INDIAN HIGHER EDUCATION HERITAGE

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S SRIKANTA SWAMY
SISTLA RAMA DEVI PANI

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Conflict of Interest: The content material for preparing this Book has been collected from various documents viz ancient Indian scriptures, manuscripts, historical documents, books, reports, etc., and has been reproduced verbatim at some places to maintain the sense and intent of the facts. The Book has been prepared with the intention to strengthen the existing repertoire of documents on the heritage of Indian Higher Education.

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Vikas Marg, Laxmi Nagar, Delhi-110092
Ph. : +91 9312550335, 011-22504042
E-mail : infodma07@gmail.com

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PREFACE

Faith is the bird that feels the light when the dawn is still dark.

-Rabindranath Tagore

The higher education System in India has its own unique long history. During ancient and medieval times, India had a rich knowledge culture. The rich knowledge culture was propagated through *Vedas* and *Upanishads* which were the creation of sages, *Rishis* and *Munis* after years of research. The Indian education system sprouted from the original literature provided in the *Vedas*, *Upanishads* and other such materials. The intellectual acumen of India showed its expression in almost all areas ranging from the *Vedas* and the *Upanishads* to a whole range of scriptural, scientific and artistic sources. The six traditional branches of knowledge *vedangas* and other scientific disciplines like arithmetic, algebra, astronomy, medicine, chemistry, biology, astrology, logic and grammar are the outcomes of Indian traditional knowledge. India's rich classical and regional languages are indicators of the rich tradition. Indian ethos and culture are distinctly explicit in our traditional education. It emphasizes developing values, and character formation: and developing personality leading to self-reliance and preparedness to serve society.

It was India which considered knowledge as real wealth and worked towards a knowledge society. For centuries, the knowledge systems in India were passed down from generation to generation through word of mouth to ear in an unbroken oral tradition. This has created a wonderful tradition of effective oral rendition in India, which continues in the form of *Mantras* and *Shlokas*, creating positive vibes in the atmosphere. Gradually, writing innovation came into vogue in different materials such as stones, copper plates, palm leaves, paper and now computers.

One of the core strengths of Indian civilization is the well-established institutions of arts and learning in ancient India. It is home to the world's oldest university or *vishwavidyalaya*. In course of time, *vishwavidyalayas* or universities were considered centres for higher education and cultural exchange. From the Medieval times when Moghul interposition started in India, the traditional education system started deviating from its original form. Later, the British system of education brought a total metamorphosis to the system. However, due to its very strong roots, ancient Indian education is continuing in the form of traditions in Indian families and Vedic education institutions. Most importantly, firm belief is visible in most Indians either in a tacit or explicit manner. But since we seem to be dwindling between the two systems, ancient and modern, trying to manage both, we are not able to do justice to

the ancient system of education. The National Education Policy–2020 has come out with a solution for this problem both in its spirit as well as vision when it mentioned, "The rich heritage of ancient and eternal Indian knowledge and thought has been a guiding light for this Policy. The pursuit of knowledge (*Jnan*), wisdom (*Pragyaa*), and truth (*Satya*) was always considered in Indian thought and philosophy as the highest human goal. These rich legacies to world heritage must not only be nurtured and preserved for posterity but also researched, enhanced, and put to new uses through our education system."

The vision of the Policy is to instil among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen. Great literary scholars, philosophers and thinkers like Shri Rabindranath Tagore, Swamy Vivekananda, Shri Aurobindo Ghosh, Mahatma Gandhi ji, Shri Vinoba Bhave, etc. also advocated infusing ancient Indian knowledge and philosophy in modern Indian education.

Thus, the Indian higher education system has its own rich heritage which has now become indispensable for the whole world as it offers a unique approach to education that emphasizes moral and spiritual development, critical thinking, holistic development and a global perspective. It has the potential to play an important role in shaping the future of education and the next generation of leaders. It becomes all the more indispensable today, as we face complex global challenges such as environmental degradation, political instability, and grave social issues like terrorism.

This book provides a glimpse of the journey of the Indian higher education system right from the ancient post-Vedic period times till now passing through the medieval era covering different areas such as education; contributions of great Indian visionaries, Technical and Medical Education, Open and Distance Education, Policy Reforms, and National Educational Policy – 2020, etc. In the process of the journey, the Book provides solutions for some of the grave problems being faced by the world today.

The Book is a result of the collaborative effort of the authors and production team. We are thankful to our team members Dr Yogita Kanwer, Research Fellow and Mr N. C. Nath for their support in printing and production.

We sincerely hope that this book will be of great use and an inspiration to the Readers.

Authors

HISTORY OF ANCIENT HIGHER EDUCATION IN INDIA

AN UNDENIABLE BUT FORGOTTEN TRUTH

The Indian education system has its roots in old Indian cultural legacy that aims at character building. It has a unique strength which is demonstrated in Indian scriptures, practices, and beliefs. During ancient days Indigenous education was imparted at *gurukulas*, at home, and even in temples in India. It helps the younger generations imbibe virtuous ways of life. This chapter highlights the main objective of searching and connecting the roots of the history of Indian Higher Education and its accomplishments. The material has been compiled from multifarious sources which are rarely accessible to either Oriental or Occidental philosophers. It is an attempt to critically analyze the contributions of ancient scholars in order to unearth the truth and facts. The chapter is explained with descriptive and analytical perspectives. It may find its acceptance and prove worth for further studies. The chapter begins with the discussion on *'Dawn of Vedas and its Antiquity'* and exhibits its vastness and depth of unfathomable void, commenced by holding a grain from the roots with *Slokas* of *Jnana Yoga* of Bhagavad Gita. Many historians, anthropologists, and philosophers of oriental studies refer to the Epic War of Mahabharata in various contexts and determine the antiquity of the Vedas and Bhagavad Gita as one of the most authentic, reliable, and condensed form of the Vedas, which voluminously speaks about not only philosophy, spirituality, and individual discipline, but also throws light on social set-up and the system of education evolved during that time. In All Indian scriptures contain philosophical messages are conveyed in a cryptic manner. It is hard to decipher and realize, unless an individual undergoes a specialised training for proper understanding.

THE DAWN OF VEDAS AND ITS ANTIQUITY

Bhagavad Gita, Chapter–4–Jnana Yoga–Verse – 1, 2 and 3.

इमं विवस्वते योगं प्रोक्तवानहमव्ययम्।
विवस्वान् मनवे प्राह मनुरिक्ष्वाकवेऽब्रवीत्।।1।।

Meaning: This imperishable yoga I explained to Vivasvan (Sun), Vivasvan taught it to Manu; Manu deliberated to Ikshvaku.

एवं परम्पराप्राप्तमिमं राजर्षयो विदुः।
स कालेनेह महता योगो नष्टः परन्तप।।2।।

Meaning: This handed on down the line, the King Sages knew. This yoga by great efflux of time decayed in the world, O, Parantapa.

स एवायं मया तेऽद्य योगः प्रोक्तः पुरातनः।
भक्तोऽसि मे सखा चेति रहस्यं ह्येतदुत्तमम्।।3।।

Meaning: The same ancient yoga has been explained to thee by Me, for you are My devotee and My friend; it is the supreme secret.

Various opinions have been collated by oriental and occidental philosophers and have been classified to draw an outline for the evolution of the higher education system in India. However, while comparing various literary records which are used as the secondary sources, a logical conclusion may be drawn on the flow of *Sanatana Dharma*, that can be seen as the cultivated civilization established and nurtured on the banks of the river Ganga, Saraswati, Sindhu, Cauvery, etc., and witnessed various stages of development in the spheres of social, religious, intellectual, cultural, and cross-cultural elements fused with economic activities.

Prof. John Muir, in his voluminous work entitled 'Original Sanskrit on the Origin and History of the People of India; Their Religion and Institutions', has stated that no sufficient data exist for determining with exactness the period at which the hymns were composed. Of course, many western scholars, historians, philosophers, viz., Prof. Max Muller, Dr. Haug, Prof. John Muir, Prof. Weber and others have put forth varied theories which are inconclusive in arriving at a

concrete and emphatic opinion. However, in this chapter an attempt is made to trace the footprints of the evolution of 'Higher' education in the ocean of darkness of oblivion of time, obscurity, and ignorance of progeny till the silenced truth by the devastating forces having vested interests fueled by political intrigues, frantic religious dogmas, and neo-colonialism that have erupted in recent times.

Despite a few limitations, there are several convincing and justifiable evidences which may be inferred by following ten fundamental ancient Indian logical methodologies, viz., *Pratyaksha, Anumana, Upamana, Agama, Arthapatti, Aithihya, Samshaya, Nirnaya, Ukti and Nirgamana* as the form of the 'Knowledge' imparted during the Vedic period through the system and process of 'Education'. Evidently this ancient holistic Indian Education System was far superior and greater than today's higher education.

पुरुषसूक्तम्

अग्नीर्मूर्धा चक्षुषी चन्द्रसूर्यौ दिशः श्रोत्रे वाग्विवृताश्च वेदाः।
वायुः प्राणो हृदयं विश्वमस्य पद्भ्यां पृथिवी ह्येष सर्वभूतान्तरात्मा।।

Prof. S.K. Ramachandra Rao, in his book titled '*Purusha Sookta* (Text, transliteration, Translation and Commentary)', published by Sri Aurobindo Kapali Sastry Institute of Vedic Culture, Jayanagar, Bangalore, (2006), states that with the creation of the universe, the *Vedas* emanated from the *Purusha*. It traces the evolution of the Vedas and can be identified here: 'The Upanishad proceeds to remind us of what the *Purusha Sukta* itself elaborates; that the three Vedas emanate from the *Purusha* as also all the sacrifices, and offer the initiations into them, the year with all the seasons, the performers of rituals, the worlds, and all kinds of creatures (humans, angels, beasts, birds and so on). The text adds that in-breathing and out-breathing, the ritual offerings, the penances and austerities, faith, truthfulness, and duties devolving on us come out of this *Purusha* and take shape. The account is completed by drawing our attention to the fact that this *Purusha* is in fact the indwelling spirit of beings; he abides in the interior of the being, like the very Self of the self, enveloped by the gross body and the elemental ingredients thereof.'

Some of the theories advocated by eminent Eastern and Western Philosophers can be evidential in this context which categorically deny the theory of Aryan invasion. It also proves that they are fallacies of colonial theories or theories created to intellectually overpower oriental knowledge by their fabricated, concocted, baseless and unscientific narratives.

Prof. Kenneth Chandler, in his book 'Origins of Vedic Civilization' has affirmatively denied the theory of Aryan invasion and stated: '. . . . . One myth is that a race of light skinned Aryan people invaded India from outside, pushing the dark-skinned natives, called Dravidians, into the South. According to this theory, the lighter-skinned race invaded India in an incursion that took place, some scholars' project, around 1,500 B.C. This myth persisted long after an overwhelming body of scientific evidence, and a consensus of archaeologists, show that it is completely untenable. It must be discredited before we can get an accurate picture of the character of Vedic Civilization.'

While justifying that Vedas have originated in India with its roots resonating in the lives of the aboriginal inhabitants of this soil, he further adds: 'As we see, the Veda was first 'cognized', not by invading races from outside India, but by the people who had lived continuously in India for thousands of years. Also, the dates commonly ascribed to the origin of Vedic tradition are probably off by many thousands of years. Archeologists at Harvard, Oxford and other top universities in the US and Europe agree that there was no invasion of India from outside that displaced the people of the Saraswati and Indus river valleys. This civilization arose within northern India and there is also evidence that Vedic civilization was either a precursor to the Indus-Saraswati civilization or an early contributor to its cultural and spiritual heritage many millennia before the speculative mythologies of the past suggest. The vedic civilization arose in India.

Lokamanya Balagangadhara Tilak, in his scholarly work 'The Artic Home in Vedas' elaborates the system adopted by our ancestors in passing the Vedas to their progeny, the antiquity of Vedas.

'In these days of writing and printing, we have no need to depend upon memory, and consequently, we fail to realize what memory, kept under the strictest discipline, is capable of achieving. The whole of the Rig-Veda, *nay*, the Veda and its nine supplementary books, have been preserved by the intellectual class of India, letter for letter and accent for accent, for the last 3000 or 4000 years at least; and those learned men who have done so in recent times may well be credited with having faithfully preserved the traditions of the ancient home, until they were incorporated into the sacred books. These achievements of disciplined memory may appear marvelous to us at present; but, as stated above, they were looked upon as ordinary feats when memory was trusted better than books, and trained and cultivated with such special care as to be a faithful instrument for transmitting along many generations whatever men were most anxious to have remembered. It has been a fashion to cry down the class of learned men who make it their sole profession to cultivate their memory by keeping it under strict discipline and transmit by its means to our sacred writings without the loss of a ans accent from generation to generation. They have been described, even by scholars like Yâska, as the carriers of burden, and compared by others to parrots who repeat words without understanding their meaning. But looking the service, which this class has rendered to the cause of ancient history and religion by preserving the oldest traditions of the race, which is invaluable; and looking at the fact that a specially disciplined memory was needed for such preservation, we cannot but gratefully remember the services of those whose hereditary devotion to the task, we might say, the sacred religious task, rendered it possible for so many traditions to be preserved for thousands of years. The learned men might analyze and explain the Vedic hymns more or less elaborately or correctly; but for that reason, we cannot forget that the very basis of their labors would have been lost long ago, had the institution of learned men who made disciplined memory their exclusive business in life not been in existence. If the institution has outlived its necessity, which is doubtful, for the art of writing or printing can hardly be trusted to the same extent as disciplined memory in such matters, we must remember that religious institutions are the hardest to die in any country in the world.

It will be relevant to take into consideration the views of some prominent western scholars on Indian ancient history and education.

Prof. Hermann Kulke is a leading historian of early mediaeval India, who did pioneering research on Indian-Southeast Asian connections. He is Professor Emeritus of History at Kiel University. Kulke. He completed his Ph.D. in Indology in the temple city of Chidambaram, India, from Freiburg University. His D.Litt. (Habilitation) from Heidelberg University was on Gajapati kingship and the Jagannath cult in Orissa. He began his career in the Department of Political Science at the South Asia Institute, Heidelberg, and taught Indian history for 21 years in the institution's Department of History at the institute. He was the founder member and coordinator of the now well-known Orissa Research Projects of the German Research Council. His books include A History of India (1986), with Dietmar Rothermund, Kings and Cults: State Formation and Legitimation in India and South East Asia (1993), The State in India 1000-1700 (ed.) (1997), and History of Precolonial India: Issues and Debates (2019, ed). with B.P. Sahu et al. For his outstanding contribution to the history of early mediaeval Orissa, Professor Kulke was awarded the Padma Shri in 2010 (Government of India), the Federal Cross of Merit in 2011 (Federal Republic of Germany), and Doctor of Literature, Honoris Causa in 2018, by Ravenshaw University, Cuttack, India.

Prof. Dietmar Rothermund was born on 20th January, 1933 in Kassel. He studied history and philosophy at Marburg and Munich, and received PhD from the University of Pennsylvania in 1959. His Ph.D. dissertation was centered on the social history of America. Shortly thereafter, he travelled to India on a scholarship from the German Research Foundation. In 1963, Heidelberg University offered him an appointment as a research assistant, and in 1968 he rendered his services to the Chair of South Asian History. Rothermund also served on the Advisory Board of the Oxford Research Encyclopedia of Asian History. Rothermund died on 9th March, 2020.

The most convinceing answer to the question of the origin and date of the Vedas is simply unknown. *Scholars Hermann Kulke and Dietmar*

Rothermund comment briefly on the early development of the dating/ origin issue of the Veda as: 'The dating of these texts and of the cultures that produced them has been debated for a long time by Indologists. The famous Indian nationalist, Bal Gangadhar Tilak, wrote a book entitled Arctic Home of the Vedas stating that the Vedas could be dated back to the sixth or fifth millennia BCE. He based his conclusions on the interpretation of references to positions of the stars in the text, which could be used by astronomers for a detailed calculation of the respective date. The German Indologist Hermann Jacobi, independently arrived at a very similar conclusion that the middle of the fifth millennium is the date of the Vedas. Another German Indologist Max Muller, an Oxford teacher, projected a much later date. He took the birth of Buddha around 500 BCE as a point of departure and pointed out that the Upanishads, which antedate Buddhist philosophy, must have been produced around 800 to 600 BCE. The earlier Brahmana and Mantra texts of the Vedas would then have been produced around 1000 to 800 and 1200 to 1000 respectively. These dates projected by Max Muller tally very well with modern archaeological research and demonstrate that at least half a millennium between the decline of the Indus valley Civilization and the immigration of a new nomadic population, might have been be identified as the Vedic Indo-Aryans.'

Prof. Forrest Baird was a teacher at Whitworth since 1978. Along with various courses in philosophy, he has been teaching at Theological Seminary in extension programmes to the West. Dr. Baird has a B.A. from Westmont, an M.Div. from Fuller, and an M.A. and Ph.D. in philosophy from Claremont Graduate University. In his time at Whitworth, Dr. Baird was selected by five graduating classes as the "Most Influential Professor" and has also been voted as "Teacher of the Year" by his colleagues.

Dr. Baird studied the problem of evil while he was a Resident Fellow at the Institute for Ecumenical and Cultural Research at St. John's University and Abbey in College ville, MN, and has studied Chinese philosophy in detail. Dr. Baird recently edited a scholarly work entitled Philosophic Classics in six volumes. His other works include editing the book, Human Thought and Action: Readings in

Western Intellectual History, and co-authoring (with Jack Rogers) the Harper Collins textbook, Introduction to Philosophy: A Case Study Approach.

Prof. Raeburne S. Heimbeck Joined as Director General Honors Programmme, at central Washington University in 1967. He became a professor of humanities and subsequently of philosophy and religious studies in the Department of Philosophy and remained there until his retirement in 1999. For 26 years, he was the only professor who taught the religious studies programme at the university. He continued to teach courses in the department and the William O. Douglas Honors Program until 2008, and after that, continued to deliver lectures on various occasions at the university. Rae was the first recipient of the William H. Bonsall Visiting Professorship in Humanities at Stanford University in 1976, and was a visiting professor at Anhui University in China in 1985-86, 1988-89, 1997-98, 2004, and 2007.

He was passionate about Asian and Indian philosophies, religions, and cultures. Meticulous in scholarship, he was the author of the book, 'Theology and Meaning', published in 1969 and then reissued by Routledge in 2013, and co-editor of the highly rated Classics of Asian Thought by Pearson Prentice Hall in 2006. At the time of his death, he had completed compiling an anthology of his other writings. As noted, adherents of Sanatan Dharma believe that the Vedas have always existed.

Scholars Prof. Forrest E. Baird and Prof. Raeburne S. Heimbeck note:

'Of all their many sacred texts, Hindus accord supernatural origin only to the Vedas. These four books are exclusively trusted to reveal the essential knowledge of life. Such knowledge, Hindus hold, has existed eternally in the form of vibrations sounding throughout the universe. These elusive vibrations remained undetected until certain Indian sages equipped with spiritual hearing finally heard and formulated them in the Sanskrit language, beginning about 3,200 years ago.'

In the 'Introductory Note' of the book entitled 'Eminent Orientalists–Indian, European, American' (page-10), published by Asian Educational Services, New Delhi & Madras, 1991, significant aspects of oriental knowledge, its

wisdom, and its contribution to world culture have been emphasized. Some of the selected excerpts are quoted here under:

'In this task of unveiling the wisdom of the East, a handful of European and Indian scholars have co-operated with admirable results. It was during the days of Warren Hastings that the first impetus was given to Oriental research and a devoted band of scholars under the lead of Sri Williams Jones founded the Asiatic Society of Bengal in 1784. Colebrooke and Wilson followed his tradition and enriched the proceedings of the society with their contributions, with a view to popularizing the abstruse scriptures of the Sanskrit classics. The bright examples set by these illustrious Sanskritists inspired a host of savants' intent on Indo-Aryan research. Every department of oriental life and thought came to be scrutinized from a new angle of vision, a vision disciplined by the critical methods of science and inspired by the wealth and splendor of the half-hidden world of culture.' Thus, one can say that oriental philosophies and culture are original and fundamental. Following the opinions of several other philosophers who expressed their perspectives on the Vedic knowledge, Sanskrit and wisdom evolved from the process are immensely significant in this context.

Sanskrit is located with rich oriental beliefs and culture. Sir William Jone's belief in Sanskrit can be seen when he writes: *'The Sanskrit language, whatever be its antiquity, is a wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either'. While expressing his views on Manu and Manusmriti, he states, 'A spirit of sublime devotion, of benevolence to mankind and of amiable tenderness to all sentient creatures pervades the whole work; the style of it has a certain austere majesty, that sounds like the language of legislation and extorts a respectful awe; the sentiments of independence on all beings but God, and the harsh admonitions even to kings are truly noble; and the many panagyrics on the Gayathri, the mother, as it is called, of the Veda, prove the author to have adored not the visible material sun, but that divine and incomparably greater light, to use the words of the most venerable text in the Indian Scriptures, which illumines all, delights all, from which all proceed, to which all must return, and which alone can irradiate not our visual organs merely but our souls and our intellects.'*

In the long list of those who have laboured for the cause of Sanskrit learning and Indian research, no name is held with greater veneration

than that of Henry Thomas Colebrooke, who immediately succeeded to the work done by that illustrious orientalist, Sir William Jones. He realised more and more that for a proper and intelligent administration of the country, knowledge of Sanskrit was absolutely essential. His essay on the Vedas published in 1805 made the Europeans acquainted for the first time with most ancient work of the Hindus and the Aryan world.

Prof. R.C. Dutt appreciates the contribution of Sir Henry T. Colebrooke with the words, 'Colebrooke was the first European writer again who thoroughly inquired into the subject of Hindu algebra, arithmetic and astronomy and it is feared he is the last European to write on that topic with the confidence and authority of an erudite Sanskrit scholar.'

The general view of Colebrooke with regard to Hindu knowledge of mathematical science can be stated in his own words:

'The Hindus had certainly made distinguished progress in science so early as the century immediately following that in which the Grecians taught the rudiments of it. The Hindus had the benefit of a good arithmetic notation, the Greeks, the disadvantage of a bad one. Nearly allied as algebra is to arithmetic the invention of algebraic calculus was more easy and natural where artithmetic was best handled. No such marked identity of the Hindu and dio-phantive systems is observed as to demonstrate communication. They are sufficiently distinct to justify the presumption that both might be invented independently of each other.'

Sir Horace Hayman Wilson has contributed towards Puranas and Kathasaritsagara. In his introduction to Mahabharata, he says:

'By these means, the merit, both poetical and historical, of the Mahabharatha is becoming more widely known, but in the amplitude of it, found in the numerous traditions, legends, and tales which it contains, and in its many didactic and philosophical paragraphs, it offers an accumulation of materials adapted to different tastes, and auxiliary to diverging researches, which must long advantageously engage the attention and regard the industry of Sanskrit scholars.'

With Regard to Hindu Medicine he Adds: 'That in medicine, or the astronomy and metaphysics, the Hindus have kept pace with the

most enlightened nations of the world; and that they attained as thorough a proficiency in medicine and surgery, as any people whose acquisitions are recorded.'

ENCOUNTERING AND DECIPHERING THE PAST

Many great mysteries have captivated the human mind since human existence on earth over millennium of years ago. Some fundamental mysteries, such as why this universe exists on its own? What is the aim of human life on the earth? Why does something there exist rather than nothing? There are several riddles which are considered as primordial questions, and every culture of civilization has pondered over them. It can be inferred that these mysteries are in turn eclipsed by other mysteries intertwiningly connected with each other. However, for all these conundrums, it can be said that it is the human consciousness that which is always wakeful and stands as a witness to these marvels. It is our perceiving reality which tries and struggles to seek answers for all these mysteries.

Thus, we can say that consciousness is the gateway to all value, meaning, and significance in the universe. This journey of the human consciousness in search of finding answers itself is the quest of knowledge which connects us with the universe. However, hitherto there has not been any scientific consensus which emphatically concludes these principles, ideologies, and dogmas. Surprisingly, our ancient ideas advocated by our ancestors, whom we regard as sages of bygone eons, are blessed or divine with the vision with which they realise the eternal meaning of the universe. With spirituality they could see the cause and action of the things and living beings beyond the concrete world. In this spiritual journey, the visionaries found that there must be something by itself that is not merely an object to be subjected to material enjoyment. Thus, the discoveries attained by our ancient hermits are regarded as the great revelation. In India, the Vedas have been held as the sacred lore of divine knowledge of super sensible realities and one considered as '*Apaurusheya*', which are the outcome of their deep meditations and communion with the Reality. Outcomes of the meditated knowledge and enlightenment of the visionaries are printed in lofty languages like Sanskrit. Knowledge is not an invention

or creation but a true reflection of the material and abstract manifested by Supreme Cosmic Energy, which is omnipresent and omnipotent. In other words, modern science has deciphered it as a force, a potency, which is usually identified as *'Sphota'* or *'Big Bang'*.

Taking a leaf from the editorial of *'The Divine Life'* published on July 1971, Vol-XXXIII, some of the excerpts are constructed as hereunder:

Thus, the word 'Veda' is not a group of letters in the Sanskrit language, but a permanent energy-compound which lies in a seed form even at the time of the dissolution of the universe and manifests itself again in the next cycle of creation. This view substantiates that 'Knowledge' is eternal, though it may manifest in different concepts. One of the foremost significance of Vedas is that it reveals superphysical facts of life which are inaccessible to the mind of common man. The mantras in the Vedas are not merely indicative of nature of truth by means of connotation and denotation, but also suggestive by way of the vibration they produce when they are recited with their proper Swaras or intonation. The mantras of the Vedas are uttered by a Rishi or a sage of realization to whom it was revealed, whose thought-force is behind the mantras. Those mantras have specific Chhandus (i.e., metre) in which they are composed; a way of juxtaposing words in a sentence by which they produce a kind of bio-chemical reaction, as it were, when chanted with proper modulation of voice, which charges the mantras with a novel force. Each set of mantras is offered to the specific 'Devata' or a deity, the form of whose presence is implied in the shape of the vibrations which the mantras produce when chanted. It is beyond logic or human imagination that 'Vedas' takes the mind of the seeker of Truth from the objective material world gradually to the Universal Being hidden beneath the names and forms of sense-perception.

In this regard, many Western orientalists have done great inquest and service in discovering the historical, archaeological, and sociological background of the Vedas and have brought out critical editions of the Vedas by way of arduous research for many years. With the passage of time, the ability to perceive the inner meaning of the Vedas is being lost. Unfortunately, the indigenous cultural and spiritual beliefs are removed from the education system of India resulting in the gradual erosion of the value system, degradation

of political structure, decline in socio-cultural revolutions, loss of human gratification, collapse of cultural structure of *Sanatana Dharma*, succumbing to the imperialistic and predatory expansionist hunger of invaders, and other complexities that have emerged in the current society. The inner meaning of the Vedas is spiritual in a very broad sense of the term, and it is a way of living in contact with Reality in all its grades of manifestation, viz., physical, social, psychological, and universal.

If fundamental thoughts and oriental philosophies and beliefs are rejuvenated and re-entered into the academic conversation, gaining new respect by philosophers and scientists across the globe, the world may find the lost peace and happiness again. Over the years, it has grown ever more evident that the materialist understanding of science seems entirely unequipped to explain how and why consciousness exists. Being a part of the Supreme Reality, our consciousness is an undeniable truth and this fact may even be a fundamental aspect and springboard to a deeper part of reality.

In the words of crystalized opinion of Swami Sivananda, the following mentioned excerpts unravels beautiful meaning in a nutshell.

'The Vedas are the eternal truths revealed by God to the great ancient Rishis of India. The word Rishi means a seer, from Drish, to see. He is the Mantra Drashta, a seer of mantra or thought. The thought was not his own. The Rishis saw the truths or heard them. Therefore, the Vedas are what are heard (Sruti). The Rishi did not write, he did not create it out of his mind, he was the seer of thought which existed already. He was only the spiritual discoverer of the thought. He is not the inventor of the Veda.'

Further, Swami Sivananda, in his 'Divine Life' adds: *'The Vedas are eternal. They are without beginning and end. An ignorant man may ask how a book can be without beginning or end. By the Vedas, no books are meant. The Vedas came out of the breath of the Lord. They are the words of God. The Vedas are not the utterances of people. They are not the composition of any human mind. They were never written, never created. They are eternal and impersonal. The date of the Vedas has never been fixed. It can never be fixed. Vedas are eternal spiritual truths. Vedas are an embodiment of divine knowledge. The books may be destroyed, but the knowledge they contain*

cannot be destroyed. Knowledge is eternal, in that sense, the Vedas are eternal.'

ORIGIN OF VEDIC CIVILIZATION

During the flow of its course, in the land of Bharata Varsha (India), wherein Vedic civilization flourished '*Sanatana Dharma*' was vigorously practised and Dharma was part and parcel in every walk of life. Here, the Sanskrit term '*Dharma*' cannot be equated with the English term '*Religion*'. However, it can be defined as a way of life that sustains not only mankind, but each and every living being in this universe. Hence, the ideals of '*Vasudhaiva Kutumbakam*' was conceptualized during this era of Knowledge. The traditions, customs, that were practised during that time is embedded in our current socio-cultural practices, termed as *'Shodasha Samskara'*. This infusion of a spirit of righteousness and religiousness in the minds of progeny should have been regarded as the first and foremost aim of education. The need for and essence of those ritual practices were performed as an integral part of life are codified in several *smritis,* viz., *Yagnavalkya Smriti*, *Parashara Smriti*, *Manu Smriti* and so on. These spiritual thoughts play a very significant role in upbringing of the younger generation to understand the reality of the spiritual world and to learn the about nature. This spiritual education grooms the mind, intellect, and soul of a child and also moulds his character and emphatically determines the ideals of life at a tender age.

उपनीय गुरुः शिष्यं महाव्याहृतिपूर्वकम् ।
वेदमध्यापयेदेनं शौचाचाराँश्च शिक्षयेत् ।।15।।

Yagnavalkya Smriti; 2: Brahmachari Prakarana;

Meaning: The teacher has to perform Upanayana, (holy thread ceremony), imparting various Vyahruti mantras, Vedas, discipline, customs and traditions.

Thus, the shaping up of character was the primary priority of education, followed by moral and spiritual awareness during the Vedic Age. Our ancestors, preceptors in Gurukulas, unhesitatingly gave more prominence to the development of moral character than

intellectual attainment, and any deviation or depravation from right path or turpitude was considered an iniquitous personality. Unfortunately, in later years, the imparting of Vedic knowledge was totally denied.

कृतज्ञाद्रोहिमेधाविशुचिकल्पानसूयकाः ।
अध्याप्य धर्मतः साधुशक्ताप्तज्ञानवित्तदाः ।।28।।

Yagnavalkya Smriti; 2: Brahmachari Prakarana;

Meaning: The teacher shall impart knowledge only to that student who has qualities of gratitude, trustworthiness, ability of listening and grasping, cleanliness of both internal and external, reverence towards elders and non-egotistic.

The main crux of education in the Vedic period was to develop a man's ideal nature of morality which enables him to control his own animal instinct. It aims at the blossoming of wisdom and knowledge in every aspect and in all manners.

During the Vedic period, a student was considered a Brahmachari, means he should lead a life of celibacy in order to realize and achieve his educational ideals, and hence marriage was incompatible with studentship. Character building was attained through various sacraments, *Sanskaras* at different stages of life. Brahmachari had to attain *'Paripoornata'* which meant he entered the *Gruhasta Ashrama*. He would overcome the primal cravings and urges by penetrating through them with the strength, acquired during his student days and when he rose above these, he was considered to be fit for the highest spiritual freedom. Therefore, from these factors, one could arrive at the conclusion that the plan of life as chalked out in the four stages of *Ashramas* is a highly methodical arrangement for the preservation, direction, and transfiguration of human energy, mental, moral, and spiritual.

मधुमांसाञ्जनोच्छिष्ट-शुक्तस्त्रीप्राणिहिंसनम् ।
भास्करालोकनाश्लील-परिवादादि वर्जयेत् ।।33।।

Yagnavalkya Smriti; 2: Brahmachari Prakarana;

Meaning: *The pupil shall renounce/abandon consuming alcohol, and meat; abjure speaking harsh words; disdain worldly pleasures; violence; foul words; and other attitudes which are regarded as immoral and indiscipline.*

मननात् त्रायते इति मन्त्रः

–*Mananam* means analytical study, *Trayate* means which protects us if we enquire into that particular aspect. In Gurukulas the pupils were practiced to recite the hymns and repeat them for specific times, which meditate taught on a particular mantra which was believed to be capable of protecting an individual. 'Vid' is the basic concept meaning 'To Know' and hence, the word 'Veda' denotes a 'source of Knowledge' or 'Treasure house of Knowledge'.

The Vedas do not seem to be authored or composed by any human intellect. It is purely the outcome of revelations or transmitted from supernatural powers having civilizations ahead of light years to the Rishis, divine sages who acted as intermediaries. Through Rishis the Vedas must be conveyed to mankind. The Sanskrit term 'Rishi' means–'to know' (ऋषति जानाति इति ऋषिः See Introduction to Vedanta–Tattvabodha; Swami Paramarthananda, Page–17). Hence, the Vedas are considered as *'Apaurusheya Pramanam'* meaning not born out of human intellect.

RECOGNIZING THE LIMITATIONS

Exposing the pupils to the Nature and connecting his body, mind and soul with Nature was one of the main ideal behind the Gurukulas concept of Education. The serene atmosphere of *Ashramas* where *Gurukulas* were founded within the lap of bountiful nature igniting the spirit of learning in the midst of nature. The serenity of Nature subtly used to remind both the teacher and taught to be an integral part of the Nature and magnificent molecule in the process of learning and teaching methodology. In addition to the personal attention to each and every student and dedicated, focused practical training nourished unparalleled high degree of proficiency for the teacher and taught.

Upanayana sacrament was regarded to be mandatory mark to begin the education of the boys and girls. Vedic period witnessed education for all the strata of society to a largest extent. *Bhiksha Vrutti* from a pupil was mandatory which subjugated the ego of the child and this concept amplified the idea of reaching education to poorest of the poor (For ex: Satyakama Jabali) and even society also

devotedly ensured for the liberal contribution and maintenance of such *Gurukula Ashramas* with missionary spirit of self-sacrifice. The society during the period of Vedic civilization developed mandatory commitment towards maintenance and sustenance of *Gurukula Ashramas* and in turn ashramas were headed and run by respective preceptor. Every pupil studying there used to develop an understanding with the fellow beings in society. The society had great reverence for *Gurukula Ashramas* and a belief was nurtured that the pupils as the children of God. Their own brethren and this expansion of divine love engendered the spirit of service. Selfless service was believed to be the highest expression of divine love. Value of love was followed without any expectations. Selfless services rendered to humanity broadens the mental horizon and deepens the sympathy of the heart. Charity is the immediate result of such culture of head and heart. Charity reduces selfishness and this constitutes the purification of mind and removes the barriers between humans. It helps a man to realize his essential unity with the whole of the cosmos. It is said that one who is absolutely good, radiates goodness, because all his actions are motivated by selflessness and directed towards universal wellbeing and finally it results in creation of 'Welfare State'. Vedic education pattern focused on character building and imparting knowledge irrespective of class or caste of and individual.

After the *Upanayana* (investiture of sacred thread) ritual, a peculiar practice was followed without any hesitancy and unconditionally, a child would be sent to *Gurukula ashrama*. There is a dictum in Sanskrit that those parents who will not send their wards to *Gurukulas* are considered as enemies for their own children.

माता शत्रुः पिता वैरी येन बालो न पाठितः।
न शोभते सभामध्ये हंसमध्ये बको यथा।।

Meaning: *A mother will become an enemy and father become a foe, if they do not impart education to a child and in future, like a crane in the midst of swans, such son will not be radiant in the midst of the learned men.*

Hence, during his student life at Gurukula ashrama, a student has to undergo stoic discipline of both mental and physical by sacrificing all his comforts.

सुखार्थी चेत् त्यजेत् विद्यां विद्यार्थी चेत् त्यजेत् सुखम्।
सुखार्थिनः कुतो विद्या कुतो विद्यार्थिनः सुखम्।।

One who seeks comforts and pleasure shall disdain Education; One who aspires Education shall shun comforts. Because, how can a pleasure monger acquire Education and how can a pupil enjoy comforts/pleasure?

In Mahabharata, it is extensively and elaborately defined the duties of a pupil towards his preceptor. These qualities were instilled in the pupils in the Gurukula ashrama system of education. The following is the excerpts of Adi Parva of Mahabharata:

धर्मागतं प्राप्य धनं यजेत दद्यात् सदैवातिथीन् भोजयेच्च।
अनाददानश्च परैरदत्तं सैषा गृहस्थोपनिषत् पुराणी।।

आहूताध्यायी गुरुकर्मस्वचोद्यः पूर्वोत्थायी चरमं चोपशायी।
मृदुर्दान्तो धृतिमानप्रमत्तः स्वाध्यायशीलः सिध्यति ब्रह्मचारी।।

In his 'The Hindu View of Life', Dr. S. Radhakrishnan opines 'the vedic rule of life was confined to the people who developed under the stimulus of experience recorded in the vedas. Its forms are singularly well marked in type and those of others were sufficiently unlike them so as to justify a distinction'.

CLASSIFICATION OF VARIOUS BRANCHES OF VEDAS

Vedas are also called as '*Shruti*' (What is Heard), composed in Vedic Sanskrit and are considered as oldest scriptures of mankind. The word '*Veda*' is derived from '*Vid*' dhatu which means 'Knowledge' or 'Wisdom'. Though it is considered as 'Apaurusheya', in Mahabharata it is attributed to Lord Brahma. Each Vedas viz., Rig Veda, Yajur Veda, Saama Veda and Atharvana Veda, have been further technically classified into four major categories:

Samhitas consisting of *Mantras* and Benedictions

Aranyakas

Aranyakas comprise of text on rituals, ceremonies, sacrifices, etc.; Brahmanas which constitute commentaries on rituals, ceremonies, sacrifices, etc. These have grown up on the theological treatises, which are distinctly differ from literary type. Prof. Macdonell says: They reflect the spirit of an age in which all intellectual activity is concentrated on the sacrifice, describing its ceremonies, discussing its value, speculating on its origin and significance'.

Upanishads are the texts discussing meditation, philosophy and spiritual aspects of knowledge.

Brhadaranyaka Upanishad, Chandogya Upanisha, Taittariya Upanishad, Aittereya Upanishad, Kausitaki Upanishad, Kena Upanishad, Kathopanishad, Ishavasy opanishad, Shwetasvatara Upanishad, Mundaka Upanishad, Prashnopanishad, Maitrayaniya Upanishad and Mandookya Upanishad.

In several Sanskrit scriptures, the modes of expression entailing difficult technical, philosophical terms are so different from those of European thought, that they can hardly ever be accurately translated. This may be of two reasons i.e., the use of technical terms and of great condensation in expression and the hidden allusions to doctrines of other systems.

Vedas

Upon critical perspective of Hindu philosophy, two traditions viz., *Astika* which staunchly considers Vedas as their authority and Shramana or Nastika traditions (ancient Hindu Philosophy of Materialism) which do not consider Vedas as authority viz., *Lokayata, Charuvaka, Ajivika, Baudha, Jaina,* etc. However, though there are differences, some of the portions of Vedas also discuss similar concepts and ideas which are found in Nastika philosophy.

Several European Philosophers viz., Ralph T.H. Griffith, Max Muller, H.H. Wilson, Witzel and others, have learnt Sanskrit, conducted deep research into Vedic Philosophy and proved as the upholders

the ideology of Vedas. There are several theories pertaining to the antiquity of Vedas which roughly states circa 1700–1100 BC, circa 1500 to 500– 400, circa 1000–500 BC. Due to the ambiguousness, inconsistency and non-consensus, there is no definite and exact period of origin of Vedas. There is no archaeological evidence to accurately and categorically determine the period of Vedas.

It is surprising to note that Vedic knowledge, till the period of Guptas i.e., 1st century A.D. was preserved by way of oral tradition with precision and elaborate mnemonic techniques not because there was utter absence of alphabets or scripts or writing methodologies, but for obvious reasons that the Vedas were not kept in written or manuscript format for thousands of years. There are several evidences which prove that even during that period, the art of writing and scriptures existed. Vedic Knowledge is scattered among four vedas, upanishadas and puranas.

The ***Rig Veda*** comprises 1,028 hymns and 10,600 verses, organized into *Mandalas*. The hymns are predominantly discussed cosmology and praises deities, origin of universe, metaphysics, virtues, and so on. Even today it is customary to recite these verses during Hindu weddings, religious prayers, etc.

Each *Mandala* consists of hymns and are classified as *Sookta*, *Ruks* and *Pada*. The meters used in the *Ruks* are composed in *gayatri*, *anushtup*, *trishtup*, *jagati chhandhus*. Further, instructive convenience, each Mandala has been synthetically divided viz., *Anuvaka* and another scheme divides entire texts of *Mandalas* into *Ashtaka*, *Adhyaya* and *Varga*.

The sookthas in Rig Veda are composed by several Rishis viz., Angirasa, Kanva, Vashishta, Viswamitra, Atri, Bhrugu, Kashyapa, Ghrutsamada, Agastya and Bharata. There is a specific system of learning laid down to learn, study and recite the Vedas through a learned preceptor in a prescribed disciplined manner.

The *mantras* in Yajurveda are called as Prose Mantra with 1,875 verses and it is believed to have been composed around 1200 to 1000 BCE, having contemporaneous with Sama Veda and Atharvana Veda. **The** Yajurveda further classified into Shukla Yajurveda and Krishna Yajurveda.

The sages who have contributed for Yajurveda are Jabala, Baudhya, Sapeyi, Kapola, Paudravatsa, Paramavatika, Parashara, Vaineya, Vaidehya, Katyayana, etc.

In '*A History of Indian Philosophy*' by Prof. Surendranath Dasgupta, Professor of Sanskrit, Government College, Chittagong, published by Cambridge University, 1922, states that *'Saama Veda–Practically it has no independent value, for it consists of stanzas taken entirely from the Rig Veda, which were meant to be sung to certain fixed melodies and Atharvana Veda contains spells and incantations appealing to the demond world and abounds with notions about witchcraft current among the lower grades of population and derived from an immemorial antiquity'.*

Puranas – A Literary Record of Incredible Past

The real essence, content and motto of 'Puranas' are concisely and precisely narrated in 12th Skanda, 6th Chapter of Srimad Bhagavata. There are 18 Maha Puranas and 18 Upa-Puranas which are composed during different periods and few verses from various Puranas are referred below for correct understanding of the rich treasure of knowledge. The puranas are also called as Iti-haasa which means,

धर्मार्थकाममोक्षाणामुपदेशसमन्वितम् ।
पूर्ववृत्तं कथायुक्तमितिहासं प्रचक्षते ।।

Meaning : History teaches the past incidence that has occurred and preaches about Dharma, Artha, Kaama and Moksha.

सर्गश्च प्रतिसर्गश्च वंशो मन्वन्तराणि च ।
वंशानुचरितं चेति पुराणं पञ्चलक्षणम् ।।
सर्गः विसर्गः वृत्तिः रक्षा अन्तरं वंशः वंशानुचरितं संस्था हेतुः अपाश्रयः ।

Agni Purana

One amongst the 18 Maha Puranas is the Agni Purana. It comprises descriptive narration of numerous incarnations of Maha Vishnu and it is stated that the verses were recited by Agni to Sage Vasishta. It is interesting to note that apart from ritual worship, it also deals with description of universe, Cosmology,

History, Warfare, Sanskrit Grammar, administration, judicature and law, warfare, medicine, temple architecture, various religious rites, sacrifices, mudras, yoga, duties and responsibilities, ancestral rites, pilgrim places, virtues to be emulated in one's life, etc. Though the exact period of the composition of the Agni Purana cannot be ascertained, the modern historians with deep research have asserted that Agni Purana has been composed between 8th A.D to 11th A.D.

Agni or Fire is one of the most venerated deity in Vedic period. Several hymns have been attributed to *Agni* in Vedas and it is regarded to be close friend to human race. It is evident that *Agni* is part and parcel of our life and is indispensable. Having approximately 380 chapters, presented in the form of discourse between sages, *Agni* Purana celebrates the radiance and multi-dimensional role of *Agni* in all walks of our life. Our ancient cultural heritage and Sanskrit literature are well knitted beautifully in this purana.

Brahmanda Purana

Brahmanda Purana is identified as one of the 18 maha puranas. It comprises of cosmological theories of Brahmanda, cosmogony, genealogy, ethics and duties, yoga, geography, public administration, polity, festivals, traditions, pilgrim places, classification of eons, and so on. It is said that this purana might have originally composed during 1000 BCE and later got edited between 4th and 6th AD. Another important factor is that Adhyatma Ramayana is embedded in this purana.

Linga Purana

Linga Purana is regarded to be one of the 18 maha puranas and connected with Shaivism having 163 chapters. It is believed that this was composed between 5th to 10th BCE. The purana has two divisions vz., poorva bhaga and uttara bhaga, extensively speaks about cosmology, geography, astronomy, seasons, festivals, tour guide, temple tradition, yoga, etc.

Markandeya Purana

Markandeya Purana is among the 18 maha puranas and named after sage Markandeya. It revolves round the character of the scholar Markandeya and extensively narrates with Shaivism as well as Vaishnavism. It also narrates the greatness of Devi the goddess which show cases Shakti tradition and reverence for feminism. It is believed to have been composed during 550 BCE. It is said that this purana has 137 chapters with 9,000 verses, comprising various topics on vedic ideas and rituals, metaphysics, social conventions, cultural information, Karma theory, yoga, including Advaita Vedanta, flora and fauna, theology and so on.

Matsya Purana

Matsya Purana is another significant Purana comprising 291 chapters, 20,000 verses and narrates about manvantara, art, architecture, sculpture, pilgrim places, various dynasties, temple architecture, construction of reservoirs, rituals, geography, pilgrim places, good governance, yoga, worship, and so on.

Naradiya Purana

Naradiya Purana belongs to Vaishnavism with two sections viz., Purva Bhaga and Uttara Bhaga, 207 chapters and 3,000. There is also Upa Purana on the same concept which is called as Bhruhan Naradiya Purana with 78 chapters and 3,500 verses. It is interesting to note that in this Purana a few significant aspects of Buddhism are also included in some of the chapters. The Naradiya Purana discuss on subjects viz., vedangas, salvation path, Pashupata philosophy, art of jewelry, theories of war, music, dance, etc. It is notable to mention that summary of 18 major puranas are dedicated in one of its chapters. Hazra says that it is not known whether the extant manuscripts of the Narada Puranas are same as the 9th and 10th-century originals, but the verses quoted in medieval Hindu Smriti texts with these texts cited as source, are missing from the currently surviving manuscripts.

However, puranas are the form of stratified literature and each work consists of materials that has grown by numerous accretions in successive historical eras and no purana has a single date of composition.

Padma Purana

Padma Purana is dedicated to both Shaiva and Vaishnava philosophies. It is voluminous in size having 55,000 verses, covering topics on geography, cosmology, rivers, seasons, temples, pilgrim places, yoga, theosophical discussions, festivals, ethics, and so on. Though the period of composition of Padma purana cannot be ascertained, it is believed to be composed between 4th and 15th BCE.

Vayu Purana

Vayu Purana belongs to Shaiva philosophy, comprising 24,000 verses. It appears that this has been revised over centuries. Since it connects with the manuscripts of Mahabharata and other Sanskrit texts, this purana is considered as one amongst the oldest in the puranic genre. It is believed to be composed between 300 to 500 BCE. It encompasses geography, temple guides, various penances, movement of celestial bodies, solar system, rituals and rites, life after death, and so on.

The text is notable for the numerous references concentrating on so many crucial issues appealing to human curiosity. In medieval era Indian literature, likely links to inscriptions such as those found on the Mathura pillar and dated to 380 CE. It is proved to be a source for carvings and reliefs such as Elephanta Caves carvings at the Elephanta Caves–a UNESCO world heritage site. Several Sanskrit poets have referred this purana in their literary works.

Vishnu Purana

Vishnu Purana elucidates Vaishnava philosophy, comprises of around 80 chapters, 30,000 verses. It deliberates on cosmology, sankhya school of thought, wisdom of Vedas, geography, solar system, eons, ethical duties, spirituality, etc. It has been revised over centuries.

SANSKRIT: A MEDIUM OF INSTRUCTION OF ANCIENT INDIAN EDUCATION

Sanskrit is one of the ancient languages in the history of mankind and is considered as Deva Bhasha (language of God) passed on by Lord Brahma to the Rishis. Its script is called as 'Devanagari Lipi'. It is believed that Sanskrit is a boom from a civilization that is advanced in all spheres of 'Knowledge'. Sanskrit is proved to be the most systematic and technical language in the history of mankind and considered as mother of all languages. About 97% of the modern languages have its roots or taken birth from the Sanskrit, with the credit of high degree of versatility. Sanskrit has a potential for expressions/articulation by using minimum words. There are numerous synonyms for each word, with specific meaning. For ex: the word '*Hasti*' (Elephant) has nearly 100 synonyms, whereas English has only one word. Sanskrit has the quality of '*Innovativeness*', irrespective of its oldness.

Rick Bricks, one of the NASA scientist mentions that "Sanskrit is the most suitable language for computers, as it is very efficient in making of algorithms". Sanskrit language has the largest vocabulary, as it comprises 102 arab 78 crore and 50 lakh words. The new research and inventions reveal that regular practice of Sanskrit language improves brain's functionality, checks the stumbling blockades in learning aptitude in Science, Mathematics and other difficult subjects and it also increases the power of the memory. With the passage of time, Sanskrit language has created culture of knowledge and tradition of wisdom. Such an eminent language, Sanskrit must be preserved and respected.

Even today, Sanskrit language is survived and spoken in India. It is due to the spiritual and religious practices prevailed in the way of Indian lifestyle, which has a tradition of more than 5000 years. Sanskrit has produced a vast repertoire of literature which is sacred and secular in nature. Sanskrit has also abundantly contributed in the various fields of sciences viz., Ayurveda, Astronomy, Astrology, Gramatology, Musicology, Mathematics, Vasu-shilpa, Puranas, including philosophic themes. Until medieval times, Sanskrit language was patronised by kings and it was accepted and recognized as a Court Language. The beauty of Sanskrit can be seen in its inherent

quality of sound pattern and its resonant effect on the speakers as well as listeners.

Amongst the Vedas, *Atharvana Veda* and its *Parishistas* contain the scientific thought. However, our ancestors concentrated more on the philosophy, which also contains fundamental concepts of science.

Great grammarians like, Patanjali and Panini have written discourses in Sanskrit which demonstrate the language in spoken and written forms. The great and the most revered epics the Ramayana and the Mahabharata are beautiful recitative poetries are originally in Sanskrit. These verses are recited and are oral texts with wonderful metrical qualities. It precisely connects with human thought and consciousness. It is astonishing fact that Sanskrit which has come to the mankind from the '*Devatas*' (extra-terrestrial beings or advanced alien civilization from other galaxy/milky way!) is a fully developed and highly matured language and unlike other languages, it has the stages of genesis, infancy, process of development through ages and other various stages.

Sri Aurobindo Gosh, the greatest Philosopher, has aptly stated: *"The ancient and classical creations of the Sanskrit tongue both in quality and in body and abundance of excellence, in their potent originality and force and beauty, in their substance and art and structure, in grandeur and justice and charm of speech and in the height and width of the reach of their spirit, stand very evidently in the front rank among world's great literatures".*

It is interesting to display some glimpses of the contributions in Sanskrit literature in the field of science, mathematics, mechanical, physical and other allied subjects which unravels the work of constructing scientific concepts, methods of investigation of physical phenomena, inductive methods of algebra, etc. Since time immemorial our scientific approach, ideas, practices, have been deeply influenced the course of natural philosophy in East as well as the West. The comparative readings of various texts translated from Sanskrit to English, one can see that the Sanskrit philosophic-scientific terminologies, however difficult from its technical character, are exceedingly precise, consistent and expressive. Since Vedic period the Knowledge Tradition in the land of Bharata Varsha has survived

because of Karna Parampara, wherein everything worth learning was learned in Gurukulas orally from the Guru. Oral form of the language was basically in practice. Inscriptions substantiates that written texts came into vogue during the period of Guptas, especially during the period of Samudra Gupta. However, in the modern times, only after the advent of the British there was deteriorated is speaking the language but and it survives even today.

FACULTY AT THE GURUKULA ASHRAMAS

The vast Sanskrit literature and Puranas firmly ascertain the perspectives of evolution of higher education in India. Several instances have been revealed here to bring out the quality of education, the essence of education, the teaching methodology adopted, various branch of knowledge, classification of subjects, contents of the knowledge, the cadre and hierarchy of teaching faculty, institutional structure of the Gurukula ashramas, administration of the Gurukulas, etc., are extensively covered and selected excerpts with summarized meaning of the respective verses are mentioned here. One can see how greatly the teaching faculty in that era has contributed in various sectors of society through their capacities of study and research.

ब्रह्माण्डपुराणम्, सम्पुटः-2, अध्यायः-33, पृष्टम्-230

सप्रधानाः प्रवक्ष्यन्ते समासाच्च श्रुतर्षयः।
बह्वृचो भार्गवः पैलः सांकृत्यो जाबलिस्तथा।।2।।

संध्यास्तिर्माठरश्चैव याज्ञवल्क्यः पराशरः।
उपमन्युरिन्द्रप्रमतिर्माण्डूकिः शाकलिश्च सः।।3।।

बाष्कलिः शाकपूणिश्च नैलः पैलोऽलकस्तथा।
पन्नगाः पक्षगंताश्च षडशीतिः श्रुतर्षयः।।4।।

Soota Puranika mentions about genealogy of various faculty members and elaborates about the branches in the assembly of Rishis, thus (for verse 2, 3 & 4):Out of the cadre of sages, those who have systematically studied Vedas are called as 'Shrutarshis' (Sages distinguished by knowledge of Vedas). Amongst them 86 Maharshis are identified as 'Shrutarshis' viz., Bahvracha, Bhargava, Paila, Sankrutya, Jabali, Sandhyasti, Maathara, Yajnavalkya,

Parashara, Upamanyu, Indrapramati, Mandooki, Shakali, Bashkala, Shakapooni, Naila, Paila, Alaka, Pannaga and Pakshaganta. These Dwija Munis (Twice born) are renowned Maharshis having studied and taught 'Bahvracha' branch of Vedas.

एते द्विजातयो मुख्या बह्वृचानां श्रुतर्षयः।
वैशंपायनलौहित्यौ कंठकालावशावथ।।5।।

श्यामापतिः पलाण्डुश्च आलम्बिः कमलापतिः।
तेषां शिष्याः प्रशिष्याश्च षडशीति श्रुतर्षयः।।6।।

एते द्विजर्षयः प्रोक्ताश्चरकाध्वर्यवो द्विजाः।
जैमिनिः स भरद्वाजः काव्यः पौष्यंजिरेव च।।7।।

हिरण्यनाभः कौशिल्यो लौगाक्षिः कुसुमिस्तथा।
लाङ्गली शालिहोत्रश्च शक्तिराजश्च भार्गवः।।8।।

"Further the Soota Puranika states that, these Vedic teachers are the most important amongst Bahvrachas who are distinguished for their knowledge of Veda. Vaishampayana, Lauhitya, Kanthakala, Avasavadha, Shyamapati, Palandu, Alambi and Kamalapati and their disciples and disciples of their disciples constitute the 86 Shrutarshis." is the meaning of 5th and 6th Shlokas.

सामगानामथाचार्य ऐलो राजा पुरूरवाः।
षट्चत्वारिंशदन्ये वै तेषां शिष्याः श्रुतर्षयः।।9।।

कौशीतिः कङ्कमुद्गश्च कुण्डकः स पराशरः।
लोभालोभश्च धर्मात्मा तथा ब्रह्मबलश्च सः।।10।।

क्रंथलोऽथो मदगलो मार्कण्डेयोऽथ धर्मवित्।
इत्येते नवतिर्ज्ञेया होत्रवद्ब्रह्मचारिणः।।11।।

Soota Puranika further adds, that these eminent sages are called as Adhvaryus of the Charaka branch of Krishna Yajurveda viz., Jaimini, Bharadwaja, Kavya, Pausyanji, Hiranyanabha, Kausilya, Laugaksi, Kusumi, Langali, Salihotra, Saktiraja and Bhargava.

Speaking about Saama Veda, Soota Puranika further adds, that the preceptor of those who recite Saama mantras is king Pururavas, the son of Ila. Forty-six other sages, together with their disciples are also Shrutaris. Kausiti, Kanakamudga, Kundaka, Parasara, Lobhalobha, the pious souled, Brahmabala, Kranthala, Madagala and Markandeya, who is conversant with Dharma–these 90 should be as Hotravad Brahmacharins i.e., religious students performing Homas. Is the meaning of 7th, 8th, 9th, 10th and 11th shlokas.

चरकाध्वर्यवश्चापि ह्यनुमंन्त्रं तु ब्राह्मणम्।
चलूभिः सुमतिश्चैव तथा देववरश्च यः।।12।।

अनुकृष्णस्तथायुश्च अनुभूमिस्तथैव च।
तथाप्रीतः कृशाश्वश्च सुमूलिर्बाष्कलिस्तथा।।13।।

चरकाध्वर्यकाध्वर्युनमस्युर्ब्रह्मचारिणः।
वैयासकिः शुको विद्वाँल्लौकिर्भूरिश्रवास्तथा।।14।।

सोमाविरतुनांतक्यस्तथा धौम्यश्च काश्यपः।
आरण्या इलकश्चैव उपमन्युर्विदस्तथा।।15।।

भार्गवो मधुकः पिङ्गः श्वेतकेतुस्तथैव च।
प्रजादर्पः कहोडश्च याज्ञवल्क्योऽथ शौनकः।।16।।

अनङ्गो निरतालश्च मध्यमाध्वर्यवस्तुते।
अदितिर्देवमाता च जलापा चैव मानवी।।17।।

Soota Puranika explains in detail about the various classifications made in Krishna Yajurveda that after the expounders of Mantras and Brahmanas, the Adhvaryus of the Charaka branch of Krishna Yajurveda are to be understood. Calubhi, Sumati, Deva-vara, Anukrishna, Ayus, Anubhumi, Prita, Krshasva, Sumuli, Baskali, Shuka the learned son of Vyasa, Lauki, Bhurishravas –these are prominent Adhvaryus of Charaka Adhvaryakas. They are brahmacharins worthy of being paid obeisance. Is the meaning of 12th, 13th and 14th shlokas.

उर्वशी विश्वयोषा च ह्यप्सरःप्रवरे शुभे।
मुद्गला चातुजीवैव तारा चौव यशस्विनी।।18।।

प्रातिमेधी च मार्गा च सुजाता च महातपा।
लोपामुद्रा च धर्मज्ञा या च कोशीतिका स्मृता।।19।।

एताश्च ब्रह्मवादिन्य अप्सरो रूपसम्मताः।
इत्येता मुख्यशः प्रोक्ता मया च ऋषिपुत्रकाः।।20।।

"Further, Soota Puranika, expounds that Somavi, Atunantakya, Dhaumya, Kashyapa, the forest dwellers viz., Ilaka, Upamanyu, Vida, Bhargava, Madhuka, Pinga, Svetaketu, Prajadarpan, Kahoda, Yajnavalkya, Shaunaka, Ananga and Niratala–these are Madhyama Adhvaryus.

It is interesting to note that Sootha Puranika particularizes on the women scholars and mentioned the following women who were capable of expounding the Brahman viz., Aditi the mother of the Devas, Jalapa, Manavi, the two splendid celestial damsels viz., Urvasi, Vishvayosha, Mudgala, Anujiva, Tara of great fame, Pratimedhi, Marga, Sujatha, Mahatapa (of great penance), Lopamudra, who is conversant with Dharma and Kausitika. The celestial damsels are of approved beauty." is the meaning of 15th, 16th, 17th, 18th, 19th and 20th shlokas.

वैदशाखाप्रणयनास्ततस्ते ऋषयः स्मृताः।
ईश्वरा मन्त्रवक्तार ऋषयो ह्यृषिकास्तथा।।21।।

ऋषिपुत्राः प्रवक्तारः कल्पानां ब्राह्मणस्य तु।
ईश्वराणामृषीणां च ऋषिकाणां सहात्मजैः।।22।।

Continuing his discourse, Soota Puranika further states that the sons of the sages are founders of the branches of Vedic School and are known by names– Isvaras (Masters), expounders of the Mantras, Rishis and Rishikas. They are also expounders of kalpas (ritualistic texts) and of Brahmanas along with the sons of Ishvaras, Rishis and Rishikas.

मिश्राणां तद्भवेद्वाक्यं गुरोर्बलप्रवर्तनम्।
धर्मशास्त्रप्रणेतारो महिम्ना सर्वगाश्च वै।।31।।

तपःप्रकर्षः सुमहान्येषां ते ऋषयः स्मृताः।
बृहस्पतिश्च शुक्रश्च व्यासः सारस्वतस्तथा।।32।।

The statement of 'Mishras' demonstrates the strength of the preceptor at that time. They are composers of scriptural texts possessing the quality to go every-where. Their greatness and their intensity of very great penance have earned the title of 'sages' to them. They are Bruhaspati, Shukra, Vyasa and Sarasvata.

व्यासाः शास्त्रप्रणयना वेदव्यास इति स्मृताः।
यस्मादवरजाः सन्तः पूर्वेभ्यो मेधयाधिकाः।।33।।

ऐश्वर्येण च सम्पन्नास्ततस्ते ऋषयः स्मृताः।
यस्मिन्कालो न च वयः प्रमाणमृषिभावने।।34।।

दृश्यते हि पुमान् कश्चित्कश्चिज्ज्येष्ठतमो धिया।
यस्माद्बुद्ध्या च वर्षीयान्बालोऽपि श्रुतवानृषिः।।35।।

Vyasa is the one who composed scriptural texts. He is remembered as Vedavyasas. Though he was young in age, he was superior to the earlier ones in his intellect. He was richly endowed with prosperity and is remembered as Rishis, the sage. In the matter of the conception of a sage, neither the period nor the age is the authoritative criterion. A younger person may be superior to the elderly person in intellect can be called as a Learned Sage.

यः कश्चित्करणैर्मन्त्रो न च पादाक्षरैर्मितः।
अनियुक्तावसानं च तद्यजुर्वै प्रचक्षते।।37।।

Yajus mantra is the *Mantra* which is not measured by means of syllables in the foot but by means of *Karna* (Rhythmical pause) and its end possesses syllables in excess.

ह्रींकारः प्रणवो गीतः प्रस्तावश्च चतुर्थकम्।
पञ्चमः प्रतिहोत्रश्च षष्ठमाहुरुपद्रवम्।।38।।

निधनं सप्तमं साम्नः साप्तविन्ध्यमिदं स्मृतम्।
पञ्चविन्ध्य इति प्रोक्तं ह्रींकारः प्रणवादृते।।39।।

The following seven adjuncts of a Saama mantra are called Sapta Vidhya (or Vindhya*) viz., Hrimkara, Prastava (Beginning), Pranava

(Omkara), Gita (Song), Prati-Hotra, Upadrava, 7) Nidhana. Pancha Vidhya excludes Hrimkara and Pranava (Vindhya*).

(*) Vindhya is a technical term which indicates a part of a Saama stanza. Prastava is the beginning of the hymn, Prati Hotra is the response or supporting tune by the assistant Hotra, Upadrava is the 4th of the five parts of a Saama stanza. Hrimkara and Omkara appear subsequent additions.

Classification of Vedas, contribution made by Veda Vyasa and disciples: Excerpts from in Vol-2; chapter – 34, of Brahmanda Purana,

ब्रह्मणा चोदितः सोऽस्मिन् वेदं वक्तुं प्रचक्रमे।
अथ शिष्यान् स जग्राह चतुरो वेदकारणात्।।12।।

जैमिनिञ्च सुमन्तुञ्च वैशम्पायनमेव च।
चतुर्थं पैलमेतेषां पञ्चमं लोमहर्षणम्।।13।।

Urged by Brahma, he began to recount the Veda in this Yuga. To maintain the continuity of the Vedas, he took four disciples, viz., Jaimini, Sumantu, Vaisampayana, Paila and Lomaharshana.

ऋग्वेदश्रावकं पैलञ्जग्राह विधिवद् द्विजाः।
यजुर्वेदप्रवक्तारं वैशम्पायनमेव च।।14।।

जैमिनिं सामवेदार्थश्रावकं सोऽन्वपद्यत।
तथैवाथर्ववेदस्य सुमन्तुमृषिसत्तमम्।।15।।

इतिहासपुराणस्य कल्पवाक्यस्य चैव हि।
मां तैव प्रतिजग्राह भगवानीश्वरः प्रभुः।।16।।

With due formality, he accepted Paila as the disciple unto the Rigveda, Vaishampayana as the expounder of the Yajurveda, Jaimini as the disciple for the Samaveda and the meaning of its mantras. Similarly, he accepted Sumantu, the excellent sage, as the disciple for the Atharva Veda. The saintly lord accepted me (Soota Puranika) as the disciple for Itihasas, Puranas and Kalpa Vakyas.

एक आसीद्यजुर्वेदस्तं चतुर्द्धा व्यकल्पयत्।
चातुर्होत्रमभूत्तस्मिँस्तेन यज्ञमकल्पयत्।।17।।

The Yajurveda was a single composition and he divided it into four. There were four types of sacrificial duties which are called Chatur Hotra and he ordained Yajna thereby.

द्वे कृत्वा संहिते चैव शिष्याभ्यामददाद्विभुः।
इन्द्रप्रमत्तये चैकां द्वितीयां बाष्कलाय च।।25।।

Taking up the Ruk mantras, Paila classified them into two groups. After composing two Samhitas the eminent preceptor handed them over to his two disciples – one to Indrapramati and the other one to Baskala.

चतस्रः संहिताः कृत्वा बाष्कलो द्विजसत्तमः।
शिष्यानध्यापयामास शुश्रूषाभिरतान् हितान्।।26।।

The excellent twice-born sage Baskala composed four samhitas and taught his disciples who were eagerly engaged to serve him and who were desirous of his welfare.

बोध्यां तु प्रथमां शाखां द्वितीयामग्निमातरम् ।।
पाराशरीं तृतीयां तु याज्ञवल्क्यामथापराम्।।27।।

The four samhitas are as follow: the first branch is Bodhya, the second branch is Agnimatra, the third one is Parasari and the fourth one is Yajnavalkya.

इन्द्रप्रमतिरेकां तु संहितामृषिसत्तमः।
अध्यापयन् महाभागं माण्डूकेयं यशस्विनम्।।28।।

Indrapramati, the excellent sage taught one Samhita. He taught the highly distinguished and famous Mandukeya.

सत्यस्रवसमग्र्यं तु पुत्रं स तु महायशाः।
सत्यस्रवाः सत्यहितं पुत्रमध्यापयद्विभुः।।29।।

सोऽपि सत्यहितः पुत्रं पुनरध्यापयद्द्विजाः।
सत्यश्रियं महात्मानं सत्यधर्मपरायणम्।।30।।

That sage of great fame taught his eldest son Satyasravas. The renowned sage Satyasravas taught his son Satyahita. Satyahita taught his son Satyasri who was noble-souled and was eagerly devoted to truthfulness and piety.

अभवंस्तस्य शिष्या वै त्रयस्तु सुमहौजसः।
सत्यश्रियाश्च विद्वांसः शास्त्रग्रहणतत्पराः।।31।।

Satyasri had three disciples who had great brilliance, were learned and were eagerly devoted to the clear grasp of the scriptural texts.

वेदव्यासा व्यतीता ये ह्यष्टाविंशति सत्तम।
चतुर्धा यैः कृतो वेदो द्वापरेषु पुनः पुनः।।10।।

Sakalya was the first among the disciplies, the second was Rathitara and the third was Bharadvaja the son of Baskala. These were those who made the shakas of that veda function and flourish.

Classification of Vedas–Arrangement Vedas by 'Vyasa'–Sages who attained the top most revered position in the hierarchy amongst learned men: Excerpts from Vishnu Purana, Vol-2; Chapter–3;

द्वापरे प्रथमे व्यस्तः स्वयं वेदः स्वयंभुवा।
द्वितीये द्वापरे चौव वेदव्यासः प्रजापतिः।।11।।

तृतीये चोशना व्यासश्चतुर्थे च बृहस्पतिः।
सविता पञ्चमे व्यासः षष्ठे मृत्युः स्मृतः प्रभुः।।12।।

सप्तमे च तथैवेन्द्रो वसिष्ठश्चाष्टमे स्मृतः।
सारस्वतश्च नवमे त्रिधामा दशमे स्मृतः।।13।।

एकादशे तु त्रिवृषा भरद्वाजस्ततः परः।
त्रयोदशे चान्तरिक्षो धर्मी चापि चतुर्दशे।।14।।

त्रय्यारुणिः पंचदशे षोडशे तु धनंजयः।
क्रतुंजयः सप्तदशे सञ्जयोऽष्टादशः स्मृतः।।15।।

ततो व्यासो भरद्वाजो भरद्वाजात्तु गौतमः।
गौतमादुत्तरो व्यासो हर्य्यात्मा योऽभिधीयते।।16।।

Twenty-eight times have the Vedas been arranged, by the great Rishis, in the Vaivaswata Manwantara *in the Dwapara age.*

अथ हर्य्यात्मनो वेनस्मृतो वाजिश्रवास्तु यः।
सोमशुष्कायणस्तस्मात्तृणबिन्दुरिति स्मृतः।।17।।

ऋक्षोभूद्भार्गवस्तस्मात् वाल्मीकिर्योभिधीयते।
तस्मादस्मत्पिता शक्तिर्व्यासस्तस्मादहं मुने।।18।।

जातुकर्णोभवन्मत्तः कृष्णद्वैपायनस्ततः।
अष्टाविंशतिरित्येते वेदव्यासाः पुरातनाः।।19।।

Consequently, eight and twenty Vyasas passed away. In their respective periods they divided the Veda into four. In the first Dwapara age, the distribution was made by Swayambhu himself; in the 2nd, the arranger of the Veda (Veda Vyasa) was Prajapati (Manu); in the 3rd, Usanas, in the 4th, Brihaspati, in the 5th, Savitri, in the 6th, Mrityu (Yama), in the 7th Indra; in the 8th Vasishta, in the 9th Saraswata, in the 10th Tridhamana, in the 11th Trivrishan, in the 12th Bharadwaja, in the 13th Antariksha, in the 14th Vaprivan, the 15th Trayyaruna, in the 16th Dhananjaya, in the 17th Kritanjaya, in the 18th Runjaya, in the 19th Bharadwaja, in the 20th Gautama, in the 21st Uttama, in the 22nd Vena, in the 23rd Saumasushmayana also Trinabindu, in the 24th Riksha, the descendant of Bhrigu (Valmiki), in the 25th Shakti, and in the 26th Parashara, in the 27th Jatukarna and in the 28th Krishna Dwaipayana.

देवमित्रश्च शाकल्यो महात्मा द्विजपुङ्गवः।
चकार संहिताः पंच बुद्धिमान्वेदवित्तमः।।1।।

Formation of Samhitas and its Contributors: Excerpts from Vol-2; Chapter–35, of Brahmanda Purana,

देवमित्रश्च शाकल्यो महात्मा द्विजपुङ्गवः।
चकार संहिताः पंच बुद्धिमान्वेदवित्तमः।।1।।

Shakalya, known as Devamitra was an intelligent noble soul, a leading twice-born was the foremost among those who were conversant with the Vedas, composed five Samhitas.

पंच तस्याभवन् शिष्या मुद्गलो गोखलस्तथा।
खलीयान्सुतपा वत्सः शैशिरेयश्च पञ्चमः।।2।।

He had five disciples viz., Mudgala, Gokhala, Khaliyan, Sutapas and his son Saisireya.

प्रोवाच संहितास्तिस्रः शाकवैणो रथीतरः।
निरुक्तं च पुनश्चक्रे चतुर्थं द्विजसत्तमः।।3।।

The excellent twice-born expounded three samhitas viz., Saka, Vaina, Rathitara and Nirukta.

तस्य शिष्यास्तु चत्वारः पैलश्चेक्षलकस्तथा।
धीमान् शतबलाकश्च गजश्चैव द्विजोत्तमाः।।4।।

He had four disciples viz., Paila, Iksalaka, Satabalaka and Gaja.

बाष्कलिस्तु भरद्वाजस्तिस्रः प्रोवाच संहिताः।
त्रयस्तस्याभवन् शिष्या महात्मानो गुणान्विताः।।5।।

Bharadvaja, son of Baskala, expounded three samhitas. He had three noble-souled disciples endowed with good qualities.

धीमाँश्च त्वापनापश्च पान्नगारिश्च बुद्धिमान्।
तृतीयश्चार्जवस्ते च तपसा शंसितव्रताः।।6।।

Tvapanapa, Pannagari and Arjava are all praiseworthy for holy observances achieved by the power of penance.

वीतरागा महातेजाः संहिताज्ञानपारगाः।
इत्येते बह्वृचाः प्रोक्ताः संहिता यैः प्रवर्तिताः।।7।।

They were devoid of passion, they had great splendour and perfect masters of the Samhitas.

वैशम्पायनशिष्योऽसौ यजुर्वेदमकल्पयत् ।
षडशीतिस्तु तेनोक्ताः संहिता यजुषां शुभाः ।।8।।

The disciple of Vaisampayana composed Yajurveda. Eighty-six splendid Samhitas were explained by him in detail. He gave them to his disciples and they grasped them in accordance with the injunctions.

THE CONTENT, THE SPIRIT AND THE POWER OF VEDIC KNOWLEDGE

Scientific knowledge and knowledge of art, including music, sculpture, painting, etc., are present in the Vedas in a different form. Aesthetic and spiritual expressions can be found in literature, in music, in fine arts, even in science. The knowledge which is imparted through the system of Education during the Vedic period, was not confined to the *'Higher'* level as we claim today. Beyond the *'Higher'* level, even ahead of our modern times, i.e., *'Greater'* ultra-higher level and the perspectives of knowledge transcended outside the realm of senses carrying the mind and soul to the *'Absolute Reality'*. Unfortunately, the legacy of '*Higher* **(?)** Education' in India has gradually got diminished and disappeared into eternal oblivion. Vedic education pattern was unparalleled. Vast research has been carried out in the scientific circles in recent times to rediscover the real meaning of Vedas. Surprisingly, despite incessant human efforts, no one could measure the depth Vedas even in modern age.

It is true that the content of the Veda *Mantras* is spiritual in nature, but at the same time, its intonation is sacred. Experts in Vedas say that everyone cannot chant the *mantras*, because the chanting itself is an Art. When it is recited in a specific manner, with proper understanding, the Veda *Mantras* produce peculiar harmonious vibrations which can materialize itself into actual visible effects and it can work even miracles and marvels due to the forces which are generated by the intonation and meaning behind the invocation.

Thus, the Vedic knowledge is a great legacy that has come down to us from the sages who were the representations of Supreme Cosmic Power. The Vedas cannot be studied only with the books in the

libraries, because they have to be imbibed and assimilated in a holy atmosphere with a sacred attitude. There are restrictions imposed on even the study of the Vedas, just as methodologies of study in our present day Education System, with curriculum set-up for teaching and learning. Similarly, in the ancient *Gurukula ashramas,* proper techniques, systematized forms of instructions were maintained and the students were properly equipped with Vedic knowledge to live in material world.

True to its essence, the Vedic education system of imparting knowledge was practiced in Gurukula Ashramas was really fruitful. As it was with the goal to feel and understand expression of Reality in all its levels and intensities directed towards holistic personality of an individual. The knowledge of Vedas was not merely an educative process, not merely an instruction in spiritual living or an attempt to equip the mind with scientific and artistic knowledge, but a method of living a very successful life in all stratas of society. For instance, Purusha Sooktha, Rudra Adhyaya contain seeds of anthropology, polity, administration and other aspects of humanities. It is about how to conduct ourselves harmoniously with other fellow beings. Here organization has to be administered is narrated precisely manner. The concept of '*Varna Ashrama*', is an erroneous terminology which we interpret today as '*Caste*', are only classifications of knowledge and capacity of an individual to act. This system can be found abundantly described for the first time in history of mankind. As it is said that with great responsibility, comes great power – similarly various powers viz., spiritual power, political power, economic power, etc., are embodied in this social classification and identified as '*Varnas*'. Proper understanding and indepth study of Vedas provide us an insight to understand the co-relation between material and abstract. It validates that Knowledge should be intuitional, inspirational and rational in all aspects. The following is not relevant

लिङ्गपुराणम्, चतुर्थोऽध्यायः (पूर्वार्धः)
महाकाल
चतुर्युगसहस्रांते मनवस्तु चतुर्दश।
चत्वारि तु सहस्राणि वत्सराणां कृतं द्विजाः।।5।।

There are 14 Manus by the time a thousand sets of 4 Yugas come to a close.

तावच्छती च वै सन्ध्या सन्ध्यांशश्च कृतस्य तु।
त्रिशती द्विशती सन्ध्या तथा चैकशती क्रमात्।।6।।

O twice-born, the Kruta yuga consists of 4,000 years, 400, 300, 200 and 100 years respectively constitute the period of transition both at the beginning and end of a yuga.

अंशकः षट्शतं तस्मात् कृतसन्ध्यांशकं विना।
त्रिद्व्येकसाहस्रमितौ विना सन्ध्यांशके न तु।।7।।

The Amshaka, therefore, is 1/6th of the duration of each Yuga. The period of duration of Treta, Dwapara and Kali is respectively 3,000, 2,000 and 1,000 years without their Amshaka parts.

त्रेताद्वापरतिष्याणां कृतस्य कथयामि वः।
निमेषपञ्चदशका काष्ठा स्वस्थास्य सुव्रताः।।8।।

That of Kruta has been mentioned above. O! men of holy rites, 15 winks in the eyes of a man of normal health in normal condition constitute a Kashtha.

मर्त्यस्य चाक्ष्णोस्तस्याश्च ततस्त्रिंशतिका कला।।
कलात्रिंशतिको विप्रा मुहूर्त इति कल्पितः।।9।।

30 such Kashthas make one Kalaa. 30 such Kalaas make one Muhurtha.

मुहूर्तपञ्चदशिका रजनी तादृशं त्वहः।
पित्र्ये रात्र्यहनी मासः प्रविभागस्तयोः पुनः।।10।।

The night contains 15 such muhurthas and the day another 15 muhurthas.

कृष्णपक्षस्त्वहस्तेषां शुक्लः स्वप्नाय शर्वरी।
त्रिंशद्ये मानुषा मासाः पित्र्यो मासस्तु स स्मृतः।।11।।

A lunar month according to human reckoning constitutes the night and day of the Pitrs. Divided further, the dark half constitutes the day and the bright half constitutes their night when they go to sleep.

शतानि त्रीणि मासानां षष्ट्या चाप्यधिकानि वै।
पित्र्यः संवत्सरो ह्येष मानुषेण विभाव्यते।।12।।

30 human months make one month of the Pithrs. The period of 360 months calculated according to human reckoning makes one year of the Pithrus.

मानुषेणैव मानेन वर्षाणां यच्छतं भवेत्।
पितॄणां त्रीणि वर्षाणि संख्यातानीह तानि वै।।13।।

A 100 years calculated according to human reckoning make 3 years of the Pithrus.

दश वै द्व्यधिका मासाः पितृसंख्येह संस्मृता।
लौकिकेनैव मानेन अब्दो यो मानुषः स्मृतः।।14।।

12 months according to human calculation make one year (of the mortals); 15 months of the manes *(according to their own calculation) constitute their one year.*

एतद्दिव्यमहोरात्रमिति लैङ्गेऽत्र पठ्यते।
दिव्ये रात्र्यहनी वर्षं प्रविभागस्तयोः पुनः।।15।।

According to Linga Purana, one human year constitutes the period of day and night for the manes. Their days, nights and year and their further divisions are as follows:

अहस्तत्रोदगयनं रात्रिः स्याद्दक्षिणायनम्।
एते रात्र्यहनी दिव्ये प्रसंख्याते विशेषतः।।16।।

The period of Uttarayana (northern transit of the sun) is the day for the manes*; the period of Dakshinayana (southern transit of the sun) constitutes their night. These days and nights are calculated in accordance with the reckoning of the* devas.

त्रिंशद्यानि तु वर्षाणि दिव्यो मासस्तु स स्मृतः।
मानुषं तु शतं विप्रा दिव्यमासास्त्रयस्तु ते।।17।।

30 human years constitute a divine month. of, twice-born, a 100 human years constitute 3 divine months and 10 days.

दिव्यः संवत्सरो ह्येष मानुषेण प्रकीर्तितः।
त्रीणि वर्षसहस्राणि मानुषाणि प्रमाणतः।।19।।

त्रिंशदन्यानि वर्षाणि मतः सप्तर्षिवत्सरः।
नव यानि सहस्राणि वर्षाणां मानुषाणि तु।।20।।

अन्यानि नवतिश्चैव ध्रौव्यः संवत्सरस्तु सः।
षट्त्रिंशत्तु सहस्राणि वर्षाणां मानुषाणि तु।।21।।

360 human years constitute a divine year. 3,030 human years constitute a year of 7 sages. 9,090 years, according to human calculation make a year of Dhruva.

दश चैव तथाऽहानि दिव्यो ह्येष विधिः स्मृतः।
त्रीणि वर्षशतान्येन षष्टिवर्षाणि यानि तु।।18।।

36,000 human years make a century of divine years. The people who know arithmetic say that the 300 and 60,000 human years constitute the period of a 1000 divine years.

Matsya Purana – Chapter – 195; Bhrugu Vamsha Pravaranu Keertana:

भृगुश्च च्यवनश्चैव आप्नुवानस्तथैव च।
और्वश्च जमदग्निश्च पञ्चैते प्रवरा मताः।।29।।

अतः परं प्रवक्ष्यामि शृणु त्वन्यान् भृगूद्वहान्।
जमदग्निर्विदश्चैव पौलस्त्यो वैजभृत्तथा।।30।।

ऋषिश्चोभयजातश्च कायनिः शाकटायनिः।
और्वेया मारुताश्चैव सर्वेषां प्रवराः शुभाः।।31।।

और्वो गोत्रकरस्तेषां भार्गवाणां महात्मनाम्।
तत्र गोत्रकरास्त्वन्ये भृगोर्वै दीप्ततेजसः।।16।।

भृगुश्च च्यवनश्चैव आप्नुवानस्तथैव च।
और्वश्च जमदग्निश्च वात्स्यो दण्डिर्नडायनः।।17।।

वैगायनो वीतिहव्यः पैलश्चैवात्र शौनकः।
शौनकायन जीवन्ति रावेदः कार्षणिस्तथा।।18।।

वैहीनरिर्विरूपाक्षो रौहित्यायनिरेव च।
वैश्वानरिस्तथा नीलो लुब्धः सावर्णिकश्च सः।।19।।

विष्णुः पौरोऽपि बालाकिरैलिकोऽनन्तभागिनः।
मृगमार्गेयमार्कण्डजविनो नीतिनस्तथा।।20।।

मण्डमाण्डव्यमाण्डूकफेनपास्तनितस्तथा।
स्थलपिण्डः शिखावर्णः शार्कराक्षिस्तथैव च।।21।।

जालधिः सौधिकः क्षुभ्यः कुत्सोऽन्यो मौद्गलायनः।
माङ्कायनो देववतिः पाण्डुरोचिः सगालवः।।22।।

साङ्कृत्यश्चातकिः सार्पिर्यज्ञपिण्डायनस्तथा।
गार्ग्यायणो गायनश्च ऋषिर्गार्हायणस्तथा।।23।।

CONCLUSION

What man needs is not philosophy or religion in the academic or formalistic sense of the term, but ability to think rightly. It is difficult to find out the exact date when Vedas were created but Vedic era proves that it was very rich in terms of knowledge and culture. Though it is difficult to define right thinking, it cannot be denied that moral teachings build up the personality which were strongly imbibed on the minds of the generations of Vedic era. Education is not accumulation of information, but assimilation of reality. When educationists, academic administrators forget this fundamental truth of the educational process, education becomes a travesty and dilapidates the life of the progeny.

In the later stage, the epics like the Ramayana, Mahabharata followed by Bhagavadgita were supposed to be a good substitute for Vedas. These epics conveyed the message propagated by the Vedas to mankind. In a quintessential form of Veda-Samhitas, the Upanishads, and Bhagavad Gita, are considered as 'Prasthana Traya' –three pathways of liberation.

To conclude, education imparted during Vedic era aimed at holistic and spiritual development of a child. Vedic education propagates the system which was originated and preached by the divine sages. Vedic education system comprised the stake holders like teachers (Guru), student (Shishya), society and parents. It was completely student centric which believed in the grooming of a student into a good and responsible citizen. One can go into greater research of the profundities of Vedas and its ramifications of Knowledge which are 'Greater' in a true sense.

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MEASURING THE INFINITY
THE VEDIC EDUCATION SYSTEM

Vedic Education aims at physically tenacious, intellectually compatible, emotionally balanced, spiritually elevated and socially responsible generations. It provides meticulous training to the youngsters targeting the peaceful society and completeness of human life. It is difficult to narrate the '*Education pattern followed in the Vedic period*' just in few paragraphs or pages. The education system chased during that age is replicated in the Vedas, the puranas and in the Ramayana and Mahabharata. It will be like an adventure by a simpleton or an act of audacity to touch the pinnacle of Himalayas by raising hands, standing beneath of its foothills. Though it is difficult to claim the exact dates of these greatest Indian classics, its contribution to build up a constructive generation cannot be denied. The boundary of our ignorance is vast and cannot be demarcated. There is a great need for further classification and subtle investigation and research in the field of oriental works, Indian literature and Indology, by removing all prejudices and obstacles that may erupt in its way.

India known as '*Bharata Varsha*', is not recognized as a settlement of land inhabited by people only, but as a Great Nation where ancient civilization had originated making its presence felt around the globe. It is a matter of immense fortune to be the part of this cultural legacy. Along with diversified habitats, geographical differences, abundant economic resources, it is land of '*Tomorrow*' or '*Future*'. The life evolved by the people, who lived here through bygone eras, carried and constituted the spirit of '*Oneness*'. Oneness with the Ultimate Truth, oneness with the fellow beings, oneness with the Nature has evolved as the goal of life among the youngsters by Vedic Education. The outcome of a system called '*True Education*'.

The main object of Education during Vedic period was inclusive enough to unite the most divergent forms of *Sanatana Dharma* and to lay a solid foundation of *Dharma* and ethics on which the student may build, in his manhood, the more specialized principles suited to his intellectual and emotional temperament. The Education, thus

imparted on such ideals, directed to build a character with pious, dutiful, strong, self-reliant, righteous, gentle and well balanced mind. It targets at the fully developed personality and also a good citizen.

Dr. S. Radhakrishnana has aptly pointed out that *'if education is limited to an objective study of facts, natural sciences and social sciences, it may not be possible for you to reach what may be regarded as a truly civilized temper. Education is not a body of knowledge. It is a quality of mind; and that quality of mind cannot be developed merely by studying sciences or by pursuing technological studies, important and indispensable as they are for any true university life. But there is something else, which one has to acquire if he is to call himself a truly educated man'*.

Further, quoting a dictum from Sanskrit, साक्षरस्य विपरिणत्वे राक्षसो भवति ध्रुवम् । He mentions that '*if you are only learned, if you are only scientifically skilled, professionally competent, technically good, you may be a very learned man, but without the vision of values, you become not* Sakshara*,* but Rakshasa*. Such things have happened in this world in our own experience. So mere scientific knowledge of that type cannot be regarded as the elements of sound education'*.

Education should be dynamic and the individuals involved in that process of learning should be receptive for the changes and challenges taking place. The perspectives of others should be consciously shared to churn out the Truth and to attain greater goals for the cause of the society.

There is a law that you become what you contemplate. In simple terms, one's thoughts and feelings control his or her destiny. The creativity of man takes an undesirable turn when it gets directed towards objects rather than its principles or quintessence or the meaning that is hidden in the life-process. This evolution of creativity is 'Knowledge' and consciousness arising out of that 'Knowledge' educates the mind. It is difficult to define the term 'Knowledge'. In a deliberate attempt to get the definition of 'Knowledge', one may miss the 'Original Form' that it takes. The broad term, 'Knowledge' is the root cause for the growth of human wisdom on this planet. Butman's growth cannot be measured by present standards of thought, since we have not yet

conceived the tremendous power of life that is inherent in the very center of our being. If we retrospect through the ages, we can point out that those great minds that have understood the principles underlying the tremendous ignition of Consciousness, which is the moving factor in every thought throughout the universe constantly. If one fails to recognize this fundamental truth, he becomes weak and if we acquire the attitude of consciousness, then his mind works with miracles.

Family as a germinating ground of fertile soil for personality and determines type of Education to be imparted:

Family plays a very significant role in the life of a person. Character building and instilling values start at home under parental guidance and supervision. This process has continued rigorously in Indian System of Education. Values like truthfulness, compassion, empathy, righteousness, reverence towards elders and preceptors are practiced at home and indirectly get imprinted on the mind of a child. In India sacred values are practiced from time immemorial. The value of knowledge depends on the utility we make of it. If we use it for selfish end or purposes, it leads towards destruction. These high and noble faculties of the mind and will are not the exclusive inheritance of any race or land. We inherited them by our ancestors, with an intention not that we should employ them for our own benefit alone, or cultivate them just for our own sake but to apply them for the welfare of mankind and that is the concept of Knowledge is circular– Education Structure–Contents–Shruti and Smriti methodologies adopted.

वसुधैव कुटुम्बकम्। लोकाः समस्ताः सुखिनो भवन्तु।

During Vedic times, Comprehensive Learning and Teaching was the hallowed part of Educational system. It was deeply embedded in the country's civilization. It was involved in the creation of an environment inspiring for matured learning for acquiring knowledge and skills which finally fructifies in the personality development of the learner/pupil and holistic achievement of the Teacher.

'Knowledge' has three uniquenes viz., as an 'instrument to achieve a certain Goal', as a 'Goal' and finally as an 'Achievement'; This

knowledge has to be imparted through a process called 'System of Education' wherein participation of both teacher and the taught makes centre theme and expands the process of pedagogy with various features viz., Mutual Learning, Collective Learning thereby theoretically it involves the aspects of Behaviorism as well as Cognitive and Social psychology.

आचार्यात् पादमादत्ते पादं शिष्यः स्वमेधया।
पादं सब्रह्मचारिभ्यः पादः कालेन पच्यते।।

Summary: *A student learns 1/4th of knowledge from his Teacher/Preceptor; 1/4th of knowledge is acquired by his intelligence; and he acquires 1/4th of Knowledge in the company of his class-mates/seniors through constructive* 'Participatory Learning' *and he learns the remaining last 1/4th portion gradually with the passage of time.*

The above Sanskrit verse clearly shows that learning process which involves four major components has the unique dimension i.e., knowledge is spherical and to avail such knowledge it is said there are three paths which are beautifully enumerated in the verse mentioned below:

गुरुशुश्रूषया विद्या पुष्कलेन धनेन वा।
अथवा विद्यया विद्या चतुर्थं नोपलभ्यते।।

Summary: *To acquire Knowledge there are Three ways viz., 1) Serving the preceptors, 2) Offering plenty of Dakshina and 3) Sharing or Exchanging with each other.*

In the process of learning the following fundamental principles were meticulously and scrupulously adopted and in almost all *Gurukulas* extensively adapted with further widening the vision of those ideals.

प्रत्यक्षम् - (इन्द्रियेभ्यः साक्षात् प्राप्यमानं ज्ञानम्)

Pratyaksham *refers to the acquiring knowledge through faculties of perception with which the thoughts are connected, imagination and volition, and finally culminates self-awareness or consciousness.*

अनुमानम् - (ऊहाद्वारा कल्प्यमानं ज्ञानम्)

Anumana *inference from data, which depends for its value on the possession of the right data, on the right observation of the data including the drawing of the right analogies.*

उपमानम् - (सादृश्येन तुलनां कृत्वा प्राप्यमानं ज्ञानम्)

Upamana *means comparison as a source of acquiring Knowledge; it is derivatively the knowledge of the similarity or by assimilation between two things.*

आगमः - (वेदाध्ययनात् प्राप्यमानं ज्ञानम्)

Agamas *are collection of scriptures Vedanta viz., cosmology, epistemology, philosophical doctrines, precepts on meditation, yoga, etc., and acquiring greater knowledge by studying the* Agamas *is considered as holistic learning methodology.*

अर्थापत्तिः - (उपपाद्यज्ञानेन उपपादककल्पनम्)

Arthapatti, *the 5th means of knowledge by which one obtains accurate knowledge of the world. Arthapatti is knowledge arrived at through presumption or postulation.*

ऐतिह्यम् - (इतिहासात् प्राप्यमानं ज्ञानम्)

Aitihya, *or through the study of 'History' the knowledge could be obtained and study of history is considered as one of the mode of acquiring knowledge of the world.*

संशयः - (झटिति अनङ्गीकृत्य परीक्ष्य प्राप्यमानं ज्ञानम्)

Samshaya *means uncertainty or refers to Doubt. If different conflicting views are found about the same object, then doubt arises in the mind as to which is the reliable view and through this type of study knowledge could be obtained.*

निर्णयः - (स्वयं निश्चेतुं सामर्थ्यं प्राप्यमानं ज्ञानम्)

Nirnaya *means Confutation or Settlement or Ascertainment which is one of the path to attain Knowledge, purely based on Tarka or Logic.*

उक्तिः - (ज्येष्ठानाम् अनुभवकथनात् अस्माभिः प्राप्यमानं ज्ञानम्)

Ukti *means adage, proverbs or worthy speech or maxim from the scholars, seasoned elders and they are compiled as Subhash it as by various poets*.

निर्गमनम् - (एवं ज्ञानप्राप्तिक्रिया)

Nirgamana *means one of the methodologies for acquiring knowledge by using all the nine above processes*.

Dr. A.S. Altekar, Professor and Head, Department of Ancient Indian History and Culture, Benares Hindu, University, in his book Education in Ancient India, Chapter–4, Educational Organization and Finance, Page-101, published by Nand Kishore & Brothers, Benaras, 2nd Edition,1944, subtly sketches the funding made by the State for the Education, both in the East and West, and states as hereunder:

चतुर्विधा भजन्ते मां जनाः सुकृतिनोऽर्जुन।
आर्तो जिज्ञासुरर्थार्थी ज्ञानी च भरतर्षभ।।16।।

'A glance at the contemporary history shows, however, that the states in the West also had not only no State Education Departments, but were not accustomed to give any substantial grants to educational institutions started by private individuals. Schools in the Middle Ages in Europe were dependent not on the State but on the Church; it was the latter which provided for the expenses, supplied teachers and molded aims and ideals. Famous English Universities like Oxford and Cambridge grew out of no Order of Government or Resolution of Parliament: they were originally centres of scholars united by their zeal and aptitude for learning, and anxious to hand down the torch of learning to the next generation. Their sincerity and scholarship attracted donors like Walterde Merton and Wykenham, who came forward to provide hostels and colleges for residence and study. Down to the 19th century, education was financially dependent on the Church, private benefactors and corporations. In England, the state gave its first grant for primary education as late as 1832, and that was of 2000 only. In France the state took up the cause of education only after the great Revolution of 1788. It was in Germany that

the state first began to zealously champion the cause of education; Martin Luther maintained that education ought to be supported by state and his advocacy proved effective. In India, however, the state recognized its responsibility to the cause of education since earliest times, as we have shown already. It believed in the spontaneous growth of education and so did not organize its own educational department'.

GENDER EQUITY & EDUCATION FOR WOMEN

Vedic Education propagated Gender Equality and encouraged education for women. During Vedic period family played important role in educating girl child. This has been reflected in several Vedic scriptures viz., Upanishads, Smritis, Dharma Sutras, Ramayana, Mahabharata and also in vast literary sources in Sanskrit of later Vedic period.

There are many passages in the Brahmanas which shows that the women were given the high esteem during Vedic period. Gargi, a learned lady, is mentioned as taking active part in a great assembly of learned men summoned by King Janaka. Similarly, there is an eminent deliberation between Sage Yagnavalkya and his wives Maitreyi and Katyayini, in Bruhadaranyaka Upanishad, on the possible comprehension of the infinite by the finite.

In Ramayana, Aranya Kanda, Chapter–9, the discourse between Sita and Sri Rama, depicts about the intellect and subtle knowledge of Sita about Ethics and Morality, substantiating the argument that Sita was one amongst the learned women of that period.

Similarly, in Mahabharata, in Udyoga Parva, Bhagavadhyana Parva, Chapter– 133–135, Vidulopakhyana, where in Kunti in a discussion with Yudhistira, extols Queen Vidula for vehemently criticizing his son Sanjaya, who retreated from battle field and inspires him to retaliate back in order to save his kingdom. This shows the political acumen, bravery, ability in administration, farsightedness and visionary approach of both Kunti and Vidula. The traditions, social customs and status of an individual women are well reflected in many Sanskrit plays. For instance, in Malati Madhava, the female lead role

Kamandaki has been depicted as an educated girl and she was sent to Gurukula along with Bhurivasu and Devavrata.

GURUKULA STRUCTURE

Gurukulas are the places or institutions to impart education. The Gurukulas were located far from towns, quite free from the disturbing factors of city, established in a serene atmosphere and ambience which inspires for learning. The pupils commonly called as '*Brahmacharis*' had a free hand in the choice of their *Guru*. The *Guru* was free to judge whether the pupil was a deserving aspirant, able to receive, retain and pass on the knowledge given to him and it is interesting fact that there was no third party interference from the government, except to nurture and provide all the facilities. Even the State has exempted the *Gurukulas* from all types of land taxes. A '*Vatu*' after his Upanayana will be accepted on the basis of certain standards and parameters and the preceptor would weigh and see that the required qualities of humility and service were in him, including his eagerness for knowledge to be augmented with the spirit of enquiry, firm faith in *Acharya*. In an average *Gurukula*, there will be students studying ranging from 1,000 to10,000, and students were looked after by respective Acharyas and the entire *Gurukula Ashrama* would be supervised by '*Kulapati*'. These *Gurukulas* were all like residential schools, where the pupils had to stay for a minimum period of 12 years, leading a celibate life.

There are abundant references in epics and Sanskrit literature that even kings would send their princes to *Gurukulas*, for instance, Krishna, Drupada, hailed from royal families and Sudhama, Drona from poor family background were educated at the same place. Prior to beginning the formal teachings, in Gurukulas, strict care was taken to train the pupils in Yama and Niyama, in order to destroy the impurities of mind enabling them to receive the light of wisdom, the knowledge which illumines their life. In addition to this, *Ahimsa, Satya, Brahmacharya, Asteya, Aparigraha, Shaucha, Santosha, Tapa, Swadhyaya, Ishwara Pranidhana* were inculcated and rigorously practiced. It is the teacher who naturally weighs where his pupil stands, cleverly detaching himself from the fruits of his labours and

allows his pupil full freedom to accept or reject the advice by asking him to ponder over the matter.

Several scriptures of Sanskrit, Prakrit, Pali, throw light on the system of education prevailed in Takshashila and other renowned centres of learning in India at that time. In Takshashila, the teachers imparted education in several practical professions like military skills, medicine, logic, linguistics, grammar, philosophy, law, etc., and pupils were required to memorize the same by learning from '*Shruti*' methodology and preserve in their '*Smriti*' i.e., Memory. Though the art of writing was there, it was not utilized for the purpose of preserving the Vedic texts for long time, till *Guptas* period. The historians believe that if there was any slightest mistake in the accent or the pronunciation of the Vedic hymns, a disaster would inevitably issue. The intellectual community who controlled and guided the system of education did not have narrow aims and objectives, they targeted the pupils to get trained. Very often these pupils questioned their traditional beliefs and started new theories.

As neak into the colossal scale of Sanskrit literature, undoubtedly proves that they are indomitably original in nature and the Vedic period had its tremendous impact on the evolution of *Upanishads*, *puranas*, inspired by the contents of *Vedas* and *Upanishads*. There was a surge of Sanskrit literature in later part of Vedic period in the form of dramas and various branches of science and humanities. This was the intense originality and depth of self-expression in Sanskrit contributed by the scholars of Vedic era which must be regarded as national heritage. In the later part of Vedic era, Sanskrit literature inspired the development of literature in regional languages. *Shilappadikaram* in Tamil and abundant literary works in Kannada, Bengali, Marathi, Malayalam are quite evidential.

It is highly deplorable and erroneous to define the knowledge in a narrow sense. The subsequent generations seem to have confused the system of education by just acquisition of knowledge ignoring its utility, morality and responsibility. It is important that a pupil shall be imparted education, but at the same time it is more important to create awareness and ability to think logically about using his/her power of knowledge acquired. Education should also connect with

the nature and environment in which both teacher and the taught exist and survive. For example, it is not enough to train a child as a carpenter. Unless he is well acquainted with the necessary tools, machinery, the raw material needed to prepare the furniture, his education will be incomplete. At the same time, he must be trained in identifying seasoned wood, the selection of the quality trees for his work. Along with these things, he must know and understand his responsibility towards society and Nature. He must understand that if he cuts trees to make furniture, he should plant them in abundance to protect his future.

Primarily the Vedic era of Education was based on three faculties viz., power of reasoning, power of comparison and differentiation and power of articulation. These qualities were imbibed right from the childhood of a pupil which took him to the higher class of civilized personality. Cultivation and development of a personality with natural skills fused with a sense of social responsibility is the real essence of education. When these fundamental abilities get degenerated, the entire civilization naturally gets eroded. Indeed, the modern Indian history is the outcome of the degeneration of our intellectual alertness causing degradation of our age old practices and the loss cannot be irretrievable.

With the study of Vedic scriptures, one can experience vast sweep of intellectual ideas expressed with clarity of vision and purity of heart, in highly arresting poetic signs and symbols as well as down to earth, rational, reasonable and well debated logical conclusions.

The subjects like *Tarka* (Logic), *Danda Neeti* (Politics), *Artha Shastra* (Political Economy), (*Rekha Ganita*), Geometry etc., which were taught at the *Gurukula ashramas* developed the power of accurate reasoning, the power of articulation, expression are derived from learning linguistics and power of comparison and differentiation get enlarges in the study of History. Therefore, the pupils at Gurukula were given comprehensive education apart from vocational training in agriculture, animal husbandry, horticulture, etc. These are the profound and brilliant techniques to enhance the intellectual spheres of pupils adopted in the Gurukula system of Education. Further,

there was exact classification of knowledge of things viz., human thought, creations are recorded and preserved in the form of pictures, literature, etc., and knowledge of mind viz., ideas of liberal education, humanities, rational thinking, etc.

The gist of content and pedagogy which were taught in the *Gurukula Ashramas* is dependent here.

CONTENT AND PEDAGOGY OF GURUKULAS

Bruhad Aranyaka Upanishad

It is the greatest not only in extent, but also greatest in respect of its substance and theme. It is great, in the sense that the illimitable, all embracing, absolute, self-luminous, blissful reality–Bruhat is identical with *Atma*, constitutes its theme. Adi Shankaracharya in his commentaries on this Upanishad comprehends both the upadesha or revelation of the true nature of the mystic experience of the Brahma and *Atma* identify and the upapatti or logical explanations of that great doctrine of *Advaita* through the employment of the dialectic modes of argumentation called as '*Jalpa*' (arguing constructively as well as destructively for victory) and *Vada* (arguing for Truth). This Upanishad consists of 3 khandas viz., Madhu khanda, Yajnavalkya Khanda or Muni Khanda and Khila Khanda. Bruhadaranyaka Upanishad has systematic presentation of philosophical doctrines which form a spiritual conglomerate of several things of varying value belonging to different stages–*thaum* at urgic pebbles, dualistic and pluralistic toys and monistic gems.

Kena Upanishad

It is aptly said that the pupil or system of education which do not have the fundamental essence of inquisitive tendency or seeking clarifications by placing questions are considered as numb or dead. Kenopanishad is a unique Upanishad encourages and cultivates the approach of getting answers by asking questions in order to acquire Knowledge. He who seeks answers by this method of question is called as '*Jignasu*'. Even in Bhagavad Gita Sri Krishna appreciates this

perspective in a knowledge seeker in Chapter – 7, verse – 16, Jnana Vignana Yoga.

There is a Kannada verse which says: *Four fold in division are the righteous ones who worship Me, O Arjuna: the suffering, the seeker for knowledge, the self-interested and the wise, O, Lord of Bharatas.*

It begins with the word 'Kena', Kenopanishad is so named and also called as '*Talavakara Upanishad*'. The most interesting and peculiar characteristics of Kena Upanishad is in its subtle psychological analysis which is suggestive that anyone who would follow it closely, is sure to find himself, to the very gate of the transcendence. Divided into four parts, the first two parts are in the form of dialogue which explains in an indicative way of the phenomenon of perception, apperception of soul, absolute consciousness and functions of mind and senses. The 3rd part, being the assumption of the first two parts is described in a metaphorical form. The 4th part speaks about how Brahman should be meditated upon, either subjectively or objectively and discusses the results of the practice of meditation. The subject matter of this Upanishad is so subtle and abstruse, that more the pupil dives deep into the matter, the more he will be over-joyed to see the truth.

Shwetashwataropanishad

It is a short Upanishad belonging to Krishna Yajurveda, consisting of 113 *mantras* divided into 6 chapters. The sage Shwetashwara is said to have taught it to his disciples. It does not advocate any particular system of orthodox philosophy as elaborated in Darshanas or in their expositions. Some of the verses of this Upanishads are allied in thought to Adwaita, Vishishtadvaita, Dwaita and other branches of Vedanta. Interestingly, the ideas of Sankhya and Yoga find a prominent place and lays equal emphasis on Jnana, Bhakti and other paths of spiritual life.

The discussion of King Pravahana Jaivali and Gautama in Chandogya Upanishad, elaborates about the system of education, quality of

education, teaching methodology and eagerness of a student and commitment of a preceptor towards his pupil. The interaction between teacher and student depict that there is an external as well as internal impulse is instrumental for and creation which is responsible for the diversity of being. Impulse being an irresistible and peculiar urge from inside and one cannot have a control over it when it manifests. This creative impulse exists in the form of force in all beings, including every atom of creation, human beings, animals, plants and inorganic world. This creative activity is omnipresent and possesses an ability for self-transformation towards a higher goal. For instance, art, music, literature, event echnology and science are the products of this 'Creativity'. These are some of the aspects one can find in the deliberations of King Pravahana Jaivali and Gautama.

Naradiya Dharma Shastra or Narada Smriti

Like most of the *Dharma Shastras* or *Smritis*, it is one of the ancient codes of revealed laws. It is called by the name of an ancient Rishi Narada and his authorship. These law books are divided into two principle classes viz., *Dharma* or *Samayacharika Sutras* i.e., aphorisms on law or established customs, written partly in prose, partly in mixed prose and verse and 2nd one is metrical versions of such works viz., *Dharmasutras* of *Apastambha*, *Vishnu*, *Manu*, *Yajnavalkya*, *Parashara* and soon.

Nyaya Sutras

Gautama, known as *Akshapaada*, is the author of *Nyaya* Sutra. He founded a rational system of philosophy called '*Nyaya*' which at its inception had no relation with the topics of *Vedic samhitas* and *Brahmanas*. *Nyaya* was regarded to be pure logic unconnected with the scriptural dogmas. Gautam cognized four means of valid knowledge viz., perception, inference, comparison and knowledge derived through any reliable assertion.

Vaisheshika

It is said that Sage Kanaada has first advocated this school of thought. In one of the *sutras*, the term '*Vaisheshika*' which means

'*characteristic*', 'distinguishing'. According to the Sage Panini the word is derived from '*Vishesha*' meaning 'a treatise on Vishesha', which means species, distinction, difference, excellence, superiority and accordingly the word '*Vaisheshika*' has been interpreted. However, Kanadda school of thought elaborates the theory of '*Vishesha*' as the ultimate atoms. The atoms are mathematical points, without parts and possessing the same attribute and activity in their respective classes of '*Pancha Bhootas*'. The application of *'Vaisheshika'* was also found in *'Adhyatma Shastra'* on the basis of Law of *Karma*. Kanaada by applying subtle process of analysis and synthesis, divides all things viz., substance, attribute, action, genus, species and combination. It is interesting to note that, Vaisheshika theorems are also applied to cosmology, geology, mineralogy, plant physiology, mechanics, acoustics and other positive sciences are explained. Similarly, the doctrine of *Adrishta* carries the enquiry further into the fields of ethics, sociology, logic, epistemology, psychology, philology and so on. Therefore, Vaisheshika is also called as '*Manana Shastra*', the treatise based on reasoning, rationale and critical system.

Sankhya School of Thought

This system of thought was founded by Sage Kapila, who made an attempt to give answer from rational one to the mysterious questions which arise in every thoughtful mind about the origin of world, the nature and relations of man and his future destiny. Sir Henry Thomas Colebroke, one of the illustrious British orientalist and scholar in Sanskrit and Indian Literature, strongly opines that 'the laws of the Sanatana Dharma (Hindus), civil and religious, are by them believed to be a like founded on revelation, a portion of which has been preserved in the very words revealed and constitutes the Vedas, esteemed by them as sacred writ. Another portion has been preserved by inspired writers, who had revelation present to their memory, and who have recorded holy precepts, for which a divine sanction is to be presumed. This is termed Smriti, recollection (remembered law) in contradiction to Shruti, tradition (revealed law)'. 0632

Yoga Vasishta

It is an inspiring philosophical work in Sanskrit filled with lofty spiritual thinking and written in the form of poetry. It begins with description of sorrows of life, which are transitory in nature, pleasures of senses which are deceptive and ignorance of man which drives towards the pursuit of happiness in objects, the restless mind, the hankering desires and mirage of happiness. It lays emphasis on rightly directed effort towards perfection, attitude of contentment, tranquillity of mind, company of wisemen (*Satsanga*) and rational investigation into Truth (*Vichara*). The subject matter dives into further depth of acquisition of spiritual insight, direct realization of the eternal principles rather than theoretical reading.

The Method of Perceiving the World

Here, the pupil who will be the observer is taught by his precept or about how to presuppose the existence of conscious unity between object and the subject, universal spiritual reality which is omnipresent, subtle analysis of situation which is perceivable, stages that lead to universal consciousness, nature of every experience and its impact on mind, existence and manifestation of absolute infinite consciousness, etc. It further dilates about space and time in terms of unequivocal manner, observational activities of mind, co-existence of ideas, time and unravels on the subjective side of the thought-process of an individual, the spatiality, temporality, regularity and objectivity of the world, and so on. Thus, it takes both the preceptor and the pupil to the dawn of absolute knowledge. The contents further narrate that there is no permanency in the structure of any objective forms, situation and contexts of experience, misconception of reality, transmigration of lives, chain of causation, transcendence of soul in to eternal being. It is amazing to know about the seven stages of knowledge and liberation viz., 1) the right intention to pursue the right path of knowledge (*Subhecha*), 2) rational investigation of the ways of acquiring knowledge (*Vicharana*), 3) attenuation of mind subtlety attained by the practice of meditation (*Tanumanasi*), 4) realization of spiritual equilibrium on account of the attainment of highest mental purity (*Sattvapatti*), 5) non-attachment to the externality/objectivity

of any kind (*Asamsakti*), 6) non-perception of materiality due to realization of the divine existence (*Padartha Abhavana*), 7) ultimate state of the experience of the absolute (*Turiya*). The method of teachings of doctrines commissioned in Yoga-Vashishta is the answer to the needs of human mind. The presentation of philosophical and mystical truths is incomparable and it drain severy doubt or question of metaphysics, psychology and ethics. It is considered as one of the greatest works on yoga, philosophy and ethics that have been ever presented before.

Kathopanishad

It is regarded as most appropriate introduction to spiritual life. It is in the form of discussion between Yama and Nachiketa, about the mysteries of '*Self*'. It has message that the path to perfection can be trodden only after encountering several threats and temptations and in this process of search for Truth, the subjective propensities and objective tendencies show their heads in concrete forms in order to weaken the spirit of the pupil. This Upanishad delivers a message that a pupil has to clear the way in the midst of oppositions which are inevitable in one's struggle for transcending one's individuality in the absolute by negating the super sensuous realities and attractions.

Tarkashastra

The tradition and practice followed at Gurukula system of education critically analyses the meaning of Vedas and Upanishads by conducting group discussions. With the passage of time this logical methodology of analysing the theorems, doctrines, dogmas are encapsulated in a cryptic manner in the Vedic verses. It has been developed and ramified by getting recognition as separate discipline of studies called as '*Tarka Shastra*', *Nyayaand Nyaya Mimamsa* and totally considered as '*Hetu Vidya*'. For instance, Chanakya's Artha Shastra is considered as ' **Anviksiki**' which is embodiment of Trayi, Vartaand Dandaniti. He has given paramount importance to reasoning in education system and opines it has utility for the goodness and welfare of the society at large. Some philosophers narrate *'Anviksiki'* as combination of Sankhya, Yoga and Charuvaka Vada. Tarka Shastra is considered

as light of all knowledge and means to all actions and the basis of all virtues.

Bhagavad Gita

During the latter part of Vedic era, Bhagavad Gita was considered as one of the foremost part in the Gurukula curriculum. It is considered as the essence of all Upanishads, Smritis and Sutras in a nutshell. Gita is not just an academic discussion, nor simply a bundle of theories to be read at ease for intellectual enjoyment, but it is solution for inescapable circumstances. It resolves the riddle of the individual with the society. Bhagavad Gita is a finest instance of pupil centred education and ideal for Preceptor – Pupil relation, who both are interested in the subject matter of learning.

The conclusion, 18th Chapter, Moksha Sanyasa Yoga, is not only a summary of the previous chapters, but a beautiful epitome of the complete lesson, a natural and final culmination of the discourse. Here, we can witness that the Preceptor Lord Krishna's wisdom fluidly combines with the pupil Arjuna's effort and follows wealth, victory, prosperity and firm policy.

Many western philosophers, statesmen, scholars have expressed their opinion about Bhagavad Gita and excerpts are presented:

Warren Hastings, Governor General during British India said: 'With the deductions, rather qualifications, which I have thus premised, I hesitate not, to pronounce that the Gita is a performance of great originality, of a sublimity of conception, reasoning and diction, almost unequalled among the known religions of mankind'.

Sir F.T. Brooks in his 'Gospel of Life' mentions: 'Not only the Bhagavad Gita fulfils every condition needed for becoming asset of national life, it is pre-eminently a scripture of the future world religion and a gift of India's glorious past to the moulding of still more glorious future of mankind'.

Sir William Von Humboldt expresses that *'The Gita is the most beautiful, perhaps the only true philosophical song, existing in any known tongue. It is the deepest and the sublime production that the world possesses. I read it with*

permanent feelings of gratitude towards fate that has let me live in order to study it'.

References and Notes:

1) Education in Ancient India; Chp – 4, Dr. A.S. Altekar

2) Mahabharata; Udyoga Parva; Bhagavadhyana Parva; Chp-133-135,

3) Bruhad Aranyaka Upanishad

4) Kenopanishad

5) Shwetashwatar opanishad

6) Bhagavad Gita; Moksha Sanyasa Yoga, chp-18

POST VEDIC EDUCATION AND MEDIEVAL ERA
REVEALING FACTS

The civilization which flourished during Sanatana Dharma is the most ancient civilization among the surviving civilizations with the heritage of science, mathematics, astronomy and humanities. The outcome of scientific investigations conducted in the fields of Medicine, Mineralogy, Metallurgy, Agriculture, Botany, Alchemy, Architecture, Sculpture, and several other areas are the results of the Education system which was practiced during Vedic age. It was widely used in all spheres of the practical life in the society. Therefore, without prejudice we must acknowledge the contribution of the Vedas, particularly, *Atharvana Veda* and its *Parishishtas* to the Vedic pedagogy which contains a great deal of scientific thought. It is an admitted fact that the vast literature on Astronomy and Mathematics have contributed a lot to the world. The present and future generations can fathom the depth of ancient Indian knowledge through intensive research. Comprehension of our ancient education system will definitely strengthen our confidence for further pursuits in the realm of knowledge to attain zenith in respective research areas in the days to come.

POST VEDIC PERIOD

The education system during the Vedic period continued to flourish even after hundreds of thousands of years preserving its spontaneity. Even during the period of Samrat Ashoka of Mauryan Empire, the *Gurukulas* at Takshashila flourished by teaching vedas and its branches. Though there was an influence of Buddhism at Nalanda University and in learning centres of major parts of northern India with surge in Buddha *viharas*, Vedic education pattern had its peculiar impact on social mind. At the same time, the ancient system of education had empirical side, criticism and estimate of thought, geometrical concepts and methods were dominated by the concepts derived from physiology and philology.

It is evident that the Sanskrit philosophico-scientific terminologies, though difficult from its technical character, are astoundingly expressive, elaborative, precise, and consistent.

Post-Vedic phenomenal progress in the field of education, experimentations and research are also seen influenced by Vedic educational principles. It would have been difficult to achieve progress without the backup of Vedic education system. This itself justifies the receptive approach of our ancestors to welcome any progressive thinking and accepting any thoughts emanated out of fertile rational thinking inclined towards scientific approach. The Sankhya, Vaisheshika, Nyaya and Patanjali school of thoughts which have its origin somewhere connecting the Vedic era, firmly lays down the methodology of reasoning and science and gradually elaborates the concepts of mechanics, physics, chemistry and so on. Incidentally the Jaina, Lokayata (Charvaka), Baudha and even Poorva Mimamsa of Vedanta, have made contributions for the growth of inquisitive tendency on the aspects of science, critical thinking and analysis. With the passage of time, the concepts revolutionized the scientific temper in the society, due to the Gurukula ashrama culture. A conclusion could be arrived that due to this lush and fruitful ambience galvanized by system of education, many incredible and voluminous Sanskrit literary works flourished in all dimensions of knowledge viz., Bruhat Samhita of Varaha Mihira, Vyasa Bhashya on Patanjali's sutras, Samhita by Charaka, Vartika by Udyotakara, Bhashya by Prashastapada, Kumarila Bhatta, Shankaracharya, Sridharacharya, Vachaspati, Bhaskara, Udayana, Vijnana Bhikshu, and several others, resulting in reactionary wave for Buddhism called as Renaissance of both religion and cultural.

In this section various schools of thoughts are narrated in nutshell. Its contribution to science, humanities, few theorems and terminologies have relevance and interrelation with the modern day scientific approach. It is an attempt to unravel the true essence of the then System of Education, in an unbiased manner. Moreover, the surviving Sanskrit literature of all forms of schools of thought in abundance reflect the system and quality of education which prevailed during

that period and some outstanding works stand as testimony for surpassing the excellence of modern times.

The Sankhya–Patanjali School of Thought

Under this school of thought a unique interest in the Indian history has emerged in a clear and comprehensive process of cosmic evolution. Thus, the study is not just metaphysical supposition, but a positive principle based on the conservation, transformation and dissipation of Energy. For instance, *Sattva*, *Rajas* and *Tamas* are considered as Essence, Energy and Inertia respectively, the '*Prakruti*' as Ultimate Ground, which is indestructible, formless, limitless and ubiquitous, the '*Samashti Buddhi*' as Universe of Consciousness, '*Purusha*', the Absolute has transcendental or non-mechanical influence, etc. There are several doctrines in the form of *sutras* extensively defined in Padas in Sanskrit which are advocated under this school of thought which has wide acceptance having corollary with modern scientific theories.

Similarly, Vijnana Bhikshu, in his Yoga Vartika, briefly summarizes the Vishnu Purana process as hereunder (*Seal, 2015*);

'Bhutadi as radicle in conjunction with *Mahat* produces the sound-potential, which as radicle in conjunction with *Bhutadi* produces Akasha, which as radicle in conjunction with *Bhutadi* produces the touch-potential, which as a radicle in conjunction with *Bhutadi* produces *Vayu*, which as radicle in conjunction with *Bhutadi* produces the colour-potential, which as radicle in conjunction with *Bhutadi* produces *Tejas* and so on'.

The scholars and historians across the world have recognized the immense contribution of Vedic civilization in the field of philosophy, thereby gives it a separate entity as 'Hindu Philosphy' viz., Sankhya, Yoga, Mimamsa, Vedanta, Vaisheshika and Nyaya. The peculiarity of these philosophies is that though they have originated from the Vedas, they have independently developed out of the Vedic system. It may be stated that the implicit philosophy of the Vedas becomes explicit in the Upanishads, where core issues such as the Eternal One, *Atman* and the problems of the schools are enough like these to warrant us in treating them as an historical outgrowth.

Analysis and investigation in the field of Vedic and Post Vedic education system brings out the main challenge of this age that is chronological obscurity. It is a great task to find out the exact dates of various events and literary creations among the records of Indian mammoth literature may be philosophy or religion. The traces appear to be very fragile and ever diminishing. Even, painstakingly, if we learn that there are several works which have been translated after it reached West Asia, China and Japan, there is little hope of getting material evidence for pure history of Sanatana Dharma and civilizations flourished during various eras. This sharing of intellectual assets paved way for migration of from Indian to alien lands and cultures, emphatically corroborati 'Knowledge' ng the System and Quality of Education which was practiced here and India was recognized as '*Vishwaguru*' since time immemorial. However, it is accepted that there should be some approximation of dates necessary for justifying any research work. Following are the random references of instances where one can find how Indian Knowledge System took its journey during post Vedic period and also during the medieval era.

Nyaya (Logic)

An inference may be drawn that the Gurukula system of education which continued from Vedic period, remained even during post Vedic period. At that time Indian Logic system had already reached its summit. It may be stated that under Akshapada (Gautama) the classification of Indian Logic evolved its form based on the principle of exhaustive division and is exclusively a process of dichotomy and doctrines of fallacies viz., fallacy of homogeneity, heterogeneity, division, non-division, possibility, hesitation, conversion, unity and separation, utterance, non-existence, product, eternity and so on (Ancient Indian Politics).

It is well known that in ancient India, much progress was made in the fields of medicine and surgery which was applied to the relief of human sufferings. Arthashastra mentions about the existence of two great universities viz., Kashi and Takshashila, in which all sciences including medicine were taught by the professors of world-wide repute. Amongst them leading professors of medicine, Atreya

(6th BC) and Jivaka were the famous Physicians contemporary to Buddha. These evidences bring out the progressive scenario of Indian medical science at the time of Gautama Buddha or even before him and the advancement attained in medicine and surgery. The progress achieved in the period of Chandra Gupta Maurya will be evident from the measures adopted by the government to secure the health of the people in the society. The Megasthenes, the Greek traveler, in his book 'Indica' mentions that care and treatment of sick foreigners formed one of the duties of Government which depicts that physicians with medicines and appliances had to be kept ready to meet any emergencies. The records state that even Alexander was awe struck, when several proficient Greek physicians confessed their inability to deal with the cases of snake-bite and Alexander was obliged to consult the Indian *Vaidyas*, who successfully treated snake-bite cases. The army possessed surgeons with surgical instruments, remedial oils, bandages, nurses with food and beverages, etc., to serve the wounded soldiers. Even for the treatment of diseased and wounded animals, there were veterinary surgeons to look after the live stocks. In addition to this several steps were taken for the plantation and growth of medicinal plants and herbs by earmarking portion of fields cultivated directly under the supervision of the Government.

It is very interesting to note that post-mortem examinations were conducted during those days. The corpse was smeared with oil to prevent putrefaction and all cases of violent death caused by suffocation, hanging, drowning, poisoning were brought to the morgue and medical officers. An attempt was made to find out as far as possible the exact cause of death from an examination of the symptoms, and the whole affair was subjected to a careful scrutiny and if any suspicion found, evidence was taken and the matter left to be disposed of in the court of law. These facts are evident to demonstrate for pristine glory during the Mauryan empire, where teaching the medical science was included in its curriculum as before.

Another important aspect is that there was insurance coverage against flood, famine, fire and other natural calamities.

INDIAN EDUCATION SYSTEM AND METHODS: APPROACH OF FOREIGN SCHOLARS

The most definite data of Indian Civilization available are not from Indians, but they are from foreign visitors and descriptions made by them, inevitably reflects the System of Education which was in vogue during that period. A Greek Megasthenes was deputed as Ambassador to the court of Chandragupta Maurya by Seleucus, the satraps of Alexander have descriptively mentioned in 'Indica' which give a picture of the standard of the Indian civilization of those days. It also helps us to construct the chronological classification of many Indian literary works including system of education we used to practice.

'On Yuan Chwang's Travels in India' by Thomas Watters, published by Royal Asiatic Society, London, 1904, is one of the important and extensive work, is a collection of critical notes on the well-known travels throughout India by Yuan Chuang (Hiouen-Thsang). Here the author discusses and identifies all the Sanskrit names and places, etc., transliterated in the original Chinese text *'Ta-T'ang-His-yu-chi'* (*'Records of Western Lands of the Great T'ang Period'*). It is a collection of memories authored by Hiouen-Thsang. Hiouen-Thsang descriptively narrates each and every aspect he encountered and witnessed viz., its seasons, cities and houses, Indian measures, communities, purification habits, writing and language, dressing style and personal characteristics, Education in India, the Five Vidyas, Methods of Teaching, various school of thoughts, systems, the mendicants, caste system, army in India, social and legal matters, revenue system, etc. All these are the results of his encounters with Indian culture during his travel and stay in India. Some are the excerpts of instances which depict the status of India and its best practices from perspective of a foreigner: as presented here.

Written and Spoken Language

Hiouen-Thsang's description proceeds to tell of the writing and learning of the Hindus: *'Their system of writing was invented, as is known, by the Deva Brahma who at the beginning instated as patterns 45*

words. These are combined and applied as objects arose and circumstances occurred; ramifying like streams they spread far and wide becoming modified a little by place and people. In language, speaking generally, they have not varied from the original source, but the people of 'Mid India' are pre-eminently explicit and correct in speech, their expressions being harmonious and elegant, like those of the devas and their intonation clear and distinct, serving as rule and pattern for others'.

Education in India

Proceeding to the education and learning of the people of India, he writes thus:

'In the beginning the education of their children and winning them on to progress they follow the 'Twelve Chapters'. When the children are 7 years of age the great treatises of the five sciences are gradually communicated to them. The first science in Grammar which teaches and explains words, and classifies their distinctions. The second is that of the skilled professions (concerned with) the principles of the mechanical arts, the dual processes and astrology. The third is the science of medicine (embracing) exorcising charms, medicine, the use of the stone, the needle, moxa. The fourth is the science of reasoning, by which the orthodox and heterodox are ascertained and the true and false are thoroughly sought out. The fifth is the science of the internal which investigates and teaches the five degrees of religious attainments (the five vehicles) and the subtle doctrine of karma'.

The historians explain the above statement as one of the strong evidences to substantiate the then system of education witnessed by the foreign visitors. Among the 12 chapters, the 1st chapter is '*Siddhamchang*', Buddhist dictionary which the children of India learnt at their primary level. '*Siddhamchang*' is interpreted as 'auspicious invocation' and the Buddhists used it with '*Namo Sarvajnaya*', i.e., 'Praise to the omniscient'.

Similar interesting quote is made by Alberuni, the Arab traveller who visited India. He states: 'The most generally known alphabet is 'Siddha-matrika', which is considered to be originated from Kashmir, but it is also used in Varanasi. Varanasi and Kashmir were the high schools of Hindu science. The same writing is used in

Madhya Desha i.e., the middle country, all around Kanauj called as '*Aryavarta*'.

Hiouen-Thsang description further adds: *'2nd group being Greatshastras of the Five Sciences were taught, which means 'five categories of learning and speculation, viz., Science of Sounds, i.e., Grammar, or Shabdavidya, apparently the Buddhist name for Grammar and non-Buddhists called it as 'Vyakarana'. Science of Arts and Crafts, i.e., Shilpasthanavidya of the sutras. The 3rd group being healing prescriptions science, i.e., medical science in all its branches, or Chikitsavidya. The 4th group is Science of Reasoning or Hetu Vidya or Science of Causation or Nyaya (Logic). The 5th group being 'Adhyatma Vidya' or the highest spirit and belonging to oneself. The Buddhist schools taught secular instructions and non-Buddhist schools taught meta-physical and argumentative treatises of great doctors of Abhidharma'*.

In Buddhist shastras the student studies the doctrine of *karma*, which is stated, defended and illustrated with a subtlety of intellect and boldness of imagination almost matchless. It is said that Kumarajiva had studied the *shastras*, the five sciences and *Gunabhadra* has learned all the *shastras* means sciences, astronomy, arithmetic, medicine, exorcisms.

Further, Hiouen-Thsang narrates about the Vedas as: *'The intellectual class learn the four Veda treatises. The first called 'Shou' or 'Longevity' (Ayur Veda) tells of nourishing life and keeping the constitution in order; the 2nd called 'Tzu' or 'Worship' (Yajur Veda) tells of the making offerings and supplications; the 3rd called 'Ping' or 'Making Even' (Sama Veda), the ceremonial etiquette, divination and military tactics; the 4th called 'Shu' or 'Arts (Atharva Veda) tells us of the various skilled arts, exorcism, medicine. The teacher must have a wide, thorough and minute knowledge of these, with an exhaustive comprehension of all that is abstruse in them'*.

He further adds that Vedas were taught entirely by oral communication and commentaries and other Vedic treatises in writing.

'These teachers explain the general meaning (to their pupils) and teach them the minute; they rouse them to activity and skilfully win them to progress; they instruct the inert and sharpen the dull. When disciples, intelligent and acute are addicted to idle shirking, the teachers doggedly preserve repeating

instruction until their training is finished. When the disciples are 30 years old, their minds being settled and their education finished, they go into office; and the first thing they do then is to reward the kindness of their teachers'.

Indian Logic in China

During the post Vedic period the Indian logic was introduced by Hiuen-Tsang. It is stated that he met and completed his education under Shilabhadra at Nalanda, Prajinabhadra at Tilataka, Jayasena and others and translated 657 *sutras* and *Shastra* and took the material to China. His translation of Hetu Vidya, Nyaya, Pravecha, Taraka Shastra and six volumes of the books on Hindu logic authored by his disciple Kwei-ke are considered as Great Commentary. Bunki, Seimai, Bumbi, Shintai, Jogan were the contemporaries of Kwei-Ke also wrote valuable books on logic. Later on Douyu, Dohkwan, Taikenk, Seikwa and others expanded the vistas of logic discipline in China and thus contributed to the development of Chinese Buddhism, theology and Logic in China.

Indian Logic in Japan

A Japanese monk *Dohshoh* went to China in 653 AD to study theology under the guidance of Hiuen-tsang. At that time translation of Sanskrit scriptures was going on in the imperial monastery. After his return to Japan in 656 AD, his teachings received the name of doctrine of the South Hall. Distinguished pupils of Dohshoh and scholars like Gemboh, Gyohki, Senkyo, Ryobih, Gyotatsu, Ryuson, Ryohhen and several others studied Indian Logic and disseminated the same at Japan. Thus, *Nyaya* school of thought founded by Akshapada (Gautama) made its mark at China, Japan and South East Asia.

ADVANCED UNIVERSITIES OF POST VEDIC ERA

In the history and philosophy of world education, the ancient learning centres which flourished during ancient times in India have prouder history, hallmark and indelible impact on all civilizations of the world. It is also interesting to note that ancient Indian

universities had more impressive teaching and research programmes. The universities in India flourished during centuries before the universities of Alexandria, Athens, Constantinople. Expert faculty which taught in the hallowed ambience of Takshashila, Nalanda, Vallabhi, Vikramashila, Kanchi, Madhurai. The faculty incorporated great scholars of high repute and eminence. Indian educational concepts are unparalleled in the history of educational thought and practice because their influencing ideals and relationship have proven, nothing but, sublime.

Takshashila University

Takshashila University is one of the oldest amongst the universities and revered as 'Centre of Learning' even during Vedic period. It is said that the university is named after Taksha, son of Bharata, the younger brother of Rama of Ramayana. It is stated that in Uttara Kanda of Ramayana, it is stated that after defeating the Gandharvas, Bharata founded two cities and named after his two sons that is: Taksha and Pushkala–Takshashila (Gandharvadesha, the present day Rawalpindi, Pakistan) and Pushkalavata (in Gandhara, the present Khandara in Afghanistan).

Eminent scholars were on authoritative positions of various subjects resided at Takshashila made it as centre for higher education; because of their excellence itself the teachers could attract thousands of students from not only India, but also entire Indian sub-continent during that time. Students after perilous journey would seek admission in the subjects of their interest. There was no interference of royal families of authorities in the function of the universities. Since, each teacher was recognized an authority on the specialized subjects, automatically there was little scope for any conflict of interests and unhealthy competition amongst them. The knowledge of all these teaching faculties put together represented everything that was worth knowing in those days. Usually for an average pupil, it took 8 years to acquire specialization in various subjects of study, however, the period could be reduced or lengthened based on the intellectual capacity of the students. The completion of the education of the students was not marred by any formal examinations; but the examinations were treated

as superfluous, since the procedure of teaching subjects was critical and thorough. It was formed in such a way that unless one unit was very thoroughly mastered by a pupil, he was not allowed to proceed to the succeeding portions. The process of education was widened in the secondary education reaching its its culmination. Students from Benaras, Mithila, Ujjaini, Kuru, Magadha, Kosala, Rajagruha, Kashmira, flocked together at Takshashila every year to pursue higher studies. Hence, in those days Takshashila was considered as intellectual capital of India and it exercised suzerainty over the world of letters in India. Apart from this there were other centres of learning in various parts of India which are affiliated to it.

Throughout its existence, the courses which were taught in Takshashila remained unchanged. With the passage of time, there were certainly modifications or changes or additions made to the subjects imparted due to socio-political changes, religious influence. At its inception Sanskrit dominated as a medium of instruction. Later on Brahmi script was introduced; but when Persians conquered, it was replaced by Kharoshtri script; when Indo-Bactrians came to power, Greek language and culture was introduced. Thus, there was a wide range of courses in literary, scientific and technical subjects. Subjects like Vedas, science of correct pronunciation, aphoristic literature to guide various rites, sacrifices, grammar, Astrology, Etymology, holy tradition and secular law, Sankhya, Nyaya, Vaisheshika, Arithmetic, Music, Medicine, Itihasa (history), Mathematics, Accountancy, Military Skills, Poetry, Agriculture, Commerce, Cattle Breeding, Astrology, Fine Arts, etc., were taught. The preceptors were broad minded and had no objection to collect the knowledge from various available source.

During the Vedic period, financial assistance and patronage was taken care by society, rich merchants, noblemen, kings. Philanthropic activities by individual and society was practiced and preferred. There was no any differential treatment nor expulsion of students for non-payment of fees because knowledge was considered as too sacred to get exchanged with money or things. Moreover, the spiritual stance, deep knowledge and renunciation conduct of teachers inspired many wealthy men to make voluntarily contribution for these learning

centres. In addition to this, the parents of the pupils gave generous contribution–totally a pure democratic spirit prevailed in the Education System.

No restrictions were imposed for admission and opting the subject was completely according to the choice of the pupil. The process of teaching learning was founded on 'Knowledge for knowledge sake'. Panini, renowned grammarian of Sanskrit, Chanakya, Jivaka, were some of the famous students. However, with the advent of Kushanas and terrific onslaughts from Huns, (5th AD onwards) have inflicted heavy loss and damage to the Takshashila and met with its disastrous end in the succeeding years.

Nalanda University

Earlier, Nalanda University was believed as one of the religious centres connected with Buddha during his previous incarnations as Bodhisatva. It is said that Nalanda university had witnessed series of discussions of Buddha with his disciples and then by Nagarjuna with other Buddhist monks on varied aspects of Buddhism. The Jaina sources claim that this was the place where Mahavira met Gosala. Historical sources mention that Samrat Ashoka had built a vihara and also a temple as it was near to Rajagruha and convenient for his administration and religious practices. The historical data emphatically states that Nalanda University was founded by Sakraditya during 425 AD and abundantly patronised by his successors Buddaguptaraja and Tathagataguptaraja. But, it is very painful to mention that during Narasimhagupta when Mihirakula carried his attacks, Nalanda University was destroyed. Rising from its ashes like phoenix, within a short span of time, Nalanda University flourished with greater prosperity and radiance. It was during 5th century AD, Nalanda University became centre of scholastic pilgrimage across civilized world and throughout its period of existence, it received royal patronage.

It is a matter of pride and surprise that irrespective of royal dynasties, keeping aside of their political rivalries, several kings encouraged and patronized the development and sustenance of Nalanda University viz., Baladitya (468-472 AD), Vajra, Sri Harsha,

Devapala, Purnavarman, Yashovarmadeva, and several other Hindu and Buddhist patrons.

It appears that Nalanda University, like Takshashila imparted only higher education and it is said that admission was restricted to those who had necessary academic potential to follow postgraduate studies. Apart from various parts of the country, students and scholars came to Nalanda University from Tibet, China, Japan, Mongolia, Korea and other South East Asian countries. Hiuen Tsiang in his travel diaries has mentioned that only 20% of those who came seeking admission came out successful at the examination and others experienced disappointment. It is important to note that Nalanda University had a department for primary and secondary education where young pupils were admitted for free education. The educative value of the Nalanda University lays in the spirit of humility and renunciation which has been instilled in the minds of its students and this made the university unique in its personality which commanded high level of loyalty for its system from the students.

The curriculum of Nalanda University exhaustively embraced all subjects, including Buddhist as well as Hindu perspectives of knowledge. However, the study of Mahayana, its two aspects viz., Shunya Vada and Vijnana Vada and acquaintance with all its 18 subjects were made compulsory. In order to teach Astronomy, an observatory was specially maintained in the university. Along with *Tantras* which deals with mystic syllables and words, Vedas, Vedangas, Medicine, Grammar, Sankhya, Philosophy, Law, Nyaya, Vaisheshika and other miscellaneous subjects were taught. The head of the university was called as 'Bhikku' in turn was elected by various Buddha Sanghas, who used to shoulder the responsibility of the administration of the university viz., admission of the students, regulation of the courses in various subjects, allocation of work to the faculty, conduct of examinations, securing and maintenance of manuscripts. There were councils constituted to meticulously look after the financial aspects, food and clothing for pupils and staff members, medicines, and other activities of the university. The teachers are called as '*Upajjihaya*' or '*Acharya*' and along with academics, they were entrusted to supervise the students and

authority to punish them in case of deviation of rules and regulations. It is stated that there were nearly 8,500 students and 1,500 teachers were appointed Student- teacher ratio was mentioned as 8:1. The university library buildings were named as Ratnasagara, Ranodadhi and Ratnaranjaka and had a large collection of manuscripts. Famous and eminent faculty members of Nalanda University are, Nagarjuna, Kamasila, Buddhakirti, Chandrogamin, Vasubandhu, Chandrakirti, Dinnaga, Dharmapala, Padmasambhava, Gunamati, Jayadeva, Jinamitra, Sthiramati, Shantarakshita, Asanga, Aryadeva, Rahulabhadra, and so on.

When Vikramashila University began to receive more attention and patronage, the development and progress of Nalanda University got hindered. However, during 12th century (1100 AD) the university received fatal blow at the hands of Bakhtiyar Khilji. The system and structure of these universities were destroyed. The monks were massacred and the vast 'Knowledge Treasure' stacked in library was set on fire.

Vallabhi University

This university was situated in the sea-shores of Saurashtra, the present day state of Gujarath. This university was one of the prominent centres of Hinayana Buddhism and it had become rival of Nalanda University in the field of academics. The Maitraka dynasty founded and patronized this university. Along with Buddhist doctrines, science, subjects of Sanatana Dharma were also taught at this place. Students from all over the country thronged to this temple of learning to study Raja Niti, Vaarta, Accountancy, administration, Law, Economics, etc. Very little is known about its faculty viz., Gunamati and Sthiramati. During the visit of Hiuen Tsiang, in 7th century, it has 6,000 students and faculty. From the sources, it is learnt that it was run according to the pattern of Takshashila and Nalanda universities. With incessant attacks by Muslim invaders, it was plundered and destroyed, however, its academic activities survived till 12th century (*Ray, 1903*).

While tracing the progress of chemical knowledge in ancient Indian System of Education, we come to know that it was closely associated with medicinal preparations, metallurgical operations, the technical

arts and beliefs in the transmutation of metals. In Rig Veda, we find the Ashwini Kumar as, twin divine physicians, invoked, gave sight to the blind and made the lame walk. The Gods during the Vedic period were the representations and personifications of five natural elements viz., fire, wind, water, ether and earth. These five natural phenomenal elements have had their great influence on the herbs, plants by endowing them with their potent and active properties, attributed them to the level of gods/demi-gods and addressed as such. For instance, the Soma plant is an object of particular adoration and the Vedic worshipers enjoyed in ecstasy over the exhilarating effects of the fermented juice expressed from it. Here, the Soma rasa was considered as Amruta; it is a medicine for a sick man. So Soma plant was considered and revered as a God having healing powers. In the later part of Vedic era, this Soma rasa gave dawn for Hindu Alchemy.

Sri Anna Morsvar Kunte, in his 'Introduction to Astanga Hridaya' of Vagbhata, states that: *'Princes like Divodasa and bards and leaders of the tribe of the Angiras, administered medicines and gloried in effecting cures. A skilled physician is distinctly defined as one who lives in a place abounding with medicinal plants, and who assiduously devotes his time to the acquisition of knowledge'*.

The capacity of a nation must be judged by what it has independently achieved in the several fields of knowledge, system of education and branches of literature, viz., Mathematics, Arithmetic, Algebra, Geometry, Astronomy, Phonetics, Philosophy, Theology, Grammar, Law, Philology, etc.

Dr. Thibaut has shown that the geometrical theorem which tradition ascribes to Pythagoras, was solved by the Hindus at least two centuries earlier and Schroeder mentions that the Greek philosopher owed his inspiration to India, we must not forget that the most scientific grammar that the world has ever produced, with its alphabet based on thoroughly phonetic principles, was composed in India about 7th or 8th century BC.

Prof. Macdonell mentions: '*We Europeans, 2500 years later, and in a scientific age, still employ an alphabet which is not only inadequate to represent all the sounds of our language, but even preserves the random order*

in which vowels and consonants are jumbled up as they were in the Greek adaptation of the primitive Semitic arrangement of 3000 years ago'.

Prof. Max Muller, in his last work gives expression thus*: 'In some respects and particularly in respect to the greatest things, India has as much to teach us as Greece and Rome, nay, I should say more'.*

Medical Science

The research and study of human anatomy pertaining to human skeleton, body frame, etc., have been conveyed by different systems viz., Atreya, Sushruta and Vagbhata. The teachings of Atreya are compiled in the Samhita by his disciples, amongst them two are known viz., Agnivesha and Bheda. The Charakahas revised Agnivesha Samhita and later several physicians viz., Dridhabala, son of Kapilabala, Vagbhata- I, Madhava, Chakrapanidatta, Vijaya Rakshita and others have further revised it by immensely contributing various newly founded research outcome.

Sushruta, a surgeon contributed a lot in surgery viz., Shalya as his special study is compiled as a compendium of General Medicine (Ayurveda). During the later part of Sushruta, several anonymous physicians have composed supplementary chapters on Shalakya to Sushruta Samhita. To mention about Sushruta, he has contributed for innovation of surgical instruments, surgical operations, which are described in Chikitsita Sthana, extraction of a dead fetus in Sharira Sthana, etc.

Vagbhata–I also contributed to the study of diseases of eye, general medicine and Vagbhata – II compiled new work titled 'Ashtanga Hrudaya Samhita. With the passage of time, Indian Medical science witnessed eight ramifications viz., Kaya Chikitsa (Internal Medicine), Shalya (Major Surgery), Shalakya (Minor Surgery), Bhuta Vidya (Daemonology), Visha, (Toxicology), Rasayana (Tonics), Vrsha (Aphrodisiacs), and Kumara Bhrutya (Paedotrophy). The Indian medical science also witnessed some changes during Buddhism era, in Kashi and Takshashila universities. Famous Buddhist physicians like Jivika, Nagarjuna contributed a lot to this field of education.

Astronomy

The Astronomy was called as 'Vedanga Jyotisa' and was considered as foremost supplementary knowledge of the Vedas. In one of the Vedas, the knowledge of 'Jyotisha' has been described as hereunder:

यथा शिखा मयूराणां नागानां मणयो यथा।
तद्वद् वेदाङ्गशास्त्राणां ज्योतिषं मूर्धनि स्थितम्।।

Just as the combs of peacocks and the diamond of the serpents, so does the knowledge of 'Jyotisha' stand at the head of all the supplementary of the Vedas.

The vast Vedic literature provides a fair evaluation of the astronomical acumen and achievement during ancient India. The celestial observations found in several Vedic passages as a support to compute back and arrive the date of composition of relevant hymns. The knowledge of almanac and daily progress of sun, moon, stars, for the conduct of auspicious rituals are followed even today as the product of ancient Astronomy. In Taittariya Aranyaka there is even minute division of time and in Taittariya Brahmana there is separate science called 'Nakshatra Vidya', which also mentions about hierarchy of scholars who advocated various theories in this science.

Vikramashila University

This was located on a hillock on the banks of river Ganga which is known as *Bihar* and was considered as one of the coveted seat of learning for Mahayana sect during that time. Founded by Dharmapala during 8th century AD, it was patronized by the kings of Pala dynasty.

It is said that this vihara possessed 108 temple complexes, 6 college buildings, beautifully built like a lotus and a marvelous Mahabodhi temple at the centre with 6 gates and each gate led to six institutions of various disciplines. The academic administration and course curriculum was similar to that of Takshashila and Nalanda universities. It is said that admission was restricted only for those who aspire to

become Buddhist monks with an intention to spread Buddhism in other countries. Apart from Mahayana school of thought, emphasis was also given to learn Grammar, Logic, Metaphysics and other aesthetic subjects of Hinduism. There are records which describe that scholars, viz., Jetari and Ratnavajra from Tibet received their degrees after completion of their studies at this university. It appears that even after their studies the pupils have good relation with their *alma mater* and it has proved that this university has developed a strong alumni connection and bondage. It is said that during admissions, six eminent scholars have guarded the six gates leading to the university in order to conduct entrance exam for each and every student who aspires to get admission at this university. To name a few who attended this task are Naropa, Prajnakaramati, Ratnakarashanti, Vagisvarakirti and several others. It is said that there were 3,000 monks studying at this university. Gradually Vikramashila University came under deep influence of Tibetian culture.

Acharya Buddha Jnanapada, Jnaka Sri, Vairochana Rakshita, Prajnakaramati, Ratnakarashanti, Ratnavajra, Dipankara Sri, Vagishwarakriti, Viryasimha, Abhayankaragupta. Tathagata Rakshita, Dharmakeerti and several others have served in this university.

Unfortunately, the Vikramashila University was destroyed completely during 12th century AD, in the invasions carried by Bakhtiyar Khilji, who unleashed merciless carnage upon Buddhist monks.

Indian System of Medicine

The Ayurveda medicine system is a living system and even today millions of people in India are being treated according to this system.

It is surprising to discover that the amount of anatomical knowledge is disclosed in the works of the earliest medical writers of India. Considering the antiquity of its period and their early age, 6th century B.C., the accuracy and extent of literature is astonishing. Historical facts prove that two Greek physicians, Ktesias, around 400 B.C., and Magasthenes, circa 300 BC, visited and resided in the parts of Takshashila.

Regarding human anatomy and other disciplines connected with it, it is a fact that in medical science no satisfactory conclusions of human anatomy can be arrived without the recourse of human dissection. In the System of Education pertaining to the discipline of medical science in ancient India, we have solid evidences that in the medical compendium of Sushruta it is implicitly confirmed by the statements of Charaka that during training in surgery, puncturing has to be practiced by the medical students on the veins of dead animals and on the stalks of water-lily; similarly extracting on the pulp of various kinds of fruits and on the teeth of dead animals.

EDUCATION DURING MEDIEVAL PERIOD

The post vedic period witnessed rise of Buddhism as a state religion because of Samrat Ashoka and his successors. For several centuries Buddhism was patronized by several dynasties, which paved way for the establishment of hundreds of Buddhist monasteries as centre of learning. Buddhism propagated the true meaning of life. It focused on right view, right aspiration, right speech, right path , right action, right livelihood, right mindfulness and right concentration but the sense of patriotism was overshadowed and contemporary generation remained unaware of developing fighting spirit for the country during the era. Buddhism worked to bring downfall of Indian kingdoms i.e., the high esteem and importance in which Buddhism held towards *sanyasi*. The fact is that it had psychological effects on the sentiments, approaches and mindsets of the people of all castes, irrespective of gender and age, to flock to the fold of recluses and lead a life of idleness mendicants. This disorderly situation and lackadaisical nature of the masses about their political awareness and plight, material development of the state, prosperity and protection of the motherland, spirit of nationalism, were deeply damaged and crippled the vigorousness to offer resistance to the foreign invaders and thus India became easy prey to the fanaticism of alien religion. However, strong efforts were made to awaken the Indian minds from their inertia and eradicate the morbid feelings, by none other than Sri Shankaracharya, but it was too late and feeble, but it ignited the spirit of nationalism, which took many centuries to manifest into its full

form till the rise of Shivaji and Peshwas in Indian polity. The natural result of political anarchy made people divided and they could not offer any united defense which was necessary to successfully resist foreign attempts at conquests.

It was during 8th century AD, Mohammad-bin-Qasim, after several failed attempts by his predecessors, the first Arab invader succeeded in the attack of Sindh province, defeated king Dahir and this gradually paved way for Mohammedan rule in India in the later years. However, this prompted for the cultural exchange in a large scale between Indians and Arabs. Meanwhile, Arab intellectuals evinced inclination towards gaining vast Indian knowledge, its applications, systems and practices viz., Geography, Medicine, Chemistry, Mathematics and during the rule of Arabs, inevitably the Arabic and Persian languages were introduced in the administration.

History proves that ancient India was invaded, subjugated to the Arab/Turk rule and modified by a succession of invaders, who imposed a new rule and introduced new system with an exotic creed with strange language and administration. For nearly 800 years the Mohammedan rulers gradually brought under their control the whole of northern India, till the ascendency of Hindu nationalism and rise of European powers in Indian soil. However, it has to be admitted that the transition was violent which damaged the cultural and religious fabric of the country. It plundered the society economically. No credible achievement was made by these invaders. Reiterating the fact, over the centuries, India never adjusted to the ideas of foreigners, on the contrary they got attracted and assimilated into the Indian philosophy, ideas, knowledge system and mainstream.

Another important factor is that historically the Mohammedan era is merely records of dethroning of kings, rebellions, assassinations, intrigues. Their conquests were fuelled by lust and fanaticism, *sans* any national growth or progress as it was witnessed during Vedic period or post Vedic era. It appears that the ancient Indian society and its main spirit of 'Knowledge and Education', survived the shocks and threats of new ideas, incursions and upheaval. The undercurrent of intellectual wisdom which was flowing since thousands of centuries had penetrated deeply into its traditions, ethos and integrated in its life.

The travelogues, memoirs of Fa-Hein (Fo-Kyo-Ki), Hiuen-Tsang (Si-Yu-Ki), Al-Beruni, Ibn Batuta (Kitab-Ul-Rahla), Nicolo Counti, Italian who visited Vijayanagar empire, Abdul Razzak, Persian who visited Vijayanagar empire, Domingo Paes and Fernao Nunes, Portuguese who visited Krishnadevaraya of Vijayanagar empire, Afnasy Nikitin, Russian merchant, William Hawkins, Sir Thomas Roe, British ambassadors of King James-I, who visited the court of Moghul emperor Jahangir, Sir William Norris, a Briton, who visited the court of Aurangzeb, Bartholomiu-Dias, a Portuguese navigator, who visited Vijayanagar empire, Edwardo Borbosa, Lama Taranath, Nicholas Downton, and several others have documented the experiences of their visits and observation of the society, administration, education practices, commerce, religious customs and so on.

The following excerpts speak about the exchange of knowledge system between Indians and Arabs during this period.

Abu Rihan Muhamad bin Ahmad Al Biruni: Born about 970 AD and died on 1038 AD. He was an astronomer, historian, logician and geometrician. Abu-l-Fazl Baihaki, who lived about 50 years, after Al-Biruni, mentions that *'Bu Rihan (Al-Biruni) was beyond comparison, superior to every man of his time in the art of composition, in scholar like accomplishments and in knowledge of Geometry and Philosophy. He had a most rigid regard for truth'.*

It is said that Al-Biruni, one of the greatest scholars from Arab, excelled his contemporaries in Sciences, Mathematics, Geometry and Philosophy. He entered into the service of Mohamad-Bin-Sabuktigin and had spent long time in northern India, during that time he learnt several Indian languages including Sanskrit and also visited many provinces. During his stay in India, he had good relation with many scholars and learned men of India and gradually this acquaintance paved way for him in acquiring knowledge of the Indian philosophy, belief, traditions, scriptures and religion. Amongst the best and most excellent of all Indian books upon arts and sciences called 'Batajal' which he translated to Arabic. From this work he extracted a great deal which he made use of his *Kanun Masudi*, a work upon mathematics and geometry. The laborious research of Indian scriptures regarding numbers, ages, era, have been exactly imitated by Al-Biruni in his

translation of the Batajal. Al-Biruni's works are some of the examples of the Indian knowledge transferred to the west and it clearly substantiates that the knowledge of ancient technical chronology of the highest importance in establishing the early civilization of the Aryan race. Many of the contemporaries who reviewed his works have mentioned that the solar calendar was the most perfect scheme for measuring time with which he acquainted and it was maintained by the astronomers of that country (India), that both the solar and lunar zodiacs had originated with them. The divisions of the signs in their systems being far more regular than those adopted by Greeks or Arabs. The Khwarizm (solar calendar made by Al-Biruni) dated originally from an epoch anterior by 980 years to the era of Seleucidae, a date which agrees pretty accurately with the period assigned by our best scholars to the invention of the Jyotisha or Indian calendar.

Tarikhu-L-Hind is one of the famous books authored by Al-Biruni, which is the treatise of the literature and science based on Indian thought at the beginning of the 11th century. Al-Biruni himself mentions in the Prelude for his book that he has translated two Indian works into Arabic language, one which discusses the origin and quality of things which exist and is entitled 'Sankhya', the other is known under the title of Patanjali, which treats of the deliverance of the soul from the trammels of the body. These works contain the chief principles of the Indian creed. The historians are of view that the book which has been called as '*Batajal*' is none other than the Sanskrit work translated by Al-Biruni, believed to have been the original script of the sage Patanjali, a well-known Grammarian, Philosopher and Vedic commentator, of post Vedic period.

There are a few instances which substantiate that Muslim rulers retained and encouraged the education system which prevailed earlier. The Sikandar (1389-1413 AD) of Shah Mir dynasty, during his reign established a department to translate Sanskrit works into Persian and translation of Mahabharata and Rajatarangini of Kalhana, into Persian language are the remarkable achievements. During the Mughal period, Akbar established a new faith viz., Din-I-Lahi, by compiling code of education regulations and suggested innovative

methods in teaching pedagogy, syllabus and course curriculum from elementary to higher education. However, most of the educational institutions were run on the basis of religious lines of Islam and was conservative in nature.

Hence, an inference may be drawn that during the period of Mohammedan regime, though in religious aspects it was intolerant, it was comfortable in the matters of education, economic and administration. The learned class was protected and entrusted with high offices. They were indispensable because of their academic excellence.

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COLONIAL ERA AND POST INDEPENDENT ERA
AGE OF RATIONALISM AND HUMANISM IN INDIAN EDUCATION

With the advent of British in India during the period of the Mughal emperor Jahangir the seeds of European culture and rationalism began to germinate in the Indian soil. Britishers obtained permission from Jahangir (1600) to trade in Surat. The watchful British gradually took the advantageous positions of the then prevailing socio-political conditions and emerged as one of the powerful foreign powers in India. After the Battle of Buxar and Plassey, during 1757 and 1764 respectively, the political order and situation prompted the ambitious British to consolidate their position in India by extending the scope of their limited activities. Britishers did not confine only to trade, but also established administration in the provinces which were under their control by providing facilities of education, civil administration, amenities to the local population. It was a fertile ground and safe haven for their commerce and business interests. Founding Calcutta Madrassa (Mohammedan College) in 1781, with the initiatives by Lord Warren Hastings, which was followed by Sanskrit College of Benares in 1792 with a motto *'comfortable in all respects to the Dharma Shastra in the chapter on education'*. It is pertinent to mention here that on the renewal of the charter of the East India Company in 1813, the following clause was specifically included:

'A sum of not less than a lakh of Rupees in each year shall be set apart and applied to the revival and improvement of literature and the encouragement of the learned natives of India and for the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories in India'. The progressive Hindus in Calcutta supported for better education which catered to the needs of 19th century. Due to the efforts by David Hare, a watchmaker, it got momentum for the establishment of Hindu College in 1816. During 1821, Poona College was established and annually the Peshwas distributed the large chunk of funds amongst learned men for their learning. The meeting of the Governor-General in Council was held in July 1823 and it was resolved that:

'There should be constituted a General Committee of Public Instruction, for the purpose of ascertaining the state of public education and of the public institutions designed for its promotion, and of considering and from time to time submitting to Government, the suggestion of such measures as it may appear expedient to adopt with a view to the better instruction of the people, to the introduction among them of useful knowledge and to the improvement of their moral character'.

Sir Thomas Munro established Board of Public Instruction for the Madras Presidency during 1826 followed by constitution of Bombay Board of Education during 1840.

'Education of the People of India'–the essay published during 1838 by Sir Charles E. Trevelyan, one of the members of Bengal Civil Service, created tremors by dividing the intellectuals in India as supporters of oriental learning, grounding and advocating English Education.

On 25th June 1822, Sir Thomas Munro, in a minute recorded has drawn the attention of the local government and stated: 'Much has been written, both in England and in this country, about the ignorance of the people of India and the means of disseminating knowledge among them, but the opinions upon this subject are the mere conjectures of individuals, unsupported by any authentic documents and differing so widely from each other, as to be entitled to very little attention. Our power in this country, and the nature of its own municipal institutions, have certainly rendered it practicable to collect materials from which a judgment might be formed of the state of the mental cultivation of the people. We have made geographical and agricultural surveys of our provinces; we have investigated their resources and endeavoured to ascertain their population; but little or nothing has been done to learn the state of education'.

During 1881, in his letter addressed to Lord Marquis of Ripon, the Viceroy and Governor General of India, Sir John Murdoch, an Indian agent of the Christian Vernacular Education Society for India, lays emphasis on the initiatives to be taken by the Government for education in India, mentioning that 'the government of 1/6th of the earth's population, differing in race and creed, with many inflammable elements, is a task demanding the greatest care and wisdom. The

difficulty is increased by the administration being largely in the hands of foreigners, its head, generally a stranger to the country, holding office for only five short years'.

He further adds: 'Education is rapidly spreading, according to the trite saying 'Knowledge is power'. Whether it will prove a blessing or a curse depends upon the way in which it is employed. The stream resembles its source. The effects of education turn largely upon its character. If we go seriously wrong, says Dr. Murray Mitchell, in the educational system we set up, the error may soon be irretrievable and the consequences fatal'.

Quoting the words of Dr. George Smith, a seasoned educationist and friend of India can be quoted as *'In a backward country like India the normal school is the root of all successful education. It is sad to be under the necessity of writing such platitudes year after year; but it is necessary'.*

Lord Lytton mentioned about the changes that were taking place in India as *'the greatest and most momentous revolution–at once social, moral, religious and political–which perhaps, the world has ever witnessed'.*

In '*A History of English Education in India*' authored by Syed Mahmood, Barrister-at-Law, Fellow of the Universities of Calcutta and Allahabad, Trustee and Hon. Joint Secretary of the Muhammadan Anglo-Oriental College, Aligarh, published by MAO College, Aligarh, in 1895 several comprehensive remarks can be seen which are introspective and justifiable, unravelling the facts along with statistical figures and some of the excerpts are shown as hereunder':

During 19th century many Indian progressive thinkers thought that European system of educational discipline has to be implemented as it is a significant fact that should never be lost sight of in considering the import of any great political, social or educational measures to be adopted for the prosperity of India. Their views and opinions were supported by many philanthropists and noblemen of Britain. Amongst them was Sir Charles Grant, anotable statesmen from Grants of Schewglie, who was one of the distinguished Directors of East India Company, represented the County of Inverness in Parliament, pioneered the reformists in India. In 1792 he wrote a treatise *'Observations on the state of society among the Asiatic subjects*

of Great Britain, particularly with respect to morals and on the means of improving it'. It is one of the printed parliamentary papers relating to the affairs of India and one of the valuable data which throws light on moral, intellectual and political condition of India during that time comprising the philanthropic sentiments, philosophical advices and holistic principles of administrative policies. It further emphasises upon the origin, reasons and principles of the policies of the Britishers to introduce a knowledge of English literature, disciplined and rational European sciences as their subjects in India.

Expressing his concrete opinion Sir Charles Grant states*: 'Whatever diversity of opinion may have prevailed respecting the past conduct of the English in the East, all parties will concur in one sentiment, that we ought to study the happiness of the vast body of subjects which we have acquired there……. Although in theory it never can have been denied, that the welfare of our Asiatic subjects ought to be the object of our solicitude, yet, in practice, this acknowledged truth has been but slowly followed up and some of the inferences which are deducible from it, remain, as it should seem, still to be discovered'*.

Today we are witnessing the pedestal of 'Knowledge Economy' of 21st century and looking towards the horizons of centuries ahead, but the suggestions and opinions expressed in the treatises of Sir Charles Grant are far more relevant even to our times, deserves interesting consideration and views of a true statesmen stands testimony for good administration of the country, unambiguously compiled a century ago.

Further, Sir Charles Grant, in his treatise enlists negative traits amongst various native communities which are deprived of the principles for good administration viz., corruption, perjury, avarice, selfishness, obsequiousness, hypocritical, mutual discord, malice, calumnies and cunningness, which are resultant of lack of proper education with rationalism and humanism. These factors hinder the progress of an individual as well as society and country. To substantiate his views, Sir Charles Grant, mentions the instances of thefts, robberies and secret crimes in Bengal and astonishing indifference of the populace towards befalling standards towards humanity, which are principles of fatalism and condemning the same he strongly advocates for a

radical change before a spirit of rapine. He estimates that absence of patriotism, fierce, lawless, licentiousness and cruelness, are imperfections of human nature resulting because of the lack of good education and exposes the defects which causes degeneration of the society at large.

Further, in order to revive the intellectual, social and moral standards of the people of India, Charles Grant propounds that it is the duty of the State to provide education which is rationale and inculcates humane qualities to its subjects; one can foresee the anticipation, desire, concern and farsightedness in emancipation of natives of India from the words of Mr. Charles Grant: *'We now proceed to the main object of this work – for the sake of which all the preceding topics and discussions have been brought forward – an inquiry into the means of remedying disorders, which have become thus inveterate in the state of society among our Asiatic subjects, which destroy their happiness and obstruct every species of improvement among them'.*

Further, in his macro analysis of the then social conditions and micro dissection of society which are conspicuous in his writings, Charles Grant elaborately narrates the pathetic plight of the Indian society and asserts his profound views that: *'To the use of reason and argument, however, in exposing their errors, there can be no objection. There is, indeed, the strongest obligation to make those errors manifest, since they generate and tend to perpetuate all the miseries which have been set forth and which our duty as rulers, instead of permitting us to view with silent indifference, calls upon us by every proper method to prevent'*. This statement itself stands as evidence for the deplorable conditions due to practices of various blind faiths in the society, plight of women, and comprehensively reflects the miseries faced by majority of the population and unearths the dark side of religious fanaticism and ignorance prevailed during that period.

Strongly advocating for the new wave of education system, Charles Grant, mentions: 'The true cure of darkness, is the introduction of light. The Hindus err, because they are ignorant; and their errors have never fairly been laid before them. The communication of our light and knowledge to them, would prove the best remedy for their disorders; and this remedy is proposed, from a full conviction, that if

judiciously and patiently applied, it would have great and happy effects upon them; effects honourable and advantageous for us. There are two ways of making this communication; the one is, by the medium of languages of those countries; the other is, by the medium of our own. In general, when foreign teachers have proposed to instruct the inhabitants of any country, they have used the vernacular tongue of that people, for a natural and necessary reasons that they could not hope to make any other means of communication intelligible to them. They are our own, we have possessed them long; many Englishmen reside among the natives, our language is not unknown there, and it is practicable to diffuse it more widely. The choice, therefore, of either mode, lies open to us; and we are at liberty to consider which is entitled to preference. Upon this subject, it is not intended to pass an exclusive decision here; the points absolutely to be contended for are, that we ought to impart our superior lights, and that this is practicable; that it is practicable by two ways, can never be an argument whey neither should be attempted. Indeed, no great reason appears why either should be systematically interdicted, since particular cases may recommend, even that which is, in general, least eligible'.

In his treatise Charles Grant enlists the advantages, benefits and outcomes of introducing the English language in the new system of Education based on the European model to be introduced to the Indian natives. The targets of new pattern education were smooth British administration, dissemination of western thoughts through English by the art of printing, disintegrate the illogical religious dogmas by contributing towards true knowledge of Nature, effectively enlighten the populace through promotion of principles and application of mechanical inventions, agricultural development, etc. They confidently believed that it would silently undermine the superstitions and evil practices followed in the Indian society and they will be the ultimate reapers of the benefit of this new order.

Charles Grant, emphasized on the principles and mode of communication of knowledge as English. He applied it in his observations, profound logical arguments, resounding persuasion and conviction to his ideals of humanism, clearing all the insane

apprehensions, suspicions and misgivings and staunchly advocated for the improvement of intellectual, social, economic and moral conditions of natives of India. He believed that this approach would possesses historical importance and intrinsic value for the evolution of modern education system in Indian context.

True to his conviction and sincerity, Charles Grant mentions: 'This subject has not hitherto received a formal consideration; but the objection which would resist all improvement, lest future inconvenience should arise from it, necessarily brings on this decisive question, whether we shall, in all time to come, passively leave our subjects in the darkness, errors and moral turpitude in which they now grovel, or shall communicate to them the light of Truth, and the means of melioration and happiness, personal and social? The question may more properly be – whether we should keep our subjects in their present and social? For if improvement ought not to be communicated to them, we should not be merely passive, but be careful to exclude it; as, on the other hand, if it ought to be communicated; This question then is to determine the grand moral and political principle, by which we shall henceforth and in all future generations, govern and deal with our Asiatic subjects. Whether we shall make it our study to impart to them knowledge, light and happiness; or under the notion of holding them more quietly in subjection, shall seek to keep them ignorant, corrupt and mutually injurious, as they are now? The question is not, whether we shall resort to any persecution, to any compulsion, to any sinister means. No; the idea has been frequently disclaimed; it is an odious idea, abhorrent from the spirit of true religion;

In his treatise Charles Grant mentions that introduction of western education will be the only key factor to ameliorate and revolutionize the Indian society from its socio-political backwardness. He emphasizes that the intention is not to glorify the conquest made by the British through its modernization or magnanimity, but enhance the prosperity and stability in the long run, which culminate in social happiness, morality and pass on the beacon of knowledge. Charles Grant's vision was not only pragmatic but also optimistic. It can be anylised when he says 'In success would lie our safety, not our

danger. Our danger must lie in pursuing, from ungenerous ends, a course contracted and illiberal; but in following an opposite course, in communicating light, knowledge and improvement, we shall obey the dictates of duty, of philanthropy and of policy; we shall take the most rational means to remove inherent, great disorders to attach the Indian people to ourselves, to ensure the safety of our possessions, to enhance continually their value to us, to raise a fair and durable monument to the glory of this country and to increase the happiness of the human race'.

It is important to note that with the commencement of British Education in India, the Indigenous Education System was reorganized with strange experiments of rationalism of European methods, adapting itself to the changed conditions, connecting differently to the constituted minds with divergent thoughts. During its initial stages, when the Indian society was non-receptive and sceptic to this changed circumstance, the writings of European orientalists created awakening in the minds of the reformists. In this connection the contribution made by the stalwarts like Mr. Thomas Fisher, who held the office of 'Searcher of the Records' at the East India House, London, in his elaborate memoir dt: 7-2-1827 and its supplementary dt: 23-2-1832, essays on 'British Education in India' during 1890 by Frederick William Thomas (21-3-1867 to 6-5-1956), British Indologist and Scholar of Trinity College, Cambridge University, London, Sir Charles Trevelyan's Education in India, publications of General Council on Education in India, pamphlets by Rev. James Johnston, Secretary of the Council, articles of Mr. John Murdoch, Alexander's East India Magazine, the Calcutta Review, Asiatic Quarterly journal, and several other books are seen to be devoted for the cause of Education. It contains with mature opinions of men who were familiar with Indian society structure and aimed to enlighten the Indian populace.

Sir Thomas Munro, the then Governor of Madras, was distressed with the decay of Indian literature and arts due to the negligence of people which he witnessed so ordered during 1822 for an investigation for the reasons of the same. This inspired the East India Company to make provisions for 'moral and intellectual amelioration' of the people as

per the wishes of the parliament. Sir Thomas Munro's initiative led to other reformists to tread his path and during 1823 the researches made by Sir Elphinstone led to introduction of educational reforms in Bombay presidency.

In his collection of essays Sir F.W. Thomas has made an in depth and unbiased observation of the then system of education in India and has recorded as: *'It is true that in physical and mathematical science their knowledge was infinitely inferior to that current in Europe at that date. It is true that in these branches real progress had ceased for centuries. But what was taught was well taught and the attainments of the Hindus were not inferior to those of any ancient nation or to those of European scholars prior to the Renaissance. There is further reason to believe that we found education like everything else in India in a state of decline, due to the anarchy and oppression, which had prostrated the people's energies for more than three centuries'.*

From the above we can analyze and classify the evolution of European Education System in India into three specific stages. During 1677 the East India Company took measures to send a school master to Madras to teach the elements of English and the religion and in the Charter of 1698 and Despatch of 1752 certain amount was earmarked annually to Madras Government for the encouragement of missionary activities at its discretion. Further, during 1727 (when first English Mission was established at Madras) to 1823 being first stage, the period was entirely private effort with occasional Government interference from 1854 to 1881, which established new principles and uniform introduction of administration because of Great Despatch by Sir Charles Wood. Third period is considered from 1882 till 1947.

The main features of Charles Wood Despatch may be summarized as commencing from primary education and streamlining the method of education. It promoted education through vernacular, setting up of Department of Education in every province and opening of minimum one government run school in every district and emphasis was given for the promotion of education for women. With regard to Higher Education, apart from systematizing the methodology of education, it laid importance on establishing universities in major cities like Calcutta, Madras and Bombay presidencies on the pattern

of University of London which was established in 1836. Greater impetus was given to promotion of English in the system of education for higher studies, importance of teachers' training at all levels, hierarchy in education like primary schools, Anglo-vernacular high schools, affiliated colleges at district level and affiliating universities in the presidency towns. In addition to this system of grants-in-aid was encouraged. Involvement of private sector and secular education was included and promoted.

It is remarkable to note that during the period of first stage, upon initiative was taken by Mr. Jonathan Duncan, resident of Benares, the British Government. He founded the Benares Sanskrit College in 1791 under Lord Cornwallis. During 1793, on the renewal of Company's Charter, due to the emphasis laid by Mr. Charles Grant, supported by Mr. Wilberforce, the British Parliament passed a resolution that *'it is the peculiar and bounden duty of the British Legislature to promote, by all just and prudent means, the interest and happiness of the inhabitants of the British dominions in India and that for these ends such measure ought to be adopted as may gradually tend to their advancement in useful knowledge and to their religious and moral improvement'.* It is also notable that during 1804 Lord Wellesley declared that Government Education System will adhere to strict religious neutrality. Regarding the interference of the religious activities of the Indians, one of the officer in the company's service and then resident at a native Court has recorded that – *'it is deemed to be madness to attempt the conversion of the natives of India or to give them any more learning or any other description of learning than what they then possessed. The Hindus had as good a system of faith and of morals as most people and regarding musalmans, it is quite sufficient if we endeavor to conciliate their confidence and to mitigate their vindictive spirit'*. Impacted by such views, obviously the *British Government might have taken neutrality and secular stand in the system of Education*.

During first stage, when the East India Company's renewal was discussed in Charter of 1813, it was supposed to be necessary for the need of Education through missionary enterprise and after unmistakable thoroughness the following Education Clause was inserted stating that *'it shall be lawful for the Governor General in council to direct that out of any surplus which may remain of the rents, revenues*

and profits, a sum of not less than one lakh of rupees in each year shall be set apart and applied to the revival and improvement of literature and the encouragement of the learned natives of India and for the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories in India'. In fact, this clause is the foundation stone of the present system of Indian Education.

The following extract from the First Educational Despatch from the Court of Directors, dt: 3-6-1814, states that: *'We refer with particular satisfaction upon this occasion to that distinguished feature of internal polity which prevails in some parts of India and by which the instruction of the people is provided for by a certain charge upon the produce of the soil and by other endowments in favour of the village teachers, who are thereby rendered public servants of the community.*

Further, it states that *'the mode of instruction that from time immemorial has been practised under these masters has received the highest tribute of praise by its adoption in this country, under the direction of the Rev. Dr. Beil, formerly Chaplain at Madras; and it is now become the mode by which education is conducted in our national establishments from a conviction of the facility it affords in the acquisition of language by simplifying the process of instruction'*.

'This venerable and benevolent institution of the Hindus is represented to have withstood the shock of revolutions and to its operation is ascribed the general intelligence of the natives as scribes and accountants. We are so strongly persuaded of its great utility that we are desirous you should take early measures to inform yourselves of its present state and that you will report to us the result of your inquiries, affording in the meantime, the protection of Government to the village teachers in all their just rights and immunities and marking by some favourable distinction, any individual amongst them who may be recommended by superior merit or acquirements; for humble as their situation may appear, if judged by a comparison with any corresponding character in this country, we understand those village teachers are held in great veneration throughout India'.

There are several provisions and Acts were formed related not only to administration and trade, but also for the education of India, as they mark first concrete step by the State in the form of legislative

affirmation for educational policies. Section 43, Statute 53, Geo-III, Chapter–155, is attributed for heralding a new epoch in the history of Public Education in India through legislative enactment. This Act has been identified with first policy of Public Instruction in the administration during British period. This was followed by the first despatch of the Court of Directors to the Governor General on 3rd June 1814, conveying directions on the matter related to education. This Act had two distinctive objects 1) encouragement of the learned natives, revival and improvement of literature and 2) promotion of knowledge of sciences amongst the inhabitants of India. The despatch also laid emphasis for Sanskrit Learning and some of the excerpts are reproduced as follows:

'We are informed that there are in the Sanskrit language many excellent systems of ethics, with codes and laws and compendiums of the duties relating to every class of the people, the study of which might be useful to those natives who may be destined for the Judicial Department of Government. There are also many tracts of merit, we are told, on the virtues of the plants and drugs, and on the application of them in medicine, the knowledge of which might prove desirable to the European practitioner; and there are treatises on Astronomy and Mathematics, including Geometry and Algebra, which, though they may not add new lights to European science, might be made to form links of communication between the natives and the gentlemen in our service, who are attached to the observatory and to the Department of Engineers, and by such intercourse the natives might gradually be led to adopt the modern improvements in those and other sciences. With a view to these several objects, we have determined that due encouragement should be given to such of our servants, in any of those departments, as may be disposed to apply themselves to the study of the Sanskrit language and we desire that the teachers, who may be employed under your authority for this purpose, may be selected from the amongst the natives who may have made some proficiency in the sciences in question, and that their recompense should be liberal'.

However, by the time when the Despatch 3-6-1814 arrived to India, here the British India was engulfed with several issues like war with Nepal, turmoil in central India, financial crunch, etc., which prevented the Government to give more attention and act upon the Charter of

1813.Therefore, no significant measures could be implemented on the matter of Education.

It was somewhere during 1816 in Calcutta, some group of reformists having public spirit and supporters of western education under the leadership of David Hare and Rajaram Mohan Roy, subscribed a capital sum Rs.1,13,179/- and founded 'Vidyalaya' or Anglo-Indian college for getting education of Indian children through European model, oriental languages and sciences. Within a span of few years, the institution gained in popularity and even claimed superiority over missionary schools and was affordable to natives. Later, on let the behest of Mr. H.H. Wilson, during 1821, Calcutta Sanskrit College was founded by the Government. These developments in the matter of education have engaged special attention of the Government and affirmative measures were implied to place the Committee of Public Instruction and on 17th July 1823, in the council the Governor General took into consideration the memorandum submitted by Holt Mackenzie for the formation of General Committee of Public Instructions in the Bengal presidency. During 1823, Rajaram Mohun Roy presented a memorandum which was termed as controversial, to the Governor General, Lord Amherst. He extended his support and advocated the implementation of English in the education system for the natives. This raised several questions about the nature of education to be encouraged in India and the matter came before the Court of Directors of the company for its consideration. The Despatch of the Court of Directors issued on 18th February 1824, observes that 'the ends proposed in the institution of Hindu college and same may be affirmed of the Mohamedan were two: the first, to make a favourable impression, by our encouragement of their literature, upon the minds of the natives and the second, to promote useful learning'. This underlines for the need and essence of useful knowledge to be promoted. After several developments, the Court of Directors in their dispatch to the Governor General dated 29th September 1830, gives indications of policy of English education, followed by separate colleges for study of English, encouragement for translations of western science, education for natives for public service, adoption of English as official language, Court administration, spread of western ideas, etc.

Meanwhile, due to depleting standards in Education, Sir Thomas Munro, Governor of Madras presidency, wrote a minute on 25th June 1822 and 10th March 1826, supporting for endowment of schools by government and other reforms on the lines of the principles adopted by Bengal presidency. These developments created impact even in Bombay presidency for educational measure and they were reflected and recorded in the minute on education dt: 13th December 1823 by Mountstuart Elphinestone, Governor of Bombay, wherein he indicated road map of detailed plan for the improvement of education. Amidst several outcry of dissent, it was favoured for encouraging English by a minute dt: 24th march 1828, proposed by Mr. Warden and this was supported by the Despatch of Court of Directors dt: 21st September 1826, 29th September 1830 and 12th December 1832 respectively. Through all these developments, we can see the paradigm shift was taken in the field of education from unorganized individual efforts, efforts made by East India Company and finally legislative recognition of Education as duty of the State and implemented in 1813.

Lord Thomas Babingt on Macaulay's Minute and proclamation by Lord William Bentinck: The 19th century is fully packed with turning points of unexpected events. With the arrival of Lord Thomas Babington Macaulay to India during 1834, it spelled the beans for future revolutionary change in the education system of the country installing it on a firm foundation and at the same time having deep repercussions on socio-political scenario. Prior to his arrival, India had two systems of education, viz., vernacular elementary and higher education instructed through Sanskrit and Arabic. However, Macaulay and reformist supporters were of the opinion that English education was the true policy on which State efforts should be almost entirely concentrated.

In his notes 'Speeches by Lord Macaulay–with his minute of Indian Education', Mr. G.M. Young makes sincere efforts to interpret the vision of Macaulay and writes 'Macaulay in his heart always believed in perfectibility, which demonstrated keen faith in human progress. His unbelievable imagination in resolving unsurmountable challenges are emanated from humanism which he dwelt on every example of

human goodness, courage in war, self-discipline in peace, science, invention, discovery and for him these are flowers with unexpected tenderness; neither Macaulay had any doubts where the path on which he was entering would lead him. His idea of administration opens to all Indians and manned even in the higher branches by Indians of birth was bound in the long run to become an Indian administration. It remained to fit the Indians for their future, which intellectually, meant to detach them from their past and to graft them, if they could be grafted, on to the stock of western science and culture. The reformists of that time opined that instruction in Sanskrit and Arabic could produce nothing, but a learned native, on the other hand instruction in English would open to the Indian all the treasures of western knowledge'.

Sir Arthur Howell, in his treatise 'Education in British India–Prior to 1854', published during 1872, consciously mentions about strong prejudices of Macaulay towards Sanskrit literature is mainly because of ignorance. Despite this his minute remains a model of just and comprehensive reasoning.

The Minutes of 2nd February 1835 which is the collection of 'Speech by Lord Macaulay with his Minutes on Indian Education', published by Oxford University Press, London, 1935, one can find the visionary intention of Macaulay, in which he mentions: *'We now come to the gist of the matter. We have a fund to be employed as Government shall direct for the intellectual improvement of the people of this country. The simple question is, what is the most useful way employing it?'*

In the said Minutes, Lord Macaulay plainly admits stating '*I have no knowledge of either Sanskrit or Arabic. But I have done what I could to form a correct estimate of their value. I have read translations of the most celebrated Arabic and Sanskrit works. I have conversed both here and at home with men distinguished by their proficiency in the eastern tongues. I am quite ready to take the oriental learning at the valuation of the orientalists themselves'*.

Further, Macaulay adds: *'with models of every species of eloquence, with historical compositions, which, considered merely as narratives, have seldom been surpassed, and which, considered as vehicles of ethical and political instruction, have never been equalled; with just and lively representations*

of human life and human nature; with the most profound speculations on metaphysics, morals, government, jurisprudence and trade; with full and correct information respecting every experimental science which tends to preserve the health, to increase the comfort or to expand the intellect of man. Whoever knows that language has ready access to all the vast intellectual wealth, which all the wisest nations of the earth have created and hoarded in the course of ninety generations. ..... Whether we look at the intrinsic value of our literature, or at the particular situation of this country, we shall see the strongest reason to think that, of all foreign tongues, the English tongue is that which would be the most useful to our native subjects'.

The spirit and farsightedness of Macaulay was invigorating and reinventing in an attempt to focus all natives under one unifying language, not only confined to administration, but also revamping the system of Education through English as medium of instruction, wherein he mentions: *'In one point I fully agree with the gentlemen to whose general views I am opposed. I feel with them, that it is impossible for us, with our limited means, to attempt to education the body of the people. We must at present do our best to form a class who may be interpreters between us and the millions whom we govern; a class of persons, Indian in blood and colour, but English in taste, in opinions, in morals, and in intellect. To that class we may leave it to refine the vernacular dialects of the country, to enrich those dialects with terms of science borrowed from the western nomenclature and to render them by degrees fit vehicles for conveying knowledge to the great mass of the population'*. Macaulay's essays, minutes or speeches displays natural excellence of his prose, flawless lucidity, the movement of his thoughts were little ahead of the thinking of the audience, straight and hard-hitting arguments, penetrating with the point of reasoning and these characteristics made him classic and traditional during his own life time. Thus, his speeches became echo of the oratory of that heroic age of 19th century. Unfortunately, most of Macaulay's minutes on Indian education are not accessible writings in the language and they are not reprinted. However, due to efforts made by Sir George Trevelyan, only few of his writings are traceable in the form of abbreviated texts.

Macaulay's Minutes created aftermath effects of constructive and affirmative in the British administered provinces commencing from Bengal, Madras and later Bombay presidency, which are far reaching. It was even welcomed in other non-British provinces or princely states viz., Travancore, Mysore, Patiala, etc., but the impact was steady and gradual.

Macaulay in his speech quotes the instance of intellectual progress made by Russia. Referring Russia, he mentions *'there is now in that country a large educated class, abounding with persons fit to serve the state in the highest functions and in no wise inferior to the most accomplished men who adorn the best circles of Paris and London… . . . . . The languages of western Europe civilized Russia'.*

Subsequently, Macaulay's minute was concurred by Lord William Bentinck and his council on 7th March 1835 by passing following prominent resolution amongst others, which is considered as historical in catapulting the system of education to higher plane.

'His Lordship in council is of opinion that the great object of the British government ought to be the promotion of European literature and science amongst the natives of India and that all the funds appropriated for the purposes of education would be best employed on English education alone'.

There were several views in favour and against the British Educational policies but the fact is that the British never adopted proselytizing policy, but as a whole, implemented religious neutrality in Education as a State policy. However, keeping in mind the role and value of religious practices, various duties of life, need of morality required for public service are essential beyond any faith and beliefs. It was felt that religious instruction is advisable and at the same time moral instruction is necessary and any educational grant should not be dedicated to proselytism.

In this connection, the official publication on education by Mr. Arthur Howell, Under Secretary to the Government of India, substantiates the Education policy of the British:

'Before leaving India, Lord William Bentinck had an opportunity of

declaring on two memorable occasions the strict policy of religious neutrality, which is still observed in the matter of education'.

The Governor General declared that *'the fundamental principle of British rule, the compact to which the Government stands solemnly pledged, is strict neutrality. To this important maxim, policy as well as good faith have enjoined upon me the most scrupulous observance. The same maxim is peculiarly applicable to general education. In all schools and colleges supported by Government this principle cannot be too strongly enforced, all interference and injudicious tampering with the religious belief of the students, all mingling direct or indirect teaching of Christianity with the system of instruction, ought to be positively forbidden'*. This religious neutrality has been backed by the despatch of the Court of Directors, dt: 13th April 1858, for the strict adherence to the sentiments expressed by the Governor General.

Gradually the British Educational policies started to deepen its roots in all the spheres of the Indian society, not only with the efforts by Britishers, but also with staunch support of natives and prominent organization like Brahmo Samaj and stood on firm foundation commencing from Bengal. The later period witnessed the progression of European education system in India followed by several further reforms and regulations. The educational minute of 24th November 1839 by Lord Auckland, the Governor General, slightly modified the policy of exclusive English education by giving liberal encouragement to English study. It saved the native colleges from the misappropriate hess of the funds specially assigned to them. Educational resolution dtd: 10th October 1844, by Lord Hardinge, favoured for employment of successful native students in the administration.

ESTABLISHMENT OF MODERN UNIVERSITIES IN INDIA

Triumphed by the previous success of Lord Macaulay's Minutes followed by subsequent minutes by succeeding Governor Generals, Court of Directors, on 25th October 1845 a proposal plan was made for the establishment of University at Calcutta in the presidency of Bengal by Mr. Charles Hay Cameron, a British Jurist and member of the Supreme Council of India. Mr. C.H. Cameron had prominent

role in the codification work started by Lord Macaulay and he was the Chief Advisor in the preparation of the Indian Penal Code. In order to accomplish liberal education and motto of British education, the proposal emphasized for the establishment of a Central University with power of awarding degrees in the disciplines of Arts, Science, Law, Medicine, Civil Engineering by incorporating a special Act of the legislative council of India constituting the lines of University of Oxford, University of Cambridge and University of London. It was also proposed to establish the university consisting of a Chancellor, Vice Chancellor and fellows, senate, faculty of law, science, civil engineering, medicine, etc., and faculty of arts for general control and superintendence. In the structure of the University examination of candidates for degrees in all the departments was decided to be held once in a year conducted by Examiners appointed or nominated from the Senate. The benefits of the examination were supposed to be extended from those institutions which conform to the regulations enacted in respect of the course, period and study. Though, this proposal was kept in abeyance by the authorities in English, it was taken along with the subject of renewal of the Charter of East India Company during 1852-53. Prior to the renewal of charter, it was customary to conduct an enquiry over the Indian affairs by parliamentary committee comprising members from House of Lords and House of Commons and report about the progress and policy of English education in India. Upon submission of enquiry report, on 20th August 1853, Act of Parliament, 16 and 17, Vic., C.95, was passed pertaining to English education. It contained a provision by which the appointments to the civil service and medical service in India were withdrawn from the Directors of the company and thrown open to public competition.

During the course of parliamentary enquiry, several petitions were presented to the Parliament and amongst them, the petition dtd: 30th November 1852 made by Mr. Charles Hay Cameron was considered as of historical importance pertaining to High English Education in India. In fact, on 7th July 1853, Mr. C.H. Cameron explained his views before the Select Committee of the House of Lords, supported by the views of Sir Charles Trevelyan, Marshman and Others.

The subsequent developments of the Act of Parliament, 16 and 17, Vic., Chapter 95, passed on 20th August 1853 paved way for educational Despatch of the Court of Directors, dt: 19th July 1854, which is considered as 'Charter of Education in India'. It was summarized in the Report of the Indian Education Commission of 1882, recommended special attention for the improvement and wider extension of education, both English and vernacular with the attainment of the following objects:

a) Constitution of a separate Department of the administration for education;

b) Institution of universities at the presidency towns;

c) Establishment of institutions for training teachers for all classes at schools;

d) Maintenance of existing Government Colleges and Higher Schools and increase of their number when necessary;

e) Establishment of new middle schools;

f) More attention to vernacular schools, indigenous or other, for elementary education;

g) Introduction of system of Grants-in-aid;

Thus, with the foundation of universities, an important epoch in the history of European education in India began and the Despatch of Court of Directors, 1854, was considered as the guiding principle for Indian Universities. The Calcutta University was incorporated by Act II of 1857, passed on 24th January 1857, University of Bombay was incorporated by Act XII of 1857 passed on 18th July 1857 and University of Madras was incorporated by Act XXVII of 1857, passed on 5th September 1857. The Delhi College which was closed during 1st war of Indian Independence–1857, was revived again by the Punjab Government in 1864 when a college was established at Lahore. It was during the period of Lord Ripon, Act XIX of 1882 on 14th October 1882 was passed for the establishment of Punjab University and Allahabad University was incorporated by Act XVIII, 1887, passed on 23rd September 1887.

Sir W.W. Hunter Commission, 1882

With the passage of resolution by the Government of India, on 3rd February 1882, a Commission was constituted comprising of European and natives as its members, headed by Sir W.W. Hunter and the following general duties were assigned:

'It will be the duty of the Commission to enquire particularly (subject only to certain limitations to be noticed below) into the manner in which effect has been given to the principles of the Despatch of 1854 and to suggest such measures as it may think desirable in order to the further carrying out of the policy therein laid down. The Government of India is firmly convinced of the soundness of that policy and has no wish to depart from the principles upon which it is based. It is intended only at the present time, to examine into the general results of its operation and to scrutinize the efficiency of the machinery that has been set on foot for bringing about those ends which the Government from the outset had especially in view'.

The W.W. Hunter Commission after considering the Government's priorities submitted its recommendations where some issues were discussed like primary education, collegiate education, academic discipline of the students in the colleges affiliated to the Indian universities, average cost of collegiate education per student (1881-82), after career of the Indian graduates (1871-1882), scope and character of the grant-in-aid system, etc. The Government of India in its resolution dt: 23rd October 1884 took notes of the same. Some excerpts of relevant portion pertaining to higher education are re-produced here:

'That for all kinds of education private effort should be increasingly and mainly relied on in future and that every form of private effort should be systematically encouraged through the following ways:

a) By clearly showing that, education should be systematically encouraged with: complete efficiency, wherever it will be necessary. The improvement and extension of institutions under private managers will be the principal care of the Department;

b) By leaving private managers free to develop their institutions in any way consistent with efficiency and the protection of neighbouring institutions from unfair competition;

c) By insisting to all institutions, maintaining from public funds and under official management, refraining from undue competition with corresponding aided schools, by such means as charging lower fees;

d) By liberal rates of aid, so long as aid is needed;

e) By co-operation in the gradual raising of fees, so that less and less aid may be required, and

f) By favouring the transfer to bodies of native gentlemen of all advanced institutions maintained from public funds, which can be so transferred without injury to education generally;

A conclusion may be drawn that the grants-in-aid rules where made more favourable and the department where re-organized. The schools remained unchanged and administrative reforms were implemented by the formation of local boards with well-defined powers, mainly concentrating on natives and on far reaching educational consequences. The Chapter–13 of the Report of Hunter Commission elaborately recommends for indigenous education, primary education, secondary education, collegiate education, internal administration of the education department, external relations of the department, classes which require special treatment, women education and as to its legislation.

Sir Thomas Raleigh Commission or Indian Universities Commission, 1902

On 27th January 1902, the Government of India, through a resolution decided to constitute a commission to:

1. Inquire into the condition and prospects of the universities established in British India;

2. Consider and report upon some proposal which have been, or may be, made for improving their constitution and working;

3. Recommend to the Governor General in council such measures which may tend to elevate the standard of university teaching and to promote the advancement of learning.

After going through the various aspects of the Universities in India, the Commission made recommendations as hereunder:

a) To expand the legal powers of the erstwhile universities so that all the universities may be recognized as teaching bodies. Undergraduates should be left in the main to the colleges, but the universities may make better provisions for advanced courses of study and may make appointments for teaching and other infrastructure.

b) Emphasis for defining the jurisdiction for the universities and restructuring of the Calcutta University and removing certain affiliated colleges from the list of Calcutta which are situated at Central Provinces, United Provinces.

c) If a college is situated within the local limits of a university desires for any special reason to apply for affiliation in another university, its application should be addressed, in the first instance, to the local university and the application should not be granted unless with the consent of both Syndicate and Government of India.

d) Proposals for the establishment of new universities, formation of Senate, Boards of Studies, Syndicate, appointment of Registrar and staff, teaching faculties, College libraries, affiliation rules, Governing Body of a college, residence for students, course curriculum, fee structure, infrastructure, norms for transfer of students, college life, recognition of schools, inclusion of vernacular languages in courses, norms for science courses, general outline of courses, rules for age limit for matriculation, rules for matriculation and government services, methods of examination, appointment of examiners, university funds, were recommended.

Sir Michael Ernest Sadler Commission–1917

In 1917, the Government of India constituted a commission to study and report about the problems erupted in the Calcutta University followed by implementation of the Universities Act, 1904. Sir Michael Ernest Sadler was an educationist who reformed British Educational system and Vice Chancellor, University of Leeds was appointed as Chairman and Sir Ashutosh Mukherjee and Zia-ud-din-Ahmed as Indian representatives. After visiting all universities, the Sadler Commission submitted its report which is considered as voluminous and most significant, which comprises 13 volumes having in depth and comprehensive survey of educational issues commencing from secondary education, graduate education and university education in the country. In order to improve the standards of university education, the Sadler Commission recommended some suggestions for improvement of secondary education.

Recommendations of the Commission

1. To make fundamental changes in the secondary education, so that revolutionary changes may be initiated in the field of higher education.

2. To draw a line between the courses of secondary education and university education at intermediate examination, instead at the matriculation examination. To create new type of institutions called as 'Intermediate Colleges'.

3. The students shall be entitled to enter the university education only after by passing intermediate examination.

4. After intermediate course, the duration for the degree courses shall be limited for 3 years. For the eligible students there will be a provision of honours degree and for the general students, there will be the provision of Pass Course.

5. Board of secondary and intermediate education, consisting of the representatives of Government, University, High Schools and Intermediate colleges be established and entrusted with the administration and control of secondary education.

6. More encouragement for autonomous institutions.
7. Encouragement for centralized residential teaching universities with autonomy for administration.
8. More encouragement for women education in schools, colleges and universities and establishment of Special Board of Women Education in Calcutta University.
9. The teaching resources in the city of Calcutta shall be organized so that the Calcutta University may become entirely a teaching university.
10. A separate teaching and residential university should be established at Dacca (the present day Bangladesh).
11. Full time and salaried Vice Chancellor shall be appointed as the administrative head of the university.
12. The Senate and the Syndicate shall be replaced by the Court and the Executive Council respectively.
13. All Universities should be freed from unwarranted official control.
14. Interference by the Government in the academic matters of universities shall be discontinued.

Sir Philip Joseph Hartog Commission–1929

It was 1917, when Edwin Montague, the Secretary of State of India, announced in the British parliament that the policy of the British is to ensure the objective of the progressive realization of reliable Government in India. This significant change in the British policy of administration was prompted by the outbreak of World War–I. This declaration made several nationalist leaders to anticipate that the British Government is keen to give the power of self-administration to the Indians and supported the British in war campaign. Added to this, during this time **'Swadeshi'** movement had gained momentum throughout the country. Meanwhile, Edwin Montague, the Secretary of State for India, visited India and had detailed consultations with Lord Chelmsford, Governor-General,

pertaining to the political and administrative matters of the country and later they jointly submitted a report to the parliament in 1918. Subsequently, the British parliament approved the report and thus, Government of India Act, 1919 was passed which was termed as 'Montague-Chelmsford Reforms'. Under this Act, Diarchy System or Dual Government, was suggested by specifically defining the jurisdiction of the Central and Provincial Governments. The administrative subjects of the Provincial Government and some important subjects like law and order, police, revenue came under 'Reserved' subject and education, health, local self-government came under 'Transferred' subject. But, this system of Dual Government made the Governors of the provinces powerful, by bringing Executive Council and Provincial Legislature under his control. Here, the provincial legislature was represented by Indian leaders. The Education Minister was made in-charge of Education Department. Apart from this, the Executive Council had authority over the 'Reserved' subjects. However, this Dual Government system gradually created several complexities, especially in the matters pertaining to education. For instance, when the Indian ministers were eager to improve the system of education in their respective states, they were crippled with financial powers for the implementation of plan. On the other hand, the Governors having unrestricted powers, exercised to reject the educational bills sent by the State Ministers. Due to this constant friction occurred between the provincial ministers and British administration represented by the Governors and all educational programmes suffered a setback in the states. Later, the national leaders realized the true intention behind the system of Dual Administration. Meanwhile, due to repressive measures adopted by the Government, the people became agitated and the movement for struggle for freedom became virulent with the massacre in Jalianwallah Bagh, imposition of Rowlatt Act, promulgation of martial law in Punjab, Non-Co-operation movement by Gandhiji, etc. Added to this, the Indians boycotted the English education and Provincial Ministers also joined the movement. Sensing the imminent danger and prevailing situation, during 1927 the British Government had appointed a Commission for suggestion of necessary reforms headed by Sir

John Simon by studying the political, constitutional aspects of the British administration including education system. In order to make specific investigations on educational conditions in India, in turn the Simon Commission had constituted an auxiliary committee, headed by Sir Phillip Hartog which submitted its report on September 1929.

Recommendations of Hartog Committee, 1929

The Hartog Committee after going through all aspects of Indian education submitted its findings during September 1929 by highlighting issues of 'Wastages' and 'Stagnation' at the primary level, laid more emphasis for mass education and its observations had far-reaching effects in the coming years.

1. Fixing of duration of primary course to 4 years;
2. Instead of mushrooming of schools, adoption of consolidation policy;
3. Enhancing the status of the teachers by service conditions, pay, imparting training and attain quality through improvement;
4. Formatting the curriculum and pedagogy which suits the rural areas wherein children could read;
5. Flexible school hours, seasonal holidays and catering to the local requirements;
6. Promotion of technical and commercial education in universities in order to control the menace of unemployment;
7. Increase in the quantity of the Government inspection staff;

Due to Global Economic Depression that had occurred during 1930-31, the recommendations of Hartog Committee could not be implemented effectively and educational progress could not be achieved up to the mark as suggested by the Committee.

Sir John Sargent Scheme or Plan–1944

It was in 1943, during the period of Lord Wavell, Viceroy, the Central Advisory Board of Education drew up a national plan for the post-war educational development, under the chairmanship of Sir John Sargent famously known as 'Sargent Plan'.

With a vision to improve the standard of Indian education within a period of 40 years on par with Britain, the report has been maintained and prepared. The committee made detailed observation of the primary education, high school education and university education and made comprehensive recommendations about the general planning in the university education, role of central and provincial governments, provision of necessary resources enabling their smooth functioning, etc., and highlights are classified and mentioned as hereunder.

Basic (Primary and Middle) Education

1. A system of universal, compulsory and free education for all boys and girls between the ages of 6 and 14 should be introduced as speedily as possible though in view of the practical difficulty of recruiting the requisite supply of trained teachers it may not be possible to complete it in less than 40 years;

2. The character of the instruction to be provided should follow the general lines laid down in the reports of the Central Advisory Board's two committees on Basic Education;

3. The Senior Basic (Middle) School, being the finishing school for the great majority of future citizens, is of fundamental importance and should be generously staffed and equipped;

4. Quality of education depends on the teacher. The present status and remuneration given to the teachers and especially those in primary schools are deplorable. The standards in regard to the training, recruitment and conditions of service of teachers prescribed in the report of the committee approved by the Central Advisory Board in 1943 represent the minimum compatible with the success of a national system; it should be adopted and enforced everywhere.

5. A vast increase in the number of trained women teachers will be required.

Pre-Primary Education

1. An adequate provision of pre-primary instruction in the form of Nursery Schools or classes is an essential adjunct to any national system of education.
2. In urban areas, where sufficient children are available within a reasonable radius, separate nursery schools or departments may be provided; elsewhere nursery classes should be attached to junior basic schools;
3. Nursery schools and classes should invariably be staffed with women teachers who have received special training for this work;
4. Pre-primary education should in all cases be free;
5. The main object of education at this state is to give young children social experience rather than formal instruction;
6. Recommended for the inclusion of natural sciences and of vocational and technical subjects;

High School Education

1. The high school course should cover 6 years and the normal age of admission about 11 years;
2. Special arrangements will have to be made for the transfer from Senior Basic (Middle) schools to High Schools of suitable children, who show signs of late development;
3. High schools should be of two main types viz., a) Academic; b) Technical. The objective of both should be to provide a good all round education combined with some preparation in the later stages for the careers which pupils will enter on leaving school;
4. The curriculum in all cases should be as varied as circumstances permit and should not be unduly restricted by the requirements of universities or examining bodies;

5. In order that no poor child of ability may be excluded, liberal assistance in the form of free places, scholarships and stipends should be available throughout the course.

6. In order to secure teachers of the right type, the salaries paid in all recognized schools, whether maintained by the State or by private bodies, should not be less than those prescribed by the Central Advisory Board of Education.

University Education

1. Indian universities, as they exist today, despite many admirable features do not fully satisfy the requirements of a national system of education.

2. In order to raise standards all round, the conditions for admission must be revised with the object of ensuring that all students are capable of taking full advantage of a university course. The proposed re-organization of the High Schools system will facilitate this.

3. The present intermediate course should be abolished. Ultimately the whole of this course should be covered in the high school, but as an immediate step the first year of the course should be transferred to high schools and the second to universities.

4. The minimum length of a university degree course should be 3 years;

5. Tutorial system should be widely extended and personal contacts established between teachers and students.

6. Greater importance to high standards in post graduate studies especially in pure and applied research.

7. Steps should be initiated to improve the conditions of service, including remuneration, of university and college teachers.

8. An Indian University Grants Committee should be constituted for the purposes and with the terms of reference set out under this chapter.

Technical, Commercial and Art Education

1. In view of the prospective needs of post-war industry and commerce for skilled technicians and in order to cater for the aptitudes of those who will derive greater benefit from a practical course, the establishment of an efficient system of technical education at all stages, on the lines set out in the report of the Technical Education Committee, is a matter of great urgency.
2. Due regard should be had to the recommendations of the Abbottwood Report in respect of the scope and content of Technical instruction.

Adult Education

1. Comprehensive arrangements on the general lines set out in the Adult Education Committee's report should form an integral part of any national system of education. These are particularly important in India today in view of the very high percentage of illiterates.
2. The responsibility for adult education must rest with the State but every effort should be made to enlist the aid of suitable voluntary organizations wherever available.

Training of Teachers

1. The existing training institutions are barely sufficient to meet wastage among existing teachers and to train those hitherto untrained.
2. The proposals for the recruitment and training of teachers as set out in the report approved by the Central Advisory Board in January 1943 should be generally adopted.
3. No fees should be charged in Training Colleges.
4. Refresher courses are of the utmost importance and should be provided for all types of teachers but particularly for those in remote rural areas. Facilities should be provided for research and

selected teachers should be encouraged to study educational methods in foreign countries.

The Health of the School Children

- Provision for ensuring the physical welfare of all pupils and students should be made on the lines set out in the report of the Joint Committee.

The Education of the Handicapped

1. Provision for the mentally or physically handicapped should form an essential part of a national system of education and should be administered by the Education Department;
2. The blind and deaf need special educational arrangements, including specially trained teachers. It may be desirable to establish central institutions for training the teachers required.

In addition to the above, provisions were made for re-creative and social activities, employment bureaux, considering the provinces as the main units for educational, administration, with exclusion to university and higher technical education, and co-ordination of their activities on all India basis, were recommended. The use of mother tongue to be used as the medium of instruction in all high schools was also laid emphasis. Several eminent educationists and personalities from the provinces and principalities of that time even opined and suggested for the establishment of 'Educational Museums', which would give impetus with tremendous possibilities for educating young and adult. They even suggested that 'Teaching Museums' and 'Science Museums' should be developed extensively and without paying attention to this aspect, any scheme of education will be incomplete.

THE POST INDEPENDENCE ERA

Dr. S. Radhakrishnan Commission Report, 1948-1949

With the political change followed by native leadership that heralded new era from 15th August 1947, great expectations were reckoned

in the fields of administration, economy, education, agriculture, industry, science and technology, etc., and it was envisioned with renewed vigour to get freedom from ignorance in order to achieve development on par with developed countries with galloping pace. Keeping in view the natural resources, human intelligence and energy which the country possessed, it was thought to bring radical change of spirit which is essential to bring revolutionary and fundamental alteration.

In this connection, the Government of India constituted Dr. S. Radhakrishnan Commission during 1948 to consider and make recommendations to the following:

1. The aims and objects of university education and research in India;
2. The changes considered necessary and desirable in the constitution, control, functions and jurisdiction of universities in India and their relations with Governments, Central and Provincial.
3. The financial system of the universities.
4. The maintenance of highest standards of teaching and examination in the universities and colleges under their control.
5. The courses of study in the universities with special reference to the maintenance of a sound balance between the humanities and the sciences and between pure science and technological training and the duration of such courses.
6. The standards of admission to university courses of study with reference to the desirability of an independent university entrance examination and the avoidance of unfair discriminations which militate against Fundamental Right 23 (2).
7. The medium of instruction in the universities.
8. The provision for advanced study in Indian culture, history, literatures, languages, philosophy and fine arts.

9. Need for more universities on a regional or other basis.

10. The organization of advanced research in all branches of knowledge in the universities and institutes of higher research in a well-co-ordinated fashion avoiding waste of effort and resources.

11. Religious instruction in the universities.

12. Special issues of Banaras Hindu University, Aligarh Muslim University, Delhi University and other institutions of an all-India character.

13. The qualifications, service conditions, salaries, privileges and functions of teachers and the encouragement of original research by teachers.

14. Discipline of students, hostels and organization of tutorial work and any other matter which is germane and essential to a complete and comprehensive enquiry into all aspects of university education and advanced research in India.

The report has been considered as first ever produced in an independent India, which is quite expansive. Even today it has retained its relevance in the matters of public policy. The highlights and excerpts of the recommendations are mentioned hereunder:

1. Universities as the organs of civilization: In order to confront the confusion of the present times, the education system should be revamped which is not stagnant, but dynamic, receptive to guidance, think in the light of the reason at the same time giving space to ancient political set-up, social customs and arrangements, principles, for holistic development without displacing the priorities.

2. To give more emphasis for the Intellectual Adventurism in futuristic perspective, at the same time honouring the greatness attained in the past and giving up the pedantic and idolatry attitude.

3. To promote the concept of integrated way of life in the system of education with an objective to achieve purposefulness empowered

with responsibility, urge for accountability in human endeavour, exploring for new frontiers of knowledge conditioned with ideals of humanism which benefits the society.

4. To promote the ideals of wisdom in imparting knowledge i.e., 'Jnana Vijnana Sahitam', because any knowledge which is devoid of wisdom will become stale and inefficient. It is the wisdom which awakens the mind and soul in the path of self-realization.

5. It is the system of education which creates new social order and prepares each individual coming to its fold to realize the value of human life and dignity in possessing individual personality to contribute for sustainable society based on democratic principles and beliefs, because it is democracy which affirms that every individual is a unique adventure of life.

6. Furthering the growth and expansion of human mind with unity of spirit and interdependence of knowledge. Because, it will amplify the intellectual vision of the students, inspires aesthetic enjoyment with practical power and empowers for initiation of new life.

7. In addition to this, flexibility of educational system, social justice, agricultural education, technological education, rural development, social studies and research, leadership training, liberal education, spirit of science, professional integrity, assistance to downtrodden communities, need of imparting national discipline, cultural unity and promotion, etc., were suggested.

Dr. A. Lakshmanswami Mudaliar Commission, 1952: Secondary Education Commission

The Government of India during 1952, constituted the Secondary Education Commission, under the chairmanship Dr. A. Lakshmanswami Mudaliar, Vice Chancellor, Madras University, to look into the following aspects of the secondary education in India:

1. To enquire into and report on the present position of secondary education in India in all its aspects;

2. To suggest measures for its re-organization and improvement with particular reference to:

    i. Aims, organizations and content of secondary education;

    ii. Its relationship to Primary, Basic and Higher Education;

    iii. The inter-relation of secondary schools of different types;

    iv. Other allied problems

After several extended meetings, deliberations and discussions, the committee submitted its report by making recommendations and some important excerpts are mentioned as hereunder:

1. To new organizational pattern of secondary education wherein education should commence after 4 of 5 years' period of primary or junior basic education which includes a) Middle or Senior Basic or Junior Secondary stage of 3 years; b) Higher Secondary stage of 4 years;

2. The mother tongue or the regional language should generally be the medium of instruction throughout the secondary school stage, subject to the provision that for linguistic minorities special facilities should be made available on the lines suggested by the Central Advisory Board of Education.

3. Diversified courses of study shall include viz., humanities, sciences, technical subjects, commercial subjects, agricultural subjects, fine arts and home sciences;

4. Apart from imparting knowledge, dynamic methods of teaching, inculcating desirable values and proper attitudes and habits of work should be imbibed among the students;

5. The education of character should be envisaged as the responsibility of all teaches and shall be provided through every single aspect of school programme;

6. Religious instruction may be given on a voluntary basis and outside the regular school hours; extra-curricular activities

should form an integral part of school education; educational guidance should receive much greater attention in order to broaden the pupils' understanding of scope, nature and significance of various occupations;

7. The external examinations should be reduced and new approach of examination and evaluation shall be introduced;

8. A reasonable uniform procedure shall be devised for the selection and appointment of teachers;

9. Apart from this, organization and administration, management and conditions of recognition of schools, school infrastructure, working hours and vacation, re-organization and improvement and other aspects were considered for recommendation;

National Committee of Women's Education–1958–59

The post-independent era realized and witnessed the need and issues to be addressed for girls and women education in the country. On July 1957, the Education Panel of the Planning Commission, at its meeting recommended for the appointment of an appropriate committee to look into the various aspects of the questions pertaining to the nature of education for girls at the elementary, secondary and adult stages and to examine whether the present system was helping them to lead a happier and more useful life. Accordingly, the committee was constituted under Chairmanship of Smt. Durgabai Deshmukh and the committee was asked to look into the following aspects:

1. to suggest special measures to make up the leeway in women's education at the primary and secondary levels;

2. to examine the problem of wastage in girls' education at these levels;

3. to examine the problem of adult women who have relapsed into illiteracy or have received inadequate education and who need continuation in education so as to enable them to earn a living and participate in projects of national reconstruction;

4. to survey the nature and extent of material and other facilities offered by voluntary welfare organizations for the education of such women and to recommend necessary steps to enable them to offer larger educational facilities to them;

5. to examine the possibility and methods of encouraging a larger number of women to go into vocational trades by providing suitable vocational training as a part of formal education or through special courses designed for adult women;

Following are the selected excerpts of the recommendations of the committee

1. The education of women should be regarded as a major and a special problem in padegogy for a good many years to come. Bold and determined effort should be made to face its difficulties and magnitude and to close the existing gap between the education of men and women in as short a time as possible.

2. Government should encourage the opening of more creches for the care of the younger children. These creches can be located at community centres, Mahila Samitis, in buildings attached to schools or in other suitable places. They may be run as part of welfare extension projects or by voluntary workers.

3. All girls (and all boys also) of parents below a prescribed income level should be given free education up to the middle stage.

4. At the secondary stage, diversified courses so far introduced for girls have been framed chiefly with a view to preparing them for homemaking. This approach is too narrow and taking into consideration the various vocational opportunities open to women, some additional diversified courses of pre-vocational education, suitable for girls, should be introduced.

5. The state governments should be requested to take vigorous measures to increase the output of women teachers and to employ them in increasing numbers so that the existing low proportion of women teachers is substantially raised in the new future;

6. A thorough study of the vocational training needs and of the employment opportunities for women should be undertaken immediately by the Government with a group of experts and representatives of concerned ministries with adequate time and ample resources at their disposal. Such a survey will discover the occupations available for women in different parts of the country;

7. Government should formulate a number of small scale industries scheme, calculated to meet the needs of women, in consultation with the departments concerned;

8. Government should take immediate action by providing additional seats for women in existing training institutions and / or starting new training centres in vocations suitable to women;

9. Educational institutions for women should organize regular career conferences to acquaint the students leaving the institutions and their guardians about the occupational opportunities open to them and the qualifications required for them;

10. Special educational facilities for adult women should be provided for 3 valid reasons partly i) on humanitarian grounds, partly ii) as an act of pure social justice; and partly iii) because women workers are needed for a number of plan projects;

11. The central government should accept responsibility for provision of grants-in-aid to selected organizations doing some significant work in the field of the education of women and for this purpose adequate provision should be made in the central budget from year to year;

12. The services of the voluntary organizations should be extensively used in the field of middle, secondary, higher, social and vocational education of women. Their services should also be utilized in teacher-training and in providing special educational facilities for adult women;

13. Women's welfare organizations should be encouraged to take up educational schemes for which aid should be given from the special fund proposed to be created for the development of the education of girls and women;

14. A fairly large number of scholarships should be instituted for poor and deserving girls in all colleges, both government and private. The amount of these scholarships should be such as would enable the girls to continue their education without being a burden on their families.

15. In the funds sanctioned for the welfare of the backward classes, a special provision should be made for the education of women from the backward communities;

16. Social education classes for imparting simple useful skills and for creating certain new attitudes necessary for present day conditions should be widely expanded through the agency of Mahila Mandals in rural areas;

17. Grants to be given to a few selected institutions to develop themselves into institutions specially devoted to the education of women;

18. Co-education should be adopted at the primary stage as a general policy. But as a transitional measure, separate schools for girls may be permitted as an exception in places where there is a strong public demand for them and the enrolment of girls is large enough to justify their establishment. Propaganda should be made in all such areas to remove the existing prejudice against co-education and create a positive opinion in its favour;

19. As a scientific study of the problem of wastage on an all-India basis is needed, the Ministry of Education should carry out special studies focusing this problem in all parts of the country to throw light on both the causes and extent of wastage at the different stages of the educational ladder.

Soon after the submission of the recommendations by the National Committee on Women's Education, a National Council for Women's Education was constituted during 1959, under the Chairmanship of

Smt. Durgabai Deshmukh. It was to advise on issues pertaining to the girls' education at school level and adult women, policies, programmes, priorities and targets for the expansion and improvement of the girls' education including women, to suggest measures to create public awareness in favour of girl and women's education, etc.

Later, during 1962, Hansa Mehta Committee was constituted by National Council for Women Education to examine about the differentiation of curriculum for boys and girls in education and the committee recommended as hereunder:

1. Though Home Science is a useful subject for girls, it should not be made compulsory for them at higher secondary stage;
2. Proper teaching infrastructure should be provided in educational institutions for Music, Drawing, Painting, Fine Arts, for which girls evince their interest;
3. Girls should be encouraged to take science and mathematics subjects;
4. Handwork should form a part of girls' education, in lieu of Physical Education;
5. Measure should be initiated for the appointment of women teachers in all educational institutions both at secondary and university levels.

Meanwhile, due to general dissatisfaction found in women's education in the southern states, Bhaktavatsalam Committee was constituted for remedial measures during 1963 and the committee recommended as hereunder:

a) It upheld the Hansa Mehta Committee report for education of women, by suggesting Domestic Science as compulsory subject;

b) Respective State Governments should take lead to create public awareness about girls' education; Central Government should provide financial assistance for women's education;

c) Condensed the course designed by Central Social Welfare Board for adult women education and also to evolve functional curriculum;

d) Reservation should be there for women students in Teachers Training Centres, specially for those who hail from rural areas;

e) Attractive incentives, emoluments, accommodation, conveyance, etc., shall be extended to women teachers.

Dr. D.S. Kothari Commission, 1968

'Programmes of education lie at the base of the effort to forge the bonds of common citizenship, to harness the energies of the people and to develop the natural and human resources of every part of the country. It was one of the major aims of the Third Five-year plan to expand and intensity the educational efforts and to bring every home within its fold–was the declaration of the Third Five Year plan. At the end of 3rd Five Year Plan, it was felt to conduct a comprehensive analysis of the educational system in order to initiate a fresh and more determined efforts for its reconstruction and in this regard, Kothari Commission was appointed to advise the Government on 'the national pattern of education, its general principles, policies for the development of education at all stages and in all aspects'. During that time, since the country needed a great economic boost and social change, it was thought that education is the only way out to bring about the desired change. The Government was convinced that education is the key to national prosperity and welfare and to invest on human resources which is an important component in Education, for greater returns. The report is considered as a major and significant dealing with all aspects and sectors of education in a comprehensive manner, reflecting the national aspirations of the people of India. The Kothari Commission Report dealt with general aspects of educational reconstruction, re-orientation of educational system in consonance with national objectives, structural re-organization, equalization of educational opportunities, improvement of teachers through enrolment policies, various phases and classifications of education, issues pertaining to expansion, curriculum, pedagogy, textbooks, evaluation, administration, issues related to higher education, establishment of major universities, programmes for qualitative improvement, university governance, education in respect of agriculture, technical and vocation, science education and research, challenges of adult education and also

remedies in the form of recommendations viz., educational planning, administration and finance.

Recommendations

At the first instance, the Kothari Commission suggested recommendations primarily on educational reconstruction viz.,

a) Radical transformation of the content of education to connect the lift, needs and aspirations of the nation as a whole;

b) To achieve ample, constant and internationally comparative qualitative improvement through imaginative programmes;

c) Expansion of educational faculties on the basis of exigency of manpower with meticulous planning and equalization of educational opportunities;

The Kothari Commission has also suggested five-point programmes for the issues related to the transformation of the Education in the country which are narrated in a nutshell as hereunder:

1. Importance and introduction of work experience at all phases of the education at large which was deemed as an integral part; Vocalization of secondary education and widening the base of the professional education at university level;
2. Creation of strong bondage of educational institutions with the society which paves way for unique institutional values and contribution through best practices in promoting national consciousness, development and service and identifying these aspects as an essential part of education.
3. To give emphasis and impetus for the scientific research and learning at all stages of pedagogy.
4. Importance for value based education at all stages thereby inculcation of higher moral and societal values;
5. Replacing the outdated system of education by innovative learning skills and practices viz., self-study habits, problem-solving ability, critical analysing, creative thinking, inquisitive quest for knowledge, skill promotion, etc.

The Kothari Commission also suggested for the creation of conducive atmosphere for education in all the educational institutions and emphasis for maximum utilization of infrastructural facilities established for the education and recommendations made under this theme is considered as most crucial.

a) Improvement of teachers' remuneration at all levels, their academic growth and professional training;

b) Revision and upgradation of the curriculum with more emphasis on Mathematics and Science; apart from this, adoption of regional languages as medium of instruction at university level;

c) Upgrading the text books and other teaching materials to higher quality, at both school and university level and also making them at affordable;

d) Implementation of Internal Assessment system which lays emphasis for students' academic activity throughout the year and comprehensive reforms in examination system;

e) Bringing uniformity and flexibility in education system which encourages innovation and experimentation;

f) Importance to give encouragement to each and every school and college by organizing country-wide awareness programmes enabling them to stretch to maximum extent;

g) Re-organizing the pattern of the educational structure i.e., 10+2+3;

In addition to this, in order to enrich facilities and expand the opportunities, the Commission suggested for eradication of adult illiteracy within a period of two decades. In this regard it recommended for expansion for higher secondary and college education in terms of manpower and its optimum regulation on a selective basis, increase in infrastructure for free education and also ample supply of books, great impetus to scholarship programmes, acceleration for the education of women and backward classes, reduction of wedge in educational development amongst various

regions and states. The Kothari Commission Report has envisioned the national objective of internal transformation of education connecting to the life, needs and aspirations of the people, by tackling several complex and delicate issues to herald qualitative improvement and strengthening and widening of the educational infrastructure. The Kothari commission Report was discussed by eminent personalities all over the country and thereafter, assisted by Special Parliamentary Committees formulated National Policy on Education which was passed in the form of a resolution on 24th July 1968. In the said resolution following important points were incorporated which are listed as under:

1. Free and Compulsory education up to the age of 14;
2. The status, emoluments and education of the teachers improved;
3. Development of official and regional languages of the country;
4. Removal of regional disparities in the provision of facilities especially to the education of girls and backward classes;
5. Higher emphasis on education for agriculture and industry;
6. Eradication of illiteracy;
7. Revamped educational structure and wide uniform pattern of 10-year general education followed by 2 years of higher secondary level and 3 years' college programme for a first degree;
8. An investment of 6% of national income in education per year;

In the 4th Five Year Plan launched during 1969, the fundamental recommendations of the Kothari Commission Report and the resolution of National Policy on Education jointly provided the fertile base for the formulation of policies and programmes pertaining to Education. It is conspicuous that the 4th Five Year Plan directed at making progress towards implementing the constitutional directives of free and compulsory education for the year 6 to 14. At secondary and higher stages of education more emphasis was laid on strengthening by consolidation and broadening by diversification,

so as to meet the multiple needs of trained manpower with better required standards.

National Policy on Education, 1986

It was during 1986-87, when India set another mile stone in revamping its education system by adopting in parliament the National Policy on Education after an extensive national debate. It was intended to reconstruct the education system as a formidable dynamic force for national growth and integration. As a prelude to the National Policy on Education, 1986, initiation was made for the National Open University in the courses of Management and Open Learning System. In addition to this, under NPE, 1986, emphasis was made for Navodaya Vidyalayas, schemes for free education to girls' upto higher secondary stage, functional literacy programmes, teacher orientation programmes, non-formal education, 'Operation Blackboard' for school education, establishment of District Institutes of Education and Training, formulation of Science Education and Non-formal Education, modernization of Technical Education, establishment of autonomous colleges, consolidation and quality improvement in Higher Education, etc., were planned and implemented in a phased manner.

The National Policy on Education, 1986, envisaged scheme for 'Non-Formal Education (NFE)' during 6th Five Year Plan, as a centrally assisted scheme in 9 educationally backward states viz., Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Madhyapradesh, Uttarpradesh, Rajastan, Orissa, West Bengal, Jammu & Kashmir and mainly concentrated for children in urban slums, hilly, tribal and desert areas. In this process panchayat raj institutions and several voluntary organizations were involved by giving them desired flexibility. The NFE had some features like organizational flexibility, relevance of curriculum, diversity in learning activities which suits the learner's needs, decentralization of management, etc.

The NPE, 1986, had wide plans and schemes for restructuring and reorganization of Teacher Education through orientation of teachers, establishment of District Institutes of Education and Training, Secondary Teacher Training Colleges, Advanced Studies in Education,

strengthening of Departments of Education in Universities, Vocationalization of Education by setting Joint Council, academic support from NCERT, setting up of State Council of Vocational Education, State Council of Educational Research and Training, etc.,.

Further, the NPE, 1986, laid emphasis for computer education in schools, viz., Kendriya Vidyalayas, State Government Schools, Aided and Private Schools.

The NPE, 1986, in order to provide better quality and modern education in cohesive with the components of culture, environmental awareness, inculcation of values, physical education, etc., have stressed to establish and management of Navodaya Vidyalayas, staffing pattern, recruitment of personnel, admission procedures, infrastructural provisions, improvisation of academic contents, etc.

In NPE, 1986, it was thought that Modern Educational Technology as a powerful tool for improving education in schools across the country and basic works were completed during 6th Five Year Plan. In addition to this, emphasis was laid on science teaching in the schools with importance to Mathematics and Science Education.

Further, the NPE, 1986, envisaged for Environmental Orientation to school education, re-organization of content and process of School Education, Adult Education, Education for Women's Equality, Development of Regional Languages and so on.

Another important aspect of NPE, 1986 was Higher Education which gave major emphasis for institutional development in terms of infrastructure, management, re-designing and re-structuring of courses and programmes, establishment and development of mechanisms which promote co-ordination and improvements in standards. This paved way for the development of Open University/ Distance Learning System, Rural Higher Educational Institutions, and Indira Gandhi National Open University which was established earlier to NPE, 1986, i.e., on 20-9-1985, was further revamped and strengthened. During 1986, National Council for Higher Education was set up to oversee and develop the higher education, to advise the government on allocation of resources for various educational systems, promotion of collaborative programmes between Higher Educational

Institutions and research and also between institutions and industry. Meanwhile, National Testing Service was initiated to delink the degrees from jobs, Rural Institutes/Universities were established on the lines of Educational Model of Mahatma Gandhiji.

Acharya Ram Murthi Committee, 1990

It was during 1990 an Education Committee was constituted under Prof. Ram Murti to examine old education policies, suggest new measures to promote industrialization, development of rural areas and also suggest measures for maximum success of Operation Blackboard.

Janardhan Reddy Committee, 1992

The above committee was constituted to make detailed examination of the report submitted by Prof. Ram Murti and also to look into the educational progress of Scheduled Castes and Scheduled Tribes, suggest suitable measures for their desirable educational standards. The Janardhan Committee suggested for the development of common school system in order to provide all the facilities to the backward classes and emphasized to establish Navodaya Vidyalaya in all districts, free universal education to the children, adult education, vocationalization of secondary education, university education, teachers' training, financial outlay and also founding of AICTE.

Reference and Notes

1) Syed Mahmood, History of English Education in India' authored by Barrister-at-Law, Fellow of the Universities of Calcutta and Allahabad, Muhammadan Anglo-Oriental College, Aligarh, (1895).

2) Talboys, J. India under British Rule, Wheeler, Macmillan & Co., London, (1886).

ASSOCIATION OF INDIAN UNIVERSITIES
AN INSTITUTION OF HERITAGE

The Association of Indian Universities (AIU), an organization poised to hit the century, was founded on 23rd March 1925. AIU has successfully traversed a long journey of 98 years and is proudly entering its 99th year in a few months. In these 98 years, many institutions have come up and slipped into oblivion. In contrast, an Institution distinct in character, distinct in nature, the resolute and resilient AIU grew continuously in strength and stature, carrying forward its rich legacy and glory, achieving several landmarks in the field of higher education at national as well as international levels. Today, it is an Institution of heritage in the landscape of Indian higher education. It is indeed a matter of pride to celebrate this institution by recounting its story of the glorious journey and paying tribute to all those who have connected us to this string of history-making. Obviously, our history is a vital part of who and what we are! Winston Churchill once said, "You know you will never get to the end of the journey. But this, far from discouraging, only adds to the joy and glory of the climb." Yes! the end of the journey, of course, is not known but looking at the significant role played by AIU, it is certain that it will continue to grow with glory forever.

RAISON D'ETRE

The genesis of the present modern University System in India is attributed to the establishment of the first three universities at Calcutta, Bombay and Madras in 1857. Being only three universities in the whole country, each one of them had a vast jurisdiction. With the passage of time, the number of universities started increasing and their areas of jurisdiction decreased. But due to the large geographical area of the country spanning from present Ceylon to Bhutan and Pakistan, it was difficult for the universities to interact with each other. Consequently, they remained isolated and there was no coordination among them regarding their courses of study or mutual recognition of degrees. This created difficulty in the mobility of students or staff from one university to the other. Particularly,

the admission of students coming to Indian universities for higher studies after attaining degrees from universities in other countries, ie foreign degrees, was a big challenge due to the lack of any standard equivalence mechanism. This created a need for an inter-university body to facilitate interaction among universities and create a standard mechanism for the equivalence of foreign degrees.

THE GENESIS AND EVOLUTION OF AIU

The legend behind the establishment of AIU reveals that the seeds of AIU were sown by Calcutta University Commission (The Saddler Commission) which, in 1919, pointed out the need for coordination between universities in matters relating to courses of study and recognition of degrees. The second congress of the University of the Empire – an association established in London in 1912 (the forerunner of the present Association of Commonwealth Universities) resolved in its deliberations in Oxford in 1921, the necessity of having a body to look after the matters of common interest of Indian Universities. The Lytton Committee on Indian students studying in the United Kingdom also recommended that an inter-university body be established so that it could coordinate the courses of study in Indian universities and arrange for their recognition by foreign universities. The Government of India pursuing this line of thinking convened for the first time a '*Conference of Indian Universities*' at Shimla in May 1924. Among the delegates who attended this Conference were distinguished persons like Dr. C.V. Raman and Sir Nilratan Sircar from Calcutta, Sir Chimanlal H. Setalvad from Bombay, Mr. G.A. Natesan from Madras, Pandit Madan Mohan Malaviya, Mr. A.B. Dhruva, Prof. P. Seshadri and Dr. S.S. Bhatnagar from Banaras, Mr. S. Sultan Ahmed from Patna, Mr. A. Hydari and Dr. A. Siddiqi from Hyderabad, Dr. Zia-ud-Din Ahmad from Aligarh, Dr. Hari Singh Gour from Delhi, and Dr. Radha Kumud Mookerji from Lucknow. The Conference unanimously passed a resolution and called upon the universities to establish a central agency with the following objectives:

a) to act as an Inter-university organisation and bureau of information;

a) to facilitate the exchange of professors;

b) to serve as an authorised channel of communication and facilitate the coordination of university work;

c) to assist Indian universities in obtaining recognition for their degrees, diplomas and examination in other countries;

d) to appoint or recommend, where necessary, a common representative(s) of India at Imperial or International Conferences on higher education;

e) to act as an appointments bureau for Indian universities;

f) to fulfil such other duties as may be assigned to it from time to time by the Indian universities.

Implementing the resolution, on the 23rd of March 1925, representatives of 11 out of the 14 universities in existence in India met in the library of the University of Bombay and formed the Inter-University Board (IUB). The representatives were:

- The Rev. John Mackenzie, M.A., Principal, Wilson College, Bombay University
- The Rev. E. M. Macphail, M.A., D.D., C.I.E., C.B.E., Vice Chancellor, Madras University,
- Mr. Manohar Lal, M.A., Barrister-at-Law, Dean of University Instruction, Panjab University
- Mr. A.B. Dhruva, M.A. LL.B., Pro Vice Chancellor, Dean of the Faculty of Arts, University Professor of Sanskrit and Principal, Central Hindu College, Banaras Hindu University
- Mr. N.S. Subba Rao, M.A. Barrister-at-Law, University Professor of Economics, and Principal, Maharaja's College, Mysore University
- Mr. E.A. Horne, M.A., Professor of Economics, Patna College, Patna University

- Nawab Hyder Nawaz Jang Bahadur, (Mr. A. Hydari), B.A., Finance Member, Executive Council, and Member, University Council, Osmania University
- Mr. N.M. Sharif, B.A., Provost, Aligarh Muslim University
- Mr. P.J. Hartog, C.I.E., M.A., B.Sc., D.L., Vice Chancellor, Dacca University
- Mr. N.V. Thadani, M.A., Rector, Delhi University
- Rao Bahadur V.R. Pandit, M.A., Barrister-at-Law, Nagpur University and
- Mr. R. Littlehailes, M.A., Officiating Educational Commissioner with the Government of India.

Once formed, the Inter-University Board kick-started assuming its responsibilities assiduously. The office of the Board functioned in a room in Maharaja's College, Mysore. Annual Meetings were held in which important issues pertaining to Indian universities were discussed and on the basis of consensus, and resolutions were passed to improve the system. Quinquennial Meetings of Vice Chancellors were also held at different intervals of time. The IUB in 1927 passed a resolution: '*that the Board, while fully recognising the principle of trusteeship on the part of the Government for the proper utilization of public funds, is of opinion that…the main grants to the universities from the various Governments for recurring expenditure should take the form of fixed grants for definite periods of years and that the control retained by the Governments should be of such a general character as to reduce to a minimum interference with the autonomy of the universities*' showing its concern for the grants to the universities. The duration of the degree course is another topic which evoked from time to time, till now. In the Meeting of 1929, the three-year degree course was one of the topics of contemporary concern, featured on the agenda of a Board Meeting.

The 18th October 1930 Issue of the Educational Supplement of the London Times devoted a whole article to its work and pointed out the '*increasingly useful place the IUB had filled in the past five years*.' '*It has*', *it observed, brought the universities into constant touch with each other and*

in many important directions has been the instrument of cooperative action'. In the 6th Meeting of the Inter-University Board held at Mysore in 1931, the Secretary, Professor Seshadri, reported that the work of the Board had been very favourably reviewed in the press both at home and abroad.

In the field of academic activities, the Board played an important role in laying down conditions for recognition of examinations between universities. Originally, it was taken for granted that universities would recognise examinations of other universities on a reciprocal basis. But sometimes this was not possible as some universities considered the degrees of another one below par and declined recognition. The Board was approached to standardise the procedure in such cases, and it laid down the conditions under which recognition should be granted between the universities. This helped in maintaining some parity of standards. The Board also became an effective agency for advising its members as regards the standard of the degrees and diplomas of foreign universities and official organisations and its services were no less valuable in securing recognition for Indian degrees abroad.

At the Quinquennial Conference in 1934, Sir C.V. Raman moved a resolution that technological training should form a part of university education. This met with general acceptance, but from some of his colleagues, it evoked a reaction that today seems to belong to another world. They protested that the conference was dealing with the matter more as politicians than as educationists. They resisted saying, "*Because of unemployment, let us not produce masons and carpenters!*' Prof Satya Murthy insisted that universities ought to be centres of 'real' culture where literature, history and philosophy were cultivated. They must not be converted into 'glorified or unglorified workshop!'. Another example of the change in attitudes is the issue of 'Education' as a discipline for study at the university level. Today, Education is one of the prominent disciplines. Prior to 1934, the universities flatly refused even to consider its inclusion among university disciplines. Efforts to promote inter-university sports began to gather momentum in 1941. At its 16th Annual Meeting held at Trivandrum in January of that year, the draft rules prepared by the Rules Committee were finally adopted and have since been

considerably improved. They can still be regarded as the basis of the rules and regulations governing such tournaments. By 1945, not only had the number of universities increased but likewise their activities and problems. It was not now possible to do justice to the resulting volume of work in one annual meeting of the Board. Moreover, the problems which sometimes cropped up were urgent and required the Board's prompt attention. It was felt, therefore, that for a business-like administration, a Standing Committee should be created which would prepare the agenda, budget, and financial estimates for the annual meetings of the Board and also be responsible for dealing with inter-university problems that rose from day-to-day. The first Standing Committee was set up, at the instance of Sir Maurice Gwyer and Sir A. Lakshmanaswami Mudaliar in 1945, consisting of the Chairman and four other members. The first Chairman was Dr. J.C. Chatterji. Soon after this a regular constitution was framed, and the membership of the Standing Committee was fixed for a period of three years. Sir A. Lakshmanaswami Mudaliar was the first elected Chairman of the Standing Committee.

In the conference of Vice Chancellors and representatives of universities in India, held at Madras in 1952, the IUB established itself as the authentic spokesperson. The conference was convened to consider the Proposed Government of India Bill to set up a Central Council of University Education to ensure the coordination and determination of academic standards in institutes of higher education. Having considered this proposal in all its aspects the conference unanimously rejected it and requested the government to set up instead a University Grants Committee 'on the lines on which such a committee is functioning in Great Britain'. The resolution mentioned – '*While not interfering with the autonomy of the universities which are statutory bodies with special duties and responsibilities devolving upon the university authorities constituted under the various university Acts, the view of the IUB should be taken into consideration when large questions of policy are concerned, and it should be the endeavour of the universities to implement those views*.'

After independence a large number of new university Acts were passed and old ones were amended from time to time, the trend generally

being to restrict academic independence rather than to liberalise it. In 1952, the Government of India made a positive attempt in the proposed Bill to curtail university autonomy through a statutory council, composed mainly of non-university educationists and public men. This was at the time openly resented by the Board and it deplored this tendency. After this, two authoritative bodies reported on this problem. The first was the Committee on 'Model Act for Universities' appointed by the Ministry of Education (1964). The Committee in its report said: '*Autonomy for a university is not a matter of fundamental right, as it were, but is a condition for its efficient functioning and for enabling it to achieve the true ideals and aims of a university." A university needs autonomy if it is to discharge properly its functions and obligations to society and play an effective part in the development and progress of the country.*'

The second was the Education Commission (1964-66) whose report published in 1966 endorsed the general principles laid down by the Model Act Committee. The Commission said: '*It is important to recognise that the case for autonomy of universities rests on the fundamental consideration that, without it, universities cannot discharge effectively their principal functions of teaching, research and service to the community; and that only an autonomous institution, free from the regimentation of ideas and pressure of party or power politics, can pursue truth fearlessly and build up, in its teachers and students, habits of independent thinking and a spirit of enquiry unfettered by the limitations and prejudices of the near and the immediate which is so essential for the development of a free society…*

…there could be other claims or situations which involve an undesirable infringement of university autonomy. For instance, it would be wrong if universities were expected to owe allegiance to any particular political party, or individual, or attempted to further the interest of such parties or individuals. It is equally wrong, as people in power in public life and even those within the academic community itself sometimes do, to influence appointments… and to interfere with the admission of students…Similarly, it is not proper that State Governments should try to give 'directives' to universities in academic matters… We also feel unhappy at restrictions placed on some of the universities in the country and at some recent attempts to curtail their autonomy.'

The Board worked extensively on the issue of the medium of instruction and examinations both in secondary schools and universities. The Working Group appointed by the UGC (1961) to review the '*medium of instruction*' issue in the light of recent experience reported that English should continue as the common medium in the universities till it was replaced by Hindi in Devanagri script by easy and progressive stages, on fulfilment of two conditions:

(a) the availability of a fair number of books of a suitable standard for students and teachers covering the whole degree course;

(b) the making of arrangements for a period extending over at least one year to train teachers in the use of the new medium after a fair number of books had become available in the official language of the Union.

The Board in its Annual Meeting held in February 1963 stressed the following points in particular:

(a) Since the replacement of English as a medium is inevitable, every care should be taken by universities to ensure that the transition is made without jeopardising the quality of education and after careful preparation e.g. the co-operation of teachers and the availability of good standard books.

(b) Stress should be laid on the importance of teaching English as a compulsory subject. In a transitional stage, English should serve as a link between university men, and between university and university, in respect of the exchange of professors or migration of students.

(c) The Board, like the Council, hoped that English would thus be always an international link; its place as an internal link will gradually be taken by Hindi as it develops. It urges that at the university stage, the student should be equipped with a progressively better command of Hindi in addition to a good working knowledge of English.

(d) It is reiterated that the standard of teaching both in Hindi and English should be improved and maintained at a high level both in school and college.

(e) It seems natural that regional languages would gradually become the media of instruction at the university stage. The Board sees no reason why there should be any bar to the use of English or Hindi as the medium of instruction in a university or a college.

(f) There should be a provision in every university to permit the use of Hindi or English as an option for the regional language for answering examination papers.

To sum up, from the various discussions which took place in the IUB during this period of transition, three schools of thought emerged fairly clearly from the otherwise vague and confused opinion that often clouded the issue. These were:

(a) Education through the mother tongue is the most natural, and productive of original thought. Therefore, English as a university medium must be replaced immediately by the mother tongue. 'It is not only futile but also highly wasteful and even self-deceptive to wait for the preparation of textbooks for introducing this much-needed reform.'

(b) English, a foreign language, known to only 2 per cent of our population, must go. But it must be replaced not by a regional language, but one which can be a common medium to all universities. This can only be in Hindi. Therefore, English must be replaced by Hindi as the university medium.

(c) English has, for the past 100 years been the common medium of universities as well as of the higher intellectual life in the country. No Indian language has yet developed to that stage. Hindi has the further disadvantage of being unacceptable to the Southern States as a common medium. Therefore, English which is also one of the best sources of modern knowledge should continue, if

necessary, alternatively with the regional language. That will also prevent the fissiparous tendencies that different media in universities are bound to set in motion and will preserve the intellectual life of the country.

ESTABLISHMENT OF THE UNIVERSITY GRANTS COMMISSION (UGC)

The first reference to the establishment of a University Grants Commission appears as early as 1936 in a resolution moved by Dr. Amarnath Jha recommending the institution in each province or group of provinces of a University Grants Committee on the same lines as the UGC of Great Britain. The Board welcomed the proposal and circulated it to the universities for their reactions. It met with a very varied response. It was welcomed by Agra, Allahabad, Andhra and Delhi. But Aligarh, Madras and Rangoon did not view it with favour. The other universities did not see any need for it, especially in provinces where there was only one university. Seven years later when the memorandum on Post-War Educational Development came to the Board for consideration from the Government of India, the Board asked for the creation of a Central Grants Committee and also laid down its functions which were:

- to assess and distribute grants from public funds to the universities;
- to examine and advise upon all schemes for major developments;
- to visit the universities once in five years and make recommendations, if any, to them.

The Board also emphasised that the Committee should consist of men of academic eminence and experience in university administration in India. At the same time, it pointed out that '*any kind of control or inspection is not consistent with the dignity and autonomy of the universities, while the advice and cooperation of the Central Grants Committee will always be welcomed by the universities*.' The demand for the Grants Committee was repeated several times by the IUB. In 1949 the University Education Commission made this one of its important recommendations.

In 1951 soon after the Constitution of India was adopted, the Government of India circulated the Universities (Regulations of Standards) Bill to the universities and the Board. The Bill proposed to set up a Central Council of University Education for the maintenance and coordination of standards, with wide powers:

(a) to establish and maintain panels of advisers, inspectors etc.;

(b) to obtain all information from a university relating to the courses of study in the various branches of learning, taught in that university, together with all the rules and regulations relating to the standards of teaching and examination in that university, respecting each of such branches of learning;

(c) to direct the executive authority of any university to take such action as it may specify for the purpose of implementing the whole or any part of the recommendation of the Council.

The Central Council as visualised here was not to have any grant-giving functions as was proposed by the IUB in reply to the Post-War Memorandum and in subsequent resolutions on this subject. The Council was a body for collecting information from the universities on various matters and on this information, it would advise or even direct the universities to take certain steps to improve standards. The IUB objected to the right of the Council and described its establishment as a direct attack upon the autonomy of the universities. The Vice Chancellors and representatives of universities who met in a special conference to consider the Bill opposed it unanimously. The Vice Chancellor of Bombay University, Justice N.J. Wadia, opined that '*the passing of such a piece of legislation will completely destroy the autonomy of universities and will take away all the initiative from them*'. The Chairman of the Standard Committee, Dr. A.L. Mudaliar, pointed out that the Bill did not provide for the constitution of the Council, the qualifications of the members, or even the number of members. The whole thing was to be done by the rules framed by the Government. '*If it was a question of intention alone', he added, 'the world would be a much*

better place.' The Conference unanimously requested the Government to withdraw the Bill and reiterated the often-repeated demand of the IUB that a University Grants Committee should be set up on the lines of the one in the U K.

Even after this conference, the controversy did not cease altogether. The Ministry did not agree to drop the Bill. The reluctance could perhaps be understood against the background of the constitutional provision under which the States were responsible for education including higher education. Consequently, the States reacting to popular pressure started a large number of universities. A certain diversity of standards was inevitable in this process. But the Central Government was not altogether out of this picture because under another provision it was responsible for '*the coordination and determination of standards in institutes of higher education*'. The Government of India was, therefore, anxious to maintain some uniformity between these institutions especially since its finances were made available to the States for education. This was the primary motive behind trying to secure control over the universities. But the way the Government went about it caused fear and suspicion. That is why the universities could not relent in their opposition to the measure. The impasse had to be resolved and after another conference in 1953, a formula came to be evolved for setting up a UGC which substantially met the two divergent standpoints. There was at this time University Grants Committee functioned in the Ministry of Education which was a grant-giving body for the central universities. This Committee was dissolved and, in its place, a regular UGC was created. In addition to the grant-giving function, which was demanded by the IUB, the UGC was also vested with the power of coordination and determination of standards which was earlier proposed to be vested in the Central Council. In this way, the UGC came to be vested both with statutory and financial powers.

The establishment of the UGC is clearly traceable to the role played by the IUB. Though the UGC was supposed to be set up on the lines of the UGC in the U K., there was a difference between the two. The British Committee is purely a grant-giving body and is not responsible for the coordination and maintenance of standards. It is true that

when it considers any request from a university for aid to carry out a project, establish a department, etc.; it visits the university and satisfies itself that the conditions there are suitable for undertaking such a project. This is necessitated by two factors:

(a) The Committee must be sure that the new project/activity is such as will thrive in the background obtained in the universities.

(b) That it will answer a national need.

On the other hand, our UGC is not only a grant-giving body but under its Act, it is responsible for '*the coordination and determination of standards*' – a function which the IUB also has been carrying out under its constitution.

The point made by Dr. Rao regarding the UGC's responsibility to the IUB was a valid one. Usually, UGC's responsibility to Parliament on the political side is readily accepted. But the equally urgent need to consult the IUB in academic matters is not so easily appreciated. The statutory-cum-financial power of the UGC inevitably led to a bureaucratic temper and that temper was not always the right one in dealing with autonomous academic institutions. However competent the Commission may be in itself it cannot vouch that it will always be right in its approaches because of its official character. In the U.K. this danger was eliminated to a great extent because there was such an understanding between the UGC and the Committee of Vice Chancellors that the chances of 'freak' decisions were reduced to the minimum. As Prof. Samuel Mathai observed, "There is an opportunity both for cooperation and mutual criticism (between the two bodies). There is nobody in India to provide the same kind of 'tension' to the UGC. The IUB of India could have been such a body; but lack of funds, the relatively brief term of office of most Indian Vice Chancellors, rivalry among States and anxiety of individual Vice Chancellors, to avoid being too critical of the UGC, made the IUB a rather ineffective 'foil' to the UGC. Dr. C.D. Deshmukh realised the necessity of such an effective 'foil' and believed that without the IUB's cooperation, the UGC would not be able to fulfil its long-term objectives. The tendency of neglecting the IUB on the part of the

Ministry and the UGC seemed to have grown after his retirement. This may be traced to various reasons among which may be mentioned the increasing bureaucratic climate at various levels.

JOURNEY OF IUB TOWARDS BECOMING AIU

Originally, the Board admitted only the statutory universities to its membership. Subsequently, however, some research institutes of good standing came to be conferred with powers of awarding degrees and diplomas by virtue of Section 3 of the UGC Act. The first such institute to apply for membership in IUB was the Indian Agricultural Research Institute (1961). In admitting it the Board resolved that '*such of the institutions as are recognised either on the recommendation of UGC or by legislation empowered to confer degrees be admitted as associate members*.'

In September 1961, the Board prescribed specific conditions for admission in view of some of the Bihar universities having provisions in their Acts (1960) which were out of keeping with the concept of university autonomy. Some of these were that:

1. They must be statutory universities.
2. They must have several faculties in the university.
3. The Act, Statutes etc. of the university must be in conformity with the general principles governing universities both in regard to administration and maintenance of standards, and the autonomy for academic purposes.
4. The Chairman should get a report on them from Visiting Committees appointed to study their functioning.

By 1963 the membership of the IUB rose to 48. It was therefore felt that the composition of the Standing Committee should be modified once again in order to give further representation to the different regions. Accordingly, at the Board's meeting in 1963, it was resolved that '*keeping in view the increasing membership of the IUB the strength of the Standing Committee be increased so as to have three representatives from each of the four zones and two additional members be co-opted by the Chairman*

of the Standing Committee'. Of the three members to be elected from each zone, two should be selected on rotation based on the seniority of service of Vice Chancellors (seniority based on the total tenure of Vice Chancellorship in the country) in the zone concerned and the third member to represent the senior most university in the zone (seniority to be counted on the date of the establishment of the university).

Subsequently, the Board also approved of co-opting two members on the Standing Committee, such co-option being made by the newly constituted Standing Committee itself and of the co-option of the outgoing as well as the incoming President of the Board. In the early years, the membership of the Board had been open to all universities created by statute, and it was automatic. The Board was always anxious that all the existing universities should become its members, thereby adding to its strength and prestige. However, with the emergence of different types of universities, particularly private universities, the rules of membership changed from time to time.

Looking at the new composition and structure of the Board, Dr. C.D. Deshmukh and Dr. B.D. Laroia, the then Secretary of the Board, mooted the idea of giving the Board a legal identity and Dr. C.D. Deshmukh gave the Board its motto :

संघात संजायते संधि

(*From association is born integration*)

Later, in 1967, Dr Amrik Singh got the Inter-University Board registered as a society under the Societies Registration Act-1860, and in 1973 it was rechristened as the 'Association of Indian Universities'.

JOURNEY OF AIU

Organisational Growth

As mentioned earlier, the Association of Indian Universities assumed a very important role since its inception and continuously added new responsibilities as per the growing requirement for higher education

in the country. On the basis of responsibility new functional Divisions were added to it from time to time. Gradually, the Association grew into a full-fledged multifunctional institution. The landmarks of the growth of AIU activities and its divisions are presented here.

Evaluation Division (1925)

The Evaluation Division is the foundation pillar of AIU, embarked at the time of its inception in 1925 to fulfil its most important objective of assisting universities/ individuals in providing equivalence for their degrees. AIU is vested with the power of issuing academic equivalence to the degrees obtained from accredited universities outside India for admission to higher studies in Indian Universities as well as employment. The Division provides expert assistance on the status of foreign qualifications to the students, universities, central and state agencies including Ministries of the Government of India, etc.

The Division also provides assistance to evaluation/accrediting agencies of foreign countries. The Division helps the Ministry of Education to formulate proposals for Educational Exchange Programmes, between Indian universities and universities of other counties, on mutual recognition of educational qualifications. The Division provides expert assistance on the status of foreign qualifications to the Universities, Ministries of the Government of India, Union Public Service Commission, and other central/state agencies, concerning the selection of students who have obtained their qualifications from abroad. The Ministry of Education, erstwhile Ministry of Human Resource Management, Vide its letter No F.15-17/94-TS IV dated 13th March 1995 issued a Notification that 'those foreign qualifications which are recognized/ equated by the AIU are treated as recognized for the purpose of employment to post and services under the Central Government.

Apart from giving equivalence to Degrees, AIU gives equivalence to stand-alone programmes or institutions outside the purview of the universities offering stand-alone programmes in the field of Management. In this series, it accords equivalence to the fellow programmes awarded by the AICTE-approved stand-alone institutions. As of now, the AIU is able to consider requests for the

equivalence of the Fellow Programmes offered by the Indian Institutes of Management (IIM) only.

AIU has also been involved in granting equivalence to the Postgraduate Diploma in Management since the late 1960s. Originally, such equivalence was granted only to the PGDM Programme offered by the IIMs but with the advent of the AICTE-approved institutes offering PGDM, this facility was extended to them as well. Only such PGDM programmes are granted Equivalence which meets the laid down terms and conditions.

In 2021, AIU has also been mandated by the Department of School Education, Ministry of Education, Government of India to accord equivalence to the Indian Boards for the Secondary/Senior Secondary Examination vide Gazette Notification. The Gazette Notification No CG-W-2011-231254 dated 15th November 2021 and Letter No F.11-3.2016-Sch.3 dated 15th November 2021 from the Ministry of Education. This will help in addressing the difficulties being faced by the students in respect of the equivalence of certificates issued by the school education boards in India for the purpose of admissions in higher education institutions and employment in central/state Government. The equivalence granted by AIU will be automatically considered as *inter-se* parity between the Boards in India. Permitting smooth inter-school Education Board migrations and shall be valid at all India level for the purpose of higher education and employment.

Sports Division (1928)

In University Education, Sports play an important role in the development of the integrated personality of the youth including – Body, Mind and Spirit. Accordingly, active participation of University students in competitive sports generates a spirit of healthy competition in daily life too. It is, therefore, necessary that the university youth of the country needs to be brought together on a "National Platform" through the media of sports and physical activities with a view to channelize youthful energy into constructive directions, as a nation-building process. The Sports Division was established in 1928. It functions as Inter-University Sports Board (AIU) for the promotion of competitive sports in the university sector which is full of sporting

potential for excellence. The IUB realised the importance of sports and games for the youth in the universities and, therefore, created an independent Board for these under its auspices. The Inter-University Sports Board (ISUB) is the earliest and the largest sports organisation in the country. Knowing its importance in the life of the universities the competitions were kept open even for those universities which had not become IUB members. From such beginning, it has now developed into an organisation which sponsors combined university teams for participation not only in national but international events. This is a significant step in the national effort to create a cadre of sportspersons who could later participate in the Olympics.

AIU organizes National University Games and Special Coaching/ advance Training camps for highly talented and selected athletes in collaboration with member universities, for the participation of Indian University teams/contingents in National and International Sports Championships. It also scrutinizes the self-calculated claim (s) of contesting universities for the award of the Maulana Abul Kalam Azad Trophy to be presented to the overall top-performing universities for promoting excellence in competitive sports. The MAKA Trophy is the most prestigious award, which is presented to the Vice Chancellor and Director of Sports of the winning university by the Hon'ble President of India on National Sports Day – 29th August, every year. Further, the AIU organizes Vizzy Trophy Cricket (M) Tournament in collaboration with the Board of Control for Cricket in India (BCCI) in which the top 4 teams (one from each zone) are selected during zonal cricket tournaments, based on the outstanding performance of the players, every year. Furthermore, the Champion Universities Hockey (Men) Tournament is also organized in association with the Jawaharlal Nehru Hockey Tournament Society, regularly. The AIU, being an affiliated member of the International University Sports Federation (FISU) arranges visits of Indian Universities teams for participation in World University Games/Championships and acts as a host to visiting university teams from other countries as and when required.

Another feather in the cap of the AIU was added when the Ministry of Youth Affairs and Sports vide letter No. F9-22/2007-SP.I dated 05-05-

2008 elevated the status of the Inter-University Sports Board (AIU) to National Sports Promotion Organization (NSPO), on account of its meritorious contribution to the field of University Sports and placed university sports in the "Priority Category of Sports" at par with other National Sports Federations for the purpose of promoting "Olympic Sports". Therefore, with the changed role and responsibility, the AIU established 16 Centres of Excellence in various universities for the purpose of talent search and talent promotion on scientific lines and in a professional manner to throw up an adequate amount of potential to feed the national stream.

After 1975, new Inter University Tournaments in 8 disciplines were added. In 1979, IUB floated a new scheme under the NSO programme under the title University Level Coaching Camps. According to this new programme 80 University Level Coaching Camps were organised annually in 10 selected disciplines i.e.: Athletics (M&W), Badminton (M&W), Basketball (M), Basketball (W), Football, Hockey (M), Hockey (W), Volleyball (M), Volleyball (W) and Wrestling. The period allotted for these camps was from May to September. The idea behind the scheme was to keep the University Sports Talent busy during this period when they tend to slack. Today, it is holding 225 events in 65 sports at regional and national levels including Khelo India University Games, the mega sporting event for universities and colleges.

University News (1929)

University News is a Weekly Journal of Higher Education brought by AIU and referred nationally and internationally by the practitioners of higher education for the happenings in Indian higher education. Starting as a Bi-annual News Bulletin in 1928, the University News evolved into a premier Weekly Journal of Higher Education and an icon in the landscape of Indian higher education much sought after by academia in India as well as other countries. It has witnessed and documented the forces and factors that have shaped the Indian Higher Education System. Thousands of its volumes brought out all these years form a treasure-house of the records of developments, facts and happenings in higher education in all these 94 years. The

news and reports published in the campus news column spread out a panorama of the activities and growth of the universities during this century of Indian Higher Education starting from 1928. The Journal contains a mammoth of information about world higher education in general and Indian higher education in particular. A widely circulated medium of communication, it is indeed an indispensable reading for all those connected with higher education.

It was in its third Annual Meeting of the Inter-University Board (IUB) in 1928 that the members proposed that a bulletin of news relating to Indian universities be published under the auspices of the IUB which can apprise the readers about the happenings in different universities. It was resolved in the Meeting to bring out a News Bulletin which will appear twice a year. It was also decided that the representatives on the IUB i.e., Vice Chancellors be requested to act as correspondents and where a representative does not find it possible to do so then the Vice Chancellor of the university concerned be requested to nominate the correspondent in his place. The first Issue appeared in July 1929 and the second one in January 1930. The Volumes contained brief reports sent by the universities on the major events of each half year, staff appointments, retirements and resignations, distinctions conferred upon members, their travels abroad, distinguished visitors, endowments received, changes in curricula, description of university functions, etc. The old Issues of the Bulletin make interesting reading. As we glance from older to new volumes, the names of the great academics of the past flip across their pages, and the students swell in numbers from a few hundred to many thousands; departments of science and technology scarcely noticeable at first, begin to overshadow the others in size and importance; the lists of research papers steadily increased. With all this, the University News volumes offer excellent source material for research into the history of Indian Higher Education.

On 1st February 1963 the first Issue of the bulletin 'University News' appeared under the Editorship of the then Secretary, Dr B.D. Laroia as a bi-monthly. His successor Dr Amrik Singh soon converted the Bulletin into a monthly journal which started publication in January

1966. Several new contents were also added to it. In addition to the usual university reports, endeavour to spotlight educational problems in a proper perspective and keep the public informed of happenings in the educational world, it also highlighted the weak and strong points in planning, promoting an exchange of views and ideas among prominent educationalists, and disseminating information regarding new developments in the field of higher education in a compact form, scholarships and fellowships available for study in India and abroad, production of cheaper textbooks, the arrival of visiting foreign professors and a host of other academic and extracurricular activities. The Journal, which consisted of roughly 18 pages then, contained a lively account of the major events of the universities, and items of general educational interest and was embellished with a few excellent photographs. Each Issue also contained a chart illustrating important statistical information. The regular features of the Journal presently are:

- 3-4 Articles of topical interest in the field of higher education that delineate current, national and global thinking;
- Campus News about the happenings in various Indian Universities and institutions/agencies/apex bodies and Ministries in the field of Higher Education; reports of seminars/symposia/conferences held at various university campuses. It also provides updates on developments in the field of higher education, youth affairs, sports and culture;
- Doctoral Theses accepted by Indian Universities;
- Advertisements for openings in Universities, Institutions, Colleges and Research Institutions; Academic and other positions available in universities and institutions of higher learning in India
- Admission Notifications;
- Calendar of Events;
- Convocation Address;

- Besides other regular features, Spreadsheet, Student Column, Communication, Viewpoint and Book Review columns have carved a special niche for themselves.

Later, Shri Sutinder Singh, Joint Secretary Library and Documentation Division took over as Editor in January 1984 and continued till 2000. It was under the Editorship of Shri Sutinder Singh that the Bulletin took the periodicity of a Weekly and attractively got elevated to the level of an international Journal. It provided a platform for the academicians to contribute their views, opinions, and articles in a much more structured way. Owing to its popularity as Journal instead of a News Bulletin, the name of the Bulletin was converted to 'University News: A Weekly Journal of Higher Education'. Prof K B Powar, Mr Sampson David and Dr Amarendra Pani took over as Editors for a short stint during different times.

The co-author of this article, Dr Sistla Rama Devi Pani was introduced to the University News in June 1999, and she took over as Editor in 2004 and continuing now. Under the Editorship of the present Editor, University News continued meticulously with all the columns initiated so far and also got enriched it with valuable columns like articles of topical importance, viewpoint, student column, a column on national specialties, debates, and symposia on different burning issues of Higher Education. She introduced the concept of bringing out frequent thematic Special Issues on topics of contemporary significance. More than 250 Special Thematic Issues were brought out by her. These Special Issues included those that were brought out on demand from the Ministry of Education (Erstwhile MHRD) on various issues which required wider dissemination, discussion, debate, and consensus of the academia of the country. Special Issues on Bills Pending in Parliament; Special Issues on Rashtriya Uchchtar Shiksha Abhiyan (RUSA); Special Issues on National Knowledge Commission, Special Issues on National Education Policy –2020, etc., are some of them. Several special issues have been brought out since 2015 on different stages of preparation of National Education Policy—2020 like consultancy, draft policy, implementation issues, etc. Still, the University News Issues are laden with a range of articles on NEP—2020. Under the Editorship of Dr Sistla Rama Devi Pani,

the University News has carved a niche for itself for its regularity of appearance and richness of its contents. It appears clockwise regularity every Monday.

The Present Secretary General of AIU, Dr (Mrs) Pankaj Mittal who is also the Chairman of the Editorial Committee undertook several new initiatives to makeover the journal to make it more attractive, relevant, interesting, and accessible. With these changes, the University News, which is going to enter its 95th year will reach newer heights.

Library and Documentation Division (1964)

Keeping in view, one of the main objectives to act service agency and a Bureau of Information, a Library and Documentation Division was established in 1964. It provides its services to students/researchers/ faculty members of Higher Education as Reference Library and Resource Centre and acts as a knowledge base on higher education. The Division has a very rich library of international and Indian books and journals on higher education. There are more than 21,000 documents and 150 current periodicals available in the Library. The Library is particularly rich in its collection of policy documents and reports on different commissions and committees established by the Government from time to time. The annual reports, calendars, handbooks and Acts and Statutes of various universities and Judgments of the Hon'ble Supreme Court on higher education and Volumes of Journals of University News to date are available in the library. On request, the Division supplies information on subject bibliographies and selective information on the higher education system. The Library and Documentation Division renders the following services to its users: Circulation, Reference Material, Press Clippings both physical and electronic versions, Bibliographic, Reprographic, Selective information dissemination, etc. The Division also brings out the Handbook on Library and Information Science containing detailed information about the Library and Information Science Courses offered by various Indian Universities and a Bibliography on Doctoral Dissertations in the field of Social Sciences and Humanities. Besides the Division compiles the Doctoral Theses accepted by Indian Universities in the field of Science & Technology,

Social Sciences and Humanities under the column 'Theses of the Month' published as a regular feature in the University News. Yearly Volumes of the Bibliography of Doctoral Dissertations are brought out on Science & Technology, Social Sciences and Humanities.

Keeping pace with the time and developments in Information and Communication Technology (ICT), the AIU Library is poised to become a digital library so that users can access the required material from their systems itself. The Division has already started sending Electronic Press Clippings through emails to all the Vice Chancellors of the country. These clippings have become very popular and sought after by the Vice Chancellors.

Research Division (1974)

The Research Cell was established at AIU in 1974 on the recommendation of an Extraordinary Meeting of AIU Standing Committee Members, UGC Officials and Officials of the Department of Education to set up a Central Research Unit at AIU for devising measures that will stimulate latent intellectual energy among the Academic fraternity of the Country. Following a letter from the Ministry of Education, Government of India the Research Cell was set up at AIU with the financial support of the Ministry of Education. Later, in 1993, the Research Cell was rechristened and elevated to Research Division with the wider mandate of covering the entire gamut of higher education.

Some of the reasons as mentioned in AIU History 1925-85 by S S Bhandarkar which led the Committee to recommend the establishment of a Research Cell at AIU were:

a. For a long time, there were compelling demands from the universities to provide expertise on up-to-date developments in the field of advanced teaching and research and on experiments in the management and organization of higher education.

b. Looking at the increasing anxiety voiced by the universities concerning the all-round deterioration creeping over

the entire university system including Government interference, the examination debacle and student unrest a growing demand for a detailed and systematic study of the defects in the present structure and functioning of the universities to search for ways of improvement was felt. There was an urgent requirement of creating a Central Examination Unit to investigate the problems of examinations in Indian Universities.

c. Seminars, Conferences and Workshops were being held by various universities but there was no agency to make a follow-up of the recommendations to draw full benefit from Seminars and Conferences. It was therefore felt that there should be an adequately staffed Central Office to collect and disseminate the relevant comments and criticisms voiced by various universities in the Seminars/ Conferences.

d. It was observed by a foreign visitor that there was the absence of an 'academic community' in India in spite of individual scholars of eminence who have won acclaim for the depth of their scholarship and their dedication to Research. The Visitor observed that "These scholars, however, prefer to work in isolation and do not create an academic climate where the intellectuals thrive and the ideas and opinions 'fill the air with an agreeable clamour." In order to make our statusquo-oriented academies to bestir themselves and respond to the winds of change a Central Research Cell was required.

e. One of the foreign professors who visited a new university reported that the preliminary discussion which took place with a few teachers was concerned exclusively with comparative pay scales, and other emoluments of Indian and American Teachers and there was no academic discussion.

Now, the Research Division, one of the most dynamic and vibrant divisions of AIU has carved a niche by making a significant academic

contribution to the higher education system of the country. It assumed the responsibility of providing an intellectual platform to the community of higher education for debating the issues and policies of emerging concern and providing research-based recommendations to the Government of India for enriching the policy framework on higher education. The Division, which takes care of all the academic activities of AIU, received accolades and recognition through its pioneering research work. The Division also facilitates the universities by providing expertise on up-to-date developments in the field of advanced teaching and research and on experiments in the management and organization of higher education both in India and abroad. The academic activities of the Division are conducted with the objective of creating a solid theoretical and empirical foundation for policy-making and national reconstruction. The Division organizes a number of academic activities for promoting the cause of higher education. The regular academic activities of the Division include: Research Projects, Capacity Building Programmes such as Workshop /Seminar, ANVESHAN – Student Research Convention, Vice Chancellor's Roundtable Conferences, Data-base activities, and Publications. The Division conducts research studies on the various emerging issues related to different aspects of higher education for having a clear and broader picture so that pragmatic and research-based inputs could be provided to the policy-making bodies/agencies to prepare appropriate policy frameworks.

The innumerable innovative research projects conducted by the Division received input from the academia and intellectuals across the country, which are compiled, collated, analyzed and accordingly recommended for policy formulation. The Research Division conducts short-term Research Projects in-house and the long-term projects are conducted in collaboration with some of the member institutions of AIU. The Division aims to provide the required impetus to the scheme for realizing its objectives. Capacity Building Programmes, Workshops, Training Courses, Seminars, Conferences and Symposiums are organized on different themes and the publications are brought out. Research Methodology Workshops are organized to train budding researchers to pick up the right kind of research problem and equip them with the necessary skills of conducting

quality research. Another important objective is to inculcate intensive research culture in institutions of Higher Learning.

The Radhakrishnan Commission has spoken enough to declare that if they had to suggest any one single reform in university education it would be that of examinations. Since then several committees set up both by Government and the universities have failed to achieve any tangible results. The evil had reached such dimensions that there was a real danger of a breakdown of the entire system. One of the concrete achievements of the AIU has been the promotion of practical steps towards examination reforms. At present the Division is engaged in conducting the following types of activities:

Undertaking Research Projects: Most important activity of the Research Division is to conduct research Studies in the current and emerging areas of concern in Higher Education. The Division has been conducting research projects on the various emerging issues related to different aspects of higher education for having a clear and broader picture of the problem so that pragmatic and research-based inputs could be given to improve the system.

Providing Academic Support to Vice Chancellors' Meets: The second significant activity of the Division is to provide academic input and support to the Secretary General to conduct important Meetings, Seminars, Conferences etc. All the academic support for the National Seminar of Vice Chancellors at the Annual Meeting every year is rendered by the Division.

Training and Capacity Building: Training and Capacity Building programmes are organized for all levels of functionaries in the University Sector viz Vice Chancellors, Officers and Staff of Administration, Finance and Examinations including Registrars, Finance Officers, and Controllers of Examination, etc. Seminars, Conferences, and Research Methodology Workshops for Academic Staff including Professors, Associate Professors, Assistant Professors, etc.

Research Conventions for Students: The Association of Indian Universities took a pioneering initiative in organizing *Anveshan* (Student Research Conventions) during 2007-08 for aspiring researchers throughout the Country. These conventions are aimed

at identifying the young and raising talent who could be promoted through proper encouragement and incentive. Four Zonal and one National Student Research Convention in the Areas/Fields of 1) Basic Sciences, 2) Engineering & Technology, 3) Agriculture 4) Health Sciences and Allied Subjects including Occupational Therapy, Physiotherapy, Nursing, Pharmacy, Nutrition and 5) Social Sciences, Humanities, Commerce and Law were organized. The attempt was made to accelerate scientific research and innovation and the application of the same towards community development percolating to the grass root level.

Creation of Databases: The Division creates Databases on different aspects of Indian Universities like Enrolment, Fee Structure, infrastructure, data on teachers, etc.; data on International Students in Indian Universities; and data on Foreign Education Providers in India, Institutional Linkages, etc., and many others.

Publication: The Division brings out several Publications in the form of proceedings, reports, books, occasional papers, brochures, etc.

Consultancy Services: The Division provides consultancy to various institutions on different areas of expertise.

Promotion of Internationalisation of Indian Higher Education: The Division undertakes several activities like creating portals, providing consultancy, organizing seminars, and workshops, facilitating the signing of MoUs, interacting with international universities, etc. to promote the Internationalisation of Indian Higher Education.

Miscellaneous Activities: The Division is also involved in various miscellaneous activities of the organization like preparing various presentations for the projection of AIU, building research resources and preparing different documents for multifarious use.

The Research Division with its dynamic academic activities has carved a niche not only for itself but also for the whole AIU in the global higher education arena and achieved a well-deserved reputation by contributing to the development of higher education.

Youth Affairs Division (1984)

The Youth Affairs Division of AIU was set up in 1984 initially as Cultural Division with the objective of organizing cultural activities for the betterment and welfare of students, teachers and others connected with universities. In 1993, the Division was rechristened as Youth Affairs Division. The Division creates a common meeting platform for university youths to display their talents in a friendly atmosphere. The activities of the Division focus on promoting national and emotional integration, developing the holistic personality of the university/college youth; inculcating human values, creating and sensitizing feelings of love, peace, amity, unity, integration, tolerance, understanding, national belongingness and appreciation for one another. The Division organises Inter-University Youth Festivals (UNIFESTS) at Zonal and National level for 24 events in the domain of Music, Dance, Theatre, Literary Events and Fine Arts. Each main event is divided into various sub-events. Fine Arts Exhibition, Essay Contests, Elocution, Poetry and Quiz Contests, etc., for university students, are among some of the events organised for giving the students an opportunity to exhibit their talent. More than 5000 University Youth participate in the festivals every year. As a prelude to AIU UNIFESTS, prospective participants are screened from the Inter College Youth Festivals which are organized by respective universities on pattern of AIU UNIFESTS. The process runs from August to February yearly. These activities also provide the youth with an opportunity for healthy interaction thereby instilling in them an awareness of our historical and cultural heritage.

The Division organizes international events which include South Asian Universities Youth Festivals (SAUFEST) among others. In SAUFESTs, University Youth from 8 South Asian Countries participate. The Division also provides a forum for the youth to attend Youth Leadership Camps (YLC), and Inter-University Youth Programmes to promote human values, culture, social skills, national integration, and international understanding. Besides these, events like the Universities Action on AIDS (UNIAIDS), measures to tackle climate change, environmental protection, etc. are also organised by the Division.

Student Information Services Division (1997)

The activities of Students Information started at AIU in the year 1927 in the form of the Publication of Universities Handbook. In the year 1997, a division named Students Information Services was set up. The Division provides extensive information on university institutions, professional bodies, accredited courses conducted by all types of universities, teaching staff of university departments, etc. It brings out a comprehensive Universities Handbook giving detailed information about the universities, their faculty, administration, and disciplines in which it offers courses at all levels. It also brings out handbooks on professional courses including Management Education, Engineering Education, Health Sciences Education, Computer Education and Distance Education. The Division provides information to the stakeholders in India on their eligibility for admission to an Indian university or on the standing of an institution through e-mail, post and telephone.

International Division (2000)

The International Cell was established in AIU in the year 2000. Keeping in view the Globalization, Internalization of Higher Education necessitates increasing international academic collaboration in the areas of common interest, particularly the exchange of students/faculty/research and technical staff, joint research projects, sharing of information, joint training credit transfer, dual/joint degree programmes, recognition of courses and programmes, the equivalence of degree etc. between the universities of India with their foreign counterparts, the AIU works in the area of internationalization. Besides updating, making the earlier MoUs functional, and collaborating with the universities of other countries, AIU also keeps records of the MoUs/Collaboration with International Organization and representation of AIU in various international forums. The division collects and collates the data of International Students in India and brings out the reports after analysis.

AIU AT PRESENT

The Association of Indian Universities (AIU) has now emerged as a research-based policy advice institution to the Government of India in the field of Higher Education, Sports and Culture. It is playing a vital role in shaping Indian higher education. Most importantly, AIU is vested with the power of according equivalence to Degrees/ Qualifications offered by the universities across the world with those offered in India and also according equivalence to the Indian School Boards. Being an apex institution, it constitutes an integral part of all major decision-making committees and commissions in the country. As a representative body of Indian universities, it facilitates cooperation and coordination among Indian universities and liaises between the universities and the Government (Central as well as the State Governments) and also national and international bodies of higher education in other countries in matters of common interest. AIU conducts inter-university sports and cultural events at national and international levels. As a National Sports Promotion Organization (NSPO) it promotes sports among Member-Universities and maintains the standards in sports. The organization (IUB/AIU) which started with 14 universities in 1925 has now a membership base of 931 universities and works as a friend, philosopher, and guide for the universities.

Vision of AIU

To emerge as a dynamic service and advisory apex organization in India by undertaking such initiatives and programs which could strengthen and popularize Indian higher education as the leading-edge system in the world and promote greater national and international collaboration in Higher Education, Research and Extension, Sports, Youth and Cultural Activities.

Mission of AIU

To promote and represent the higher education system and Indian Universities on national and international forums and establish strong liaison with the government, National/International organizations

of higher education, and sister associations world over and among universities through active support, cooperation and coordination among the member universities and all stakeholders for promoting quality education, research, sports, culture and values.

Objectives

The main objectives that AIU pursues now are:

- To serve as an Inter-University Organisation;
- To act as a bureau of information and to facilitate communication; coordination and mutual consultation amongst universities;
- To act as a liaison between the universities and the Government (Central as well as the State Governments) and to cooperate with other universities or bodies (national or international) in matters of common interest;
- To act as the representative of the universities of India;
- To promote or to undertake such programmes as would help to improve standards of instruction, examination, research, textbooks, scholarly publications, library organisation and such other programmes as may contribute to the growth and propagation of knowledge;
- To help universities to maintain their autonomous character;
- To facilitate student mobility and exchange of members of the teaching and research staff, sharing of infrastructure, joint-research projects and publications between universities in India or abroad;
- To sign MoUs with sister organizations of foreign countries in broad areas and to bring the universities together in the areas of mutual interest and to facilitate the signing of MoUs between them;

- To appoint or recommend wherever necessary a common representative of the Association at any conference or organization, national or international, on education;
- To assist universities in obtaining recognition for their degrees, diplomas and examinations from other universities, Indian as well as foreign;
- To undertake, organise and facilitate conferences, seminars, workshops, lectures and research on various themes pertaining to higher education;
- To act as a National Sports Promotion Organization (NSPO) for promoting sports among Member-Universities and maintain the standards in sports;
- To enhance participation in university sports at National and International championship competitions and make efforts to improvise upon the sports infrastructure in the universities;
- To establish and maintain linkages with organizations dealing with youth welfare, student information services, cultural programmes, adult education and such other activities as are conducive to the betterment and welfare of students or teachers and others connected with universities;
- To act as a service agency to universities in whatever manner it may be required or prescribed;
- To undertake and facilitate the publication of newsletters, research papers, books, etc.;
- To promote digitalization and provide value-added services to its member universities in the form of an Admission Portal. Job Portal & Collaboration Portal for promoting quality Higher Education.

The revised objectives as compared with those set out in the constitution originally indicated a greatly enlarged concept of the Association's functions and sphere of influence. It was no longer

regarded as merely an administrative agency working primarily as a bureau of information and an inter-university body to represent the universities at Commonwealth and other international conferences. It had progressed in experience and prestige and become capable of promoting the academic interests of the universities as well as the welfare of their students. AIU is now a think tank body with the responsibility of undertaking academic activities such as: conducting Research Studies in higher education; acting as a bureau of information on higher education; liaising with international bodies and universities for the internationalization of Indian higher education among many others.

The more significant of the newly prescribed objectives were the promotion and organisation of programmes which would contribute to the growth and propagation of knowledge in this era of digital technology.

Constitution

AIU is constituted of the General Body ie all its members, Governing Council, and Officers and Staff at its Headquarters.

Organisational Set-Up

The AIU's organizational set-up comprises the President, Vice President, Immediate Past President, Secretary General, and Vice Chancellors/Directors of Member Universities. The President and the Vice President are elected annually for a period of one year on the basis of their individual seniority as Vice Chancellor/Director, while the Secretary General, who works as the Chief Executive Officer of the Association, is appointed for a term of five years by the Association after following due procedure.

General Body

The General Body comprising all the Vice Chancellors/Directors of the Member Universities/ Institutes is the supreme authority of AIU. The President of the Association is the Chairman and Secretary General is the Member Secretary of the General Body.

The General Body meets once a year at the venue of one of its member universities to transact business in accordance with the aims and objectives of the Association in a particular order of business.

Governing Council

The Governing Council is the executive body of the Association. It manages the day-to-day affairs of the Association. It comprises 23 Vice Chancellors/ Directors including the Secretary General as its Member-Secretary and President as the Chairman. The Governing Council exercises all powers which are not specifically reserved for the General Body and is the final authority for taking decisions in regard to them.

Sub-Committees of Governing Council

To assist the Governing Council, various sub-committees namely Cultural Committee, Equivalence Committee, Finance Committee, Research Committee and Staff Affairs Committee are constituted.

SERVICES PROVIDED BY AIU

Services regarding Equivalence of Foreign Qualifications

AIU is the nodal agency for granting equivalence to the degrees awarded by accredited foreign universities and institutions for the purpose of admission to higher academic courses and employment. The equivalence of foreign degrees has been digitalized and automated by the AIU. AIU is also responsible to accord equivalence to the Two-year Full Time Postgraduate Diploma in Management (PGDM) and 04 years Fellowship Programme in Management (FPM) awarded by the stand-alone institutions falling outside the purview of universities equating their PGDM with Master of Business Administration and Ph.D. degree respectively of Indian University for the purpose of admission to higher studies.

Besides these, AIU provides professional assistance on the status of foreign qualifications to Universities, Ministries of Government of India, Union Public Service Commission, Indian Council of Cultural Relations, Medical Council of India, AAYUSH and other Central/ State Government Agencies dealing with nomination/selection/ employment of prospective Indian students having obtained their degrees from foreign universities and also for deciding the eligibility of the foreign students

The Association of Indian Universities (AIU) is mandated by the Department of School Education, Ministry of Education (MoE), Government of India to grant equivalence to Indian Secondary/ Senior Secondary School Examination Boards both Government and Private for the purpose of admission to higher education and employment in the Government services vide notification No. F.11-3/2016-Sch.3 dated 15th November 2021.

University Handbook

AIU brings out a comprehensive Universities Handbook giving detailed information about the universities, their faculty, administration, and disciplines in which it offers courses at all levels, admission schedules and academic calendar. It also brings out handbooks on professional courses including Management Education, Engineering Education, Health Sciences Education, Computer Education and Distance Education. AIU provides information to the stakeholders in India on their eligibility for admission to an Indian university or on the standing of an institution through e-mail, post and telephone. Presently, AIU is revising and updating the 35th Edition of 'Universities Handbook' in digital mode.

Internationalization of Education

Keeping pace with Globalization and Internationalization of Higher Education, AIU has enhanced its international interface further by collaborating with various national and international agencies for sharing of best practices exchange and student research work etc.

AIU has also contemplated to establish the Indian Network for Internationalization of Higher Education (INIHE) for establishing a Consortium of Indian Higher Education Institutions.

THE ACTIVITIES OF AIU

AIU maintains a close relationship with international organizations in the field of higher education including the Commonwealth of Learning, the Association of Commonwealth Universities and the Commonwealth Secretariat. Also, AIU is a member of the following international organizations:

- International Association of Universities, Paris (IAU)
- University Mobility in Indian Ocean Region, (UMIOR)
- Global University Network for Innovation, Cataluña, Spain (GUNI)
- National Association of Foreign Student Advisers (NAFSA), (USA
- India EU Study Centers Programme
- International University Sports Federation (FISU)
- Asian University Sports Federation (AUSF)
- Also, AIU works closely with the following National Level Organizations:
- University Grants Commission, New Delhi
- All India Council for Technical Education, New Delhi
- Indian Council for Agricultural Research, New Delhi
- Indian Council for Cultural Relations, New Delhi
- Education Departments of various States and State Councils
- National Sports Federations of India
- Being a member of the Association of Indian Universities,

member universities get a platform to project their views in the above forums.

(i) The Association of Indian Universities (AIU) organizes five Zonal Conferences and an Annual Conference of Vice Chancellors/ Directors every year wherein issues of national importance relating to higher education are deliberated. The conference is attended by eminent educationists, international experts, representatives of UGC, heads of apex bodies, Vice Chancellors/ Directors of AIU member universities, representatives of the State Higher Education Council etc.

(ii) The AIU organizes various Roundtables of Vice Chancellors on emerging issues of higher education. The main objective of organizing such programmes is to bring the Vice Chancellors Senior Academics and policymakers on a common platform to discuss and deliberate on the problems and issues relating to higher education. This paves the way for preparing a broader framework for policy formation on issues of national importance.

(iii) AIU conducts many academic research activities for its member universities and Ministry of Education which includes Research Projects, Capacity Building Programmes such as Workshop / Seminar, Anveshan – Student Research Convention, Vice Chancellor's Roundtable Conferences, database activities, Publications etc.

(iv) AIU organizes various youth development programmes for the students of its member universities, especially on Human & Personality Development, Active Citizenship, Building Youth Leadership, National Character and Cultural Values. These activities provide an opportunity for the students at the AIU member universities for healthy interaction thereby instilling in them an awareness of our historical and cultural heritage. The list of important activities is enlisted below:

- Inter-University National and Zonal Youth Festivals (AIU UNIFESTS)

- South Asian Universities Youth Festival (SAUFEST)
- Inter-University National Qawwali Competition
- Youth Leadership Camps
- Yoga Camps
- Awareness Campaigns (eg. HIV/AIDS, Communal Harmony, National Integration)
- DSWs & Cultural Coordinators Seminar
- NSS Workshops
- Seminars
- Literary Contests
- Indian Students Parliament
- Home Stay Exchange
- Fine Arts Youth Exhibition, etc.

(v) AIU functions as to National Sports Promotion Organization (NSPO) for the promotion of competitive sports in the university sector which is full of sporting potential for excellence. It organizes National University Games and Special Coaching/advanced Training camps for highly talented and selected athletes in collaboration with its member universities, for the participation of Indian Universities teams/contingent in National and International Sports Championships. At present, 223 sporting events are being organized on an All India and Zonal basis for both men and women sections.

(vi) The AIU, being an affiliated member of the International University Sports Federation (FISU) arranges visits of Indian Universities teams for participation in World University Games/ Championships and acts as a host to visiting university teams from other countries as and when required.

(vii) Additionally, the selected University students at the AIU member universities get an opportunity to represent Indian Universities in World University Games, World Championship, and Asian University Sports Championships conducted by the

International University Sports Federation (FISU) and Asian University Sports Federation (AUSF).

(viii) Further, AIU also organizes Capacity-building and Sports Management programmes for updating professional knowledge, and technical skills and promoting anti-doping awareness among the athletes and support staff, on the regular basis. The continuous professional development of the faculty (coaches, trainers and Sports scientists) is of paramount importance for the effective management of university Sports, broad-basing Sports and achieving excellence at global competitions.

(ix) AIU promotes and facilitates the Internationalization of Higher Education necessitating increasing international academic collaboration in the areas of common interest, particularly the exchange of students/faculty/research and technical staff, joint research projects, sharing of information, joint capacity building programme, credit transfer, dual/joint degree programmes, recognition of courses and programmes, the equivalence of degree etc. between the universities of India and other countries. The division also keeps records of MoUs/ Collaboration with National/International Organization and representation of AIU in various international forums.

(x) AIU provides extensive information related to universities, institutions, professional bodies, accredited courses conducted by all types of universities, teaching staff of university departments, etc. It brings out a comprehensive Universities Handbook giving detailed information about the universities, their faculty, administration, and disciplines in which it offers courses at all levels. It also brings out handbooks on professional courses including Management Education, Engineering Education, Health Sciences Education, Computer Education and Distance Education. The Division also provides information to the stakeholders in India on their eligibility for admission to an Indian university or on the standing of an institution through e-mail, post and telephone. The AIU handbook is sent to all the AIU member universities on a complimentary basis.

(xi) AIU Library and Documentation Division provides its services to member universities/ students/researchers/faculty members of Higher Education as Reference Library and Resource Centre and acts as a knowledge base on higher education.

(xii) AIU also brings out the University News, a Weekly Journal of Higher Education. The regular features of the journal are articles related to current, national and global thinking; Campus News; Doctoral Theses; Advertisements for Openings in Universities, Institutes, Colleges and Research Institutes; Admission Notifications, and Calendar of Events. It provides updates on developments in the field of higher education, youth affairs, Sports and culture. Over the years, it has gained immense popularity and has carved a niche for itself in regularity of appearance and richness of its contents.

(xiii) AIU maintains the directory of the AIU member universities. The member universities are being provided with University Handbook, Directory, Journal, Bibliography of Doctoral Dissertations and other publication on complimentary basis.

(xiv) AIU provides various value-added services to its member universities through AIU Portal.

(xv) AIU provides consultancy services to AIU member universities.

Publications

AIU published the following publications and forwarded them to its member universities on a complimentary basis, in the last 3 years:

- COVID-19 Response Toolkit for Indian Higher Education Institutions.
- Book on "Reimagining Indian Universities".
- Survey Report on Preparedness of Indian Higher Education Institutions for online education
- Measuring Access to Higher Education through Eligible Enrolment Ratio (EER)
- National Education Policy 2020: Proposals & Suggestions for the Implementation

- Implementing National Education Policy–2020 A RoadMap
- Compendium on *Anveshan*
- Book on "Protecting Academic Interest of Students during COVID-19 Pandemic – Best Practices"
- Indian Higher Education Profiles (2018-19 and 2019-20).
- Building a Sustainable Future Realising United Nations Sustainable Development Goals through Higher Education Institutions

Conclusion

The AIU is the hardwork of many generations of university functionery, particularly the Presidents, who chairs its committees and guided its activities. Many of them have passed away; among them, special tribute is due to Dr. A.L. Mudaliar, the doyen of Vice Chancellors, Dr. C.P. Ramaswami Aiyer, Dr. S. Radhakrishnan, Dr. Zakir Hussain, and Dr. Syama Prasad Mukherjee for the yeoman service they performed. Each President has made his/her individual contribution to the strengthening and enrichment of the organisation. Each took up those problems which happened to be most demanding during his term of office and tackled them with courage and energy. Needless to say, most problems re-emerge in new forms and continue to call for new solutions, so that the President's work is never done! But the efforts that each one puts in making their own impact help the Board to develop in many ways.

The main burden of the organisation's work, however, naturally falls upon the Secretary and his/her staff. The first six Secretaries were honorary and part-time and yet to judge from the records they tended the Board in its infancy with great zeal. Professors N S Subba Rao and Prof. P. Seshadri are names to be specially remembered. Full-time secretaries have worked only since 1947. Mention has been made of Prof. Samuel Mathai and Dr. B.D. Laroia both gave new stability to be Board and introduced the element of continuity so necessary to its proper working. Dr. Amrik Singh who served it for more than a decade

as Secretary with his characteristic zeal and devotion imparted to it a new dynamism. Knowing that the Association can only be as strong as its members make it, he made a point of urging and driving the universities to participate in one or another of its activities and the various programmes initiated by him during and after the Fifth Plan are in no small measure due to his imagination and dedicated work. Prof. Jagdish Narain considerably added to the impetus generated by his predecessor. This was amply reflected in both the achievements in the last few years of his tenure and the fresh schemes which were undertaken. The AIU Building located in Delhi is the outcome of the intention and efforts of Prof Jagdish Narain. Prof. Agrawala' leadership has brought a remarkable height to AIU. Prof K B Powar elevated its new international horizons. He provided academic leadership to the universities as well as the Ministry of Education. The tenure of Prof Furqan Qamar was challenging due to several internal as well as external disturbances. Prof Qamar had shown exemplary prudence to resolve various issues in Indian Higher Education. Dr Pankaj Mittal, the present secretary General and the co-author of this article has brought new dynamism and vibrancy to the organisation.

Now, when the AIU is on the verge of celebrating its centenary celebrations, it had taken up a large number of activities aimed at supplying information and assistance to its member universities and providing them with a forum for the mutual exchange of ideas. The achievements so far enumerated are very significant but the greatest and most durable accomplishment of the AIU is that it has succeeded to a great extent in becoming a point of cohesion for the universities which are so varied in their history and tradition, a natural consequence of their functioning in a vast country. The universities are now becoming fused into a coherent society which is a recognition of the indispensability of the AIU as well as a tribute to the status that it has achieved among them.

AIU will always work towards fulfilment of its objectives while transforming itself with the changing landscape and use of technology and providing value added services to its members and other stakeholders.

CONCEPTS OF HIGHER EDUCATION
THE VISIONARY APPROACH

'*Sa Vidya ya vimuktaye*', is a Sanskrit quote which preaches, 'knowledge is one that liberates'. Indian education system believes in such knowledge which liberates from material bondings and attractions, leading towards emancipation. Indian educationists emphasized on emotional and spiritual education of children. Some significant champions of this system are Gurudev Rabindranath Tagore, Swami Vivekanand, Sri Aurobindo Ghosh, Balgangadhar Tilak, Mahatma Gandhi. Sarvepalli Radhakrishnan and M. Visvesvaraya. These people may be called as the ambassadors of Indian culture and thought. This chapter presents the contribution of these great personalities to society specifically to the field of education.

Gurudev Ravindranath Tagore

Dr. S. Radhakrishnan, in his book 'The Philosophy of Rabindranath Tagore' MacMillan & Co., Ltd., London, 1919, mentions that popularity of Gurudev shows that there is neither East nor West in the realm of spirit and that his work meets a general want and satisfies a universal demand. Further, he adds that in interpreting the philosophy of Gurudev, the Indian ideal of philosophy, religion, art, is inevitably interpreted in the light of its own fundamental principles. Gurudev envisioned that India should develop national unity on the basis of its spiritual vision of freedom and humanity, love and fellowship.

About implementation of Western education in the Indian context, Tagore mentions 'India has preserved her vitality because whenever she came into contact with alien civilizations, she absorbed whatever was great in them without surrendering the fundamentals of her own type. Whatever we adopt from others we have to adapt ourselves to our needs and to our life. India has her own self-identity, her life and soul. She can grow strong and vigorous not by the mere accumulation of western forms and modes, but by the assimilation of them all. She should affix the stamp of her genius to whatever she lays her hands

upon and accepts, otherwise her work will not be a creation, but a mere repetition. The process of assimilative synthesis has been the characteristic of India from the beginning of her history.'

Further, in 'My Interpretation of Indian History', Rabindranath Tagore said 'True modernismis freedom of mind, not slavery of taste. It is independence of thought and action, not tutelage under European school masters. It is science, but not its wrong application to life.'

Tagore felt, 'the ideals of Indian education should be changed. The modern educated Indian is a false copy of his western contemporary. His voice is an echo, his life a quotation, his soul a brain and his free spirit a slave to things. These products of western education are not persons but shadows. There is neither art in their life nor music in their souls. Modern education has developed a slave mind.'

Responding to the western system of education, Gurudev opined that 'the educated Indian is revenging himself on his educator by developing into a cheap and troublesome imitation of himself. He is like a cut flower of humanity without any roots. True education must spring from the deeper side of a man's nature. But now the educated Indian is cut off from his past, and from the immemorial traditions and affections and restraints which bind him to his kin and country. The education which is being given is not that of the whole man. The modern school is a factory 'specially designed for grinding out uniform results.'

Supporting to this argument made by Tagore, Dr. S. Radhakrishnan states, 'absolutely no account is taken of individual variations. The same method is applied to the mental needs of an infinite variety of minds. There is no freedom for the expansion of soul or the progress of liberal thought. The religious and the artistic, the moral and the spiritual sides, are drowned in the study of scientific formulas and social laws. The mechanisation of mind and the sterilisation of the intellectual seed-plot are the results of the tyranny of the educational policy. Even from the intellectual point of view the product of this policy does not command respect.'

While analyzing the western education by Gurudev Tagore, Dr. Radhakrishnan has remarked 'the modern Indian is not taught the

profound interpretation of the soul of man enshrined in his great literature. The records of the inner spiritual life of the Indian race are utterly neglected. It is obvious that nothing can so awaken powers, kindle spiritual aspiration and set souls a quiver as a great literature which describes the highways of the human soul. There cannot be a more potent stimulus or a greater spur to the Indian mind and imagination than her ancient literature, to which the modern educated Indian is a stranger. Indian children are forgetting their past and they are unable to understand their own nature.'

Gurudev Rabindranath Tagore strongly reinforces the sublimity of education with the expression *'the highest education is that which does not merely give us information but makes our life in harmony with all existence*.'

Swami Vivekananda

Swami Vivekananda is the most celebrated saint of the 19th and 20th century, who introduced the true cultural heritage, spiritual strength and oriental wisdom to the West in an emphatic manner, like never before. Many of his philosophies on education, nationalism, spirituality, personality growth with different perspectives are more relevant today, than his life time. 'My Master'–which is a most elaborative and comprehensive collection of works of Vivekanand a contains persuasive character sketch, including his celebrated lecture at the Great Parliament of Religions, held at Chicago, USA, narrates Jnana Yoga, Karma Yoga, Bhakti Yoga, Vedanta, in an eloquent and stirring speeches. In his historical journey across India and even globe he awakened lakhs of minds and heralded new renaissance in the modern history of mankind.

Swami Vivekanand is revered as modern Hindu Monk and the key figure to introduce Indian philosophies of Vedanta and Yoga to the western world. His views dilated upon the revolutionary changes that has extraordinarily taken places nice the dawn of mankind. However, many such changes have enmeshed with ignorance, superstition, imitations are unreliable, because the human mind does not go in depth with candid investigation. Lack of inclination towards scientific temper results into superstitions. Here, Swami Vivekananda deplores the defective system of education for such ignorance and utter

dependence of a system which is degenerative in nature. Eulogizing the sacred roots of Knowledge–Vedanta, Upanishads, Bhagavad Gita – Swamiji calls for 'Back to Vedas'.

Following are the extracts from Bengali translation work, '*Complete Works of Swami Vivekananda*', which showcases the visionary approaches, perspectives and ideology of this Great Persona.

Replying to a question raised by a disciple regarding combining of western science with modern education, university system, Swamiji's answers are applicable even today:

'It is almost wholly one of defects. Why, it is nothing but a perfect machine for turning out clerks. I would even thank my stars if that were all. But no! See how men are becoming destitute of Shraddhâ and faith. They assert that the Gita is only an interpolation, and that the Vedas are but rustic songs! They like to master every detail concerning things and nations outside of India, but if you ask them, they do not know even the names of their own fore fathers up to the seventh generation, not to speak of the fourteenth!'

Further, speaking on identity of a nation, glory of a culture, heritage, purpose of quality education, Swami Vivekananda mentions his views and opinion, as follow:

'A nation that has no history of its own has nothing in this world. Do you believe that one who has such faith and pride as to feel, "I come of noble descent", can ever turn out to be bad? How could that be? That faith in himself would curb his actions and feelings, so much so that he would rather die than commit wrong. So a national history keeps a nation well-restrained and does not allow it to sink so low. Oh, I know you will say, "But we have not such a history!" No, there is not any, according to those who think like you. Neither is there any, according to your big university scholars; and so also think those who, having travelled through the West in one great rush, come back dressed in European style and assert, "We have nothing, we are barbarians." Of course, we have no history exactly like that of other countries. Suppose we take rice, and the Englishmen do not. Would you for that reason imagine that they all die of starvation, and are going to be exterminated? They live quite well on what they can easily procure or produce in their own country and what is suited to them. Similarly, we have our own history exactly as it ought to have been for us. Will that history be made extinct by shutting

your eyes and crying," Alas! we have no history!" Those who have eyes to see, find a luminous history there, and on the strength of that they know the nation is still alive. But that history has to be rewritten. It should be restated and suited to the understanding and ways of thinking which our men have acquired in the present age through Western education'.

Broadening his views, Swami Vivekananda adds the importance of inculcating the Knowledge about Vedanata, essence of '*Guru Gruha Vaasa*' in education, Brahmacharya, motto of education, etc., and following are the excerpts (Page–1372):

'However, to bring that about, the old institution of "living with the Guru" and similar systems of imparting education are needed. What we want are Western science coupled with Vedanta, Brahmacharya as the guiding motto, and also Shraddhâ and faith in one's own self. Another thing that we want is the abolition of that system which aims at educating our boys in the same manner as that of the man who battered his ass, being advised that it could thereby be turned into a horse.'

'You see, no one can teach any body. The teacher spoils everything by thinking that he is teaching. Thus, Vedanta says that within man is all knowledge—even in a boy it is so — and it requires only an awakening, and that much is the work of a teacher. We have to do only so much for the boys that they may learn to apply their own intellect to the proper use of their hands, legs, ears, eyes, etc., and finally everything will become easy. But the root is religion. Religion is as the rice, and everything else, like the curries. Taking only curries causes indigestion, and so is the case with taking rice alone. Our pedagogues are making parrots of our boys and ruining their brains by cramming a lot of subjects into them. Looking from one standpoint, you should rather be grateful to the Viceroy for his proposal of reforming the university system, which means practically abolishing higher education; the country will, at least, feel some relief by having breathing time. Goodness gracious! What a fuss and fury about graduating, and after a few days all cools down! And after all that, what is it they learn but that what religion and customs we have are all bad, and what the Westerners have are all good! At last, they cannot keep the wolf from the door! What does it matter if this higher education remains or goes? It would be better if the people got a little technical education, so that they might find work and earn their bread, instead of dawdling about and crying for service'.

In addition to this, Swami Vivekananda deliberates about the social paradigm shift that has taken place during that time, which had impacted on education, language issue, etc., and following are the excerpts (Page–1372):

'Does higher education mean mere study of material sciences and turning out things of everyday use by machinery? The use of higher education is to find out how to solve the problems of life, and this is what is engaging the profound thought of the modern civilised world, but it was solved in our country thousands of years ago.'

Swami Vivekananda's views on higher education, plight of western centres of learning, women education and emancipation, etc. are highlighted through the following selected excerpts (Page–1990):

'In these modern days there is a greater impetus towards higher education on the European lines, and the trend of opinion is strong towards women getting this higher education. Of course, there are some people in India who do not want it, but those who do want it carried the day. It is a strange fact that Oxford and Cambridge are closed to women today, so are Harvard and Yale; but Calcutta University opened its doors to women more than twenty years ago. Iremember that they ear I graduated, several girls came out and graduated—the same standard, the same course, the same in everything as the boys; and they did very well indeed. And our religion does not prevent a woman being educated at all. In this way the girl should be educated; even thus she should be trained; and in the old books we find that the universities were equally resorted to by both girls and boys, but later the education of the whole nation was neglected. What can you expect under foreign rule? The foreign conquer or is not there to do good to us; he wants his money. I studied hard for twelve years and became a graduate of Calcutta University; now I can scarcely make $5.00 a month in my country. Would you believe it? It is actually a fact. So these educational institutions of foreigners are simply to get alot of useful, practicals laves for a little money — to turn out a host of clerks, postmasters, telegraph operators, and so on. There it is.'

Swami Vivekananda strongly believed that spirituality must be fostered among generations through education. He expressed his dislike for the then education system of India. In his lecture on

'Future of India', he attacks on the contemporary education imparted through the system. He says:

'We must have a hold on the spiritual and secular education of the nation..... . . . This education that you are getting now has some good points, but it has a tremendous evil at its back, and this evil is so great that the good things are all weighed down. In the first place, it is not aman-making education, it is merely and entirely a negative education. A negative education or any training that consists negation is worse than death.'

Sri Aurobindo Gosh

Shri Aurobindo Ghosh is known as a brilliant scholar of Sanskrit and several other Indian and foreign languages like French, Greek and Latin. Since when he was young, he as similated the spirit of Indian civilization and its forms. He underwent many turbulent times during his heydays because of his affiliation with revolutionaries and their activities. After getting exonerated in cases alleged for silent political activities, Ghosh developed inclination towards spirituality. His philosophy is ramified having base from Vedantaand Upanishads and advocated for integral and balanced view of life. Sri Aurobindo Gosh strongly believed that man is the maker of his own destiny and education is a greatest tool to achieve it. As an anthropologist, Gosh intensely analysed human thinking and social evolution. Education, Ghosh opines, must emphasise on the whole aspect of human life such as physical, psychic, beauty, power, knowledge, passion, etc., and its inner concept is not only acquiring information, but it has central aim of building of powers of the human mind and spirit.

Sri Aurobindo Gosh's Educational Philosophy is the awakening of an individual as a spiritual being and is well connected to the truth of human life and self-mastery. In this regard, Ghosh advocated five aspects of education viz., physical education, vital education, mental education, psychic education and spiritual education.

His writings depic this perspectives and ideas about Education and National Education. We can quote some extracts written between 1899 and 1920 and later on published in periodicals. He says in his Early Cultural Writings: Part–3: (Page 358):

'If the physical training it provides is contemptible and them oral training nil, the mental training is also meagre in quantity and worthless in quality. People commonly say that it is be cause the services & professions are made the object of education that this state of things exists. This I believe to be a great mistake. A degree is necessary for service and there fore people try to get a degree. Good! let it remain so. But in order for a student to get a degree let us make it absolutely necessary that he shall have a good education. If a worthless education is sufficient in order to secure his object & a good education quite unessential, it is obvious that the student will not incur great trouble and diversion of energy in order to acquire what he feels to be unnecessary. But change this state of things, make culture & true science essential and the same interested motive which now makes him content with a bad education will then compel him to strive after culture and true science. As practical men we must recognise that the pure enthusiasm of knowledge for knowledge's sake operates only on exceptional minds or in exceptional eras. In civilised countries a general desire for knowledge as a motive for education does exist but it is largely accompanied with the ear their feeling that knowledge is necessary to keep up one's position in society or to succeed in certain lucrative or respectable pursuits & professions. We in India have become so barbarous that we send our children to school with the grossest utilitarian motives unmixed with any disinterested desire for knowledge; but the education we receive is itself responsible for this. Nobody can cherish disinterested enthusiasm for a bad education; it can only be regarded as a means to some practical end. But make the education good, thorough & interesting and the love of knowledge will of itself awake in the mind and so mingle with & modify more selfish objects.

Deploring the irrational, illogical and unscientific educational practice, Sri Aurobindo Gosh cautions the degeneration of society through the contemporary system of education. In the same book he says,

'Amount of knowledge is in itself not of the first importance; but to make the best use of what we know. The easy assumption of our educationists that we have only to supply the mind with a smattering of facts in each department of knowledge & the mind can be trusted to develop itself and take its own suitable road, is contrary to science, contrary to human experience and contrary to the universal opinion of civilised countries. Indeed, the history of intellectual degeneration in gifted races always begins with the arrest of these three mental

powers by the excessive cultivation of mere knowledge at their expense. Much as we have lost as a nation, we have always preserved our intellectual alertness, quickness & originality; but even this last gift is threatened by our University system, & if it goes, it will be the beginning of irretrievable degradation & final extinction.' (Page 360)

In his message for National Education Week (1918), page–411, Aurobindo Gosh explores the vistas of National Education by mentioning it as follows:

'National Education is, next to Self-Government and along with it, the deepest and most immediate need of the country, and it is a matter of rejoicing for one to whom an earlier effort in that direction gave the first opportunity for identifying himself with the larger life and hope of the Nation, to see the idea, for a time submerged, moving so soon towards self-fulfilment.'

In conclusion he calls upon the countrymen to choose proper destiny both for individual and nation at large:

'This is an hour in which, for India as for all the world, its future destiny and the turn of its steps for a century are being powerfully decided, and for no ordinary century, but one which is it self a great turning-point, an immense turn-over in the inner and outer history of mankind. As we act now, so shall the reward of our karma be meted out to us, and each call of this kind at such an hour is at once an opportunity, a choice, and a test offered to the spirit of our people. Let it be said that it rose in each to the full height of its being and deserved the visible intervention of the Master of Destiny in its favour.'

In his vision about national life, continuous development, in cohesion with culture and heritage of a nation combined with ultimate individual goal has been thoughtfully depicted in the below excerpts: Page–415:

'The whole movement of the national life of India at the present moment may be described in one phrase, a pressure from within towards self-liberation from all unnatural conditions which obstruct or divert its free and spontaneous development. It is the movement of a stream trying to break open a natural path for its dammed-up waters. This effort takes inevitably many sides and aspects; for in politics and administration, in society, in commerce, in education, this national life finds itself bound up in forms, condemned to

move in grooves which give no natural play to the new aspirations, powers and tendencies which have become its inner impelling motives. The effort to discover and organize a system of national education is part of this general effort of self-liberation, of self-finding, but perhaps the most central movement of all, in the end even the most important; for it is this which will give shape to the spirit of the nation at present in a state of rather formless flux. It is in fact no more than a chaotic press of tendencies; a national culture alone can give it form and consistency; and national education is the attempt to create and organize that culture.'

Presenting his philosophy of universal education, Sri Aurobindo Ghosh makes subtle relation between modern wisdom of science based on reason and oriental thoughts and efforts to be made to diffuse dilemma in the minds of the country men and coming generation, are well depicted in the below excerpts: Page–417:

'The necessity and unmixed good of universal education has become a fixed dogma to the modern intelligence, a thing held to be beyond dispute by any liberal mind or awakened national conscience, and whether the tenet be or not altogether beyond cavil, it may at any rate be presumed that it answers to a present and imperative need of the intellectual and vital effort of the race. But there is not quite so universal an agreement or common attainment to a reasoned or luminous idea on what education is or practically or ideally should be. Add to this uncertainty the demand— naturally insistent and clamorous with the awakening of the spirit of independence in a country like our own which is peculiarly circumstanced not only by the clash of the Asiatic and the European or occidental consciousness and the very different civilizations they have created and the enforced meeting of the English and the Indian mind and culture, but by a political subjection which has left the decisive shaping and supreme control of education in the hands of foreigners, — add the demand for a national type of education, and in the absence of clear ideas on the subject we are likely to enter, as we have in fact entered into an atmosphere of great and disconcerting confusion.'

The following paragraph showcases the visionary thoughts of Sri Aurobindo Ghosh in connecting the western science with India's knowledge treasure and lays emphasison modern life with ancient wisdom: Page–419–420: *'Mankind and its needs are the same every*

where and truth and knowledge are one and have no country; education too must be at hing universal and without nationality or borders. What, for an instance, could be meant by a national education in Science, and does it signify that we are to reject modern truth and modern method of science because they come to us from Europe and go back to the imperfect scientific knowledge of classical India, exile Galileo and Newton and all that came after and teach only what was known to Bhaskara, Aryabhatta and Varahamihira? Or how should the teaching of Sanskrit or the living indigenous tongues differ in kind and method from the teaching of Latin or the living modern tongues in Europe? Are we then to fetch back to the methods of the tols of Nadiya or to the system, if we can find out what it was, practised in ancient Takshashila or Nalanda? At most what can be demanded is a larger place for the study of the past of our country, the replacement of English by the indigenous tongues as a medium and the relegation of the former to the position of a second language, — but it is possible to challenge the advisability even of these changes. After all, we live in the twentieth century and can not revive the India of Chandragupta or Akbar; we must keep abreast with the march of truth and knowledge, fit ourselves for existence under actual circumstances, and our education must be therefore up to date in form and substance and modern in life and spirit'.

Balagangadhar Tilak

The personality of Balgangadhar Tilak is like a fearless and self-luminous *Para-Brahman*. He was lucid and straight forward in his presentation of ideas, facts and truth. His place in Indian polity is self-evident by his assertive nationalism, revolutionary and rational and was immensely connected with national aspirations and endeavors. His life, works and character are depicted in his powerful assertions of Swaraj, Home Rule and Self-Government. The qualities of indomitable will and unwavering devotion were the signature elements in the personality to Tilak.

Balagangadhar Tilak was a man of various gifted abilities which were extraordinary. He possessed sound knowledge of Sanskrit, history, law, philosophy, forward political thinking which were beyond the horizon of the period of his generation. Hisworksviz.,

Orion and The Arctic Home of the Aryans acquired world-wide recognition and left as strong a mark on the canvass of the world. It is permanently imprinted on the ever-shifting sands of oriental research. His work on Gita, no mere commentary, but an original criticism and presentation of ethical truth and considered as monumental work of all times.

Tilak expressed his views on the quality of education for India's youth. He was a great orator and his radical views were strongly expressed through his speeches. He wrote many articles expressing his ideas and perspectives on National Education during the period of British rule. His speeches and write ups are relevant even today. Following are few selected excerpts:

'Of the many things that we will do there 'religious education will first and foremost engage our attention. Secular education only is not enough to build up character. Religious education is necessary because the study of high principles keeps us away from evil pursuits. Religion reveals to us the form of the Almighty. Says our religion that a man by virtue of his action can become even a God. When we can become gods even by virtue of our action, why may we not become wise and active by means of our actions like the Europeans?'

Emphasizing of vernaculars as medium of instruction, he mentioned, 'the second thing that we will do, will be to lighten the load of the study of the foreign languages. In spite of a long stay in India no European can speak for a couple of hours fluent Marathi, while our graduates are required as a rule to obtain proficiency in the English language. One who speaks and writes good English is said, in these days, to have been educated. But a mere knowledge of the language is no true education. Such a compulsion for the study of foreign languages does not exist anywhere except in India. We spend 20 or 25 years for the education which we can easily obtain in 7–8 years if we get it through the medium of our vernaculars. To save unnecessary waste of time we have proposed to give education through our own vernaculars.'

Tilak also gave importance for technical education which are evident in his writings. *He said: 'Industrial education will be the 3rd factor. In no school this education is given. It will be given in these schools. It is an important thing. During the whole of this century we have not known how a match is*

prepared. In Sholapur matches are manufactured from straw; and straw is found abundantly in our country. If therefore, this industry is taken into our hands the importation of matches will largely decrease in India. It is the same with the sugar industry. We can procure here as good sugarcane as is found in Mauritius. It is seen by scientific experiments that the sugarcane found in the suburbs of Poona can produce as much sugar as is found in the sugarcane of Mauritius. Six crores of rupees are drained out every year from this country only forsugar. The reason is that we do not get here the education in this industry'.

Education in politics will be the fourth factor. We are not taught this subject in the Government schools. What has been proved by our revered Grand Old man–Dadabhoy Naoroji, after a ceaseless exertion for over 50 years, should be understood by our students in their youth. Every year some 30 or 40 crores of rupees are drained out of India without any return. We have, therefore, fallen to a wretched state of poverty.

Following is an excerpt from the article contributed by him to 'New India' in response to the invitation by Mrs. Annie Besant to express his view on National Education.

'If we therefore, want our younger generation to attain to the status of full citizenship, we must educate them according to that ideal. In other words, a nation that has not taken its education into its own hands cannot soon rise in literary, social or political importance.'

He adds: *'What conflict there may arise, arises only from accidental circumstances. Where the people and the Government are one, that is, actuated by the same ideals of citizenship, there can arise no conflict or differences of opinion in the matter of National Education. But where the people and the Government have different ideals of citizenship before them, where the governing class wants to keep the people down in spite of their desire to rise to the status of full citizenship in the Empire, there arises the necessity of National Education as distinguished from governmental education. Viewed in this light, National Education is only a branch or a means to the attainment to Self-Government and those who demand Home Rule for India cannot but zealously support a movement for the establishment of national Education in this country. But these difficulties must be overcome until National Education becomes the ideal of the governing class, which can be the case only when the Government is popularized.'*

Mahatma Gandhi

Gandhiji may truly be referred as the prophetic voice of the 20th century. As a staunch practitioner of non-violence, Gandhiji believed that 'non-violence is the law of our species as violence is the law of the brute. The spirit lies dormant in the brute and he knows no law but that of physical might. The dignity of man requires obedience to a higher law–to the strength of the spirit'. This shows his high level of maturity and saint liness, the qualities which could be achieved only by the power of intellect, wisdom and quality of Education, etched in one's spirit.

According to Gandhiji there are 3 types of human beings viz., Coward—inorder to save his skin, supinely acquiesces injustice and wrong; the Brave—violently resists injustice and wrong in order to re-establish justice and right and Superior—in the fullness of his strength, forgives the wrongdoer and tries to redeem him and convert him to the ways of doing good.

In Gandhiji, we find asure guide to lead a happy, rich and meaningful life, which is a pure bliss for us and at a time when our generation is doomed to toil in a state of perpetual crisis, his perspectives on Education, social stability, ethos, will be a guiding principle for the welfare of the society. Here are few selected thoughts of Mahatma Gandhi on Education, impact of Education on individual as well as society for the greater salvation of the human being.

Gandhi's Definition of Primary and Higher Education

Referring specifically to 'Primary' and 'Higher' education, Gandhiji says: 'What is the meaning of Education? If it simply means a knowledge of letters, it is merely an instrument; and an instrument may be well used or abused. The same instrument that may be used to cure a patient may be used to take his life. We often observe that many men abuse it and very few make good use of it.'

'Now let us take higher education, I have learned Geography, Astronomy, Algebra, Geometry, etc., What of that? In what way I have benefited myself or those around me? Why have I learned

these things? If this be true education, I must emphatically say that the sciences enumerated above I have never been able to use for controlling my senses. Therefore, whether you take elementary education or higher education, it is not required for the main thing. It does not make of us men. It does not enable us to do our duty.

Gandhiji expressed these views in 1909 and he remained faithful to this point of view forever. Throughout his life he consistently underrated the value of formal education as it was being imparted in the India of his day, in later life Gandhiji somewhat modified his harsh criticism on formal education. Thus, in 1921, dedicating a Medical College established to promote Hindu, Muslim and Western Medical lore and practice, Gandhiji went out of his way to 'pay my humble tribute to the spirit of research that fires the modern scientist'. (Sermon on the Sea, p-xxii). Again, in 1925 he said: 'I value education in the different sciences. Our children cannot have too much of chemistry and physics (Young India, 12th March 1925).

Gandhi's opinion on education is well framed in his own words: 'I hold that true education of the intellect can only come through a proper exercise of the bodily organs, e.g., hands, feet, ears, nose, etc. In other words, an intelligent use of the bodily organs in a child provides the best and quickest way of developing his intellect. But unless the development of the mind and body goes hand-in-hand with a corresponding awakening of the soul, the former alone would prove to be a poor lopsided affair. By spiritual training I mean education of the heart. A proper and all-round development of the mind, therefore, can take place only when it proceeds pari passu *with the education of the physical and spiritual faculties of the child. They constitute an indivisible whole.'*

Gandhiji also proposes that the trade or craft or skilled occupation, chosen by the pupil, shall serve as the dominant motive around which all learning shall be integrated to the end. The mind, body and heart may be cultivated in a balanced manner, culminating in the formation of a noble character.

Dr. Sarvepalli Radhakrishnan

A philosopher, scholar par-excellence, humanist, visionary, statesmen, educationist with progressive thinking and above all an inspiring Great Teacher– Dr. Sarvapalli Radhakrishnan, is the synonym of confluence of human sublime qualities of knowledge, wisdom and intellect. He may be called as an ultimate phenomenal personality which a human mind could ever attain. He was a true educationist whose perspectives were that education should not merely give us some techniques to lead successful lives, but should also help an individual to discover man making 'lastingvalues'. His educational thoughts are puritan, holistic, pragmatic and idealistic which were influenced by Vedanta Sara, Upanishads and Advaita philosophy. In his writings, speeches and ideologies, we witness the profound introspection, the quiet intensity and depth of vision that mark his utterances chiefly lavished on the problems created by the disruption and conflict that menace man's innermost self in the world of today–for which the only remedy he suggests is proper 'Education' and 'Knowledge'.

In the compendium of 'President Radhakrishnan's Speeches and Writings', in Chapter titled 'The Aim of Education', Page No.193–196, published by the Ministry of Information and Broadcasting, Government of India, on 7th August1962, he addressed the students' gathering at Madras Christian College, Tambaram, Tamilnadu and spoke about instituting and humanising the 'Cult of Education'.

He proudly admits that 'Education has been my special subject. At a time when people are running after all sorts of material comforts, rich food, elaborate houses, expensive cars, radio sets and feel that they will be satisfied and happy by the accumulation of these material things, it is good to realize that we should also have some room for self-knowledge, self-scrutiny, self-criticism and perpetual endeavor to take step after step to improve ourselves. If the world happens to be in a precarious situation today and if people are afraid of one another, it is not because of lack of material accumulations or great intellectual prowess. It is because they are lacking in that poise, in that balance and judgment, in that discernment which makes us distinguish right from wrong. It is that capacity which constitutes the purpose of education'.

Speaking at length he adds: *'Education is there to help us to find out what we are for in this world. Is it merely to grow rich or grow learned, or is it for the purpose of fulfilling yourselves and making yourself an offering to the Supreme? Man cannot be satisfied by wealth, by learning, but by developing the quality of detachment, of renunciation, making himself the instrument of a higher purpose. It is there that the realization of the fulfilment of man abides, and it should be our endeavor to develop it.'*

On 24th June 1962, addressing the students and teaching fraternity, at the inauguration of the Punjabi University, Patiala, Punjab, Dr. S. Radhakrishnan speaks extensively about the cultural awakening, development of regional languages, assimilation of western civilization with Indian ethos, purpose of education, etc., and following are the excerpts, from 'Education and Culture', page–183-184:

'The impact of western culture and civilization had led to a cultural renaissance through out the country, which was accelerated by political emancipation. There was a resurgence of regional languages and naturally Punjabi, which is one of the recognized languages of the country according to the Eighth Schedule of the Constitution of India and which has had a great literature, called for development. It has been the policy of the Central Government to promote the development of all regional languages.'

Dr. Radhakrishnan strongly opined that *'Education should be imparted with a view to the type of society that we wish to build. We are working for a modern democracy built on the values of human dignity and equality. These are only ideals we should make them living forces. Our vision of the future should include these great principles.'*

He adds, *'if education is to help us to meet the moral challenge of the age and play its part in the life of the community, it should be liberating and life- giving. It must give a basic meaning to personality and existence and equip us with the power to overcome spiritual inertia and foster spiritual sensitivity.'*

Dr. Radhakrishnana praises the role of the 'Teachers' for the creation of civilized society and in building a nation on strong footings of deep rooted universal knowledge, states that 'Teachers have a great deal to do with the shaping of the minds and heart so four youth. This is so obvious that it does

not need repetition, but in spite of much repetition we do not seem to have a real understanding of the place of the teacher in the present context. We speak of national integration, of peaceful approach to the problems that face us, but these cannot be realized by mere preaching. We have to be educated to a realization of it. We must check the spread of separatist activities. We should not lower the standards of rectitude. Teachers by their 'Achara' or conduct, should be an example to the students. Good conduct is produced only by a wise self-restraint. Nowhere does the superior mind disclose itself better than in self-restraint'.

On 22nd July 1962, addressing at the inauguration of new building of Sri Prasanna Gajanana Girls' High School, Hyderabad, Andhrapradesh, Dr. Radhakrishnan emphasizes on the importance of girls' education, women emancipation, gender equality, essence of education, etc., which are depicted in 'Purpose of Life' at page 185 as, *'Actually in our country, education, so far as girls' education is concerned, is not wide spread enough. So every institution which contributes to the education of girls is worthy of recognition and encouragement. But I am anxious that the kind of education that is imparted must not only be broad but should also be deep. We are lacking in depth. We may become learned and skilled, but if we do not have some kind of purpose in our life, our lives themselves become blind, blunder in gandbitter. The Gita says: Vyavasaya aaatmikaa buddhirekeha. For a truly cultured mind, there is a single- mindedness, a dedication to a single purpose. For the uncultured mind, the whole life is scattered in many directions, 'Bahushaakaa Hyanantaashcha'. Therefore, it is essential that the education which you acquire in these institutions should give you not merely learning and skill but endow you with a definite purpose in life. What that purpose is, you have to define for yourselves. It is said that 'Vidya' gives you 'Viveka', 'Vimarsha Rupini Vidya' gives you a sense of what is right and helps you to avoid what is wrong. You, must try therefore, to find out what is required of you in this generation. A purpose which held good centuries ago may not hold good today in view of the rapidly changing conditions of our country and of the world. So the purpose which you adopt in your life must be adapted to the relevant needs of the present generation, and I hope that this institution will give you that'.*

Bharata Ratna Sri M. Visveshwaraiah, Architect of Modern India

M. Visveshwaraiah is another noteworthy name in the field of Indian Education. He was a great Indian scholar who contributed to the field of water engineering and agricultural science respectively. He is known as a prolific engineer, dam builder, economist, statesman and one of India's foremost nation-builders. It is very interesting to know his views on education.

In his book 'Planned Economy for India' Chapter – 2, India and Advanced Nations, page – 13, make comparative analysis of India and with other countries with regard to education, he writes,

'Just as in the distribution of the population, only one-ninth is urban, so in point of education only one-twelfth of the total population is literate. Literacy was practically at a stand still during the past decade and ruralisation was increased. These are grave national defects, prejudicial to the efficiency and progress of the nation. No one, however, seems to realize that a radical change of policy in this respect is urgently called for. The aim of India within the next ten years should be to reduce illiteracy, as rapidly as possible, to increase the urban population to about 40% and to bring down the rural to 60% from the present proportions of 11 and 89, respectively.'

In another book 'Reconstructing India' Sri M. Vivesvaraya published by P.S. King & Son Ltd., Orchard House, Westminster, 1920, states that, he opines that the Indian mind needs to be familiarized with the *principles of modern progress, a universal impulse for inquiry and enterprise awakened and earnest thinking and effort promoted. By these and other means a new type of Indian citizenship–purposeful, progressive and self-respecting should be created and a self- reliant nationhood be developed.*

He points out that *'India must develop the idea of nationality and endeavor to organize and work out her national destiny along broad lines. Love of country should be encouraged, for India as a whole as well as for the provinces, the city, town or village of residence. By means of suitable propaganda, pride should be cultivated in all good and great things inherited from the past and enthusiasm to a high level of efficiency to raise the country from good to better as years go by. Love of fellow-men and pride in national leaders, both past and present, should be inculcated. The individual citizen must be made to*

understand that in helping his fellow-men he is doing good to himself, the country as a whole and to succeeding generations of his countrymen'.

M. Visveswaraya mentions that *'Now that a beginning is about to be made in responsible government in India, it is necessary that the standard of education should be such as to fit the people to exercise the powers and responsibilities of citizenship and to take full advantage of the social and economic opportunities which are opening before them'. In this regard, he suggests that 'India may advantageously follow in respect of education the example set by Japan.'*

He says, *'the university should, of course, aim particularly at developing leaders, governors, thinkers, administrators and directors for every branch of political, social commercial and industrial activities. Among the subjects taught should be medicine, architecture, civil, mechanical and electrical engineering, chemistry, mining and metallurgy, scientific agriculture, forestry, ship-building, economics, finance and statistics. The subjects which will give the best results for the country at present are commerce and mechanical engineering and technology.'*

Thus, Indian visionaries tried to pave way for an ideal Indian education system. Their speculations, observations and vast readings are clearly evident through their speeches and write ups. They understood that the young minds need proper nourishment which can be done through meticulous education system. They stressed on value education imparted to the generation. They emphasized on the spirit of nationalism which must be imbibed on the young minds through education pattern. Gurudev Rabindranath Tagore, Swami Vivekananda, Shri Aurobindo, Balgangadhar Tilak, Mahatma Gandhi, Sarvepalli Radhakrishnan had a dream for India which can exist on the world of reality through the transparent and empowered education system. If the nation adopts and implements the system proposed by them, then only Tagore's 'heaven of freedom' will be a reality.

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HIGHER EDUCATION AND SOCIO-ECONOMIC DEVELOPMENT

Education plays an important role in the socio-economic development of a country. Its major contribution is seen in the creation of human capital which indicates economic value of the abilities and qualities of labour that influence productivity. Education is the most empowering tool for an individual in particular and society in general. It supports to individual, social as well as economic development. Development activities require work force that is semi-skilled, skilled and specialized human resource. It is important to state that an evolved and broad-based higher education is indispensable to economic growth and development. It is for the development of the country as a whole.

There is a correlation between Higher Education and Human Resource development. Capacity building requires resources such as financial, material, natural, technology and the most important-human resources.

From the individual point of view, it facilitates all round development and competence among the youngsters for employability. From the economic point of view, it provides the economy to requisite qualified and skilled manpower for the various economic and social sectors. From the social point of view, education creates awareness for social realization among the people and helps to attain better standard for living. It is considered as a public good and is included in the concurrent list of Indian constitution.

IMPACT OF EDUCATION ON ECONOMY AND SOCIETY

Indian economy has emerged primarily from agrarian sector supported by the segments of industry and service. Although, historically it occupied a prestigious position, it did not have its target to get employment. It was because the population could manage with the farming as a source of income. The Educationists emphasised on intellectual aspects and values. The direct co-relation between higher education and human resource development is an area of research

for many years. Skill development, productivity and maximization of the potential of human resource development can be studied from different aspects.

Social Development comprises economic, sociological and psychological and spiritual aspects as well. It includes qualified human professionals or academicians who can mould the future generation. The recognition by the government also determines the priority given to Higher Education and thereby the extent of funding from government and non government organizations play a significant role. One important aspect in terms of social impact is the independent feeling generated among the youth in terms of capacity and competency building which create an independent, confident society. The desired outcome of education is in creation of resources, dissemination, innovation, research and social engagements will facilitate the development process of institution, students and the society in general

Economic forces are the major factor affecting all walks of life at the micro or at the macro level. Graph of population is increasing continuously. The World Bank estimates that by 2030, the population will reach 1.5 billion with an increase to about 1.67 billion by 2050. India is likely to add 273 million people between 2019 and 2050 according to the UN Report and will remain the most populous country till the end of the current century.

According to the Population Division of the UN Report of Economic and social Affairs Department, India's population is set to rise to 1.09 billion by 2100. Population growth will add additional challenges in front of the nation such as eradicating poverty, achieving greater equality, combating against hunger and malnutrition, strengthening the coverage and quality of health and educational system.

Life expectancy is seen increased from 64.2 years in 1990 to 72.6 years in 2019 and is expected to reach 77 years. Look at the impact on the country's social and economic aspects. All these factors affect the education sector in terms of providing adequate qualified manpower to meet the requirements as well as the changing needs.

A broad based higher education system is indispensable to economic growth and nation building. Capacity building in the national context presupposes the development of human potential. Our economy has emerged from being primarily agrarian to a growing industrial and service sector focus. Indian Education system historically occupied a prime position where students from foreign countries aspire to come for education. With the colonial rule, philosophy of education has changed from idealism to realism, socialism and pragmatism. Today, it aspires to be egalitarian and is affirmatively action oriented. From 1990 to 2010, Indian economy boasted of unprecedented growth. However, Indian Higher Education system and economy had to grapple with a plethora of politico-administrative and sociological issues. The earlier agrarian non-competitive economy has started its journey towards socialism and capitalism based on competition. Soon India started leaning towards Russia. Nehru decided to promote industrialization through central planning. Huge investments were made in Engineering and Technology. There was significant grant from the Central Government for Public Sector Units. These developments required specialized technical personnel and that is how Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs) and National Institute of Industrial Engineering (NITIES) were established. Earlier, Gandhiji wanted to promote rural activities based on Agriculture and Textiles to provide employment for the masses.

In 1970s and 80s there was a change in the socio-demographic policy adopted by the government. It had to adopt a protectionist policy. Higher education was not considered as an area of priority and the Central and state investments were not adequate. The stronger economies of East Asia and South East Asia were moving towards Western models of technical and professional education. Globalization was the buzz word for the emerging new world. Prime Minister Manmohan Singh(2005) foresaw the global trend for 21st century which was labelled as the Knowledge Century for India also. He started focusing on India's prospects for emerging as a knowledge economy. He stated that during the 21st century, the transformation for the country would be in terms of knowledge creation and knowledge transmission.

India has undertaken significant massive structural and systemic changes. After independence, India introduced a differentiated academic system with a three tiered academic structure comprising elite research Universities at the top, comprehensive Universities and specialized institutions in the middle and an array of highly accessible and high quality colleges at the bottom. The first tier caters exclusively to furthering India's intellectual capital, the other two focus on delivering economic and social value respectively. The top tier research universities are centers of excellence for creation of knowledge. These universities have broadened the scope of India's research capabilities to new interdisciplinary areas of scholarship which present great opportunities for creation of new knowledge and relevant to the new world. Besides educating a small section of the elite, these universities have emerged as the major contributor of the curriculum content for millions of students through the Massive Open Online courses. The second tier of industry-aligned professional education institutions has seen the greatest growth over the last two decades. It imparts knowledge and technical education on the one hand and broadbased critical thinking and problem solving skills on the other. It also inculcates leadership skills among the youngsters. The last cluster of broadbased highly accessible institutions is designed to expand the reach of higher education to all eligible and deserving students in the country. It plays a major role in promoting equity and access by creating significant regional and linguistic diversity and balanced gender profile. The country has reached a 50% GER while reducing disparity in GER across the states to 5%. Earlier, there was a great difference of GER between southern and Northern States.

Now, massive growth in the number of Higher Education Institutions in the country is seen. It is targeted at improving the enrollment in Higher Education for enhancing employability. Government expenditure on higher education has increased although still inadequate to meet the needs. Both central and state government have the responsibility to maintain quantity, quality, access and equity in the field of education. Public expenditure in education is an important policy instrument for realizing the education goals and for the development of the people. Public expenditure refers to the expenses incurred by the government for its own maintenance

and also for the sustainability and welfare of the society and the economy as a whole. Educational expenditure forms a major part of the total budget. However, the allocation is not enough according to the total needs. The different National policies enacted in 1986 and 1992 aimed at focusing on Higher Education in the context of social development.

A study done by Chakrabarti and Joglekar examined patterns and changes in the allocation of government funds for education for 15 states over a period of 20 years. They found that the real per capita income significantly enhances the educational expenses and there is a use and effect relationship between the two.

In the present knowledge economy, Higher Education is the focal point of knowledge and its application as Higher Education Institutions make a great contribution to creating employment and employable graduates. Thus, it contributes to economic growth and development through fostering innovation and increasing higher skills. That is the only way to improve the purchasing power and thus improve the quality of life and address the major economic, social and global challenge. Globally, Higher Education is considered as one of the key drivers of growth performance, prosperity and competitiveness. According to UNESCOR report, the social role of Higher Education provides the link between the intellectual and educational role of Universities on one hand and the development of the society on the other. Raising skills hold key to higher living standards and wellbeing. Investing in knowledge creation and enabling its diffusion is the key to create high-wage employment and enhance the productive growth.

ROLE OF HIGHER EDUCATION IN ECONOMIC DEVELOPMENT AND QUALITY WORKFORCE

Higher Education gives opportunities to succeed in current economy, since it is moving to a knowledge economy and innovation. Current universities should provide their students with various programmes aimed at preparing them for different economic sectors, helping them to stay and progress in the labour

market for long. It should offer programmes that will make a difference in service and labour market outcomes and keep pace with changes in the global economy and changes in the innovation process. Universities promote lifelong learning, which can offer opportunities to engage and attract professionals into training and professional development.

SUPPORTING BUSINESS AND INDUSTRY

Business has changed over the last decade, the dynamic processes take place in a range of contexts and landscapes. There are a lot of jobs today which did not exist several decades ago. Technology is changing the nature of work. Therefore, some jobs are disappearing. According to the 2017 Mc Kinsey Report, it is estimated that 49% of the time spent on work activities worldwide could be automated using existing technologies, requirements and skills have also changed. Higher Education Institutions assure the relevance of their knowledge, identify skill gaps, create special programme and build the right skills that can help countries improve economic prosperity and social cohesion, adapt work force development to the economy and changing demands for the new skills, developing relevant skills and achieve skill supply and thus support improvement in productivity and growth.

RESEARCH AND PROMOTING TECHNOLOGY

Higher Education is a Technology and Innovation driver. It should be one of the missions of modern universities to contribute to economy along with the other social outcome such as health and social engagement. Generally, technological innovations should be resulted in new products and should offer advanced technology for use. Knowledge is the basis of higher education. Its production via research and transmission to students via teaching and mentoring will have a multiplier effect.

However, the quality and excellence must remain the prime objective of any institution of Higher Education including Universities and Colleges. Therefore, the focus should be on resources of quality

education, encouraging students and taking account of student's profiles and specific needs, strengthening teacher training and exposure to the best working practices and creating conditions to attract the most experienced and qualified teachers.

This will create a better society and better world. This can be achieved through the training of the first class minds through advances in science and technology and encouraging by interaction in learning. To realize its full potential, higher education has to maintain a proactive stand, should be a bedrock upon which new roads can be laid for growth

CONCLUSION

Higher Education and socio-economic development has assumed unprecedented prominence in our discussions. Socio-economic development is the process of social and economic development in a society. Socio-economic development is measured with indicators such as Gross Domestic Product (GDP), life expectancy, literacy and levels of employment. Higher education should contribute constructively to the society and economy. In this process the gaps should be identified and rectified. The major challenges in Higher Education in India are in the areas of teacher quality, finance, privatization, reservation system, gaps in supply and demand of educational resources. Mushrooming of low quality institutions should be controlled. The edifice of nation rests on the foundation of edcuation. Hence, let this foundation be strong through constructive policies and practices.

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HIGHER EDUCATION THROUGH OPEN AND DISTANCE LEARNING

Distance learning is the process of transferring knowledge to learners (students) who are separated from instructor (teacher) by time and/or physical distance making use of technological components. The mission aims to include greater dimension of openness and flexibility in the process of education, whether in terms of access, curriculum or other elements of structure. The provision of higher education through open and distance learning is recognized as an effective step towards the democratization of education. It is also an important contribution to the development of higher education, notably in its modernization and diversification, encouraging the search for alternative delivery systems, including ways of updating knowledge and of providing advanced training so that institutions of higher education may serve as centres of lifelong learning permanently accessible to all.

Higher education plays a pivotal role in bringing socio-economic movement, tranquility, progress, and multidimensional advancement of human resources in the society, particularly by encouraging the erudite population to contribute towards the same. As a result, the educational sources must embark on the sense of duty to teach necessity-based higher learning that makes people knowledgeable with a particular skill set for solving challenging issues in the society. Hence, in higher education there is a pressing necessity to address few basic issues like requirement of varied educational institutional setups in time with the population ratio, changing global scenario, equal access to learning for all, industrial as well as educational research innovations, use of educational technology in partnership with industrial sector, fund allocation for expansion focusing on higher learning and many more (*Bordoloi, 2018*).

While taking into account of Higher Education in India, distance education itself is a venture. It is apt to note that higher education is not a standing stone. It is made up of many diverse and independent institutions operating to endorse and support internal institutional self-interest to serve broader population of the society, for wide

range of learners with diverging needs, assets, and abilities. From these various perspectives, problems and opportunities require quite different actions and involvements which can bring in unique outcomes across different groups of institutions, students, and faculty. Nonetheless, all the different types of institutions share a certain core principles and aspects acquired form their existence and experience that are common.

To meet challenges of admittance and fairness in higher education for large sections of the society, specifically for the deprived groups like those living in far-flung and rural parts comprising of working individuals, homemakers and others who wish to gain knowledge through education a peculiar strategy needs to be planned. Educational institutions and government divisions looking for an alternative system of education that can provide access to understand the information and a result in degree for an acknowledgement such as traditional system of education (*Kundu, 2014*).

Gross Enrolment Ratio **(**GER) is statistical measure for determining number of students enrolled in undergraduate, postgraduate and research-level studies within country and noted the findings in terms of the population. India is aiming to attain GER of 30% by 2020, but it is still far behind countries like China with GER of 43.39% and US with 85.8%. India registered its best performance on the Gender Parity Index (GPI) in last seven years 0.94 in 2016-17 from 0.86 in 2010-11. GPI is calculated as quotient of number of females by number of males enrolled. GPI equal to 1 indicates equality 1, less than 1 indicates disparity. In seven states like Goa, Himachal Pradesh, Meghalaya, J&K, Nagaland, Sikkim and Kerala women in higher education have outnumbered men. Looking at the college densities, States of southern India have higher college density. It is defined as number of colleges per lakh eligible population. Top Three states/UTs like Puducherry (49), Telangana (59) and Karnataka (53) exceed in college density index where as Bihar (7 colleges/1lakh population), Jharkhand (8) and West Bengal (11), are at the bottom in terms of college density. Number of foreign students also have not been much improved in the internationalisation of education in the country. There is marginal improvement in number of foreign students 47,575

in 2016-17 from 45,424 in 2015-16 with 31,779 men and 15,796 women. The highest share comes from the neighboring countries of Nepal (23.6%), Afghanistan (9.3%) and Bhutan (4.8%).

Besides, Gross Enrolment Ratio (GER) or Gross Enrolment Index (GEI). The number of degree holders from colleges or universities is less as compared to the total youth population who live in the country. India shares a common uniqueness in terms of having the largest population encompassing wider geographical areas and rising economies with a faster growth rate with China. The proportion of students pursuing higher education in India have not increased dramatically from 2015-16 to 2016-17. It was in range of 23% to 25% since 2013-14. Tamil Nadu has highest GER in India at 46.9%. Six states have registered GER higher than national average (25.2%), with their share of students entering higher education. This growth is twice to the overall rate. These are Tamil Nadu (46.9%), Himachal Pradesh (36.7%), Kerala (34.2%), Andhra Pradesh (32.4%), Haryana (29%) and Punjab (28.6%). However, eight states like UP (24.9%), Madhya Pradesh (20%), Odisha (21%), Bihar (14.4%), Gujarat (20.2%), Rajasthan (20.5%), Mizoram (24.5%) and West Bengal (18.5%) had GER ratio far less than the national average. Bihar has lowest GER with just 14.4% of its eligible population (in age group of 18 to 23 years) pursuing higher education.(*Gaba, 2015*)

By overcoming all the challenges in the field of higher education, the society will reach to its peak of constructive and productive approach which will attain peace, progress and contentment. One of the viable ways to transform the country like India is Open and Distance Learning (ODL) system. This chapter seeks to discuss how the institutions of Open and Distance Learning (ODL) in India would play an imperative role to deliver the required human resource development in cooperation with promotion of knowledge and skill-based education. It also aims at shielding them against all antisocial activities that would actually help in empowering and transforming the society. To analyse the topic in detail descriptive research methodology has been employed which is based on the data extracted from secondary sources of information. The secondary

sources used her are Report of Census, India Human Development Report, Human Development Report, AISHE, etc.

GENESIS OF ODL STRUCTURE IN INDIA

In India, the University of Delhi established the School of Correspondence Courses in 1962 for the first rime as a pilot scheme. Next, Punjabi University, Patiala put up a Directorate of Correspondence Courses in 1968 and enrolled many students under various programs. Open University establishment in the UK in the year 1969 encouraged Indian Policy Makers to strengthen correspondence education by an Open University system in the country to provide quality education with easy access to those who couldn't continue their education due to some reason or another. Presentably there is one National Open University, 13 State Open Universities and 194 Distance Education Institutions/ Directorates of Distance Education in the country.

GROWTH AND DEVELOPMENT OF DISTANCE EDUCATION IN INDIA: POLICY PERSPECTIVES

In 1974 Eight-member working group on the proposed Open University was constituted by Government of India. At the same time, several other universities also founded the Directorates of Correspondence Courses at their respective institutions. The first open university in India was established in one of the Southern state Andhra Pradesh as 'Andhra Pradesh Open University' in 1982. In that same year, International Council of Distance Education (ICDE) was formed by renaming the International Council of Correspondence Education (ICCE), to recogniz 'distance education' as a non-conventional education system across the world. Later, Andhra Pradesh University Open University was renamed as Dr. B. R. Ambedkar Open University.

In order to comply with the continuous rise in demand of correspondence programs, Government of India made a very first policy statement for establishment of the Open University in the Country. In August 1958, the Government of India introduced a Bill in the Parliament and it was passed by both the Houses. An

Act to establish and incorporate an Open University at the national level for the introduction and promotion of open and distance education systems in the educational pattern of the country and for the coordination and determination of standards in such systems. It was named after the late Prime Minister of the country Mrs. Indira Gandhi as Indira Gandhi National Open University (IGNOU). The idea of having institutions imparting open distance learning was accepted by many states and 1987 witnessed the emergence of two more Open Universities, namely, Nalanda Open University (NOU) Patna, Bihar and Vardhman Mahaveer Open University (VMOU), Kota, Rajasthan. Subsequently, Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik, Maharashtra was established in 1989.

Data shows that approximately 4 million students are enrolled in more than 226 programmes in these universities. At present, as per AISHE (2021) report, there are 110 Dual-Mode Universities operational in the country. Tamil Nadu state stands first with a total of 16 Dual-Mode Universities in India recognized by University Grants Commission (UGC). Up to 2012, IGNOU played dual role as an apex body through Distance Education Council (DEC) established in 1991 under section 5(2) of IGNOU Act passed by the Parliament. DEC was responsible for promotion, coordination, and maintenance of standards of ODL system in the country also extended funding support to ODL institutions for the infrastructure development, educational materials, learner support systems and use of ICT in various institutional endeavors.

It also facilitated recognition of ODL (Open and Distance Learning) institutions and programmes through apex bodies such as UGC, Ministry of Human Resource Development (MHRD), the National Assessment and Accreditation Council (NAAC), the All India Council of Technical Education (AICTE), and the National Council of Teacher Education (NCTE). Considering the report submitted by the Madhava Menon Committee and its recommendations for the creation of a new regulatory body for ODL system the Ministry of Human Resource Development (MHRD) established the Distance Education Council of India (DECI). The Madhava Menon Committee

also decided that as an interim measure, the DEC of IGNOU may be shifted to UGC. Since then, Distance Education Policy in the country recognizes ODL institutions for the purposes of grant of permission to institutions for Distance Education programmes.

The Union Cabinet passed the New National Education Policy 2020. The policy also sets targets over the next 10 years increasing the GER to 50% from the current 25.8%, through creating an additional 35 million seats in colleges, and increasing the education budget to 6% of the Gross Domestic Product (GDP) from the present 4% education budget. To accomplish this target Govt. of India is considering to recommend primary education in local languages, facilitating the possible entry of foreign universities in India, creating a single higher-education regulator, and easier board examinations wide-ranging reforms are aimed at making the Indian education system more contemporary, skill-oriented and ODL system as alternative model with special emphasis from the 10 years Plan.

The NEP has highlighted the significance of ODL by stating ODL programs could be offered by all types of institutions, provided they must be accredited to do so. The aim is to material is the goal of 50% GER. There has been a persistent concern to increase access to higher education since Independence. Achieving the goal of 50% GER will be a good objective to cover. It may not be difficult to achieve if general face to face teaching is coupled with ODL. The NEP has also underscored the value of public-spirited private institutions with commitment to high quality education. Promotion of private enterprise in higher education, to support the efforts of the government, is perhaps the need of the hour.

SCOPE OF ODL

ODL is the only system that can reach the doorstep of every section of the society irrespective of class, creed, gender, race, and geographic location. Open and distance learning systems can usually be described as made up of a range of components such as: the mission or goal of a particular system, programmes and curricula, teaching/learning strategies and techniques, learning material and resources, communication and interaction, support and delivery systems,

students, tutors, staff and other experts, management, housing and equipment, and evaluation.

The key characteristic features which make the ODL system a game changer to achieve the target of 50% GER are presented here.

Increased Flexibility, Choice and Cost Effectiveness

The ODL system has also laid emphasis on increased flexibility and choice of subjects to study particularly at higher education level and modalities like inexpensive, timing, opting place, pace, no age bar, admission criteria etc. Learners who have not been able to continue their education through the traditional system or due to any reason will get opportunities to chase and accomplish their dreams. Working class can also access distance learning for enhancing their career outlook for the better future. Flexibility to enter in desired academic programs makes the ODL system learners friendly. There is a large array of choice for the learners who go for distance education. In distance education learners are free from stress and tension of attending full-time classes. They can avail the facility like learn while earning. Here learners are free to choose the programs according their interest. The Usage of satellite, digital library/e-books/journals facilities, audio-visual system in teaching learning process help the learner to study and understand their course materials in their respective space and place. For better understanding of the materials, learners can attend Personal Contact Program (PCP) in the nearby study centre during weekends/holidays or attend the class through online mode. It entails that students will be equipped with analytical and decision-making skills to make choice of subjects.

Both for public and private institutes expenditure is very high for higher education in the conventional system. Considerable amount of money can be saved by the learners by opting for Education through distance mode removing the cost of shipping and high-valued paper back textbooks (*Oblinger, 2000 and worldwidelearn.com*). As the teaching learning process in this system adopts multimedia approach, learners can avail digital study materials for a reduced price. Radio and television programmes also help them to take classes at their own

places. Apart from these benefits the system also permits learners dual knowledge of learning while earning. As per the analysis done in IGNOU in 2003 reveals, that open and learning system is cost effective compared to traditional face to face (F2F) classroom system of teaching and has the advantage of economies of scale (*Gaba, 2003*). However, studies on costing in open and distance education in India, especially, the costing of audio/video/information technology, are yet in its infancy. Under the present pandemic situation use of ICT tool to deliver necessary study material has become the need of the hour. It is, therefore, worthwhile to point out certain priority areas for undertaking studies through distance mode. Increased flexibility wide choice of subject and cost effectiveness will definitely prove distance education as a tool to get sucess for the working young generation cost effectiveness.

Learning Satisfaction, Equal Access, Dual Degree

Unlike traditional system, students' ODL system attend traditional offline classes in the study centers and attend online session individually without any disturbance from others. Students review their lessons more than once and solve the problems. Students can also manipulate the coursework to fit their learning by focusing more on the topics which they lack knowledge (*Kirtman, 2009*). This will help students to build self-confidence and obtain greater satisfaction through distance learning experiences.

A survey proved that this method of learning technique is very much fruitful to the students who have enrolled for health care or mental health distance learning programs. In the traditional system only students of a particular age group can enroll ODL crosses the age bar and provides equal opportunity to all. Traditional system offers to few limited seats SC, ST and Physically Challenged students. Still, it is very difficult for Trans-Genders to take education in the conventional system. Prison inmates are unable to obtain any degree through conventional system. Distance education will provide equal access irrespective of socioeconomic status, gender, race, age, or of the learners. Students studying in conventional education system can also concurrently enroll for a degree of the same level in Open University.

In such case credit transfer will be given due consideration through a MOU between Open University and the respective Conventional University.

Migration Problem and Assignment Marks

Students usually face many problems while applying for programs in different universities in different states or districts with respect to migration certificate. Whereas students who take admission for master's degree in Open University do not need any migration from previous university where he/she obtained bachelor's degree earlier[9]. This is an added advantage to the learners who want to carry forward their educational endeavour in reported universities who offer distance learning. Apart from contact session or PCP there is also a provision of assignment in ODL system.

Students are asked to collect question papers from study centers or directly from home page of the respective Open University. They will be submitting the answer scripts in a limited time frame to the University. This would be evaluated by subject expert and will be returned to the learners to verify their errors. Model of 80/20 will be followed. 20% will be based on assignment and 80% assessment will be done through Term-End-Examination The total score will help the distance learners to secure minimum passing score.

CONSTRAINTS IN ODL SYSTEM

Since 1980, Open and Distance Learning educational methodology has been extensively used in India. Now it is evident that Open University Education in India is playing a vital role in respect of huge number of enrolled students in higher education from disadvantaged group of the society. However, the question is the quality of students completing higher education with adequate quality is not satisfactory (*Kirtman, 2009*). This is because of dilution of curriculum to fit to the time line of the program and no contact class or personal contact programs along with the amount of knowledge gained by the learners. The learner will concentration not only on learning but also on the earning or any other focal points. This may not give justice to the desired goal.

Lack of Technical Skills and Vast Curriculum

The biggest challenge with ODL is to address the issue of perceived notion of its disputed equivalence with the formal system. But too much of dependence on ODL to increase GER will not lead to any further dilution of standards. To improve the quality outcome of the ODL, Govt. has changed education policy time to time. Now new NEP 2020 aims of 50% GER in next 10 years. However, simultaneous improvement in quality and quantity will not be possible unless we consider the following real problems before implementing any education policy/technique (*Stanton, 2001*). With the advancement in technology for communication and adoption of same by ODL system could make a huge difference soon. Students particularly from rural areas choose ODL without any proper training of the utilization of the tools provided by the university. These learners, due to lack of understanding of the technology skills, due to frustration and insecurity become unsuccessful in their carrier or dropout form the porgram (*Daniel, 2005*). Online courses are normally not confined to the conventional mode of dissemination of knowledge. It is always fill with wide spread look out of the curriculum. Consequently, the traditional education approach could not be applied here. Both teachers and learners face problems in providing the content confined to the level and requirements respectively.

Lack of Infrastructure, Counselors, Communication Skill

Distance learning program is in existence for long. There are lacunas in support centers like no sufficient infrastructure and learning environment like conventional mode of education. And so, instructors are confronting serious problems in organizing and planning distance learning programmes, especially for new programs and courses offered in the study centers. Though the scarcity of counselors at the study centers are being taken care near the doorsteps of learners. The unavailability of skilled and knowledgeable counselors is also observer concern. This directly impacts on the learners' ability to succeed and contribute to the nation development (*Daniel and Kanwar, 2006*). Another important handicap for the development of the quality outcome of the Distance learners is learners do not get opportunity

to interact with their classmates and with the professors as seen in traditional system on regular basis. Hence their oral communication and presentation skills do not match up the mark and expectations of the potential employers.

Hidden Cost and Unavailability of Desired Programmes

Once the ODL will completely been implemented through on line mode, students need to be trained to make use technology incorporated in the learning module. For this they must have their own or rented computer and an internet connection with considerable speed. Yet Again, if they need a printed version of any study materials it should be downloaded from website and printed which needs extra money to be invested. Proper time management to attend live video program and when contact classes are not held nearby or ambiguous then learners will have to go for private coaching by paying some extra money. On the other hand, if all these shortfalls are addressed there will be a difficulty in running practical based subjects under ODL as it requires permanent laboratory set up. There are courses like nursing, clinical which are not available through distance learning because such courses require conventional teaching and hands on training for learners. This paucity of facility makes ODL a challenge for the learners and facilitators.

INCREASING STUDENTS PRODUCTIVITY

It is very clear that the target of enhancing the gross enrolment ratio in higher education from present 25.8% to 50% by next 10 years will be fulfilled easily if applied and carried with at most attention towards a few things. To do so following may be considered (*Bradley and Yates, 2000*, *Daniel, 1997 and Communities, 1991*).

- To manage technology impediments, distance learners must have training on each tool that will be used throughout the program in advance. This can be done by incorporating a proactive policy for the management of technology barriers in school level.

- The results of the research at Washington State Community College students showed that in distance learning students tended to drop out more frequently than their traditional counterparts due to difficulties in language and time management. This problem may occur in India. Most of the learners prefer to study through their mother tongue. To solve this problem, we can open at least one State Open University in every State and Territory that will enable them to offer education in regional language.
- All the CCIs and private initiatives can be converted into study centers of the respective State Open Universities (SOU).
- To maintain standard and equivalent syllabus at all-India level IGNOU may play the following roles –
    - Can arrange training schedule for course writer, Coordinator, Counsellors, and others which are related to the Distance Learning system.
    - Can set up a resource center like studio for video/audio production.
    - Can set up a regional library with a rich collection of books and periodicals on distance education.
    - Can prepare teaching material for some of the innovative programs them available in regional language through translations.
    - Although negligible yet there are some employers/ institutions who do not acknowledge distance learning degree. This problem could be solved by discussion between employers and distance learning institutions in presence of IGNOU before creating curriculum.
    - Distance learners generally study alone and miss social physical interaction. This may hamper the learner's overall personality development. The learners also do not get the opportunity to participate in extracurricular activities like NSS, NCC etc. Video conference, e-mail, chats etc.

are not adequate to give holistic approach. In this case we can integrate such supplementary programs like National Service Scheme (NSS), National Cadets Corps (NCC) in Innovation in Open and Distance Learning (ODL) so that learners and counsellors can gather at least once during a month to their close proximity of the study centre and mixed with the other students and community.

- To encourage economically inadequate section of the society we may think for fee concession (half-free or full-free) or help them in the form of stipend / scholarship based on their first semester result.
- In a survey on UK made by Werry it reveals that every respectable person of the society admits that the students of ODL system are as good as traditional learners. There are still some people who believe that face-to-face interaction as we have from the *Gurukul* system can only produce better scholars. Werry did not sort out any answer to the problem but wrote that it is an a mindset problem, and this will go with time.

CONCEPT AND CONTRIBUTIONS

In open and distance learning most of the courses and programmes are designed for and targeted for the adult population. In developing countries in distance education for conventional degree equivalency is an important way of expanding educational opportunities to the adult population. Teacher training is a vital area where open and distance learning has made a major contribution. This contains initial training for formal qualifications, in-service supplementary training for formal upgrading, and in-service training in particular subjects. Many instances, particularly from developing countries, show that teacher training at a distance may reach large groups of teachers and have a profound impact upon the development of national education systems. The use of open and distance learning for teacher education is therefore key strategy when expansion or improvement in quality is needed in the public education system[16].

A common need in many countries is to upgrade teachers' knowledge and competence in utilizing new ICTs tools and modules, the rich instructional and information resources that are available on the Web. In such cases it is also very appropriate to use the new tools in the training curriculum for teachers. Both private and public service providers of ICT tools for education have made a significant contribution to the development of industry and trade through programmes for vocational and technical training. Underlying aims and objectives include being able to react flexibly to the necessity for the working adults to get the training, and to give opportunities for those most disadvantaged by the current provision (*Ding, 1994*).

Non-formal education meant for socio-economic progress represent other areas where open and distance learning is increasingly used. Programmes at a distance often accomplish substantial numbers of women. Till today in many places in societies women lack equal opportunities for participation in the conventional forms of education and training. Open and distance learning approaches lend themselves to the teaching of many of the complicated topics of the contemporary world, in which the contribution from a variety of fields is essential. Distance education at the higher education level shows another two-fold growth pattern (*Miller, 1993*). On one hand, numerous single mode open universities have sprung up to absorb large numbers of new students. On the other, expanding numbers of traditional universities have started to provide their programmes also through distance education. The rigorous development field of technology of communication has strengthened this inclination.

Open and distance learning has all the possibilities to create new patterns of modern-day pedagogy. Closely associated with developments in the information and communication technologies, it is close to the development of new learning requirements and new forms of access to the information and implementation. It is evident that it can lead to revolution in mainstream education and might prove effective beyond the realm of education itself. Open and distance learning therefore is playing an especially a crucial role in the creation of the international knowledge-centered society (*Mills and Taits, 1996*).

UNESCO'S INITIATIVES IN OPEN AND DISTANCE LEARNING

UNESCOs initiatives in open and distance learning are based on its overall priority to ensure the right to education for all. While the use of distance education was given early support by the Organization, new developments in information and communication technologies, particularly the use of the Internet and the World Wide Web have radically increased the demand for lifelong education but also provided new means to meet the demand. Facing the educational challenges of the 21st century, UNESCO continues, through its support of open and distance learning, to contribute to the construction of knowledge societies in a lifelong learning context (*UNESCO, 1985-2002b*).

- **Setting theInternational Context:** Open and distance education from the lifelong learning perspective, based on the four pillars of learning to know, learning to do, learning to be, and learning to live together
- **Basic Education for All:** To the benefit of those who are deprived of basic learning skills, making use of untapped information sources and media channels, written press, community radio, television, libraries, multimedia channels are provided to increase the outreach of basic education programmes.
- **Adult Education:** encourages and promotes the establishment of open and distance learning institutes and, programmes, including those of open universities, with a view to give new opportunities for further studies for adults who were initially deprived of them, or for those who for some reason, did not make use of them.
- **Renewing and Diversifying Education Systems:** By supporting use of open and distance learning to meet the special needs of the disabled, migrants, cultural and linguistic minorities and others who cannot be efficiently reached by traditional delivery systems.
- **Teacher Training:** To strengthen teacher education, notably in-service teacher training, but also the training of trainers, UNESCO encourages and assists to make wider use of open and

distance learning techniques including new technologies such as pen drives, CDs, interactive multimedia systems, television and radio satellite broadcasting, computer networks, mobile applications and others.

- **Higher Education:** Since lifelong education for all will be one of the essential keys in the building of knowledge societies and having regard to the new possibilities open to distance education, the universities need to redefine their role, missions, profile and functioning in the 21st century.
- **Capacity-building for Open and Distance Learning:** Within the framework of its policies, priorities and programmes UNESCO contributes to the development of capacity building in open and distance learning among other things by generating public interest in its use, sensitizing policy and decision-makers to its potential, assisting in drafting respective policies supporting the establishment of delivery systems, institutes and programmes, improving their management administration and student support systems material and course production and the training of personnel.
- **International Co-operation:** UNESCOs role in international co-operation for open and distance learning is a part of its overall policy to face the challenges of the knowledge society, consists of both intellectual co-operation and technical assistance.

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REGULATORY AND ACCREDITATION BODIES IN INDIA

Higher education in India refers to the study programmes that are provided beyond secondary education. As in the other countries, India too has a university component as well as a non-university component. The universities offer courses at the undergraduate, postgraduate, and doctoral levels and are authorized to award degrees. The non-university higher education institutions in India offer diplomas and certificates. India follows a pattern of three years for the first bachelor's degree and two years of additional studies to acquire a master's degree in general subjects from the university. Nevertheless, four years of study are followed for the undergraduate degree in professional and technical education. The research degree, particularly Ph. D, take four to five years of studies after the award of a Master's degree by the university. With the implementation of the National Education Policy—2020 major structural changes are expected in near future.

Depending on management and funding agency, there are five types of degree-granting institutions in India, viz. Central Universities, State Universities, Deemed Universities, Private Universities, and Institutes of National Importance. Central universities are established through an Act in Parliament and are funded by the Union Government. Older universities have been established through individual acts such as Delhi University Act, Madras University Act, etc. In 2009, the Central Government established a number of universities together through the Central Universities Act. State universities, both public and private are established through an Act in the State Legislature. Public state universities receive funding from the respective State Governments and partially from the Central Government.

Deemed Universities are high-performing specialized institutions given the status of a university by the Ministry of Education on the recommendation of UGC. Deemed universities can have either government or private management. There are two types of institutions which are granted the status of deemed-to-be-universities

– the general category institutions and de-novo category institutions. The general applies to institutions with 15 years of standing and evidence of excellent academics and research. The De-novo route is adopted by new institutions that are subjected to comply with more stringent entry barriers in terms of infrastructural and academic requirements. Jurisdiction of the deemed university is throughout the country and even overseas.

Institutes of National Importance are institutes which are accorded the power to grant degrees because of their strategic and economic importance to the country. These include institutes such as IITs, AIIMS and NITs. These institutes have been established at both the Central and State level. Based on this, there are only two types of universities that can be under private management: Deemed and Private Universities.

Private Universities are established by Private Players. There are three routes for private players to set up an institute of higher education in India: A private university in a state through the State Legislation. Only 20 states have passed the required legislation facilitating the setup of a private university, with some states like Haryana having an umbrella Act for all private universities and others like Uttar Pradesh requiring a separate Act for each university. In addition, there are some states like Rajasthan that have both – an umbrella Act as well as a separate Act for each university.

Colleges are of two types, affiliated colleges and constituent colleges. Colleges are set up both by the Government as well as private management but only Government universities can affiliate colleges with them. Each university has its own set of distinct rules for granting affiliation, nevertheless, the process of doing so is fairly similar among all universities. Private colleges cannot start admission without first seeking affiliation. Different professional regulatory bodies such as the All India Council for Technical Education (AICTE), Bar Council India (BCI), etc., among others, manage different professional courses.

Evolution of Regulatory System in Indian Higher Education

Education in India, in accordance with the Constitution, was an issue taken care of by the state till 1976. In 1976, education was

moved to the concurrent list making it a collective responsibility of the Central and State governments. Thereafter, the higher education sector needed regulation to ensure planned and synchronized development, quality, equity, and social justice and to avoid biased practices. The areas which involve closer examination and regulation are granting consent to open an institution, intake of students, introducing courses, monitoring its total performance including matters related to management and leadership, and levels of student learning.

The historical record of the regulation of higher education in India began prior to Independence. In 1921, the government established the Central Advisory Board of Education (CABE) to create consensus amongst provincial governments on policy matters in education. The first regulatory body in higher education in India was, possibly, the Medical Council of India (MCI), which was founded in 1934. MCI had the authority to lay down rules and standards, and recognize or derecognize courses and institutions. (In 2020, Medical Council of India was replaced by National Medical Commission). After Independence, the government perhaps needed such a body for the higher education sector as a whole and it proposed the setting up of a Central Council of University Education.

Subsequently, the recommendations of the Higher Education Commission (Radhakrishnan Commission 1948) and successive debates led to the formation of the University Grants Commission and its aided shift of the regulatory authority to the Central government. Centralized regulation is also in accordance with the strategy of economic development implemented by the country in accordance with which higher education is anticipated to produce and supply highly qualified personnel to the production sectors of the economy.

The University Grants Commission (UGC) has been set up as a statutory body through the parliament for coordination and determination of standards in universities in 1956. The main mandate of UGC is determining and maintaining standards of teaching, examination and research in universities and framing regulations on minimum standards of education. It also has the

responsibility of monitoring developments in the field of collegiate and university education; disbursing grants to the universities and colleges. As a supplement to this, the National Assessment and Accreditation Council (NAAC) had been established in 1994 to make improvements in the quality of education in higher educational institutes in India[8]. In addition to this, the National Board of Accreditation (NBA) was founded in the year 1994 by AICTE to carry out the assessment procedures associated with the provision of quality education in technical institutes in India. The NBA helped in providing a balanced educational experience to the students by making emphasis on the academic as well as the professional needs of the students.

It seems that the Radhakrishnan Commission favoured a stance of less intrusion from the government and more autonomy for universities. It emphasized on the legislative framework meant for the universities to operate and a powerful governing body with external members, thereby leaving the universities. This view might have inspired the creation of the body like the UGC which relies more on persuasion than on mandates and compulsion. Universities were meant to be self-regulating entities, expected to voluntarily adhere to standards determined in accordance with the regulatory bodies.

The Current Regulatory Framework in India

The current regulatory framework of higher education in India is multi-layered. The main regulator is the Ministry of Education. The University Grants Commission (UGC) acts as the over-arching regulatory body. In addition, professional councils like the Bar Council of India (BCI) and AICTE are responsible for the recognition of courses, promotion of professional institutions and providing grants to undergraduate programmes and various awards. In India, most of the colleges are affiliated and so the universities constitute the next layer of regulators for these affiliated colleges. At the last layer of delivery i.e., the classroom, all these layers of regulations operate. There are significant entry, operation, and exit barriers at each level, and studying the regulatory environment at each of these levels will provide the complete picture.

The University Grants Commission (UGC) as a statutory body of the Government of India, apart from providing funds/ grants to universities and colleges plays a significant role in regulation of higher education in India. It:

- serves as a vital link between central and state governments as well as higher education institutions and advises them on measures that need to be taken to improve university education in India. For instance, providing recommendations on setting up a new university or expansion of an existing university.
- frames regulations to maintain the minimum standard of higher education in India.
- maintains the standard of teaching, exams, and research in universities.
- promotes university education.

UGC performs all the tasks from its headquarters located in New Delhi. To ensure effective regional coverage of the commission's endeavours, UGC has six offices located in cities such as Bangalore, Bhopal, Guwahati, Hyderabad, Kolkata, and Pune.

Each university in India needs to get recognition from UGC before it starts granting degrees to students. In order to be UGC recognised, each university needs to undergo an inspection by an expert panel designated by the commission. A varsity gets the status of a "UGC recognised university" only when it satisfies the expert panel in terms of different parameters such as faculty and staff, curriculum, infrastructure, as well as policies and procedures.

Professional Councils

Professional Councils offer grants to undergraduate programmes (offered at various colleges/ universities), promote professional institutions and provide recognition to different courses. The prominent professional councils along with these roles are presented here are:

All India Council of Technical Education (AICTE): Established under the AICTE Act, 1987, the council is responsible for the development of technical education in India. Broad roles of AICTE include:

- To coordinate the development of technical education in India at all levels.
- To lay down standards for courses, examinations, assessments, staff qualification and pattern, instructional facilities, etc.
- To give approvals for starting new technical institutions and courses.

National Medical Commission (NMC)

The National Medical Commission (NMC) has been constituted by an act of Parliament known as the National Medical Commission Act, 2019 which came into force on 25.9.2020 by gazette notification dated 24.9.2020 replacing the Medical Council of India constituted under section 3A of the Indian Medical Council Act, 1956. The broad role of the National Medical Commission is to:

i. lay down policies for maintaining high quality and high standards in medical education and make necessary regulations on this behalf;

ii. lay down policies for regulating medical institutions, medical researchers and medical professionals and make necessary regulations on this behalf;

iii. assess the requirements in healthcare, including human resources for health and healthcare infrastructure and develop a road map for meeting such requirements;

iv. promote, co-ordinate and frame guidelines and lay down policies by making necessary regulations for the proper functioning of the Commission, the Autonomous Boards and the State Medical Councils;

v. ensure coordination among the Autonomous Boards;

vi. take such measures, as may be necessary, to ensure compliance by the State Medical Councils of the guidelines framed and regulations made under this Act for their effective functioning under this Act;

vii. exercise appellate jurisdiction with respect to the decisions of the Autonomous Boards;

vii. lay down policies and codes to ensure observance of professional ethics in the medical profession and to promote ethical conduct during the provision of care by medical practitioners;

Indian Council for Agricultural Research

Indian Council of Agricultural Research (ICAR) has been established with the aim to meet the agricultural research and education needs of India. Broad roles of ICAR include:

- To set up agricultural universities in the country.
- To provide funding to universities.

As per UGC, currently, the council provides funding to about 30 state agricultural universities, one central university, and numerous deemed universities. "These universities employ about 26,000 scientists for teaching, research and extension education; of these over 6,000 scientists are employed in the ICAR supported coordinated projects," states the official website of UGC.

National Council for Teacher Education (NCTE)

National Council for Teacher Education (NCTE) has been set up under the National Council for Teacher Education Act, 1993 to facilitate the planned development of the teacher education system in India. Broad roles of NCTE include:

- To monitor the development of teacher education in India.
- To grant recognition to institutes offering courses/ training in teacher education.
- To lay down standards regarding exams that lead to teacher education qualifications.

- To lay down guidelines regarding the minimum qualification that a person should have to be employed as a teacher.

Dental Council of India (DCI)

Constituted under the Dentists Act, 1948, the Dental Council of India (DCI) regulates dental education and profession in the country. Broad roles of DCI include:

- To grant recognition to a degree awarded by different universities in dental courses.
- To maintain standards of dental education in India.
- To prescribe syllabus and scheme of exams.
- To lay down minimum requirements regarding infrastructure and staff.

Pharmacy Council of India (PCI)

Also known as Central Council, PCI was established under section 3 of the Pharmacy Act, 1948. The Council aims at regulating pharmacy education and profession in India up to graduation level. Broad roles of PCI include:

- To prescribe standards for pharmacy education in India for qualification as a pharmacist.
- To provide equipment and facilities to students pursuing a course in pharmacy.
- To maintain standard of examination and prescribe syllabus.
- To prescribe any other conditions regarding admission in a Pharmacy course.

Indian Nursing Council (INC)

Constituted under the Indian Nursing Council Act, 1947, INC is a regulatory body responsible for the development of nurse education in the country. Major roles of INC include:

- To maintain a uniform standard of training for Nurses, Health Visitors, Midwives, and Auxiliary Nurse-Midwives.

- To prescribe courses for the training of nurses.
- To prescribe conditions for admission in different nursing courses.
- To prescribe the standard of examination.

Bar Council of India (BCI)

Established under the Advocates Act 1961, the statutory body of Bar Council of India (BCI) regulates legal education and legal practice in India. Broad roles of BCI include:

- To prescribe the standard of professional conduct to be observed by advocates.
- To specify conditions that advocates must fulfil in order to practice law.

Central Council of Homeopathy (CCH)

Central Council of Homeopathy (CCH) was constituted under the Homoeopathy Central Council Act, 1973 with the main aim of prescribing and recognising all homoeopathic medicine qualifications in India. Any medical university/ institution which wants to grant degrees to students can do so only by applying to CCH. Other broad roles of the council include:

- To create and maintain the Central Register of Homoeopathy.
- To collect information from all universities/ medical institutions regarding the courses of study and exams.
- To appoint visitors that can examine infrastructure and other facilities are given to students at medical institutions
- To appoint inspectors for the proper conduct of exams.

Central Council for Indian Medicine (CCIM)

Established under the Indian Medicine Central Council Act-48 passed in 1970, Central Council for Indian Medicine (CCIM) is responsible for prescribing and maintaining standards of education

in Indian Systems of Medicine (Ayurveda, Siddha, and Unani Tibb). Major roles of CCIM include:

- To prescribe standards of professional conduct and a code of ethics that practitioners should follow.
- To appoint visitors to inspect different facilities (staff, equipment, accommodation, etc.) at colleges and hospitals imparting education in Indian medicine.
- To appoint a medical inspector to check the conduct of exams.
- To frame guidelines regarding the courses, practical training to be given to students, subject of examinations, and proficiency to be maintained by a university/ board medical institution for grant of recognised medical qualification.

Council of Architecture (COA)

Constituted under the Architects Act, 1972, Council of Architecture (COA) is responsible for the regulation of Architecture education and practice of the profession across India. It is mandatory for any person who wants to be in the profession of Architecture to register with COA. Broad roles of the council include:

- To prescribe the standard of education imparted in colleges/ institutions offering Architecture courses.
- To prescribe guidelines regarding eligibility for admission, course duration, course content, exam, etc.
- To conduct the inspection in institutions through committees of experts for the maintenance of the standard of facilities (staff, accommodation, etc.).

Rehabilitation Council of India

Constituted under the Rehabilitation Council of India Act in 1992, the Rehabilitation Council of India (RCI) became a statutory body on June 22, 1993. The major role of the Rehabilitation Council involves regulating and standardising the training of personnel and professionals in the field of Rehabilitation.

National Council for Rural Institutes

An autonomous society, fully funded by Ministry of Education, National Council for Rural Institutes (NCRI) was established with the aim of promoting rural higher education in India. Major roles of NCRI include:

- To motivate educational institutions to develop education according to the Gandhian Philosophy of education.
- To train teachers.
- To research by networking with policy-making bodies and organisations like UGC and AICTE.

State Council of Higher Education (SCHE)

Different state governments of India have their respective SCHEs that help in the development of higher education at the state level. Some SCHEs include Andhra Pradesh State Council for Higher Education (APSCHE), Tamil Nadu State Council for Higher Education (TNSCHE), and UP State Council for Higher Education (UPSCHE), West Bengal State Council for Higher education, Keral State Council for Higher Education, State Advisory Bord for Higher Education at Arunachal Pradesh, Tripura and Himachal Pradesh, etc. Major roles of SCHEs include:

- To consolidate efforts and investments of higher education institutions with the state government.
- To develop higher education programmes in coordination with each state.

  The State Council for Higher Education would act as a link between the universities and colleges and the State Governments and to work closely with the UGC in view of its statutory responsibility' for the maintenance and co-ordination of standards of higher education at the all India level.

Therefore, with so many regulatory bodies and multiple regulations simultaneously, the main regulatory challenges identified in this

sector are overlapping regulations at different layers for undertaking different initiatives which add to the time and cost of entering and operating in this sector. Multiplicity of regulatory bodies in higher education also signify the way higher education is organized in the country. Several Ministries are involved in providing higher education and each Ministry has its own body to govern. While the Ministry of Education continues to be the central regulator for higher general and technical education, the relevant ministries are the regulators for professional education. There is a multiplicity of regulatory agencies where mandates are both confusing and overlapping.

Opening a university/college; offering a course; getting accredited, etc, involve clearances from many agencies. Outdated but rigid requirements with respect to faculty qualification/library norms/ channel of delivery, etc. vary from one agency to the other which serve little purpose while add significantly to cost. Overall, our system of regulation views that many of our input-centric norms only add to costs without contributing to the quality of outcomes of the higher education system. Though in the process of creating regulatory system, far tougher requirements and norms were framed in comparison to any other country but the regulatory system as whole is a weakling which failed to create top ranking universities in the country as per the popular ranking systems of the world.

Some Overlaps and Contradictions of Decisions of Regulatory Bodies

There are several instances of the overlaps and contradiction of decisions made by the regulatory bodies. The existence of several regulatory bodies diminishes the autonomy of the universities also. The creation of private universities added a new dimension to the regulatory processes and mechanisms in India. The country has experienced uncontrolled growth and expansion of private higher education institutions in the recent past. Many private higher education institutions have poor infrastructure, inadequate and less skilled academic staff, and impose exorbitant fees on students. Questions have been raised about the process taken into

consideration based on which approval has been granted to many institutions[14].

In its judgment in 2005 (Yashpal Sharma and others vs. the State of Chhattisgarh), the Supreme Court ruled that all colleges established by the Chhattisgarh state under the Private Universities Act of 2002 were invalid because they did not follow the regulations stipulated by UGC in 2003. This judgment implied shutting down 117 private universities set up by the state of Chhattisgarh between 2002 and 2005.

In another instance, the Tandon Committee (UGC, 2009) found that a few of the deemed universities did not have the infrastructural facilities for quality education and advocated the closing down of 41 such institutions. Many of these institutions improved their infrastructural condition and were given the status of deemed-to-be universities. Some of the institutions, which were denied the status, contested the recommendations and it became an issue of public discussion. In a similar manner, AICTE used to collect a deposit per course fee, which was held through a joint account for 10 years. Such measures raise the cost of setting up institutions.

There have been certain court decisions in India which could be regarded as backsliding. In a recent decision in the 'State of Andhra Pradesh vs JB Education Society' Supreme Court considered that the consent of the State Government is necessary before setting up an Engineering College and AICTE cannot give such written permission on its own. Furthermore, the judgement has gone out of the way to give pseudo-control power once it states "the State Authorities can alone determine about educational facilities and the desires of the locality. If there are more colleges in a particular area the State would not be justified in granting permission to one more colleges in that locality." With this, the Supreme Court has done away with the concept of educational centres. The clustering of education institutions and the creation of an education hub has been accepted worldwide and the State of Haryana has created an 'Education City' in its State. Boston in the USA has grown as an educational hub and provided many widespread facilities and an academic environment that is conducive to higher education. This decision of the Hon'ble Supreme Court will

diminish the spirit of the states like Karnataka, Andhra, and Tamil Nadu which are examples in this context where many private colleges have found a base in a state and are performing well.

The directive, therefore, needs to be well regulated and carefully explored to take full account of relevance, requirements, practical constraints, and market realities. The aim of encouraging the expansion of educational institutions rather than restricting them should not be missing sight.

The present Indian Education system is the third largest in the world and has its origin from the British rule. There is a huge expansion in the number of institutions over the years after independence. The number of universities has reached nearly 1050 in 2021 compared to 27 in 1950. The number of colleges has reached about 50,000 in 2020 from 578 in 1950.

The massification of higher education in India has developed into a market-mediated process accelerated mostly through private institutions and funded by households. This stands in contrast to the developments in the matured market economies where the massification of higher education was facilitated largely through public institutions. The aspiration towards higher education in India has presented challenges of expanding the system with capital investment; enhancing quality while at the same time growing the system and administering the sector more effectively and efficiently. There is an ever-increasing role of the state to regulate the education sector particularly when the number of non-government institutions is proliferating.

Keeping this in view, the National Education Policy has recommended Setting-up the Higher Education Commission of India (HECI), with following autonomous verticals:

- *National Higher Education Regulatory Council (NHERC)* – a single point regulatory (Excluding Medical and Law) – a single point regulatory body.
- *National Accreditation Council (NAC)* – ensuring an emphasis on graded accreditation.

- *Higher Education Grants Council (HEGC)* – ensuring mechanisms for financing and scholarships.
- *General Education Council (GEC)* – frame expected learning outcomes for higher education programmes.

It seems there are two issues to be addressed in regulation. The first pertains to whether the existing regulations are sufficient. The government is very often criticized for the lack of adequate regulatory measures to facilitate the growth and development of the higher education sector. There is a need to investigate the acceptability of the existing regulatory measures to develop a secure regulatory mechanism. The second issue relates to the enforcement of the regulations. The instances discussed above suggest that there is a shortage of incentives for effectively implementing the regulations or, to put it in a different way. There is a strong reason to be complacent about the enforcement of regulations. Apart from contradicting and overlapping regulations, the higher education system needs to address both the adequacy of regulations and effective implementation of the existing regulations also. The solution would be to have a single regulatory body instead of many which the NEP—2020 has also recommended.

Efforts Towards Single Regulatory Body in Higher Education

The concept of a single regulatory body for higher education is under discussion for over three decades. There have been proposals to create a coordination council of various current regulatory bodies, which could blend varying views on policy matters. The National Policy on Education (1986) and the Plan of Action, 1992 envisaged the establishment of a national apex body for bringing on greater coordination and harmonization in the design and development of the higher education system, which would include higher education and research.

The National Knowledge Commission in 2006 recommended setting up of an Independent Regulatory Authority for Higher Education (IRAHE) to regulate public and private institutions based upon the verifiable criteria, awarding of degrees, performance appraisal

and accreditation. Another Committee, led by Prof. Yash Pal also suggested an apex body 'National Council for Higher Education and Research' (NCHER) in 2011 to regulate the higher education sector. It has foreseen heightened state funding for higher education, greater regulation of the private sector and increased institutional autonomy. The Committee was not in favor of the commercialization of education and discouraged for-profit private institutions while at the same time encouraging partnership with non-profit private organizations in higher education. It was expected that the regulatory authority would protect against the fast expansion of for-profit organizations providing an education of dubious quality.

The National Higher Education Regulatory Council (NHERC) was envisaged as an independent regulatory body with exclusive powers to regulate the establishment of new higher education institutions. Similarly, it was to monitor the public and private education sector, issue licenses to institutions to grant degrees and to accredit organizations to assess the performance of institutions and monitor standards. In accordance with the new framework, the role of the UGC might be limited to disbursing grants to universities. And the professional bodies like AICTE or Bar Council of India perform nationwide examinations to license those who could put into practice as a professional.

Over the period between 2010 and 2013, several bills to regulate various aspects of higher education were drafted. However, they could not be enacted. One of the vital bills pertains to the consent of foreign universities to operate their branch campuses in India. Since the bill could not be passed, the UGC issued, in 2012, regulations governing academic collaboration between Indian and foreign institutions. The regulation allows for only collaborations and not the commencement of independent branch campuses in India by foreign institutions.

The creation of private universities added a new dimension to the regulatory processes and mechanisms in India. The country has experienced uncontrolled growth and expansion of private higher education institutions in the recent past. Many private higher education institutions have extremely poor infrastructure, inadequate and less skilled academic staff, and impose exorbitant fees on

students. Questions have been raised about the process taken into consideration based on which approval has been granted to many institutions[14].

In a different instance, in its judgment in 2005 (Yashpal Sharma and others vs. the State of Chhattisgarh), the Supreme Court ruled all colleges established by the Chhattisgarh state under the Private Universities Act of 2002 invalid because they did not follow the regulations stipulated by UGC in 2003. This judgment implied shutting down 117 private universities set up by the state of Chhattisgarh between 2002 and 2005.

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It seems there are two issues to be addressed in regulation. The first pertains to whether the existing regulations are sufficient. The government is very often criticized for lack of adequate regulatory measures to facilitate the growth and development of the higher education sector. There is a need to investigate the acceptability of the existing regulatory measures to develop a secure regulatory mechanism. The second issue relates to the enforcement of the current regulations. The instances discussed above suggest that there is a shortage of incentive for effectively implementing the regulations or, to put it in a different way. There is a strong reason to be complacent about the enforcement of regulations. The higher education system needs to address both the adequacy of regulations and effective implementation of the existing regulations.

Quality Assurance and Accreditation

Ever since university rankings began, the discussion has been about how to improve university's position within the ranking.

In the public perception, there is a strong connection between the quality of education and the position of the universities in the ranking. Some of the nations, whose universities do not show up in the ranking list, are also involved in developing their national ranking systems. Many countries are critically pondering the methods and mechanisms that should be set up to establish world-class universities. It is stated repeatedly that maintaining quality at the same time expanding the system is a major challenge faced by higher education in India. International experience has demonstrated that many countries established external quality assurance systems to carry out accreditation and quality audit to guarantee that quality does not become a casualty at the same time as the system expands. The external quality assurance can guarantee the maximum level of quality across institutions and can bolster responsibility and accountability in terms of learning outcomes in higher education.

The emphasis on the quality assurance has moved from external quality assurance to student learning. It was thought that the external quality assurance system and accreditation processes are, perhaps, not the most effective ways to evaluate and monitor the student learning. Looking at the changing scenario, many countries have set up internal quality assurance system at an institutional level. The internal quality assurance system helps to follow the requirements of national external quality assurance agencies or any regulatory bodies (similar to our Internal Quality Assurance Cell). This system responds to the requirements for internal quality initiatives, sustenance, monitoring and management of the institution. More importantly, these internal quality assurance systems can consider matters associated with teaching-learning more effectively than an external quality assurance system. The internal quality assurance systems at present usually consists of self-studies and evaluations of units, supervision and assessment of academic programmes, carrying out of student satisfaction surveys on curriculum, overall contribution of the teachers and the institution, analyzing student progression, learning outcome, program skill, etc...

India also follows these provisions for quality assurance and sustenance in higher education institutions. India established external quality assurance system in the 90s. In order to address the concern of quality in higher education, the National Policy on Education (NPE, 1986) and the Programme of Action (PoA, 1992) spelled out strategy plans for the policies, promoted the establishment of an independent national accreditation flagship agency. Thus, the National Assessment and Accreditation Council (NAAC) was established as an autonomous institution of the University Grants Commission (UGC) in 1994. NAAC assess and accredits higher education institutions in the country and certifies the educational quality of the institution based on seven criteria. It classifies institutions on a nine-point scale.

The quality assessment by NAAC is accomplished through a process of self-study and peer review using well-defined criteria. The main purpose of assessment and accreditation is the enhancement and improvement of quality, recognizing excellence, accountability, information providing and benchmarking. Assessment is mainly based on seven major criteria such as a) Curricular Aspects; b) Teaching-Learning and Evaluation; c) Research, Innovations & Extension; d) Infrastructure and Learning Resources; e) Student Support & Progression; f) Governance, Leadership & Management, g) Institutional Values & Best Practices

Likewise, the AICTE has made accreditation by NBA compulsory for all technical institutions. One can expect an increased readiness on the part of the institutions to approach accreditation agencies in the coming days. However, the challenge will be carrying out the accreditation process on a larger scale within a short period. An effective quality-assurance system can assist to guarantee standards. Our country has NAAC in place currently capable of overall supervision. Higher educational institutions have also formed inter quality assurance cells. The consequence of these internal quality assurance Cells in monitoring and improving quality needs to be analyzed carefully. There is a need to strengthen internal quality assurance cells and improve teaching-learning in higher education in India especially since the variations in excellence between institutions are broad and large. Surprisingly little information is on the effective

functioning of the internal quality assurance cells and their impact on student learning.

Centre has envisaged active intervention in the revamping of Schools of Education to improve teaching-learning processes and learning outcomes in lower, secondary education and higher education in India through NEP 2020. The teaching-learning process depends on several factors, including the subject competency of the teacher, teaching-learning conditions in the classrooms, and the level of inspiration and dedication of teachers and students. Many developed nations have established academies or specific institutions of teaching and learning to improve educational outcomes in higher education institutions. The NEP 2020 envisions establishing education system to carry out a multilateral change in the teaching-learning processes and to impart pedagogical training in higher education institutions.

It needs to be highlighted that the quality of education imparted fluctuates widely amongst higher education institutions in India. India has high-quality institutions which are limited in number. Nevertheless, the fact that only few higher education institutions from India appear on the list of world-ranking universities continues to be a major concern and an element of public discussion. The biggest challenge in enhancing the quality of higher education rests with addressing issues that are related to teaching and learning in most institutions, and colleges affiliated to universities. There is a greater necessity for the active intervention to achieve better quality and focus more on state-level institutions and affiliated colleges in India that are considered to be engaged more at the undergraduate level than at the postgraduate level programmes.

Quality and Accreditation in Educational Institutions

Accreditation in Educational Institutions is the process by which an agency or association relates to the educational institutions so that the education and learning offered by them could be assessed and evaluated. The agency examines and checks to determine whether the standard of education offered in different educational institutions is as per the regulations and standards set by numerous accreditation

organizations like AICTE, UCC, etc. In India, the perception about education and learning rose over the years. In accordance with the Ministry of Human Resource Development (MHRD), the number of universities has reached nearly 1000 in 2020 compared to 27 in 1950. The number of colleges has reached about 50,000 in 2020 from 578 in 1950. The increase in the number of educational institutes has boosted the role of accreditation agencies. These units examine the standard teaching levels within the educational institutions so that quality teaching could be provided to the students. This will help the students to ascertain institutions for enrollment objective and determine the appropriateness points for credit transfer.

GOVERNMENT INITIATIVES TO IMPROVE HIGHER EDUCATION SYSTEM

India, today, possesses a system of higher education that has grown into its present form and substance over the years through inputs by various players in the field, like the government of the day, the opinion builders, the players in the political-economic fields, and the thinkers and practitioners of education. These inputs, however, have been constrained by the forces prevailing at the relevant points in time. As a result, the system has developed into a typical cultural category, with inherent limitations. A system thus meant to serve the needs of the yesteryears, is now required to sustain the life of a human mass as large and as diverse as that of India, quite legitimately dreaming to be a world power, given its potential, both material and human. Its present human resource includes the largest proportion of youth, creating a potential demographic dividend. No other country in the world, even China, does possess such a wealth of youthful population. And certainly, if fired with globo-national dreams, this great human asset can transform the country into a veritable powerhouse of incredible energy! But that, of course, requires the exploration of new horizons in a fast globalizing present-day world. In order to make India the world's educational superpower, it is essential that our demographic advantage be converted into knowledge power by nurturing and transforming our workers into a skilled and knowledgeable workforce. The government of India has undertaken several initiatives to accelerate the pace of development but before proceeding with the initiatives, some of the major issues that constrain higher education from raising up to the world competitiveness/standard merits need to be looked at.

Of late, the Ministry of Education, erstwhile, Ministry of Human Resource Development (MHRD) has taken a range of steps to establish a holistic plan in this area. The goals are to ensure quality measures; take higher education to the unreached, expand distance learning, and add innovation to the delivery of information and content. Some of the initiatives of the Government include:

1. Global Initiative of Academic Network (GIAN)
2. Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) Portal
3. SWAYAM Prabha
4. National Academic Depositary (NAD)
5. National Digital Library (NDL)
6. National Institutional Ranking Framework (NIRF)
7. National Program on Technology Enhanced Learning (NPTEL).

Global Initiative of Academic Network (GIAN)

Global Initiative of Academic Network (GIAN) is a project intended to recognize scientists and businessmen internationally and get them to engage with India's higher education institutes. Global Initiative of Academic Networks (GIAN) in Higher Education is an educational initiative by Govt. of India which integrates the talent pool of international scientists and entrepreneurs with the institutes of Higher Education in India. Under its mission, the programme is aimed at elevating India's scientific and technological capacity to global excellence by accelerating the quality of academic resources.

Established learning services are projected to be improved with a boost in efficiency. Initially, it would cater to all premium institutions such as IITs, IIMs and central universities, IISc Bangalore, IISERs, NITs, and IIITs. Subsequently, it would include regional universities.

- Greater integration of reputed international faculty with the Indian academic institutes to foster global knowledge sharing between faculty and students.
- To increase international collaborations for research.
- To increase international student exchange programmes among the academic Institutes.

- Create an opportunity for collaborative learning among students in niche areas.
- Attract the best international experts in the world to work on problems related to India.
- To document and develop new pedagogic methods in emerging topics of national and international interest.

Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM)

Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) is a collaborative project of the Ministry of Education, erstwhile Ministry of Human Resource Development, and All India Council for Technical Education (AICTE) with Microsoft's funding. It aims to host 2,000 courses and 80,000 hours of educational content that will cover all professional courses. The Information and Library Network (INFLIBNET) Centre maintains the web portal.

SWAYAM PRABHA

SWAYAM PRABHA is a group of 34 DTH channels devoted to telecasting high-quality educational programmes on a 24X7 basis using the GSAT-15 satellite. Every day, there will be new content for at least (4) hours which would be repeated 5 more times a day, allowing the students to choose the time of their convenience. The channels are uplinked from BISAG-N, Gandhinagar. The contents are provided by NPTEL, IITs, UGC, CEC, and IGNOU.

National Academic Depository (NAD)

National Academic Depository (NAD) is an initiative to provide an online storehouse of all academic awards. National Academic Depository (NAD) is a 24X7 online storehouse of all academic awards viz. certificates, diplomas, degrees, mark sheets, etc. duly digitized and lodged by academic institutions/boards/eligibility assessment bodies. NAD not only ensures easy access to and retrieval of an

academic award but also validates and guarantees its authenticity and safe storage. NAD stocks all academic honors online, including certificates, diplomas, degrees, mark sheets, etc.

National Digital Library of India

National Digital library of India is a virtual repository of learning resources which is not only just a repository with a search/browse facility but also provides a host of services containing textbooks, articles, videos, audio books, lectures, simulations, fiction and all other kinds of learning media for the learners/users' community. It is a project under the Ministry of Education through its National Mission on Education through Information and Communication Technology (NMEICT). The objective is to collect and collate metadata and provide a full-text index of several national and international digital libraries, as well as other relevant sources. The NDLI provides free-of-cost access to many books and is designed to hold content of any language and provides interface support for the 10 most widely used Indian languages. It is developed, operated and maintained by the Indian Institute of Technology Kharagpur.

National Institutional Ranking Framework (NIRF)

National Institutional Ranking Framework (NIRF) is a methodology adopted by the Ministry of Education, Government of India to rank HEIs in India. Depending on their areas of operation, institutions have been ranked under 11 different categories – overall, university, colleges, engineering, management, pharmacy, law, medical, architecture, dental and research. The Framework uses several parameters for ranking purposes like resources, research, and stakeholder perception. These parameters have been grouped into five clusters and these clusters were assigned certain weightages. The weightages depend on the type of institution. About 3500 institutions voluntarily participated in the first round of rankings.

National Programme on Technology Enhanced Learning (NPTEL)

National Programme on Technology Enhanced Learning (NPTEL) is an Indian learning platform for university-level Science Technology Engineering and Mathematics subjects. It is jointly developed by IITs and IISc. The initiative is funded by MoE, GoI. The project's central idea is to put recorded lectures taught by its member institutes online for open access. It operates one of the most extensive educational U Tube channels covering engineering, basic sciences and some humanities and social science subjects.

Rastriya Uchchatar Shiksha Abhiyan (RUSA)

Rastriya Uchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme (CSS), which aims at providing strategic funding to eligible state higher educational institutions. It aims to improve the overall quality of state institutions by ensuring conformity to prescribed norms and standards and adopt accreditation as a mandatory quality assurance framework.

Higher Education Financing Agency (HEFA)

Higher Education Financing Agency (HEFA) is a joint venture of Ministry and Canara Bank for financing creation of capital assets in premier educational institutions. HEFA's scope is greatly expanded to cover school education, educational institutes under Ministry of health etc.

All India Survey on Higher Education (AISHE) is initiated to portray the status of higher education in the country, Ministry has endeavored to conduct an annual web-based All India Survey on Higher Education (AISHE) since 2010-11. The survey covers all the Institutions in the country engaged in imparting higher education. Data is being collected on several parameters such as teachers, student enrolment, programmes, examination results, education finance, and infrastructure. Indicators of educational development such as Institution Density, Gross Enrolment Ratio, Pupil-teacher ratio, Gender Parity Index, and Per Student Expenditure will also be

calculated from the data collected through AISHE. These are useful in making informed policy decisions and research for the development of education sector.

National Research Professorship (NRP)

Government of India had instituted the scheme of National Research Professorship in 1949 to honor distinguished academics and scholars in recognition of their contribution to knowledge. Persons of real eminence, who have attained the age of 65 years and have made outstanding contributions in their respective fields and are still capable of productive research, are considered for appointment as National Research Professors.

(SANKALP) and (STRIVE)

Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) and Skill Strengthening for Industrial Value Enhancement (STRIVE)

SANKALP and STRIVE are outcome focused schemes marking shift in government's implementation strategy in vocational education and training from inputs to results with half of the scheme outlay as World Bank loan assistance.

VAJRA (Visiting Advanced Joint Research) Faculty Scheme

It is a dedicated program exclusively for overseas scientists and academicians with emphasis on Non-resident Indians (NRI) and Persons of Indian Origin (PIO) / Overseas Citizen of India (OCI) to work as adjunct / visiting faculty for a specific period of time in Indian Public funded academic and research institutions. The Scheme recognizes the value of collaborative research as a crucial element for information sharing among researchers for updating and acquiring knowledge and skills, and also to draw different perspectives to solve a shared problem.

UGC-Consortium for Academic and Research Ethics (UGC-CARE)

The UGC had come up with a white list of approved journals in which Indian researchers can publish their papers. The list was produced to address the problems of predatory journals.

Strengthening Science-Based Higher Education and Research in Universities: The main objective of the scheme is to promote excellence in research in higher education by supporting research programmes of the University and College teachers in various disciplines.

Udaan: Under this program, meritorious girl students were provided with scholarships to enable them to move without any trouble from school to technical education. This also promotes teaching and learning through the provision of free resources at secondary school level. The objective is to prevail over the low enrolment ratio of girls in prestigious technical institutions.

Pundit Madam Mohan Malvinas Mission: This mission is launched to address all the concerns related to teaching, preparation, curriculum design, professional development as well as the development of more effective pedagogy in order to have better evaluation and evaluation methodologies.

Unnat Bharat Abhiyan: This program was named for the lab-to-ground gradation of technology. Under this system, higher educational institutes can communicate with and resolve different issues faced by neighbouring villages. The scheme would particularly look after the solutions for renewable energy, organic farming, water management, infrastructure and livelihood etc.

Impacting Research Innovation and Technology (IMPRINT)

IMPRINT is a joint initiative of IIT and IISc supported by the Ministry of Education to address the major challenges in science and engineering that the country needs to address for becoming self-reliant. This national programme is aimed at developing new

engineering policies to create a road map for pursuing challenges in engineering innovation and intervention.

The Uchchatar Avishkar Yojana (UAY)

The Uchchatar Avishkar Yojana (UAY) scheme is launched with a view to promoting innovation of a higher order that directly impacts the needs of the Industry and thereby improving the competitive edge of Indian manufacturing. The scheme would foster industry-specific need-based research so as to keep up the competitiveness of the Indian industry in the global market.

Prime Minister Research Fellows (PMRF)

Prime Minister Research Fellows (PMRF) scheme is launched to support 1000 bright undergraduate students every year, for direct admission in the research programmes in reputed institutions like IISc, and IITs. The fellowship carries a lot of social recognition and it ranges from Rs 70,000 to 80,000 per month for 5 year period.

Smart India Hackathon Initiative

Smart India Hackathon initiative is to promote innovation in the students by encouraging out-of-the-box solutions for common problems faced by society at large. In the first edition held in 2017, more than 40,000 students participated to solve more than 600 problems. In 2018, the scope has been expanded to the Hardware area also.

Technical Education Quality Improvement Programme

The technical Education Quality Improvement Programme of the Government of India (TEQIP), is implemented as a World Bank-assisted Project to improve the quality of the technical education system in the country. Under the Technical Education Quality Improvement Programme Phase III (TEQUIP-III) focus has been given to the backward States in the central tribal belt and north-eastern region.

National Scholarship Portal

In accordance with the policy that education should be accessible to everyone, the National Scholarship Portal has been started. Apart from this, the Vidyalaxmi portal provides one-window clearance for the Education Loans with Interest Subvention.

India is still not at par with the United States of America in the supply capacity required for its higher education institutes. As part of the Washington Accord, the world's prominent accreditation umbrella organization, it is necessary for India to improve its accreditation best practices, measure by measure and ensure that they are implemented properly.

Initiatives Taken to Protect Academic Interest of Students in Pre and Post COVID- 19

In the first quarter of 2020, the COVID-19 pandemic took the whole world to its grips. The pandemic has affected and disrupted all sectors and walks of life globally. It has made the people prisoners in their own homes and has disrupted most of the industries in the world. The higher education sector is also severely impacted due to the pandemic. As per the UNESCO report, as of March 30, over 185 countries have implemented nationwide closures, impacting over 87% of the world's student population, 1.52 billion students. In addition, nearly 60.2 million teachers are no longer in the classroom. At the beginning of May, some countries, experiencing decreasing numbers of cases and deaths, started lifting confinement measures. As of 7, May 2021, Schools and higher education institutions (HEIs) were still closed in 177 countries, affecting 1 268 164 088 learners, which constitute 72.4% of total enrolled learners. The sudden closure of face-to-face teaching–learning and other academic /research-related activities on the campus has enormously disturbed the routine academic planning of students and faculty members. The traditional (Chalk and Talk) teaching–learning pedagogy methodologies and student –teacher on campus interactions have been replaced with online education.

At a time when the man is in the race with time to undertake a multi-dimensional life journey, lockdown after lockdown has made human life horrible. Man is a social animal, as was observed by Aristotle, and so bread and butter alone cannot be considered any solution to the pandemic. In order to face the adversities and to effectively deal with the new emerging situation, the Government of India (renamed as Ministry of Education) has played a very crucial role by providing free access to its number of knowledge networks including NDL with 4.5 core documents, SWAYAM, MOOCS and many other skill development courses. Many publishers of books also shared their links to e-books with free access to students, researchers and faculty members. During the touch time of the COVID19 pandemic, the regular interaction with students was hampered. There arose the need for counselling sessions to help them to come out from the uncertainty, confusion, stress, anxiety lack of conditions, quarantine periods institutes and cancellation of delay in academic sessions are seen having its cumulative impact on the future and career of the youngsters.

This new normal scenario has paved the way for online education and virtual classroom to connect the student –teachers across the continent with minimal challenges of the digital divide. UGC has been emphasizing continuing with the teaching-learning process using online modes such as Google Classroom, Google Hangout, Cisco Webex Meeting, YouTube Streaming, OERs, SWAYAM Platform and SWAYAMPRABHA (available on Doordarshan (Free dish) and Dish TV), etc. The pandemic condition fundamentally altered the manner in which instruction is provided and, ultimately, pedagogical methodology. The distribution of material, communication, assessment, and feedback all shifted to the available internet channels. This prompted educators to re-imagine the entire teaching-learning process and embrace ICT tools and technologies as the chariots of contemporary education.

The national digital library, where eBooks on various topics by highly qualified faculty are there was made available by institutions like IIMs, and IITs, were offered free of cost. Ministry has taken a number of student-friendly measures namely; YouTube/Simulation

links based on demonstration of laboratory experiments, General Promotion of Junior Semester students, and sharing of various academic links for free. A free hand was given to all HEIs to handle the situation in coordination and consultation with state governments. In the interest of Final Semester students and their future, the ministry instructed all HEIs to go for examinations as a mandatory requirement with the freedom given to all HEIs. HEIs were allowed to take decisions about the mode of examinations, online or offline in consultation with the stakeholders. NAAC conducted a series of Webinars which were open to all HEIs across India. Govt. of India took many initiatives in COVID19 pandemic including the reduction of the syllabus to compensate for the difficulties faced by students.

Relaxation of six months-time was granted by UGC to M Phil and PhD scholars for submission of Thesis/Dissertation. UGC and AICTE have taken a number of initiatives including the study materials free access through online educational resources such as SWAYAM, MOOCS, Harvard University links. Several other free download educational resources have been shared by concerned owners such as www.pdfdrive.net, ProQuest, Wiley, McGraw Hill, Online.infobaselearning.com, YouTube, and Local TV Channel telecasted Video Lectures prepared by faculty of concerned HEIs. Another highly commendable initiative taken by the Ministry of Health and Family Welfare (MoHFW), Government of India is student counselling through helpline 080-46110007. MoE has played a key role and leadership by issuing several instructions to HEIs to help the student community.

CONCLUSION

Higher education is an important aspect in deciding the economy, social status, technology adoption, and healthy human behaviour of every country. Improving GER to include every citizen of the country and offering opportunities for higher education is the responsibility of the education department of the nation. National Education Policy of India 2020 is marching towards achieving such objective by making innovative policies to improve

the quality, attractiveness, and affordability. It is increasing the supply by opening up higher education for the private sector and at the same time with strict control to maintain quality in every higher education institution. By encouraging merit-based admissions with free ships and scholarships, merit and research-based continuous performers as faculty members, merit-based proven leaders in regulating bodies, and strict monitoring of quality through biennial accreditation based on self-declaration of progress through technology-based monitoring, NEP-2020 is expected to fulfil its objectives by 2030. All higher education institutions with the current nomenclature of affiliated colleges will expand as multi-disciplinary autonomous colleges with degree-giving power or will become constituent colleges of their affiliated universities. An impartial agency National Research Foundation will fund for innovative projects in priority research areas of basic sciences, applied sciences, and social sciences & humanities. HE system will transform itself as student-centric with the freedom to choose core and allied subjects within a discipline and across disciplines. Faculty members also get autonomy to choose curriculum, methodology, pedagogy and evaluation models within the given policy framework. These transformations will start from the academic year 2021-22 and will continue until the year 2030 when the first level of transformation is expected to take place.

Hence, the Indian higher education system is moving from teacher-centric to student-centric, information-centric to knowledge-centric, marks-centric to skills-centric, examination centric to experimental-centric, learning-centric to research-centric, and choice centric to competency centric. It will surely add to the betterment of the nation as a whole.

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PROFILE OF THE AUTHORS

Prof S C Sharma

Prof S C Sharma is the Director of National Assessment and Accreditation Council (NAAC). Bengaluru. Prior to this, he was Vice Chairman, Karnataka State Higher Education Council. He was also Vice Chancellor at Tumkur University, Tumkur and Chhattisgarh Swami Vivekananda Technical University, Bhilai. He has to his credit more than 325 research papers in international referred journals, having 10,723 citations, H-Index 50, i-10 Index 378. As Director, NAAC, he gave a new impetus to the accreditation scenario in the country with the infusion of ICT enabled accreditation system. He has been instrumental in ushering in customised manuals and methodology for Indian higher education institutions.

Dr (Mrs) Pankaj Mittal

Dr (Mrs) Pankaj Mittal, Secretary General, Association of Indian Universities, is a notable woman academic administrator in the country. In her illustrious career spanning over three decades, she served the Indian Higher Education System in high offices like Vice Chancellor of Bhagat Phool Singh Mahila Vishwavidyalaya and Additional Secretary, the University Grants Commission. She is also a Fulbright Scholar. Her areas of expertise include Policy Planning and Management of Higher Education and Human Resource Management. Dr Mittal has made academic visits to the USA, Canada, United Kingdom, Australia, South Korea, Spain, Germany, South Africa, Hong Kong, Malaysia, Mauritius and the Philippines. She had led a delegation of 15 Vice Chancellors to UK and Mexico for academic collaborations. She is the recipient of the prestigious President of India Award in 2017 for Digital Initiatives in Higher Education; *Honoris Causa* from Karnataka State Women's University, Bijapur; and the First Padam Shri Subhashini Devi Award 2018 for contributions to Societal Development and Community Engagement from the Chief Minister of Haryana. Dr Mittal is a member of many

high-powered committees of the Ministry of Education, Ministry of Youth Affairs and Sports and various other apex bodies in the country. Dr Mittal has widely published in national and international journals including two edited books. Currently, she is also National Commissioner-Rangers at Bharat Scouts and Guides.

Dr Mariamma A Varghese

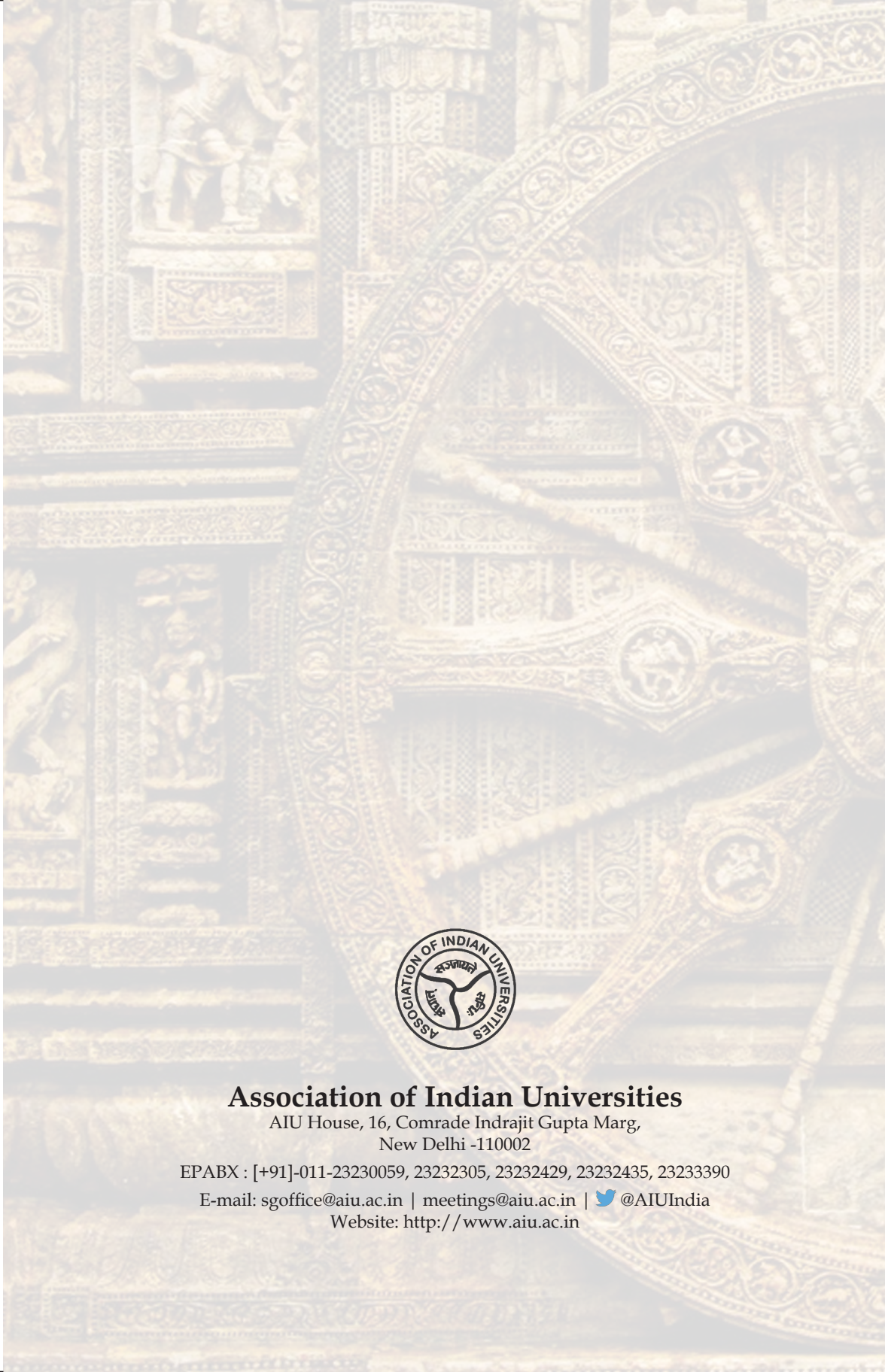
Dr Mariamma A. Varghese M.Sc. Ph.D. (Iowa State University USA) served as Vice Chancellor of SNDT Women's University, which is the premier Women's University established in India in 1961. During her tenure at SNDT, she established the Janaki Devi Bajaj Institute of Management and the Institute of Technology for Women. She also served as a Senior Education Consultant at the National Assessment and Accreditation Council, Bangalore for a period of 7 years. She was primarily responsible for developing the Methodology for Assessment and Accreditation which was in effect till 2017. She has published several books pertaining to the Quality of higher education and contributed articles in the leading refereed journals.

Dr Srikant Swamy

Dr. S. Srikanta Swamy, is working as an Academic Expert in the Research and Analysis Wing of NAAC and initiated, and involved in publishing several books; Trend Analysis report, AQAR reports, State-wise Analysis reports of Uttar Pradesh, Odisha, and Jammu and Kashmir using the Accreditation reports of NAAC. He is the Managing Director of the popular book – Quality Management System in higher education written by popular academicians. He is also the chief editor for the book Pursuit of Quality in higher education. He has guided several students toward their doctoral degrees and completed five major research projects. He has served for more than four decades in the field of education including as Additional Director, Centre for Research, Christ University, Bangaluru. He is recepient of several awards and felicitations. He has published several articles in refereed journals.

Dr Sistla Rama Devi Pani

Dr Sistla Rama Devi Pani is the Editor of the University News, A Weekly Journal of Higher Education brought out by the Associations of Indian Universities(AIU). She is one of the popular women editors in the country known for meticulous editing and maintaining persistent regularity in bringing out different publications. Starting her career as a Lecturer in Education at Dr Harisingh Gour University, Sagar, in 1991, she served Indian Higher Education System in various capacities in the bodies like Ministry of Education (MoE), NCERT, IGNOU, NIOS and AIU. She is a member of curriculum development and evaluation committees at IGNOU, NIOS and many universities including the University of Delhi. Apart from 250 Special Issues and more than 1000 Regular Issues of the University News, she has to her credit 200 Editorials, 5 Books, 2 Question Banks, and more than 20 papers and articles in different national and international journals. Dr Pani holds Doctorate in Distance Education, and Masters' degrees in Chemistry, and Distance Education. She is a recipient of the Guru Drona Award conferred by NIOS, Ministry of Education; and the National Award and Plaque of Appreciation by the Public Relations Society of India.



Association of Indian Universities

AIU House, 16, Comrade Indrajit Gupta Marg,
New Delhi -110002

EPABX : [+91]-011-23230059, 23232305, 23232429, 23232435, 23233390

E-mail: sgoffice@aiu.ac.in | meetings@aiu.ac.in | @AIUIndia

Website: http://www.aiu.ac.in