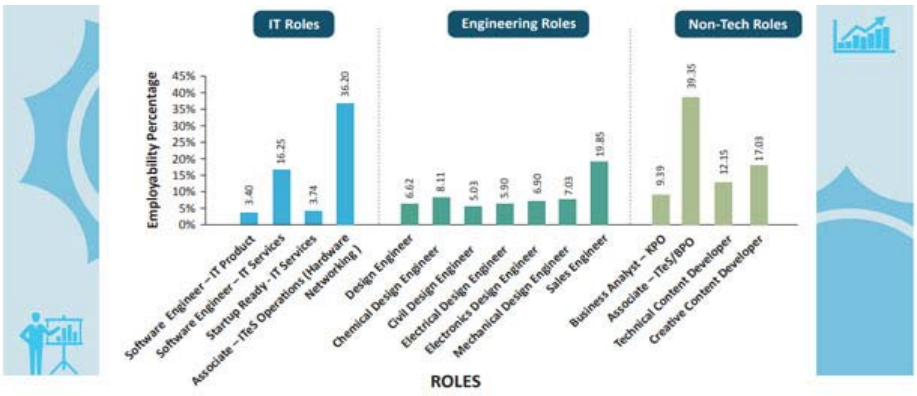


Figure 1: Employability percentage of engineering graduates in different roles

(Source: Employbility Survey, 2019, Aspiring Minds)

STRUGGLES OF ASIAN-AMERICAN IN EDUCATION AND WORK PLACE IN US

Dr. Jennifer Lee professor of Sociology at Columbia University said that "Asian Americans" are facing stalled mobility" after their college years. He further said that They have to be over-credentialed in order to just reach parity with native-born whites."

The Columbia Study using second generation migrants showed that " that Indian Americans were eight times more likely than whites to have a degree, that ethnic Chinese and Koreans were about five to six times more likely, and that Vietnamese and Filipinos tallied about two or three times higher. Yet Chinese Americans were only about 1.5 times more likely than whites to have a professional or managerial position, while the other four Asian ethnicities showed no significant gain over white graduates on that job-success measure." The study further showed that " ethnic Chinese are in fact the lone category of Asian Americans who do demonstrably better than white graduates at top levels of US industry"

Professor Lee said "ethnic Chinese have been in the US longer, and "they've accessed these programmes a lot earlier", than other Asian Americans. Ethnic Chinese in the US are, therefore, a success story for programmes of affirmative action in universities and hiring preferences in industry.

The author called on universities to recognise the importance of teaching Asian American students more than just the technical proficiencies and attention to detail for which they are typically noted."

Source and Courtesy: Paul Baskin, Times Higher Education News
paul.basken@timeshighereducation.com

UK BUSINESS SCHOOLS LEADERS PREDICTS CLOSURE AND MERGERS OF BUSINESS SCHOOLS

A report "The Changing Shape of Business Education Provision", from the Chartered Association of Business Schools (CABS) says that "UK business schools face an "increasingly sophisticated and diverse set of competitors", as the international business school market improves, online providers offer cheaper study options, alternative providers at home expand into the market and political decisions affect the choices of students"

A survey members' deans and senior managers by CABS found that many believe the impact could be "dramatic" for some institutions. The survey showed that 61 per cent of respondents agreed that the growing number of alternative and international providers entering the marketplace was "likely to lead to closure or mergers of existing UK business schools".

The report says that numbers of undergraduate non-European Union international students studying business in the UK have stayed steady around 44,000 in the last few years. Although postgraduate numbers increased by 8.9 per cent last year to 54,865, this was still less than the 59,170 studying in 2011-12.

The report states that" UK schools' ability to attract more international students will be affected by the growing competition from Australia, Canada, and across Europe in particular, the report says. Latin America was also making "steady inroads" with well-funded and staffed institutions and the increasing quality of Chinese business schools was also likely to affect UK recruitment of Chinese students"

Source and Curtesy: iStock) Anna McKie Twitter: @annamckie Times Higher Education News March 25, 2019

TRAVAILS OF BLUE COLOUR WORKING CLASS ACADEMICS

Professor Van Bueren visiting fellow Kellog College, Oxford told Times Higher Education. "It remains very difficult to get into academia if you have a working-class background, given the costs of obtaining a doctorate"

"I am not sure that the barriers faced by working-class academics break down at the middle stage of their careers".

These problems were often exacerbated by the fact that many scholars felt unable to publicly identify themselves in class terms, meaning that peer support was often hard to find.

Professor Buren said "I am not sure that the barriers faced by working-class academics break down at the middle stage of their careers," She mentioned that "such barriers included "class prejudice about accent, less financial resources to attend conferences for postgraduate students, derogatory comments about class and the absence of any financial cushion"

"People do feel reluctant to come out in this way - they feel vulnerable and don't want to be accused of moaning about disadvantage," she explained, adding that it was nonetheless "an important part of one's identity that should be recognised".

"By making ourselves more visible, we would like to break down some of the stereotypes about working-class academics and also improve social mobility

Professor Van Bueren, said that his father worked in factories in London's East End and was later a taxi driver.

Source and courtsey:
jack.grove@timeshighereducation.com

Perceptions and fears are made inside mind by outside forces

–Anonymous

My personal journey was from a student of St. Xavier Colleges, Calcutta University to joining service career as an Assistant Cost Accountant at Hooghly Dock & Port Engineers' Ltd, a Govt. of India, undertaking, doing M.Phil. and Ph.D. from Kalyani University, West Bengal joining as Lecturer In St. Xavier's College, Calcutta as a Lecturer in Business Management and continued teaching there for a prolonged period of two decades and then joining as Principal of Netaji Nagar College (Established in 1967) in 2008. The journey in academics was very educative and rewarding.

When I joined Netaji Nagar College the college had only 222 students and a rating of C++ from NAAC. My academic interest made me to organize seminars and workshops and undertake minor and major research projects in the college. Research projects were more related to local issues like Hawker spot to Shoppers' Stop - A Study of Changes in the Taste & Habits of Bengali Middle-Class Families." in College Street, Calcutta. Seminars and research projects inspired teachers and students. When I left Netaji Nagar College in 2015 to join as first Principal of City College of Commerce and Management, run by Brahmo Samaj, founded by Raja Rammohan Roy and Maharshi Debendranath Tagore, Netaji Nagar College had the strength of 1600 students and got B+ rating from NAAC.

I undertook many research projects and innovative work in college. I was Co-opted as a member of the Brahmo Samaj Education Society. Within eight months college obtained NAAC accreditation of the college. Also, I organised two National and four State Level UGC sponsored seminars at this college. City College of Commerce & Business Administration today is a college where classes are held and examinations are conducted smoothly, there is no poster, shouting, slogan or procession, no Gherao, no Ragging and all students, teachers and other staff members together represent a perfect joint family.

Let me share a recent event that took place in the college. We have a compulsory attendance for students up 70 per cent of classes held. Some students could not fulfil the criteria and therefore were not allowed to sit in the examination. There was a lot of pressure on everyone including me to allow the students to sit in the examination. There was a lot of media reporting and pressure. But we stood firm and negotiated with students. We succeeded in convincing the students. This was a trying time, but we stood firm. Students also saw the reason and were convinced of our objectivity in handling the situation.

This is an administrative issue, but our main focus is involving students and teachers in academic activities and seminars. I attended the ICF annual conferences regularly presented paper and benefited a lot from peer group interaction. I also attended a seminar organised by Gedu College of Bhutan and chaired the session. Such seminars, conferences and research projects inspire us and give us a lot of strength to perform.

I only would like to share that our main task is to work for academic excellence and the development of students and staff. No event or pressure should take us away from the endeavour to achieve excellence in education.

Dr. Sandip Paul, Principal,
City College of Commerce and Management
Calcutta, West Bengal

College Post invites Heads of Colleges, VC of universities and Directors of higher education to send their report in less than 1000 worlds about best practices and innovations in the area of academic, governance, contribution to society and achievements in sports and culture. Selected reports will be published under the proposed CP column on innovations and best practices in higher education.

Book Review

QUALITY ASSURANCE HIGHER EDUCATION- A REVOLUTION IN THE OFFING

Quality, Accreditation and Ranking- A Silent Revolution in the offing in Indian Higher Education

Edited by H. Chaturvedi Published by Bloomsbury India,2019 pp.239

A system if quality assurance in higher education through external evaluation has been in practices since the early 1980s in the USA followed by many countries in subsequent years. The main objective of the external quality review was to inform the public about the quality institution of higher education. This was initiated by the Association of Presidents and Principal's universities and colleges voluntarily through peer group review to inform students and parents about the quality of institutions. This was done by providing stars/ grades based on certain parameters of institutional evaluation. India also debated the concept of external evaluation after it was mentioned in the National Policy on Education, 1986. University Grants Commission set up an inter-university centre for assessment accreditation of institutions of higher education and titled it National Assessment and Accreditation Council- like a system of external evaluation of quality on certain parameters initially voluntary for long period but it has been made almost mandatory to acquire autonomy and certain privileges in the year 2014. Under the concept of external institutional evaluation through the ranking of universities by four external quality assurance agencies has prompted India to have its own institutional ranking framework?

Though there are several articles and publication on this subject, the book under review edited by Dr Chaturvedi has selectively included issues which are of utmost importance in the debate on external quality assessment of institutions of higher education. Introduction by Dr Chaturvedi provides a detailed historical account of development and implementation of the concept of quality assessment accreditation and for the coming decade of his poser is whether India wants to become winner or loser. He makes several suggestions to help India become a winner by 2030. There are 12 articles included in this book. Two articles by Professor Anandkrishnan and Dr Jagganath Patil, Dr Lata Pillay and Professor DP Singh deal with institutional evaluation. Dr Anandkrishnan traces evolution and growth of quality assurance and accreditation and Dr Patil et all gives an inside account of accomplishment of NACC and delve on paradigm shift during 2017 when a new system of assessment and accreditation was evolved.

Article by Anup Singh deals with quality assurance in the teaching-learning process. Onkar Singh in his paper deals with quality assurance and governance. Ravi P Singh and Rudraneel Chattopadhyay make a plea for developing a model of quality assurance across the country by various model of quality assurance adopted in the world. They title their paper as " creating an ecosystem for a disruptive change..._

Two of the 12 articles by TA Mohandas Pai and Kartik Shridhar and Shri Rajive Ranjan Thakur and Professor Dipak Singh share their institutional experiences.Dr. Pai and Shridhar make plea enhancing quality through assessment and introducing the possibility of informing the institution to reduce the gap. Whereas Dr Tahkur and Singh on the basis of their institutional case study of Jaipuria management institute deals with the innovative method of MBA curriculum development, implementation and experience in achieving excellence. Whereas SR Shankapal in paper shares experience of educational practices that enhance the students' experience in achieving excellence.

Two of the articles also deal with Ranking of MBA programme. A paper by GN Patil, A Bos, Arpita Reddy P and Aditi Mudgal delve on methodological approaches of benchmarking Management Institutions and paper by Amit Agnihotri and Ajay Dey pleads for coherence in the ranking of MBA programme to serve the society. In the series of papers on MBA/B. School programme paper by A Thothathri Raman critically examines the role played by accrediting agencies in India and shares models accreditation of MBA programme by international accrediting agencies.

In the foreword, Professor DP Singh, Chairman UGC, says "For competing globally and meeting challenges of 4th Industrial Revolution Indian universities and colleges have to work very hard with a pragmatic outlook to remove redundancies in the system."

The book is a very valuable addition in the literature on Quality Assurance and accreditation of higher education.

Dr Mridula Sharma
Director, FMG Academy, Gr. Noida

Publishers and institutions are invited to send their latest publication on education and development for review in Book Review column.

Poem by Nanak Singh in Punjabi English Translation by Navdeep Suri, grandson of Nanak Singh Remembering Jalliawala Bag sacrifice - April-13, 1919- April-13, 2019

जनरल डाईर ने आउणा ते गोली चलणी

ठीक वक्त साढ़े पंज वजे दा सी,
लोक जमां होए कई हज़ार पिआरे,
लीडर देश दा दुख फरोलणे नूं,
लैक्चर देंवदे सन वारो वार पिआरे।
कहदे जीवणा असां दा होएआं औखा,
किथे जाइके करीऐ पुकार पिआरे।
कोई सुझदी नहीं तदबीर सानूं,
ड़ाढ़े होए हां असीं लाचार पिआरे।
अजे लफ़्ज़ तदबीर मूंह विच हैसी,
उधर फ़ौज ने धूड़ धुमा दिती।
थोड़ी देर पिछे फ़ौज गोरखे दी,
जनरल डाइर ने अगांह वधा दिती।
दे के हुक्म नहक निमाणिआं 'ते,
काड़ काड़ बंधूक चला दिती।
मिंटां विच ही कई हज़ार गोली,
उहनां ज़ालमां ख़तम करा दिती।
गोली की एह गड़ा सी कहर वाला,
वांग छोलिआं भुने जवान उथे।
कई छातीआं छानणी वांग होईआं,
अैसे जुलमां मारे निशन उथे।
इक पलक दे विच कुरलाट मचिआ,
धूंआं धार हो गिया असमान उथे।
कई सूरमे पाणी ना मंग सके,
रही कईआं दी तड़पदी जान उथे।
भीड़े राह हैसन इस बाग़ दे जी,
एह रोकिया उहनां ने आण उथे।
कोई राह ना जाण नूं रिहा बाकी,
किदां बच करके निकल जाण उथे।
कोई बचिया होउ नसीब वाला,
नहीं तां सारिआं ने दिते प्रान उथे।
कई गोलीआं खाईके नठ भजे,
रसते विच ही डिग मर जाण उथे।
कईआं नसदिआं नूं गोली काड़ वजी,
झट पट ही दिते प्राण उथे।
पल विच ही लोथा दे ढेर लग गए,
कोई सके ना मूल पछाण उथे।
गिणती सिखां दी बहुत ही नज़र आवे,
भावें बहुत हिंदू मुसलमान उथे।
सोहणे सूरमे छैल छबीलडे जी,
हाए तड़फ़दे शेर जवान उथे।
सोहणे केस खुले मिट्टी विच रुलण,
सुते लंमीआं चादरां ताण उथे।
नानक सिंह ना पुछदा बात कोई,
राखा उहनां दा इक भगवान उथे।

BRIG. GEN. DYER ARRIVES, GUNFIRE BEGINS

Five-thirty sharp the clock had struck
Thousands gathered in the Bagh, my friends.
Leaders came to lament the nation's woes
Taking turns to speak out loud, my friends.
Voiced grievance, hardship, anger, sorrow
Saying, no one listens to us, my friends.
What can we do, what options left?
Can't see any ray of light, my friends.
Those words forlorn, they barely voiced
Came soldiers thundering down, my friends.
At Dyer's command, those Gurkha troops
Gathered in a formation tight, my friends.
Under the tyrant's orders, they opened fire
Straight into innocent hearts, my friends.
And fire and fire and fire they did
Some thousands of bullets were shot, my friends.
Like searing hail they felled our youth
A tempest not seen before, my friends.
Riddled chests and bodies slid to the ground
Each one a target large, my friends.
Haunting cries for help did rend the sky
Smoke rose from smouldering guns, my friends.
Just a sip of water was all they sought
Valiant youth lay dying in the dust, my friends.
That narrow lane to enter the Bagh
Sealed off on Dyer's command, my friends.
No exit, no escape, no way out was left
Making the Bagh a deathly trap, my friends.
A fortunate few somehow survived
While most died then and there, my friends.
Some ran with bullets ripping their chest
Stumbling to their painful end, my friends.
Others caught the bullet while running away
Dropping lifeless in awkward heaps, my friends.
In minutes, the Bagh so strewn with corpses
None knew just who was who, my friends.
Many of them did look like Sikhs
Amid Hindus and Muslims plenty, my friends.
In the prime of their youth, our bravehearts lay
Gasping for one last breath, my friends.
Long hair lay matted in blood and grime
In slumber deep they sleep, my friends.
Says Nanak Singh, Who knows their state
But God the One and Only, my friends.

Courtesy-www.cntraverlor.in/story

College Post R. No. 65288/95
ISBN 978-81-929059-0-7

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**SOCIETY FOR EDUCATION AND ECONOMIC DEVELOPMENT
NEW DELHI**

Published and Edited by Dr. G.D. Sharma on behalf of the Society for Education and Economic Development, from KH. No. 774/6, Mandi Village, Main Mandi Road, Near Mandi & Gurgaon Border, New Delhi-110047. Lasertypeset by Suvidha Computers, 86 A, Adchini, New Delhi-110017, and printed at Supreme Offset Press, K-5, Malviya Nagar, New Delhi-110017
Printed on 1st September 2017