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Announcement

Edited Volume
on
'75 Years of Higher Education in Independent India'

An Edited Volume is being brought out on the theme **'75 Years of Higher Education in Independent India'** to commemorate ***75 years of Indian Independent, Azadi Ka Amrit Mahotsav.*** The Volume will cover articles of eminent educationists and policy makers. Readers of the University News are also invited to contribute to the Edited Volume by scholarly papers on the above theme, and below sub theme by December 15, 2021. The Volume shall contain papers on the following Subthemes:

i. *Significant Landmarks in Higher Education in Independent India.*
ii. *Higher Education Policies and their Impact.*
iii. *Democracy, Plurality, Equality and Universality of Indian Higher Education.*
iv. *Rise of Research, Innovation and Entrepreneurship in Independent India.*
v. *Student dynamics in Indian Higher Education.*
vi. *Impact of Indian Higher Education on Community.*
vii. *Functional Dimensions of Indian Higher Education: Governance, Leadership, Financing.*
viii. *Professional Education in India.*
ix. *Islands of Excellence in Indian Higher Education.*
x. *Higher Education in India: Roadmap for 75 years Ahead.*

The papers will be published in the volume subject to fulfillment of AIU Norms for publication as given in AIU Website and on the approval of the Editorial Committee. Manuscripts may be emailed to the Editor, University News, Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi-110 002. E-mail: *ramapani.universitynews@gmail.com/universitynews@aiu.ac.in/rama.pani2013@gmail.com*, Phone: 011-23235009 (6 lines), Fax: 011– 23232131 on or before ***December 15, 2021***.

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Virtual Open School in India: A Move towards the Next Wave Education

Anita Karwal* and Saroj Sharma**

With the increasing use of Information and Communication Technologies (ICTs), words like Virtual Education, Virtual Classroom, Online Education, etc., have become ever more prominent. While, Distance Education has taken the learning beyond the walls of classrooms to the doorsteps of the learners, the virtual education or online education has taken the 'classroom as a whole', to the palms of the students. Online learning is now booming at an unprecedented rate. With the availability of high-speed internet and 4G technologies such as, Artificial Intelligence, E-learning, M-learning etc., online education has opened up a lot of possibilities for the students, teachers, and the whole education system.

India is one of the nations that is developing at an exponential rate in terms of ICT. With a population of more than 1.3 billion, the availability of high-speed internet and smart phones, the number of technologically driven people is continuously on the rise. As per the data of *Statista*, in 2021, India has over 749 million internet users across the country which is projected to grow over 1.5 billion in 2040 (Statista, 2021). Among the total internet users in the country, a majority accesses the internet via their mobile phones. However, online education could not pickup to its fullest potential till now for several reasons. It was struggling with its teething issues when the COVID-19 and the subsequent lockdown surged in the country in March, 2020. Despite that, like a magic wand, online education came as a rescue to protect the academic interests of the students who were under compelled lockdown during COVID-19. With this, suddenly there was a full blooming of online education in India. On the recommendation of the Ministry of Education, the classroom teaching and learning methods were augmented and replaced by technology-powered online education. Thereafter, online education was exploited for almost all the spheres like administration, admission, teaching, training, skill development, placement, so on and so forth by the educational institutions.

This phenomenal growth of online education in India is not just because of rapidly evolving technology, but also because of the growing importance given to education both by the government and the people at large. With the efforts of the government and people, the current Gross Enrolment Ratio (GER) at the school level increased to 89.7 per cent at Upper Primary level; 97.8 per cent at Elementary Level; 77.9 per cent at the Secondary Level; and 51.4 per cent at Higher Secondary Level. All these school students were facilitated to go for online

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education during the COVID-19 Pandemic phase to avoid physical proximity for preventing the further spread of COVID-19. This encouraged the extensive use of online media by the students. Now, the online education has come to stay as a new normal.

Apart from providing education at the finger-click of the students, online education has several other advantages like flexibility, a safe learning environment, personalized guidance, convenience, accessibility, etc. As students move to higher classes in schools, they need more freedom and attention for a better learning experience. The spirit of competition is very high and thus, they have a lot of pressure to score high ranks in examinations. Online education provides ample scope for this to students. There are times when students are stressed to complete their assignments or homework but not able to access enough study material for their preparation. In such scenarios, online learning can be helpful due to its impact on student learning. Through online education, school students can become independent learners before they join universities or colleges. Thus, it becomes a major responsibility on the part of educational institutions to provide more opportunities for online courses for the students.

Gaining reinforcement from this extensive use of ICT for educational purposes, both private and government online platforms have escalated. A plethora of digital initiatives has been taken up by the Ministry of Education for educational purposes. A comprehensive initiative called PM *eVIDYA* has been initiated by the Government of India which unifies all efforts related to digital/online/on-air education to enable multi-mode access to education (MoE-2020). Some of the initiatives are presented here.

DIKSHA (Digital Infrastructure for Knowledge Sharing)

DIKSHA is the national platform for school education available for all states and the central government for grades 1 to 12. It can be accessed through a web-portal and mobile application. It provides access to a large number of curriculums linked e-content through several use cases and solutions such as QR-coded Energized Textbooks (ETBs), courses for teachers, quizzes and others. It is the 'one nation; one digital platform' for school education. In April, 2020 *Vidya Daan* was launched as a national content contribution programme that leverages the DIKSHA platform and tools to seek and allow contribution/donation of e-learning resources for school education by educational bodies, private bodies, and individual experts.

Access Through TV Channels- Swayam Prabha TV Channels

Swayam Prabha DTH channels were initiated to support and reach those who do not have access to the internet. 32 channels are devoted to telecast high quality educational programmes.

SWAYAM MOOCS for Open Schools and Pre-Service Education

Online MOOC courses relating to NIOS (grades 9 to 12 of open schooling) are uploaded on SWAYAM portal; around 92 courses have started and 1.5 crore students are enrolled. Students and teachers can access all the course modules – text, videos and assessment questions etc. through SWAYAM.

Extensive Use of Radio, Community Radio and Podcasts

Radio broadcasting is being used for children in remote areas who are not online. 289 Community Radio Stations have also been used to broadcast content for NIOS for grades 9 to 12. A Podcast called *Shiksha Vani* is being effectively used by learners of grades 9 to12. It contains over 430 pieces of audio content for all subjects of grades 1 to 12.

Channels for the Differently-abled

One DTH channel is being operated specifically for hearing impaired students in sign language. For visually and hearing-impaired students, study material has been developed in Digitally Accessible Information System (DAISY) and in sign language; both are available on NIOS website/ YouTube.

E-textbooks

The e-textbooks can be accessed using e-Pathshala web portal and mobile app (Android, iOS, Windows). More than 600 digital books including 377 e-textbooks (grades 1 to 12) and 3,500 pieces of audio and video content of NCERT are available in the public domain in various languages (Hindi, English, Sanskrit and Urdu).

National Repository of Open Educational Resources (NROER)

NROER is an open storehouse of e-content. Nearly 17,500 pieces of e-content are available for all grades for various school subjects.

Open and Distance Learning in India

In India the Open and Distance Learning (ODL) system has been a great success due to its features like accessibility and flexibility. Rather, ODL is a great support to the Indian education system for catering education to a large number of learners affected with diversities and extremities of different kinds -- geographical, economic and social. It caters to those students who are struggling to cope up in this VUCA world, a world featured with 'volatility, uncertainty, complexity, and ambiguity'. The emerging technology in the form of e-tutorials/ e-books embedded with audio and video resources, supplemented with Open Education Recourses, interactive web links, discussion/ chat bots, online quiz/ coursework, educational games, animation, etc. and the electronic format i.e., desktop, mobile, I-pad, kindle etc. have become the first choice of ODL learners. Reports indicate that most of the learners have sufficient orientation towards online and digital media. However, the main challenge is access to electronic media to a large chunk of distance learners. Similarly, some learners may not have the equipment to undertake online teaching-learning and assessment. Apart from this, connectivity problems are also there in the country. Seeing all this, blended learning mode is the most suitable mode for a country like India.

Online teaching is carried out in two ways – synchronous mode and asynchronous mode. In synchronous mode, the teacher has to teach the students by connecting in real-time which means teacher and students, simultaneously, have to be present online at a specific time. This is done using various platforms like Zoom, WebEx, Google Meet, Google Classrooms, MS Teams, TCS Digital Class Room, etc. which facilitate real-time face-to-face interaction lancing the physical distance. In asynchronous mode, teacher and students do not have to be present online, simultaneously. This is done using pre-recorded video lectures and thus students can learn at their pace and as per their convenience or free time. Blended Learning Mode is an instructional methodology that combines traditional classroom methods with computer-mediated approaches to deliver instruction. This pedagogical approach means a mixture of face-to-face and online activities and the integration of synchronous and asynchronous learning tools, thus providing an optimal possibility for the arrangement of effective learning processes (UGC, 2021).

NIOS Virtual Open School: A New Initiative to Supplement ODL in India

National Institute of Open Schooling (NIOS) is 'Open School' established in 1986 for extending open learning facilities at the school level all over the country as an independent system with its curriculum and examination leading to certification. In July, 2002, the Ministry of Education (MoE) amended the nomenclature of the organisation from the National Open School (NOS) to the National Institute of Open Schooling (NIOS) with a mission to provide relevant continuing education at the school stage, up to pre-degree level through Open Learning system to prioritized client groups as an alternative to the formal system, in pursuance of the normative national policy documents and in response to the need assessments of the people. Through its various activities, NIOS makes its share of contribution towards universalisation of education; greater equity and justice in society, and to the evolution of a learning society. The National Institute of Open Schooling (NIOS) provides opportunities to interested learners by making available the courses/programmes of study on Open Basic Education (OBE) Programme for 14+ years age group, adolescents and adults at A, B and C levels that are equivalent to classes III, V and VIII of the formal school systems; Secondary Education Course; Senior Secondary Education Course; Vocational Education Courses/Programmes; Life Enrichment Programmes. NIOS operates through a network of five Departments, 23 Regional Centres, two Sub Regional Centres, two NIOS Cells, and more than 7400 Study Centres (AIs/ AVIs) spread all over the country and abroad. NIOS is the largest Open Schooling system in the world with cumulative enrolment of 4.13 million (NIOS Website).

Given the continuously emerging needs for online education, the National Institute of Open Schooling (NIOS) has recently launched Virtual Open School powered by Blended Learning and Pedagogy. The Virtual School has been introduced to make world-class education affordable to all and develop students with multiple intelligence. The main aim is to facilitate holistic, integrated, enjoyable and engaging learning to benefit open school learners by bridging the gap between 'education' and 'distance'. NIOS Virtual School aims to cater to learners across the world who are at disadvantage due to various

socio-economic reasons. Most importantly, it aims to bring a paradigm shift in the understanding of 'Open and Distance Schooling' with the introduction of new technology of advanced virtual learning by providing virtual classrooms and virtual laboratories for simulating the experience of real classroom learning. Live and interactive sessions for providing practical training through virtual labs and provision to evaluate students' progress through assessments and examinations are the salient feature of this Virtual Open School. NIOS Virtual School is also focusing on increasing the students' learning outcomes and make them ready to face the digital age challenges efficiently.

National Education Policy—2020 (NEP—2020) envisions an education system rooted in Indian ethos, transforming India, that is *Bharat*, as sustainable, equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower. Virtual School at NIOS lives with this vision by including Indian ethos in the curriculum of various course. One of the primary goals envisaged in NEP is to ensure that children are enrolled in and are attending schools. Through this virtual school, the top priority is to bring the children back into the educational fold and to retain them to achieve 100% Gross Enrolment Ratio in preschool to secondary level by 2030. It is also to ensure the provision of universal access and opportunity to all children of the country to obtain quality holistic education–including vocational education - from pre-school to Grade 12. In all stages, experiential learning will be adopted.

NEP—2020 is paving the road ahead towards attaining its inherent goals by ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all in the next decade. Virtual Schools can be an important instrument to achieve this.

Objectives of Virtual School Platform

Some of the main objectives of the Virtual School Platform are:

i. To inculcate concept-based learning using *live interactive teaching-learning tools,* interaction and assessment systems for various subjects and various standards of the school.
ii. To identify, recognize and foster the unique capabilities among the pupils/ learners.
iii. To provide flexibility to meet the learners' learning trajectories and programmes.
iv. To enhance inclusivity with larger emphasis on the access for *Divyang* students.
v. To work towards realizing the vision of NEP—2020.

Content and Process

Virtual School offers high-quality content for Class 9 to 12th in the form of:

- Chapters blended with games for tech-savvy generation to make learning more fun as per the curriculum of the NIOS board;
- An adaptive programme that allows the student to master one concept at a time to achieve their full potential;
- Revision notes, textbook solutions;
- Question banks for preparing for examinations;
- Mentorship/homework help;
- Learning through Multiplayer games (peer learning);
- On-Demand Video lessons;
- Virtual Live Interactive Classrooms without having to integrate an additional plug-in;
- Facilitate course counsellors/educators and learners to collaborate online, deliver and consume knowledge via live as well as recorded videos of live classes;
- Virtual Labs for simulating real experience;
- Offer skill-based job-oriented courses on Artificial Intelligence, Cyber Security etc., to prepare learners to secure jobs in the skill-based areas;
- Provide certifications to enhance employability;
- Provide access to Job Boards and Job Portals;
- Course Builder for academic course counsellors/ faculty to easily create, upload and manage content and deliver self-paced courses;
- Online tests and assessment of learners' progress;
- Analytical Dashboard/Reports and Usage Analytics to get insights into how content is being consumed and tweak the courses accordingly;
- Foster learning on-the-go with a dedicated native mobile app for Android and iOS;
- Integrate smoothly with an existing website or LMS using APIs and plugins for Moodle, WordPress, Joomla, and more;

- Scheduling the Personal Contact Programme (PCP);
- Scheduling the assignment, evaluation of assignments and awarding the marks and feedback to the learners;
- Creating discussion forums;
- Providing personal support to the learners through Chatbots;
- No limit on the number of users on the platform;
- Provide access to the content library;

Implementation of Virtual School Platform

To make the Virtual School more effective, NIOS is setting up a new studio to deliver LIVE lessons; make the e-contents of LIVE sessions and recorded materials available to learners; create a LIVE chat-room for every student for individual learning assessment. NIOS shall also undertake operations and management of the studio and education services and create a Help Desk.

Technology Solutions

- The system is reliable and robust, and will enable LIVE interactive teaching-learning from studio to the beneficiaries.
- The solution shall be a 2-way LIVE interactive model among students and course counsellor over a secured network.
- The Platform shall allow doubt clarification through remote online teachers and chat rooms.

Digital Multimedia Content

The digital multimedia content will be developed as low-bit-rate transferrable without compromising the quality of the output. The developed content shall be suitable for LIVE delivery of a minimum of 60-minute session to be delivered in bits as per be prescribed time slots. All content shall be saved in offline mode so that students will be able to watch at their convenience.

Online Project Monitoring Tool

The Online Project Monitoring Tool would maintain the following:

- Information regarding subject-wise delivery of LIVE classes.
- Real-time information about the number of virtual classes held.
- The total number of students benefitted at various levels.
- Category-wise and gender-wise beneficiaries over different regions.

The Beneficiaries

- Distance learners across the globe who would be able to attend schools virtually.
- Around 5 lakh learners who enroll in NIOS annually would be benefitted from this programme.
- The students of the formal school who are deprived of good quality teachers would be benefitted at large.
- *Divyang* students and the Socio-Economically Disadvantaged Groups (SEDGs) will be highly benefitted from this programme.

The Positive Implications of NIOS Virtual School

NIOS Virtual School is aimed at addressing the need for a skilled workforce, particularly involving mathematics, computer science, and data science, in conjunction with multidisciplinary abilities across the sciences, social sciences, and humanities. In the fast-changing employment landscape and global ecosystem, it is becoming increasingly critical that children not only learn, but should also know how to learn. There is a progress towards less content delivery with more focus on critical thinking and problem solving, making the learners more creative and multidisciplinary, so that they innovate, adapt and absorb new material in novel and changing fields.

ICT had opened up a whole bouquet of technologies for delivering education online, but the span of attention which these technologies can garner is too less. So, there is a need for devising the methodologies to engage the students in active learning through optimum timing arrangements. Though, online and virtual classrooms are a wonderful media for imparting education, to make them interesting, active listening and engagement modules need to be integrated. This is the reason why many online education endeavors are failing miserably. To make online education successful, we need a whole new system of the new-age teacher training to prepare the teachers to deliver engaging and interesting sessions. Teachings must include gaming technology, storytelling, role plays, online flashcards, quick rewards, etc., which helps in engagement and retention. NIOS Virtual School will have such training facilities and trained teachers to impart online education.

The Virtual School platform at the National Institute of Open Schooling (NIOS) is striving to meet the learning needs of young people in India who are not able to attend physical school and thus mitigating the hurdle of 'distance' and making it more open. In consonance with the Digital India Campaign, this initiative of NIOS will work through a two-pronged strategy. It incorporates blended learning with experiential and activity-based learning. It is not just a screen-based education with limited focus on the social, affective and psychomotor dimensions of learning rather the thrust would be on experiential learning, including hands-on training, arts-integrated and sports-integrated education, story-telling-based pedagogy, gaming, digital toys, virtual games, learning through animations and use of AI at large as standard pedagogy within each subject, and with explorations of relations among different subjects.

The initiative of launching virtual schools also intends to minimize the dropout rates by providing suitable opportunities to the learners to catch up and re-enter the education system through various capsule courses, short term and bridge courses complying with the vision of *Samagra Shiksha* and Right to Education Act (RTE Act). Inclusion of those subjects at the middle/ secondary level which could be further taken up as vocational and skill-based subjects is necessary. This is an opportunity for many parents who desire to enroll in online courses to help their children in their studies.

Conclusion

Online education or virtual education has come a long way in India with the potential and popularity of ICT in the country. With the ever-increasing information available on the internet and the countless number of online courses, many students in India prefer virtual platforms for pursuing various courses. By initiating virtual education institutions, we will be able to mobilize the traditional educational systems towards digitalized systems; to convert chalk and talk method to multimedia-aided method, to convert academic content into online learning content, and replace the paper-pencil based administrative procedure with an digitized model. This in turn will help in creating more sustainable and ecofriendly education institutions. Thus, the recent initiative of NIOS to launch the Virtual Open School is of great significance for the Nation. It is an opportunity for a large number of distance learners to get technology-empowered online education that can simulate the real classroom environment. Most importantly, it is a landmark step in the implementation of the NEP-2020.

In nutshell, it is an effort to enable a smooth transition of the education system towards the next wave!

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The Deccan College in Pune (1821-2021): Two Hundred Years of Dedication to Indological Studies

K Paddayya*

Western India occupies pride of place in the entire history of Indological studies. Places such as Elephanta, Karle, Ajanta and the Girnar Hill edicts of Asoka in Saurashtra immediately come to one's mind when we think of Western India. Already from the 16th and 17th centuries onwards sailors, merchants and missionaries navigating the Arabian Sea started visiting some of these places and preparing brief notices giving their impressions. Regular antiquarian research commenced in the 19th century with the field investigations and writings of many distinguished persons such as Bhau Daji Lad, Bhagwanlal Indraji, James Burgess, Henry Cousens and R.G. Bhandarkar. No less important are the contributions rendered to Indological scholarship by various institutions – Literary Society of Bombay established in 1804 (renamed as the Asiatic Society of Bombay in 1821), Bharat Itihas Samshodhak Mandal in Pune (1910), Bhandarkar Oriental Research Institute (1917), Oriental Research Institute in Vadodara (1927), and Bharatiya Vidya Bhavan and Gujarat Research Society in Mumbai (1938) (Paddayya, 2015).

The dedicated efforts of these and other institutions have enriched the Indological scholarship in a very large measure, both quantitatively and qualitatively. Among the various publications, the critical edition of the Mahabharata text (in 19 volumes) completed between 1933 and 1959 under the editorship of V.S. Sukthankar, *History of Dharmasastra* (in five volumes) brought by Bharat Ratna Mahamahopadhyay P.V. Kane between 1930 and 1962, *History and Culture of the Indian People* (in eleven volumes) published between 1951 and 1969 under the editorship of R.C. Majumdar, and the critical edition of the Ramayana text (in seven volumes) edited by G.H. Bhat and brought out between 1960 and 1975 occupy an exalted place in the whole realm of Indological literature. I must also mention that the Asiatic Society in Mumbai had the distinction of celebrating its bicentenary in 2004.

This brief review of Western India's long and robust record of Indological scholarship will remain incomplete without bringing into this entire story the Deccan College Postgraduate and Research Institute in Pune. It started functioning as a Deemed University from the academic year 1994-95, offering courses leading to postgraduate and doctoral degrees in archaeology and linguistics. It has won for itself a coveted place in higher education not only in India but outside too. In fact, like the Asiatic Society, it will cross the bicentenary mark on 6th October, 2021 and enter its third eventful century. Here it is important to realize that, while the universities of Calcutta, Bombay and Madras completed their centenaries in 1957, the Deccan College is only four years behind the Presidency University in Kolkata to complete bicentenary. This is a fitting occasion to present a short account of its origins and history, achievements and future plans.

Deccan College: Brief History

Formative Stage

The third Anglo-Maratha war that took place in the Kirkee area of Pune city (covering also the campus of the present Deccan College) in February 1818 drew the curtain on the Maratha empire and its territories in Western India came under the control of the East Indian Company. Mountstuart Elphinstone was the architect of this transfer of power. This is an event of epochal importance and marks the transition of Western India from the late medieval age to the modern period. In recognition of his contribution to the expansion of the Company's territories, Elphinstone was appointed as the Governor of Bombay Presidency in the following year and occupied this position till 1827. True to his background as a product of the liberal thought of Scottish Enlightenment and also drawing upon his personal experiences with the area, its people and their customs and traditions for well over a decade as Resident at the Peshwa court, Elphinstone desisted from the conqueror's attitude and instead embarked upon a policy of "utmost possible moderation to preserve the institutions of the natives as I find them, and to make great sacrifices for the purpose of taking people along with me, instead of imposing a government by mere force" (Choksey, 1971: 8).

Elphinstone's 37-page-long *Minute on Education* is an eloquent testimony to the high

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priority he attached to education in the new administration (Elphinstone, 1824a: 79-116). He set a twofold aim for it: a) as an instrument for bringing about social and moral transformation, particularly considering the fact that the Deccan society was ridden with many age-old beliefs and superstitions ranging from *Sati* to female infanticide and b) to prepare the natives for occupying high and low positions in the administration. Towards this end he gave encouragement to vernacular schools and translation of English writings into Marathi. Noteworthy too is his outright rejection of demands for the admixture of Christian missionary activity with the government's education policy.

What is of real interest and importance from the point of view of this essay is the fact that Elphinstone was fully cognizant of the rich nature and importance of "intellectual treasures" of the land and of the need for their preservation and further study. In the *Minute* he pays a full compliment to the indigenous learning held by the Brahmin community in these words: "…their learning may have been obscure and degenerate, but still bore some affinity to real science, into which it might in time have been improved. They were not, perhaps, much inferior to those monks among whom the seeds of European learning were long kept alive" (Elphinstone, 1824a: 110). It was this deep interest in and appreciation of ancient Indian learning enshrined in Sanskrit texts which emboldened Elphinstone to establish the Hindoo College in Pune city on the 6th October (Vijayadashmi day), 1821, and only later solicited post-facto consent from the Court of Directors in London (Fraser, 1902; and Paddayya, 2002).

Enraged by this adventure some act of Elphinstone, the Utilitarianism-led Court of Directors two years later served him a detailed letter of reproach raising a series of queries about the very purpose and usefulness of promoting indigenous learning with state support and even apprehended that the money provisions he had made for the new college might only end up as "an eleemosynary supply for pauperism or as an easy retreat for lazy indifference." The Court instead felt that European learning would have been the appropriate choice for the new college. In his 15-page-long reply Elphinstone rebuts all these objections and emphasizes that the establishment of this college was in keeping with traditions of the Dakshina Fund created by erstwhile Maratha rulers (Elphinstone, 1824b). Conceding that European learning would be introduced at a later stage, he asserts that the College would exclusively promote indigenous learning in the initial stages. Elphinstone concludes his explanations with a statement about the relevance of heritage studies which is of equal significance even now when we are seized with the creation of *Atamnirbhar* India: "At no time however would we wish that the purely Hindoo part of the course should be totally abandoned. It would surely be a preposterous way of adding to the intellectual treasures of the nation to begin by the destruction of its indigenous literature and we cannot but think that the future attainments of the natives will be increased in extent as well as in variety by being as it were engrafted on their own previous knowledge and imbued with their own original and peculiar character…" (Elphinstone, 1824a: 110-1). The Court blissfully made no further correspondence and the infant Hindoo College survived.

In 1841 an English School was also started and a decade later the two Schools were merged to form the Poona College. Subjects such as arithmetic, geometry, algebra, hydraulics, and some physical and biological sciences were made part of the curriculum. Interest in Western education picked up and Pune soon began to emerge as an important educational centre. Correspondingly, there was a general loss of interest in topics dealing with ancient Indian learning, such that some of the Sanskrit pandits left the College. This emphasis on European learning became the dominant theme when the Poona College was shifted to the present campus in 1868. While laying the foundation stone for a new building in October 1864 which was partly funded by the Parsee philanthropist Sir Cursetjee Jamsetjee Jeejeebhoy, the Second Baronet, the College was rechristened as the Deccan College. As emphasized by both Sir Bartle Frere (Governor of the Presidency) who laid the foundation stone and Sir Cursetjee Jeejeebhoy, this renaming meant that the enrollment was now open to students from all over the Deccan and to all classes of the society. Sir Bartle envisioned "greatest results" from the emphasis on European learning and blessed the College with "a future of prolonged usefulness and distinction" (Frere, 1870; Jeejeebhoy, 1870).

Between 1868 and 1934 a galaxy of students who later achieved eminence in various walks of life passed through the portals of the old building raised in Neo-Gothic style. They include Lokmanya Tilak, Gopal Ganesh Agarkar (social reformer), V K Rajwade (historian), Gurudev R.D. Ranade (philosopher), R.N. Dandekar (Indologist), Dr.

Dwarakanath Kotnis who rendered laudable war-time medical service in Chinese villages, and many others.

The faculty of the Deccan College included eminent persons such as Martin Haug, Kielhorn, Bühler and Sir R.G. Bhandarkar. Credit goes to them for placing Indological studies on a systematic footing. There was a revamping of Sanskrit studies to render them "more intelligible and profitable". Comparative studies of Sanskrit and European literature replaced hairsplitting debates about *Nyaya*, minutiae of *Alamkara* and verbiage of *Vedanta*. Epigraphical and numismatic studies appeared in a definite way. Field visits were made by Haug, Bühler and Bhandarkar to various places in Karnataka, Maharashtra, Gujarat and Rajasthan and a large number of ancient manuscripts were collected. Bhandarkar served on the faculty from 1882 to 1893 and, with his various contributions to ancient history, religion and culture, emerged as the Indologist *par excellence.* He initiated Indological writings in 1883 with his book *Early History of the Dekkhan* (1883). As we will notice later, he also introduced the method of critical inquiry in Indological studies. True to its rechristened name, the College expanded it scopewell beyond its Poona base and affiliation with priestly families and carved for itself a secure place in the whole of Deccan in both educational and social domains (Ballhatchet, 1957: 252-7; and Kumar, 1968:47-51).

Postgraduate and Research Institute

An entirely new chapter was opened in the history of the Deccan College when, after a total closure for five years from 1934, it reopened in August, 1939 as a Postgraduate and Research Institute. After a careful study of the existing curricula of Bombay University and gaps in it, the Reorganization Committee appointed by the Presidency Government recommended that the new Institute should specialize in postgraduate teaching and research in heritage studies with special reference to historical and linguistic sciences. The new faculty was a seven-member team which including Professors S.M. Katre, H.D. Sankalia, and Irawati Karve. Thanks to their visionary leadership and the contributions made by them and their colleagues during the next quarter-century in sociology-anthropology, linguistics, Maratha and Medieval History, archaeology and Sanskrit studies, the fame of the of Deccan-based institution now rose to national and international levels. And it is a matter of pride for higher education in India that the Deccan College was included in the world-list of anthropological institutions published by *Current Anthropology* in 1965 (Tax, 1965: 498). Full details about these and subsequent contributions made by the Institute to postgraduate teaching and research are available in various publications – Katre (1960) and volumes 30(1971), 50(1990) and 60-61 (2000-2001) of *Bulletin of the Deccan College Research Institute.* A brief review of these achievements in different disciplines is given below (Katre, 1960; and Paddayya, 2018).

The Department of Linguistics, headed by S.M. Katre, initially undertook historical studies of the Indo-Aryan languages of Western India and also studies of the Vedic language, culture, religion and mythology. Another major aspect of research concerns the history of principal literary languages of the Dravidian family. Also languages of the Austro-Asiatic and Tibeto-Burman families have been studied by the faculty and doctoral students. Aided by a money grant provided by the Rockefeller Foundation, the Department conducted a series of six-week-long courses in linguistics in Pune and several other places in 1954-55. Based upon the experience of these courses the Department initiated a postgraduate (M.A.) course in the subject in 1958, and this in turn inspired several other universities to open their own departments of linguistics. In recognition of its pioneering role in introducing modern linguistics in India, the UGC recognized the Department as a Centre of Advanced Study for a decade from 1963. In 2011 it was again selected by the UGC for the award of Special Assistance Programme. The ongoing research in the Department includes language contact studies, Austro-Asiatic languages and Survey of Marathi dialects.

As a unit of the Linguistics Department, Professor Katre initiated in 1948 work on *An Encyclopaedic Dictionary of Sanskrit on Historical Principles.* This is a project of monumental proportions and its resource-base consists of about one crore vocables collected over a period of quarter-century from 1500 Sanskrit texts (Rigveda to 1850 A.D.) and covering over 50 branches of ancient learning. The first volume of the Dictionary appeared in 1976 under the editorship of Professor A M Ghatge and as of today 35 volumes have been published. The work is in progress and this project already attracted the attention of Indological scholars all across the world. A.L. Basham in his book *The Wonder that was India* commended it by saying that this Dictionary, when completed, will be the largest lexicographical project in the world.

The Department of Archaeology at the Deccan College is practically synonymous with the name of H.D. Sankalia. After its counterpart in Calcutta University this is the second oldest university department in the country for studies in ancient Indian history and archaeology. Under the stewardship of Sankalia, it played a lead role in developing several branches of ancient Indian history and culture: a) region-based dynastic study of monuments; b) reconstruction of historical geography and cultural ethnography of different regions from inscriptions; c) cultural history from ancient texts; and d) evolution of Indian numerals.

The Department's fame rests equally on its numerous field studies in archaeology for reconstructing prehistoric past of the country. The faculty and doctoral research projects involved a large number of surveys and excavations covering practically the whole country from Kashmir to Kerala and from the desert part of Rajasthan to Manipur and Nagaland. Excavations in Kurnool caves in Andhra Pradesh, Isampur, Hunsgi, Budhihal, Tekkalakota and Sanganakallu in Karnataka, Nevasa, Inamgaon, Naikund and Mahurjhari in Maharashtra, Bhimbetka caves, Maheshwar, Navdatoli and Kayatha in Madhya Pradesh, Kuntasi in Gujarat, Ahar, Balathal, Bagor and Gilund in Rajasthan, and Rakhigarhi in Haryana have found a firm place in Indian archaeology. With Sankalia's own field studies at Nevasa in the Deccan in the mid-1950s serving as the starting point, the Department's investigations established for certain that different parts of the peninsula passed through one-million-year-long Stone Age or hunting-gathering stage comprising Lower, Middle, Upper Palaeolithic and Mesolithic phases.

No less remarkable is the Department's contribution towards filling up what the last British Director General of ASI Sir Mortimer Wheeler called the Dark Age (between the end of Indus civilization and Early Historical period) by unearthing from excavations a huge body of archaeological material pertaining to early agropastoral (Neolithic-Chalcolithic) societies spanning from fourth to second millennia B.C. These cultures mark the very genesis of present-day rural lifeways. The Vidarbha excavations conducted by Professor S.B. Deo threw welcome light on the burial practices and lifeways of the Iron Age that preceded the Historical period. Excavations also covered historical and medieval sites such as Nasik, Kolhapur, Daulatabad and Sisupalgarh.

The pioneering role played by this Department also extended to the domain of methodology. It has built up small but efficient scientific laboratories for archaeological, chemistry, archaeozoology, archaeobotany, geoarchaeology and biological anthropology. Computer archaeology was developed with the help of a large grant from the Ford Foundation. This grant also helped faculty development. Ethnoarchaeology and archaeological theory are its other first-of-the-kind contributions to Indian archaeology. The Department benefited in a large way from the U.G.C. Special Assistance/ Centre of Advanced Study Programmes from 1972 to 2013 without a break.

The Departments of Anthropology and Sociology made their own contributions to the understanding of the structure and dynamics of the Indian society. The Anthropology Department, headed by Irawati Karve, initially collaborated with Archaeology Department in the study of human skeletons from excavations. Then followed studies in physical and cultural anthropology – investigations of physical traits and kinship organization of various groups spread over peninsular India. The results of these studies are available in Irawati Karve's well-known publications titled *Ethnic Affinities of the Chitpavans* (1933), *Anthropometric Measurements of Maharashtra* (1951)*, Kinship Organization in India* (1968) and *Hindu Society – An Interpretation* (1961). The research projects of Sociology Department, headed by Professor Y B Damble, covered topics such as intergroup relations, educational sociology, college youth, women's studies and village weekly markets. The faculty of History Department included well-known scholars such as T.S. Shejwalkar, P.M. Joshi and A.R. Kulkarni who carried out valuable research on Anglo-Maratha wars, Maratha-Portuguese relations, and Maratha diplomacy and administration. Shejwalkar's book *Panipat 1761* is a well- known publication in Maratha history.

As per guidelines issued by the State Government regarding the need for avoiding duplication of university departments in the same place, the Departments of History, Sociology and Anthropology were shifted to University of Poona in 1972 (now called Savitribai Phule Pune University), which in turn transferred its Departments of Linguistics and Archaeology to the Deccan College. It is now left with two Departments (Archaeology and Linguistics). To these a Department of Sanskrit and Lexicography was added in 2010. Initially

affiliated to Bombay University and then to University of Poona since 1948, the Deccan College started functioning as a Deemed University from the academic year 1994-95. In addition to M.A. and Ph.D. programmes, it also conducts certificate/ diploma courses in heritage management, maritime archaeology, and Japanese and Italian languages.

Since 1939 the Deccan College has published its annual research periodical *Bulletin* without any break. Also it has brought out about 240 monographs/books authored by its own faculty and research scholars. So far about 600 doctoral dissertations have been completed in different disciplines. The Deccan College library is renowned for its holdings of books and periodicals numbering over one lakh and a half. It extends its services to scholars from other places too in India and outside. The Archaeology Museum and Maratha History Museum have jointly developed an extensive public education programme consisting of school teacher workshops, popular lectures, excavation site exhibitions, and exhibitions in towns and villages. Boththese museums attract a large number of school children and other visitors.

Other Special Contributions

Over and above the above-mentioned specialized academic contributions in historical, archaeological, linguistic and anthropological sciences, the Deccan Colege has to its credit at least three Firsts which are of general interest.

The Deccan College scholarship in Indology is noted for the application of a critical approach in the use and interpretation of written, oral and archaeological sources. This spirit of critical inquiry owes its origin to the exposure of the faculty to Western learning and stretches back to the later part of the 19th century. I must in particular draw attention to Sir R.G. Bhandarkar's stellar essay on "Critical, Comparative and Historical Method of Inquiry as applied to Sanskrit Scholarship, and Philology and Archaeology" published in 1888 (Bhandarkar, 1933). This is a remarkable piece of writing and forms the first explicit statement about research methodology not merely in Indology but in all domains of higher learning in India covering both natural and human sciences. Bhandarkar clarifies his source of inspiration in these words: "The inductive method began to be used in Europe about the end of the sixteenth century, and since that time very great progress has been made in the discovery of the laws of the physical world. The critical, comparative and historical method began to be well understood and employed about the end of the eighteenth century, and within a hundred years since that time, an equally amazing progress has been made in other departments of knowledge; and geology, palaeontology, comparative philology or the science of language, comparative mythology, evolution and the origin of species, scientific history, comparative jurisprudence, archaeology, and even comparative religion are the grand results" (1933: 363). Bhandarkar not merely advocated the method of scientific inquiry but actually adopted it in his own numerous writings in ancient Indian history, culture and religion. His books *Early History of the Dekkhan* (1884) and *Vaishnavism, Saivism and Minor Religious Systems* (1913) still remain as masterpieces of Indological writing.

It was but natural that Bhandarkar underscored the need for restraint in the employment of patriotic feelings in ancient India studies and already warned against "praising ourselves and our ancestors indiscriminately, seeing nothing but good in our institutions and in our ancient literature, asserting that the ancient Hindus had made every great progress in all the sciences, physical, moral, social and the arts, greater even by far than Europeans hitherto made" (1933: 392). This warning is equally relevant now when we notice a resurgence of narrow traditions and approaches, to ancient India and its culture. Lokmanya Tilak too employed this scientific approach in his Indological writings, more particularly in his book *Arctic Home in the Vedas* (1903) and V.K. Rajwade in dealing with the source materials of Maratha history.

These critical and eclectic approaches were continued and adopted by Katre, Sankalia and Karve while nurturing the Deccan College into areputed Research Institute. They took care to ensure that the Institute's research was free from all kinds of doctrinaire orientations. Katre's book *An Introduction to Indian Textual Criticism* (1941) is the first guidebook in India for critical reading and interpretation of ancient Indian texts. Sankalia employed this critical approach and used archaeological sources for ascertaining the historicity of events and places mentioned in the Ramayana (Sankalia, 1973, 1982). In her book *Yuganta* (1969) Irawati Karve made an irreverent character analysis of all major personalities of the Mahabharata.

Another First to the credit of Deccan College is that the seeds of disaffection towards the British

colonialism were already shown here in the late 19th century. There is the case of the student Jagannath who wrote a small piece comparing the British and Muslim modes of occupation and castigated the former for draining the wealth of India. As students, Tilak and others, emboldened by the liberal thought they were exposed to, boldly differed from and expressed views contrary to those of their teachers. In fact, Tilak and Agarkar, both in their hostel rooms and during their evening walks on the nearby Parnakuti Hill, were already toying with ideas about ways to end the British rule. It is to these ideas of student days which Tilak very soon sought to give a concrete shape and brought them to the public domain by devising appropriate methods. He thereby won the title of father of freedom struggle. This is equally true in the case of social reforms. Exposure to liberal ideas brought the young minds of Agarkar, Rajwade and others face to face with certain age-old beliefs and superstitions plaguing the Indian society. The Deccan College days again served as the seed-base of their later writings and social work. Bhandarkar's association with the Prarthana Samaj and his contribution towards religious reforms are well known (Bhandarkar, 1911).

The third First concerns the word inclusive which is freely used in matters dealing with education at both lower and higher levels. The matter is one of giving maximum scope to underprivileged sections and making them an integral part of the whole system. Here too the Deccan College took the lead. We go back to the sentiments expressed on the occasion of laying the foundation stone of the Deccan College on the Yerawada campus in 1864. Sir Jamsetjee Jeejeebhoy, the 2nd Baronet, who gave a large grant for the building, not only welcomed the new curriculum but hoped that "the benefits of the education which will be imparted with in the walls here to be erected shall be felt in every Deccan village" (1870: 272). Equally eloquent were the words of Sir Bartle who laid the foundation stone. He said that the renaming of Poona College as the Deccan College meant that the student enrollment would go beyond Poona and cover all parts of the Deccan. Even more important, he asserted that it would no longer be restricted to children of priestly families of Poona but would include all peasant classes of the whole region (1870: 273).

These traditions of inclusiveness were happily continued by the Deccan College when it reincarnated as a Postgraduate and Research Institute in 1939. Katre, Karve and Sankalia and their successors accepted with open hands students from urban, rural and even tribal backgrounds from any part of India For instance, I remember how Sankalia admitted into the M.A. course a shaky and poorly dressed Dhangar student from a remote village, provided for his stay on the campus and groomed him into a young archaeologist who subsequently became an officer in the Archaeological Survey of India. Examples can be multiplied.

Ongoing Research Projects

In continuation of the Institute's long and rich research record, the Deccan College Departments are currently engaged in several major research projects, with particular reference to peninsular India.

1. Integrated study of palaeoenvironments to serve as the basis for reconstructing man-landrelationships from the Stone Age to historical period; intensive search for hominid skeletal remains.
2. Intraregional diversity of Stone Age adaptations in different parts of peninsular India.
3. Intraregional diversity in early farming (Neolithic-Chalcolithic) societies and their relationship with present-day regional peasant cultures.
4. Landscape archaeology with reference to historical and medieval sties.
5. Ethnoarchaeological studies of hunter-gatherer, peasant and pastoral groups.
6. Preparation of atlases of tribal and literary languages of peninsular India covering Indo-Aryan, Dravidian and Austro-Asiatic families.
7. Language contact studies including the contributions of non-literary languages and associated cultures to major languages and respective cultures.
8. Collaborative studies concerning the linguistic affiliations of early farming groups.
9. Completion of *An Encyclopaedic Dictionary of Sanskrit on Historical Principles.*
10. Reconstruction of socio-economic, cultural and religious history based on ancient texts, archaeological, art historical, epigraphical and numismatic sources, and oral traditions.
11. Sociological investigations of heritage consciousness among different sections of the Indian society. Such studies would be helpful to the government in formulating culture policy.

(contd. on pg. 25)

National Education Policy—2020 and Reforms in Curriculum Design and Development

M A Varghese*

National Policy of Education–2020 (NEP-2020) has been formulated with a great vision and it aims to bring about a revolutionary transformation in our education system. There have been many changes happening in the system in a fragmented manner which did not make a great impact on our knowledge economy as revealed from the rankings India got in the world ranking statistics. Quality Research is a vital factor for India to focus on to be able to build a strong nation at par with the international standards. The approach must change from 'what to think' to 'how to think'. The policy is built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability which should transform India in to a vibrant knowledge hub in this digital world. The policy is aligned to the 2030 Agenda for Sustainable Development and aims to transform India into a vibrant knowledge society and global superpower by making the education more holistic, flexible and multi-disciplinary-suitable for the 21st century needs and aimed at bringing out the unique capabilities of each learner in the context. NEP–2020 will be the foundation for the New India. It is expected to reshape the students into global citizens who are rooted in our heritage and values. At the same time, it focuses on inquiry, analysis, and invention-based approach to help foster greater curiosity, interest, and logical reasoning in the learner's mind.

National Education Policy−2020

The aims of the Policy are comprehensively laid out as follows:

- To produce engaged, productive, and contributing citizens for building an equitable inclusive and plural society.
- To increase GER in Higher Education from 20.35% to 50% by 2035.
- To create greater opportunity for individual employment.
- To bring together fragmented system to large multi-disciplinary Universities and Colleges and Higher Education clusters/knowledge hubs.

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This entails the participation of many players like the Governments both Central and State governments, Municipalities, Industries and the local communities and the educationists. The Government must define the operational units and give the appropriate guidelines. If 40% of the Higher Education Institutions are single faculty institutions, serious planning has to be done to make them into multi faculty institutions or consolidate some neighboring single faculty institutions to make them as multi-faculty institutions .Funding for the various infrastructure facilities and staff recruitments and training are other important issues which should be operationalized. Some of these points will be discussed along with the other points of implementation.

This article will focus on Reforms in Curriculum Design and Development. Each institution must plan their programs based on some principles of curriculum planning.

What is Curriculum?

The word Curriculum essentially means the *path to run*- Every one has to go through this process to reach the destination which we call the outcome. Education is a process to transmit knowledge. Curriculum is also looked at as a process. One goes to the institution to learn and through the process of interaction the outcome is achieved.

In another perspective, it is the content/ product. How a student finds content through the curriculum transaction. Curriculum is considered to produce a purposeful product for the student and the teacher acts like a technician. The student comes to class with the purpose of achieving an outcome which is the product.

Curriculum is also viewed from the perspective of praxis to bring about *chang*e from the current situation or issue. Here, the change by which the liberation of the mind to understand the real-life content including the environmental context.

Curriculum is the heart of educational process. It is the vehicle for the ongoing journey of human development, for the economic, social and ultimately national development. According to the various

changes in the economic, social, and political environment, individuals have to grow/change to face the various challenges. Therefore, education experts have to be constantly aware of the various challenges and changes facing the present and future generation and be prepared to plan the curriculum and transactions accordingly. Curriculum development is thus an ongoing process, which should be a planned, purposeful, progressive and systematic action so that human resource development will be carried out not only for individual development, but also for the family, community, societal and national development. Curriculum refers to the means and materials with which the student will interact for achieving the intended goals and purposes. Curricular development and the timely changes will facilitate the teacher's plan of action and refines the totality of planning process and the sequence of operations. Curriculum transaction is the transfer of learning from one person to another with purposeful guidance of the learning process. To assess the learning outcome, assessment and feedback from the stakeholders are required.

Benjamin Bloom was the educationist who proclaimed the basis of classifying educational objectives. He called them behavioral objectives, ever since we have been systematizing the educational objectives as a guideline for designing curriculum for various programs. The different aspects to be considered are -cognitive, affective, and psychomotor domains. It contributes to the promotion of civic behavior, nation building and social cohesion through the transmission of democratic values and cultural norms. This supports the formation and strengthening of social capital, generally understood as the benefits of membership in Higher education contributes to the promotion of the development of abilities and a social network that can provide access to resources, guarantee accountability, and serve as a safety net in terms of crisis. The institutional relationships and norms that emerge from higher education are instrumental in influencing the quality of society's interactions, which underpin economic, political, and social development. Higher education has many purposes:

i. Acquisition of concrete knowledge and skills;
ii. Developing the ability to reason systematically about critical questions and issues;
iii. To place facts in a broader context;
iv. To consider the moral implications of actions and choices;
v. To communicate knowledge and questions effectively;
vi. To nurture habits that promote lifelong learning behaviours outside the formal settings; and
vii. Developing the skills of analysis, synthesis, and argumentation.

In a changing context, the needs and aspirations of the students must be met through the curriculum and curriculum transactions. The educationists and academicians need to take stock of the present scenario and introspect to transform the educational institutions to meet the present-day challenges. The institutions of higher education need to have a clear understanding of what they are seeking to achieve through their curriculum offerings, research, and extension programs. There is increasing pressure in the higher education system to equip students with not only the expertise derived from traditional academic programs, but also to give students sufficient range of transferable skills to enable them to play effective role in the employment sectors. Many higher education institutions are emerging with diverse programs. The thrust of education is shifting to employability based on the changing philosophy from idealism to pragmatism. Other philosophical bases are also emerging like existentialism and constructivism. From a specialized approach, there is a shift to multi-disciplinary programs with modular approach on a lifelong learning basis as promulgated in the recent NEP—2020. Moreover, higher education should have access from the diverse section of the community to be able to make the necessary socio-economic development of the country.

Universities and Colleges usually follow a routine syllabus following the one when it was originally established with minor modifications suggested by the universities without considerations of the aims of education as a whole and what changes need to be made from time to time according to the changing environment.

Historically, the aims of education are derived from the basic premises that the child is borne good and develop best, if education by people and education by things are well coordinated with the education provided by nature. John Dewey stressed on the multiplicity of aims that change with the needs and beliefs of a society. Alfred North Whitehead said that the aims of education should be to produce people who possess both culture and expert knowledge in some special direction. The underlying aims seem to be to keep the country strong economically and to give every student an opportunity to do well financially. Therefore, there are many sectors one should focus on:

- Education for personal life and professional life.
- Environment.
- Responsibility.
- Character and spirituality.
- Courage.

If happiness is connected to moral goodness, it is also influenced by intellectual virtue–by open mindedness, critical thinking and generosity of spirit. The most important single factor in the development of a healthy personality is self-esteem. It includes a person's sense of his own value, his secure conviction that his conception is good, his plan of life is worth carrying out. Secondly, self- respect implies a confidence in one's ability- to fulfill one's intentions. John Dewey was a strong advocate for the aim of education to be preparing for work. He believed that occupation is the only thing which balances the distinctive capacity of an individual with his social service.

Democracy is a mode of associated living. Its strength is in the recognition of interdependence and open communication. According to Dewey, curriculum must be continually constructed through shared experience. Every topic, attribute or skill that contributes to human flourishing matters educationally. Dewey recommended practical hands-on activity as a central feature of education. He opposed intellectualism as an attribute that values abstraction and disconnected thought above personal and practical experience. Intelligence pertains to a sustained interest in ideas and thinking. He emphasized the importance of educating for both personal and occupational life.

One of the key insights into the knowledge issue is that what you know is less important than how you know it. It boils down to the difference between two types of thinking:

- Low level concrete thinking concerns simple observations and facts and figures and is the foundation of the next level of thinking
- High level abstract thinking concerns relationships.

Both kinds of thinking are necessary. Nature first makes people experts in practical, concrete thinking and because you have to train your mind before you can do the abstract kind, a premium applies to the ability to think at the higher level. Dewey states further that the human mind does not learn in a vacuum, the factors presented for learning to be grasped must have some relation to the previous experience of the individual or to his present needs; learning proceeds from the concrete to the general and not from the general to the particular.

Benjamin Bloom was an Educational Psychologist who devised a pyramid model that represented different ways of learning. He made it a pyramid to show that the highest form of learning was evaluating information which was ultimately based on a much broader level of information that had just been well learned. Bloom wanted to promote higher forms of Critical thinking in education such as the use of analysis and evaluation of material, away from teacher's just drilling students into remembering facts and rote–learning.

Bloom's Taxonomy

Level 1. Knowledge

Normally people think of knowledge as something wonderful and all powerful. But Bloom defines knowledge simply as remembering of previously learned material.

Level 2. Comprehension

The next rung up, comprehension is the ability to grasp the meaning of material for example, understanding text, instructions and problems such as being able to restate in your own words.

Level 3. Application

This stage is a step up the hierarchy, because it requires the ability to apply, to use, the learned material in new situations.

Level 4. Analysis

Only with analysis, the real learning takes place.

Level 5. Synthesis

This is a step higher because it refers to the ability to put information and ideas together to create something new. Here creativity is involved.

Level 6. Evaluation

It is at the top of the taxonomy and is defined as the ability to assess the value of the knowledge comprehended, applied, analyzed and synthesized at the earlier levels.

During the 1990's, a new group of Academics-called Cognitive psychologists updated Bloom's pyramid to reflect the twenty first century insights into 'how people think'. The key changes were:

- Changing the names of the six categories from nouns to gerunds at each level.

- Rearranging the hierarchy. Here, Creating is at the top of the hierarchy.

There is another new model developed by two Australian Psychologists—John Biggs and Kevin Coll is a business consultant with an interest in lateral thinking. This model is called the Structure of Observed Learning Outcome (SOLO) taxonomy. This one consists of 5 levels:

- Pre-structural- where the learners do not understand the lesson/subject.
- Single Point-Uni-structural-Here, the learners have a basic insight into the subject, but only focus on one relevant aspect.
- Multiple unrelated points- multi-structural. Here learners focus on several relevant aspects but they are all treated as solutions.
- Intermediate- Relational. -Here the different insights have become integrated. Here, the learners have mastered their subject by being able to join all the parts together. This is where most learning stops.
- Logically related-Extended Abstract- Some learners may go on a step further and be able to create new ideas based on their complete understanding of the subject.

Thinking that requires all the skills in Bloom' pyramid is better than thinking that requires less of them. Creativity that has a practical outcome is supposed to exemplify this kind of 'everything' thinking, because it draws on the four highest levels of learning-application, analysis, synthesis and evaluation in addition to the core skills of knowledge and comprehension.

Another Psychologist, Calvin Taylor's idea was that many different kinds and abilities exist and that people who are gifted at one thinking may not be good at many others. Taylor claimed that typical intelligence tests measure only a small fraction of talents that have been identified (10% at most). So he proposed that multiple talents should be evaluated instead. He came up with 9talent areas that were often sidelined because of the emphasis on traditional measures of talent and ability. Other talent areas include:-productive thinking, planning, communicating, forecasting, decision making, implementing, human relations and discerning opportunities Taylor claimed that one third of the students would probably be highly gifted in at least one of the new talent areas. This new rating would thus increase their motivation; and also allow efforts to be directed more constructively toward what people are good at, instead of uselessly spend time on what people cannot be good at.

In the curriculum design and development process, all domains must be considered-Cognitive, Affective, Physical, and Psycho motor. Curriculum therefore need to be planned with much effort after consultation with appropriate experts. The integration of different domain objectives and the sequence of the learning experiences must be carefully worked out to lead correctly to the course objectives and ultimately the program objectives. The different Boards and Councils which deal with the decision making must be extremely careful with this important task.

Curriculum development is a process of developing appropriate curriculum through a need assessment process and consultation with expert groups based on the feedback from the stakeholders resulting in the development of relevant programs.

Curricular Aspects deal with how the curriculum-either assigned by the University or marginally-supplemented or enriched by an institution or totally remade, depending on the freedom allowed in curriculum design, align with the mission statement of the institution. It also considers the practices of an institution in initiating a wide range of program options and courses that are relevant to the local needs and in tune with the emerging national and global trends. Multi-skill development, career orientation and involvement of stakeholders in curriculum update are also important considerations the institutions should be aware of. The most important aspect in this context is whether the institution has clearly stated goals and objectives that are communicated systematically to all its constituencies and whether the programs of the institution are consistent with its goals and objectives

National Qualification Framework

National Qualification Framework derives its objectives of student learning and development from the values enshrined in the Constitution and contemporary concerns for strengthening Unity and national identity in a multi-cultural context and enabling the nation to face future challenges .Affirmation of the primacy of an active learner and a distinctive focus on the nature of knowledge gives the National Qualification Framework the potential to put the Indian system of education at par with the international practices. The main features of the Framework are:

- Strengthening of a national system of education with special focus on values, quality, systemic changes and common framework.
- Following the principles of curriculum development.
- Learning and knowledge.
- Curriculum areas.
- National concerns.

Guiding Principles of curriculum development are: connecting knowledge to life outside school; ensuring that learning is shifted away from rote methods, enriching the curriculum to provide for overall development of students, making examinations more flexible and integrated with classroom and real life and develop the students to assume responsible role in the democratic polity of the country. As far as learning and knowledge are concerned, we should envisage learner development and learning which is intrinsic to curricular practices. Efforts should be made in organizing learning for construction of knowledge and fostering creativity .Another important aspect to consider is –connecting knowledge across disciplinary boundaries for insightful construction of knowledge. We should be able to provide learning experiences for developing critical perspectives on social issues. As far as possible, local/regional knowledge also need to be incorporated through Constitutional values and principles. We should be able to use pedagogic practices for developing thinking process, decision making and critical reflections on social issues and national heritage. National concerns like bringing about equity and social justice for national development is equally important.

For our country's development, systematic reforms are needed where teaching assumes a significant role. It is a professional activity. Quality and accountability need to be emphasized here. Teacher education programs to be recast to reflect professionalism in the process of training and teaching. The curricular Aspects can vary from institution to institution depending on the power vested in them to make decisions. University has a greater role in deciding the curriculum than the affiliated colleges. Autonomous Colleges will have more freedom to decide on the system changes than the affiliated colleges.

Foshay (2000) presents an interesting model of curriculum consisting of purpose, substance and practice. He does not see the purpose of curriculum as promoting only the intelligent self or at best, a combination of intelligent and social self. A curriculum becomes comprehensive and fulfills the purpose only if it includes emotional, physical and aesthetic aspects Substance includes the different subjects and Practice comprising of learning, evaluation, cost, governance etc.

Besides the cognitive aspects, we need to dwell on the affective and psychomotor dimensions. In the era of pragmatic philosophy, all graduates aspire for jobs after graduation. In a Harvard University, study, it was found that the employability of graduates depend not only on the knowledge factor, but also on the attitude and values and the willingness to learn more and more .In the world of work, graduates are expected to contribute to productivity and performance of the organization. Each employee is evaluated on the basis of the contribution and the effective performance in their roles. Here, mere knowledge may not be enough. Besides, their technical and professional skills, social and emotional skills are important. Traditional curriculum is not developed to incorporate all these skills which are required for the present-day needs. Conventionally, the focus of evaluation in higher education is on the learning outcome of the prescribed subjects by the students as measured by the performance in the examination system. The required skills and competencies have to be inculcated in the graduates to lead an effective personal and professional life.. These skills are called life skills/employability skills. In fact, these skills are getting increasingly recognized as a major indication of curriculum quality. They are a set of intellectual, social, and emotional skills that are generic to the performance in learning both academic subjects and the skills are required for leading a successful professional and personal life. Some of these skills are thinking skills like critical and analytical reasoning, creative thinking, problem solving, curiosity, intra and interpersonal skills, effective communication skills, team work, leadership, identifying, accessing and effectively utilizing knowledge using technology, values, ethics ,persistence, integrity and tolerance to difference and so on. Other skills are ability to cooperate with others, learning new skills, adapting to a new environment, being resilient, recognizing one's own strengths and weakness, managing emotions and so on. The demand for these skills emerged due to changes in technology and organizational landscape.

These technologies are transforming the production and the business processes as well as giving rise to new methods of functioning in an organization to cope with the emerging trends. These skills provide the requisite skills and competencies

to adapt to these emerging trends. Due to a paradigm shift in the academic learning expectations from just comprehending existing information to discovering knowledge through exploitation by means of problem solving, research and other academic pursuits, a new set of learning skills that is generic in nature needs to be defined and devised. The immediate benefits of these skills are enhancement of employability for graduates, especially considering that in India about 80% of the non-technical graduates and 47% of the engineering are unemployable (Aspiring Minds, 2013) According to a recent television presentation (2018) only 7% of the engineering graduates are employed and 80% are not employable. Therefore, thousands of engineering colleges are closing. In India, we have not formalized or designed curricular programs incorporating these skills. The graduates acquire some of these skills through extra-curricular activities or from some add on courses which the University has introduced due to the UGC initiatives. They are not organized learning-but result in incidental learning without any specified objectives. The most realistic social goal of higher education is to develop and produce front –line manpower for various sectors in all fields of work. It also means generating leaders equipped with skills and competence in different walks of social life. A quality curriculum is characterized by defining such generic skills which are common amongst all graduates in the country irrespective of the institution. Therefore, Indian education institutions should create space and opportunity for developing a well-defined set of generic skills among the graduates to make the curriculum more contemporary, relevant, updated and of high quality.

The quality of curriculum is also evaluated by emphasizing upon what the students can do compared to what the students know. Here, the application of knowledge and skill development are important. The curriculum should also enable higher order thinking capabilities. A student should be able to have subject related skills, but also able to identify relevant information, source them, filter and classify them and utilize the information to postulate solutions.

The difference between quality curriculum and conventional curriculum can be assessed based on competencies with respect to the level of cognition ranging from lower to the higher order cognition. It is surprising to note that even now many students learn at the lower level of cognition. A good quality curriculum should enable one to define the level of cognition, like knowing, comprehending, applying, evaluating synthesizing, and creating. Thus, a graduate should be able to demonstrate his/her competencies in critical and creative thinking, problem solving and decision making, analytical thinking and managing self. By mentoring and appropriate learning experiences, curriculum can help students to move from lower level to higher level competences.

Another aspect to consider is the globalization demands. Here we need to consider the demands of a multi-cultural society. India is a multi-lingual, multi-religious and multi-cultural society with diverse social ethos. In this ever-changing scenario of globalization, it will be necessary to carefully nurture the development of multi - cultural societies. This can be achieved only through multi-cultural education with an emphasis on multi- culturalism in its approach (Amency Dixon (2010).

Multi cultural education increases productivity because a multiplicity of mental processes are available for completing the same tasks and it promotes cognitive and moral growth among all people. It increases creative problem skills through the different perspectives applied to the same problem to reach a solution. It increases positive relationships through achievement of common goals, respect, appreciation and commitment to equality among the intellectuals and institutions of higher education-

In our context, we think of the goal orientation in terms of mission and goals, program compatibility with mission & goals, social development and national development career orientation and globalization demands

How do We Construct Holistic and Multi-Disciplinary Curriculum?

Multi-disciplinary Approach is adopted to realize the full potential of all students according to their aspirations in the intellectual, aesthetic, social, physical, emotional, and moral in an integrated manner. Imaginative and flexible curriculum structure will be followed instead of the rigid silos prescribed earlier which produced unemployable graduates with some knowledge in a particular subject like science, arts, humanities etc. Environmental education, climate change, pollution, waste management, sanitation, values, sustainable development, citizenship values, service, and community participation along with pure and applied sciences could be selected. Online Distance Programmes could be taken up where credits can be obtained from the University or College where the said programs are offered. Departments of Languages, Literature, Music, Philosophy, Psychology, Vocational programs, Physical education and Extra-curricular activities

could be considered from the Universe of courses from which one can choose from.

First of all, a change will be initiated to make all undergraduate programs 4 Years. Multi-disciplinary bachelor program with multiple entry and exit from any year or course. If one year is completed, a student gets a certificate, two years-Diploma,3 years bachelors degree and Four years with research, Bachelor's degree and can proceed for Master's degree and complete within a year. Academic credit bank is created for all students where they can enter their credits for the courses they have opted for and the Cumulative Grade Point Average will be calculated on completion of any program.

Implementation of the NEP–2020

In spite of laying down the aspects of curriculum design and development, it is observed from the studies carried out on the various institutions accredited, the educationists dwell on the knowledge part of the cognitive domain to finish the syllabus of the particular program. Curriculum design and development follow a standardized procedure by the respective Boards of Studies and Academic Councils without adequate preparation or need assessment process. Those who had clear idea about the institution's objectives and plans for development and had better exposure to the knowledge of opportunities, performed better in developing more relevant and job oriented programmes. Introduction of Choice-based curriculum, value added courses and remedial education programmes are examples of innovative curriculum

Need based curriculum planning and using the feedback from the various stakeholders are seldom practiced by Higher Education institutions. However, with the introduction of Assessment and Accreditation by NAAC, this practice has been initiated to collect the feedback in the format provided by NAAC. How far that data are analyzed and the findings utilized in making decisions for the required changes is not clear in the subsequent development activities and restructuring of the curriculum. For implementing the National Education Policy-2020,some of the activities to be undertaken are:

- Emerging areas of innovative and interdisciplinary areas have to be developed
- It is necessary to undertake an extensive and intensive academic exercise for restructuring of the courses in conformity with the emerging trends in higher education with a view to promote interdisciplinary approach. It is desirable to introduce the School system as they do it for Management and other technical areas. Team teaching, context oriented relevant research should be promoted.
- Universities and Colleges should be encouraged to enter into collaboration with reputed national and international organizations as well as Industries, Financial Institutions, NGOS, etc.
- New Inter-University centers for research in Humanities and Social Sciences need to be promoted.
- There is an increasing need for promotion of science education in Universities since the number of applications are decreasing.
- Grant of autonomy to selected colleges based on their performance record to facilitate innovations and flexibility in the curriculum is imperative.
- Education need not necessarily be in terms of vertical growth, other options for horizontal mobility such as establishing community colleges where emphasis is on skill development should be considered.
- Modular approach in curriculum design will strengthen the pursuit for excellence in curricular aspects.
- A curriculum Development cell and Board of College and University Development may be constituted in each University.
- Advanced Study Centers in all the Universities in all subjects may be introduced.
- Restructuring of Board of Studies should be based on expertise of the members.
- Creation and effective use of multi-media to supplement classroom and laboratory teaching.
- Extensive use of ICT in Academics and Administration is very important in implementing the policy including the provision for laptop for each student as well as the necessary network connections.
- Set up information and library network for improving services appraisal should be an integral part of the staff recruitment policy.
- Student feedback should be collected systematically and analyzed for decision making for various issues.
- Enhancing teacher motivation, up gradation of their skills and exposure to the latest trends in education should be facilitated through appropriate measures for staff development.

Quality input is often not possible through adhoc appointment which is invariably substandard in nature. Poor quality inputs will result in poor quality outputs. If the teaching process is of substandard quality, the outcome will be substandard as well. That is the reason many corporate leaders are of the opinion that the fresh graduates are not employable unless they have been given special training programmes to equip them to perform their roles effectively. Standardized patterns of teaching by lecture method and somehow finishing the syllabus according to the prescribed schedule will not enable the students to realize their full potential and develop the necessary competence and inventiveness.

A recent announcement by the Honorable Minister of Education reveals that even in Central Universities, State Universities and IITs and IIMs almost half the positions are vacant due to unavailability of reserved category Temporary appointments do not help in resolving the problem. This is a political problem which needs to be addressed by the decision makers.

Many stakeholders including the employers often give the feedback about the graduates they employ. They often state that they are not employable unless the employer gives them additional inputs to make them suitable for the jobs.

In view of the need for developing employable graduates, universities, and colleges in the west especially USA have been experimenting with various approaches for developing competency-based education program. Institutional curriculum design processes and new delivery methods are key to provide excellent and affordable college education. It is proved that competency-based education can fit into the existing curricular structures. However, certain principles must be followed.

The program should be robust and reflect valid competencies.

Competencies are the core of the CBE curriculum. In professional programs, they should align with both industry and academic expectations. The process by which they are developed should be explicit and transparent. The program level and the competencies should reflect the skills and knowledge that students need at the next stage of the development whether it is education or employment. The process for developing program level competency should be iterative, evolving to incorporate market-place demands, academic expectations and student needs. The validity of program competences should be determined by student and the employer feedback to faculty and program designers (BOS,AC).

Students may be able to learn at a variable pace and are supported in their learning.

Competency Based Education (CBE) accommodates the realities that people master subjects at different rates and brings diverse levels of prior experience and knowledge to that mastery. CBE program should allow students to progress through the curricula at an individual pace which means that just-in- time academic assistance and other support must be provided to keep them motivated and academically on track.

- Effective learning resources are available as and when needed.
- The process for mapping competence to course learning outcome and assessment is explicit.
- Assessments are secure and reliable. Various forms of assessment like online, demonstrations, debates, etc. could be used:-

There are some challenges to adopt this approach

- Adapting regular term period to variable ones for the purpose of assessing the student progress
- Faculty requirement may be increased; They need to be trained to implement this approach
- Keeping student progressing at a reasonable rate which requires asynchronous availability of learning resources coupled with flexible access to academic assistance
- Providing orientation program to staff and students
- Identify when student needs help
- Continually measuring how well each process and all learning resource offered are working
- Have readily accessible nonacademic support services.
- Review process should be in place.

CBE can serve as a new way of organizing student learning in undergraduate and post graduate program. Faculty remain in control of the curriculum defined as what a student needs to learn and how the learning will be measured. Students can have well developed personalized learning resources that continuously evolve. They can thus receive a high-quality education that leads to demonstrated learning at affordable price because of the mix of technology, curriculum, pedagogical strategies and administrative processes.

Need based curriculum planning and using the feedback from the various stakeholders is seldom practiced by Higher Education institutions in India. However, with the introduction of Assessment and Accreditation by NAAC, this practice has been initiated to collect the feed back in the format provided by NAAC. How far that data is analyzed and the findings utilized in making decisions for the required changes is not very clear in the subsequent development activities and restructuring of the curriculum.

NAAC insists on relevant curriculum in a fast changing world. Majority of the institutions offer their programmes in traditional disciplines like Arts, Basic Sciences, Humanities and Social Sciences, Law and Commerce.

- Emerging areas of innovative and interdisciplinary areas have to be developed
- It is necessary to undertake an extensive and intensive academic exercise for restructuring of the courses in conformity with the emerging trends in higher education with a view to promote interdisciplinary approach, It is desirable to introduce the School system as they do it for Management and other technical areas. Team teaching, context oriented relevant research should be promoted.
- Universities and Colleges should be encouraged to enter into collaboration with reputed national and international organizations as well as industries and NGOS.
- New Inter-University Centers for research in Humanities and Social Sciences need to be promoted.
- There is an increasing need for promotion of Science Education in Universities since the number of applications are decreasing.
- Grant of autonomy to selected colleges based on their performance record to facilitate innovations and flexibility in the curriculum is imperative.
- Education need not necessarily be in terms of vertical growth, other options for horizontal mobility such as the establishing community colleges where emphasis is on skill development should be considered.
- Modular approach in curriculum design will strengthen the pursuit for excellence in curricular aspects.
- A Curriculum Development Cell and Board of College and University Development may be constituted in each University.
- Advanced Study Centers in all the Universities in all subjects may be introduced.
- Restructuring of Board of Studies should be based on expertise of the members.
- Creation and effective use of multi-media to supplement classroom and laboratory teaching.
- Set up information and library network for improving services.
- Teacher appraisal should be an integral part of the staff recruitment policy.
- Student feedback should be collected systematically and analyzed for decision making for various issues.
- Enhancing teacher motivation, up gradation of their skills and exposure to the latest trends in education should be facilitated through appropriate measures for staff development.

Conclusion

Curriculum Reforms in the light of NEP-2020 is a herculean task for the educationists in order to benefit from the policy. If it is done with proper understanding and cooperation from all stakeholders to implement the same, India will certainly become an educational hub which other nations also will recognize and emulate.

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Reconfiguring Education As 'APP' Learning

Neeraj Saxena*

Online learning has emerged as a Hobson's choice, as the virus has crippled the education systems world over. Interestingly, internet facilitated system has been there for around two decades now but wasn't getting main streamed due to the predictable, stiff resistance from academic fraternity and also due to limitations in access to internet. It would have taken another 5 to 10 years in the natural course, but the pandemic pushed the academicians to the wall who weren't prepared to read what was written on it!

What we have seen in the pandemic is forced completion of education, learning wasn't in focus for the most and has been left for the students to prove themselves. As a matter of fact, learning hasn't been ever the focus, handing out degrees for jobs has been. Imparting of knowledge with instructions and examining its retention is what education has meant largely, with insignificant focus on honing of skills and abilities to thrive in the professions/ jobs. Needless to say approach, alignment, consistency, relevance, outcomes etc. of education have been skated over all along and changes effected, are largely correcting the past than rejigging systems-aligned with the future.

Education has been the trusted vehicle in industrial society for upwardly movement, and parents have seen investment in children's education as a passport to prosperity. As a welfare measure, governments all over the world have been investing in education of its citizens, through the institutions created/ regulated by them and challenged by goals/ norms like Millennium Development (MDG), Sustainable Development Goals (SDG), Gross Enrolment Ratio (GER) etc. But all these have been for the (teacher-centric) times when teachers and books were the authoritative sources of knowledge and a learner had to reach them out, through academic institutions, to complete the education; but the educational landscape has been comprehensively disrupted in the last two decades.

In the wake of IT revolution, educational resources have expanded massively to include digital books impregnated with hyperlinks, recorded lectures by teachers, virtual laboratories, self-assessment platforms, learner analytics etc. and access to them has been democratized. The internet has taken education out of the classrooms- even the students on the first bench and also the teachers are learning online now. The resources are available-anytime and anywhere to everyone; thus, challenging the teachers, institutions, curricula, examination etc, as they weakly extrapolate themselves in the age of internet and need to be reconfigured.

Internet supports 'learning' and in a massive way- overcoming the spatio-temporal-lingual barriers, but we are stuck at 'education'. We have used online/ internet resources to plug the gap created by the pandemic, basically to complete the courses and thus, the 'education'. In the pandemic, we have seen video-conferencing platforms emerge as a workhorse to facilitate substitution of the classroom or their virtual re-creation. PPTs, PDFs, Word Documents, videos and other material have been transferred like never before, to complete the courses. Technology has also been used to conduct 'high-tech proctored' examinations resorted to stop examinees from cheating (yet no student failing!). Has this all helped in learning?

'Education' is prescriptive and must be taken as offered; online 'learning', on the other hand, offers a range of choices to a learner to create one's learning pathway. Teaching subjects that an academic institution has strength in and resources at its command is 'education'; on the contrary, facilitating access to ubiquitous resources, and mentoring enables 'learning'. Increasing the enrolment ratio has been a concern for conventional education, but online learning opens avenues for anyone interested in learning, making the targets of enrolment meaningless.

Internet combined with host of other technologies has the potential to support 'Adaptive, Personalized & Purposed (APP) Learning' and this should not be expended in peddling education (that is prescriptive and restrictive). This would mean change in role of teachers, repositioning of classrooms, focus on experiential learning, customizable curriculum, open book examinations and other things- targeted at new age learning. Luckily, for good teachers, online learning is the

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best thing to happen; they can now be reached by students of institutions other than theirs or even in other locations anywhere in the world. Likewise, the disinterested students forced to sit in their classroom can find an online teacher of a subject that genuinely interests them, anywhere on the internet. Of course, the practical and experiential learning, on a low pedestal now, would also have to be reinvigorated and repositioned, to drive and complement the online courses. It is here that a teacher would be indispensable but reincarnated to perform the role of counsellor, navigator, pathfinder, mentor, and guide- rolled into one.

It is not that concern on education eclipsing learning, is being raised for the first time. American business magnate Cornelius Vanderbilt (1794-1877) had remarked, "If I had learned education, I would not have had time to learn anything else". Albert Einstein squared it a few decades later by observing, "The only thing that interferes with my learning is my education". With the attributes and versatility of online mode, education can be recast and offered as learning- the 'old normal'- as in the pre-industrialized society! This shift from education to learning, will be accelerated by technologies like artificial intelligence and brain-computer interface, supported by other emerging technologies; the growth in number of Edutech companies in the last decade is a pointer to the system leaning towards-happy learning! ❑

(contd. from pg. 14)

12. Relevance of the past in the present as part of liberal education.

Bicentenary is a major landmark in the history of any institution. It is an occasion for expressing happiness about past achievements and deriving inspiration for future attainments. To repeat Sir Bartle's words said on the occasion of laying the foundation stone in 1864, this bicentenary event too "augurs a future of prolonged usefulness and distinction" for the Deccan College, as it enters its third century of existence.

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India's Leap towards Olympic Gold

Gurdeep Singh*

Olympic Games are considered to be the most spectacular display of human endeavour in pursuit of excellence, coupled with a fine blend of science and sports, followed by an intense process of specialized training of potential performers, for achievement of a defined target of sporting performance within a stipulated time. Only the world's top most athletes qualify to participate in Olympic Games and a few of them emerge as Champions of the Universe. For this purpose, holistic development of an elite athlete—body, mind and spirit is of paramount importance, for displaying a creditable performance at global sporting events, without chocking under extreme pressure. The medals tally in Olympic Games is the result of impressive strides a nation has taken in the recent years, for promoting the culture of excellence in the field of physical education, public health, smart nutrition, sports science and competitive sports. Now, sports promotion needs continuous attention of sports scientists and role-models.

Strong political will and professional drive of are two aspects of the same coin which play an important role for constant improvement in performance of top-class athletes at global sporting events. For this purpose, a realistic road-map designed by a team of sports scientists needs to be effectively implemented, under the close supervision of qualified professionals. Hence, most of the sporting nations put their weight and focus behind a well-structured process of transparent selection, advance training, international exposure and meaningful participation of talented sportspersons, so as to convert an ultimate dream into a ground reality for winning respectable number of medals in Olympic Games. Thus, a true level of sporting achievements of top-level potential athletes is determined by applying a standard analytical procedure, by a panel of experts and professionals representing a neutral agency.

The experts in the domain of sports science are of the firm opinion that miracles can happen in fiercely competitive sports, if a nation is committed, dedicated and fully organized to shoulder a major responsibility of producing the world-beaters through a collective pursuit of excellence, based on scientific support and professional approach in a time span of 10 years. Firstly, a systematic action plan needs to be prepared, to identify games and sports that contribute more medals in Olympic Games than single-medal disciplines, which holds a special significance in developing a sporting culture at grass-roots level, to ensure success in intensely competitive sports, for writing the golden history of the nation. Secondly, there should be a biggest shift in the process for providing advance training, based on latest research findings to the genetically gifted sportspersons, enabling them to pursue sporting excellence at global competitions. Thirdly, there should be no place for acceptance of mediocrity, whereas professional management of youth sports needs to be based on truly meritorious and scientific process. The regular participation in sports helps in building character, inculcating leadership qualities, appreciating opponents, respecting decisions of the referee in play in all the circumstances.

In the modern era, sports are utilized as a diplomatic tool and an ideal advertisement by the sporting nations, for projecting their economic power, military strength, solar energy, scientific discoveries and technological advancements etc. The impact of sports is so deep and powerful that influences a nation's potential image, socio-economic conditions, public health status and international political aspirations. Therefore, most developed nations have focused more on education and public health sectors for investment of adequate resources to create basic modern sporting facilities and health care infrastructure in schools, colleges and universities for talent search and talent development on the long-term basis. For this purpose, nations used a well-structured pyramidal approach, for creating the larger sporting talent pools at all levels and to throw-up an adequate amount of talented and trained superior sportspersons in the national stream, to achieve a path-breaking sporting performance at global events. Thus, it proves to be a scientific process of separating the grains from chaff in sports promotion.

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Ideally, the economics of sporting excellence suggested that there is a correlation between the cost of preparing elite athletes and their quality of performance during Olympic Games. Over a period of time, it was observed that the greatest waste of India's human resources is the huge number of youth that have never achieved their full potential. This may be possible due to an ineffective sporting eco-system in our country. However, there is no dearth of sporting talent in India, especially in education sector-schools, colleges and universities. The younger generations have biggest dreams with brightest aspirations, they can capture the public imagination. Inevitably, no individual or nation can aspire to be great, while pursuing sporting excellence, in the modern era of fast-changing and cut-throat competitions in the world of professional sports, without a sustainable systemic support, to move in right direction. Optimistically, when sporting events get tougher in pre-competitive exposure, genetically talented and scientifically trained sportspersons often rise to the occasion and overcome various challenges realistically during actual participation in global sporting matches, without distracting their deep focus of attention and without choking under extreme competitive anxiety and fear. Accordingly, they all have a huge mountain of competitions ahead of them to climb.

In the modern era, sport is being utilized as a diplomatic tool and an ideal advertisement by the sporting nations, for projecting their economic power, military strength, solar energy, scientific discoveries and technological advancements etc. The impact of sports is so deep and powerful that influences a nation's potential image, socio-economic conditions, public health status and international political aspirations. Therefore, most developed nations have focused more on education and public health sectors for investment of adequate resources to create basic modern sporting facilities and health care infrastructure in schools, colleges and universities for talent search and talent development on the long-term basis. For this purpose, various sporting nations used a well-structured pyramidal approach, for creating the larger sporting talent pools at all levels and to throw-up an adequate amount of talented and trained superior sportspersons in the national stream, to achieve a path-breaking sporting performance at global events. Thus, it proved to be a scientific process of separating the grains from chaff in sports promotion.

Olympic Games-2021 were the best antidote to the misery with which COVID-19 Pandemic has crushed the lives of people across the globe. No doubt, it was Herculean task for the local Organizing Committee, International Olympic Committee and potential athletes to ensure successful conduct of COVID-free mega event. More than 11000 top athletes from all over the world, represented 206 countries in the biggest show of human existence and excellence on the planet. However, it proved to be a befitting tribute to human spirit and determination, indicating that life must go on regardless. Further, against all odds, highly talented and scientifically trained athletes proved their actual worth by emerging as the true champions during intensely contested events of Olympic Games. Therefore, an athlete being at the center of stage was accorded the top most priority to ensure transparent selection, advance training and meaningful participation, supported by powerful aspirations to make one's presence felt in the world of commercial and professional sports, especially youth sports.

Sporting History of India

The history of sports in India is as old as its civilization, culture and traditions. The origin of sports in our country can be traced back to the Vedic period. In the modern world, the organized sports have become a global phenomenon that emerged as a huge industry, with a lucrative profit orientation world-wide. Now, sport is being considered as a powerful force influencing the lives of millions of people globally, such as behavior, health, education, ethical values and of socio-economic conditions etc. Further, games and sports have evolved in all best possible dimensions including education, commerce, health, fitness, entertainment, recreation and specialized training, for all the security and intelligence agencies. Therefore, India needs to evolve a special training regime to produce fighters and survivors, who can resist and perform well in such a defunct Indian sporting system. The reasons for this dismal and sorry state of affairs in the functioning of our sports associations and bodies are obvious. For Indian sports administrators, sporting arena is a primary territory carved by ambitious businessmen and pushy politicians, with strong muscles to flex

and relax. It offers them a gravy train of public money dispersed by an ignorant Government to the opportunist sports promoters in India, which may be a tip of the iceberg indicating a larger problem.

Government of India has spent Rs. 1,169. 65/- crores for providing an adequate financial support to 18 National Sports Federations and 127 Olympic Medal hopefuls since-2016. India's medals tally at Tokyo Olympic Games has encouraged the nation and raised our expectations, with a sense of realization that investment of adequate resources at grass-roots level is very necessary for providing scientific training to the potential athletes. Hence, National Sports Federations need to be made fully accountable for their poor performance, giving justification for huge expenditure of hard earned money of the honest tax payers. Further, winning a Gold Medal in Olympic Games is a dream destination of every elite athlete in his or her life time to be on the podium. As a result, only a few superior sportspersons, are able to realize their ultimate dream of winning a Gold Medal in Olympic Games and receive it on the podium. Hence, those who are able to win Gold in Olympics are remembered throughout their life and beyond. Inevitably, winning a Gold Medal in Olympics Games has become prestigious politically, professionally and economically. An optimal use of mass-media has played a pivotal role to glamourize and revolutionize competitive sports as a lucrative profession, stretching world-class athletes to breaking point.

Performance of India in Olympic Games

In the 2008 Beijing Olympic Games, India ranked 51st in the medal tally, thanks to Abhinav Bindra shooting his way India's first individual Olympic Gold. However, London Olympic Games-2012 was our second-best display of sporting performance yet, with six medals, but India figured at 55th place in the total medals tally. Shockingly, in Rio Olympic Games-2016, India struggled very hard to win only two medals (silver and bronze) and slipped to 67th position along with Mongolia. Over a period of time, it was found that Indian athletes have become habitual of bearing heavy burden of competitive fear and stress that may be due to expectations of a large population of our country, who are keenly interested to see their national players to survive and succeed in the toughest competitions, by displaying a respectable and podium finish performance. Therefore, battling COVID-19 induced the anxiety levels of top-class performing sportspersons, as they struggled to focus on technical and tactical aspects of focused preparations for the Olympics. Athletes faced bouts of inconsistent recovery phases during the advance training in the second wave of COVID, causing a fear of faltering at crucial stages of sporting events. However, Indian athletes lived up to their promise.

A successful sporting performance at global competitions heavily depends on a well-defined National Sports Policy and well-developed strategic action plan, followed by an effective execution and evaluation of performance of talented and trained elite athletes. For example, USA and China effectively implemented their sports polices at all levels, for demonstrating a positive impact on the performance of their top athletes during all the global sporting championships. The expectations of our people were very high from Indian contingent in Olympic Games-2021, but even before the first Indian athlete competed, there were several cheery messages from the big size and huge population of our nation, to keep the moral of sportspersons high. This time, India's largest contingent with 127 superior athletes, who qualified and participated in Tokyo Olympic Games from July, 23 to August 08, 2021 in 18 sporting disciplines. Therefore, our potential athletes were fully prepared to fight to the finish at Olympic Games and they were able to see the light of hope at the end of tunnel.

Gender Balance

If one looks at the size, population and resources of two small states like Haryana and Punjab in India have demonstrated their deep commitment, strong culture and active lifestyle, accounting for 40% of the total number of sportspersons in the national contingent. But the composition of our contingent also reflected those top performing athletes have come from across the length and breadth country. The spread-sheet of official records of the sportspersons indicated that it is not just traditional sporting hubs are working, but new training centers have also emerged in India, to cater the basic need of promoting the culture of excellence in competitive sports. Equally, if not more, inspiring is the fact that our athletes had overcome many challenges due to COVID-19 during the period of their vigorous training and focused

participation in toughest competitions of Tokyo Olympic Games. A much awaited and much-needed gender balance was witnessed in the mega sporting event, with 49% of total athletes representing 206 countries in Olympic Games were women, reflecting a sharp incline in the big investment of basic sources and resources required for development of sports.

Culture of Excellence

The professional management of competitive sports has become a focal-point world-wide and it is recognized as an important component for socio-economic development of a nation in a big way. Therefore, success of India in Olympic Games is expected to catapult sports to the fore-front in the imagination of its people, with a renewed media focus on our sporting system, highlighting its distinct features such as culture, nurture, infrastructure and structure. Hence, there could be a sense of apprehension in the mind of a common-man that without systemic changes in Indian sporting structures, in tune with rapidly changing times, this may be yet another false dawn. Hopefully, it may be possible to succeed in achieving better results, with an access of government-sponsored sporting facilities, especially in individual sporting events only. For example, Abhinav Bindra won first India's individual Gold Medal (Shooting) in Beijing Olympic Games-2008, with major help extended by his parents, in his pursuit of excellence to fulfill an ultimate dream of becoming world-beater in a sport of his ability, interest and choice etc. for the younger generations to follow.

Bright Future for Indian Sports

The most important factor for the bright future of Indian sports is an adequate investment of sources and resources, with appointment of the most suitable administrators at the top echelon of every sport in the country, for the ones to click when the right moment comes. Luckily, success of Indian athlete Mr. Neeraj Chopra, with a path-breaking and historic achievement, in the event of Javelin Throw with the distance 87.58 mts at Tokyo Olympics is a story of human determination, resilience and triumph against all the odds. However, India cannot hope to replicate the Chinese sporting model in the country blindly to achieve pinnacle of glory because of the fact that the people of both the nations have followed different belief, culture, mind-set, philosophy, sporting spirit and traditions for the centuries. Further, we cannot be satisfied with one Olympic Gold and Indian sports administrators need to think at global level in terms of infrastructure and training. Therefore, what will be truly remarkable is when sports integrate into education as an active, healthy and productive lifestyle for one and all. As a result, several Olympic champions from other sporting nations have been pursuing parallel lucrative career options, to ensure and secure financial security in next phase of their retired life, otherwise a slow death trap of misery and poverty is bound to chase them out.

Potential in Youth

Today, Olympic Games-2021 have generated a conducive environment for developing sports, with a deep impact on the mind of the youth in India. There is a general public feeling that the youth of our country is expected to take-up games and sports in a big way and ensure that the momentum generated by the success of Indian contingent in Tokyo Olympic Games does not fade away. Now, sports have begun to be discussed in every family, our play grounds need to be ready for the people to participate in games, sports and other physical activities. The youth wants to step on unknown territories, new destinations, new goals and new roads, with new aspirations. Once a younger generation decides in their mind, no stone is left unturned for pursuing sports, persevering day and night for reaching the dream destination. When we cast a keen glance at the younger generation, it is noticed that there is a sweeping change in their behavior and the mind of the youth has undergone a transformation. Today, young minds have started shunning obsolete, age-old methods and patterns, they want to do something new altogether and something different. The modern youth does not want to tread ready-made beaten paths, they want to carve out new paths, for achieving highest possible performance in all walks of life, for progress and prosperity of the global society.

Sporting System in India

The organization of Indian sports is far too complicated and far too political in its nature, to allow a straight-forward approach like European countries have developed their sound sporting systems, for displaying desirable results at international level sporting competitions. Accordingly, like Indian

democracy, our national sporting system too have evolved in its own unique model, distinct from everyone else in the world. Several committees report on the poor performance show for such a long time, submitted by experts have blamed our sporting system, they criticized the role of politicians, who run the show of sports in the country, for fulfillment of their vested interests only, they have even questioned Indian genes to a greater extent, for poor performance of Indian athletes in the global mirror of Olympic Games. Thus, there are other serious faults in the basic design of National Sports Development Code-2011, with a lousy structure of National Sports Federations, without fixing any accountability for public funding and failing to perform their basic responsibility of promoting sports in India. The weaknesses of Indian sporting system are so debilitating that chances of complete revival look increasingly bleak. Now, all the birds of a feather flock together.

The Ultimate Dream

If India wishes to emerge as a sporting nation in the near future, grass-root sports along with youth sports need to be accorded a top priority, for its total overhauling with a fine blend of science with sports, implemented by a professional and scientific approach, under careful observation of experts. Evidently, every top athlete dream of taking the world of competitive sports by storm, while pursuing excellence for winning a Gold Medal in Olympic Games and World Championships, indicating that there is enough room for improvement even at the top. In view of this, it is the right time to dust off India's old sports map and add new capitals to it. Thus, based on the provisions of program of specialized coaching, crowd funding platforms, state government sports schemes, rural sports and keen parents, some of India's main-stream sports are sprouting from the new epicenters and nurseries. Additionally, this is perhaps why talent scouting can now find world-class athletes in remote and rural areas in the country and sporting talent is blooming in several non-traditional areas and hubs, due to adequate investment in mass-media and sports marketing for igniting hopes for a top show.

Evolution to Revolution

The poor performance of Indian sportspersons at Rio Olympic Games-2016 was taken-up with a serious concern by the Government of India and the public at large. As a result, a high-power Olympic Task Force was constituted, by the Ministry of youth Affairs and Sports, to examine and suggest ways and means to improve the standard of Indian sports at par with other sporting nations, with a view to win a respectable number of medals in next Olympic Games from 2020 to 2028. Accordingly, a long-term development program was structured and implemented by experts and professionals, based on scientific support and professional approach on the field. Consequently, this evolution in the domain of sports science and professional sports management, particularly at the grass-roots level, in education sector, led to a revolution in transformation of sporting excellence in public and private sector in the country. Basically, regulation of Indian sporting system is more reactive and less proactive in its nature and scope. Thus, until and unless big things happen, various problems of mismanagement may continue to happen in the core domain of professional sports.

Brand Ambassadors

Presently, the process of promoting games and sports at all levels in India is on the cusp of a revolution, inspiring an energetic young population given the average age below 25 years, out of which majority of the people have increasingly started visualizing sports as a source of entertainment, fitness, leisure and recreation. Hence, a paradigm shift is taking place rapidly at all levels in Indian sporting system, which is being projected as a next big potential industry, for enormous investment of sources and resources, with the assured returns in terms of adequate benefits and profits to all the stake-holders, in terms of sports advertisement, brand-building, sporting business and sporting franchise. Further, this favourable trend needs to be utilized as a green bouncy pitch for Indian sports for reducing risks, enhancing reputation and optimizing returns, by using prominent and popular performers as the Brand Ambassadors with a cost effective approach. Therefore, a culture of excellence is being developed at all levels in the existing system, for making sports management more exciting, accessible and affordable as an active, healthy and productive lifestyle among the common population in India. This move is expected to go a long way in broad-basing sports for achieving a defined target of brilliant performance at next Olympic Games: 2024. Most of the sporting

nations are coming forward with effective initiatives for global partnerships.

Prediction of Gracenote

Every four years, forecasts are made by the experts on various issues related to performance of Indian contingent, such as ranking, out-come, performance level and medals tally of India at the Olympic Games. This time, a similar exercise was done by a World's leading data and technology company Gracenote which predicted that India could finish with 19 medals, four of them being Gold medals, with a lot of exaggerations and misleading statements. Most of Indian officials too were bullish, they had promised a double-digit haul of medals. Considering India's level of sporting performance in last few Olympic Games, the experts expressed their collective opinion that it was not easy at all, for Indian sportspersons to win 4 Gold, 6 Silver and 9 Bronze medals in Tokyo Olympic Games. Finally, Indian contingent finished their campaign with One Gold, Two Silver and Four Bronze medals, which is considered to be the best performance in all the Olympic Games, so far. Accordingly, there were a lot of expectations, especially from Indian Shooting (M&W) teams for winning a reasonable number of medals, on account of their last three years sporting performance. Therefore, a 127-member Indian contingent qualified and participated in Tokyo Olympic Games, by standing in their own light, they came to prominence. The complete details of India's laudable sporting performance along with a medal tally have been presented in Table-1.

Playing to Potential

The climatic conditions, scientific training, international exposure, draw of matches and monitoring system, especially during COVID-19 times, played an important part in how any given athlete performed on a particular day. Further, North Korea's decision not to be part of Tokyo Olympic Games has also benefitted many top-class athletes and nations. If one looks at some disciplines and athletes of Indian contingent, who had performed consistently well at international stage, were expected to perform creditably well, finishing with long haul of medals in Tokyo Olympic Games. Though expectations were too high to be fulfilled, but it looked like a big leap

Table-1: Medal Tally of India in 2021 Olympics

S. No.	Game/Sport	Male	Female	Total	Position	Medal
1.	Archery	03	01	04	----	----
2.	Athletics	17	07	24	1st (M)	1- Gold
3.	Badminton	03	01	04	111rd(F)	1-Bronze
4.	Boxing	05	04	09	111rd(F)	1-Bronze
5.	Equestrian	01	---	01	----	----
6.	Fencing	---	01	01	----	-----
7.	Golf	02	01	03	----	-----
8.	Gymnastics	01	---	01	----	----
9.	Hockey	20	20	40	111rd(M)	1-Bronze
10.	Judo	---	01	01	----	----
11.	Rowing	02	---	02	----	----
12.	Sailing	03	01	04	----	----
13.	Shooting	08	07	15	----	----
14.	Swimming	03	---	03	----	----
15.	Table Tennis	03	01	04		
16.	Tennis	01	02	03	----	----
17	Weightlifting	---	01	01	11nd(F)	1-Silver
18.	Wrestling	03	04	07	*11nd & 111rd(M)*	1-Silver 1-Bronze
19.	Total Athletes	71	56	127	7 Positions	7 Medals

of faith in capacity building of Indian sportspersons. Further, Indian men hockey team looked to be in the full contention of playing to their potential, for winning intensely contested matches against the most powerful and performing nations. The successful performance of Indian hockey (M) team can be attributed to the effective implementation of a strategic action plan, designed and developed by the experts, to generate a strong self-belief among the team players, for playing to their true potential.

Paralympic Success

Indian Para-athletes have delivered a great round of fresh cheer, with 19 medal which has placed the country at respectable 24th ranking in the Paralympic Games-2021. India's 5 Golds, 8 Silvers and 6 Bronzes are spread across-Shooting, Badminton, Athletics, Table Tennis, Archery. This remarkable sporting performance has out-stripped most pre-competition projections. The critical next step is to build on this momentum, with investment for an achievable aim and target of winning 38 medals at Paralympic Games-2024 to be organized at Paris (France).

Further, keeping in mind the increasing population of the disabled people, Paralympic Games are intended to motivate societies and nations to step-up disability infrastructure and social inclusions. This process has two important parts-physical and other is psychological in nature, Paralympic Committee of India along with other stake-holders need to popularize the success stories of Para-athletes all across the country. The super success of Tokyo Para-Champions, based on endless struggles needs to be projected as role models, reflecting "ability beyond disability" in the world. Most of the Para-athletes had to dig into their family bank accounts for diet, kits, equipment and exposure. Cutting edge technology has high cost and other assistive technologies are being provided to enhance accuracy, mobility, power and speed dramatically, for establishing new Olympic records for able bodied and disabled athletes. Today, there is no shortage of solutions to help Para-athletes to live, train and participate at global supporting events, but need of the hour is to ramp-up the access. Therefore, a 54- member Indian contingent participated in Paralympic Gages-2021. The details of performance of Indian sportspersons with medal tally have been presented in Table-2.

Sporting Nations

Tokyo Olympic Games proved to be a very unique and spectacular show of determination, resilience and resourcefulness, coupled with a great team-work displayed by Organizing Committee, International Olympic Committee, participating sportspersons and supervisory staff. Keeping in mind the prevailing adverse conditions during Olympic Games, the capacity building of top-class athletes was raised to the highest possible extent, enabling them to perform well, under extreme conditions and situations of high degree of pressure, to one's fullest potential to the satisfaction of all the stake-

Table-2: Medal Tally of India in 2021 Paralympics

S. No.	Country	Gold	Silver	Bronze	Total	Position
1.	CHN	96	60	51	207	Ist.
2.	GBR	41	38	45	124	IInd.
3.	USA	37	36	31	104	IIIrd.
4.	RPC	36	33	49	118	IVth.
5.	NED	25	17	17	59	Vth.
6.	UKR	24	47	27	98	VIth.
7.	BIRA	22	20	30	72	VIIth.
8.	AUS	21	29	30	80	VIIIth.
9.	ITA	14	29	26	69	IXth.
10.	AZBJN	14	01	04	19	Xth.
11.	JAPAN	13	15	23	51	XIth.
12.	GERMANY	13	12	18	43	XIIth.
13.	**INDIA**	**15**	**08**	**06**	**19**	**24th.**

holders. Based on the genetic characteristics and psychological strength, the superior sportspersons usually bounced-back in the field, with renewed energy, focused approach and uninterrupted rhythm of movements, to perform in a free-flowing manner, to the best of their abilities, even in the storm of adversaries, without being conscious about the out-come of the sporting contests. Therefore, the details of a spectacular performance of top 20 sporting nations of the world has been presented in Table-3.

Stumbling Blocks

According to a survey study conducted on malnutrition in remote and rural areas, India has highest number of stunted children in the world, (250 million children, as per NFHS data for the year 2020-21) under the age of 6 years, representing one-third of the global data on stunted children from 6 months to the age of six years. Another report published by the World Health Organization (WHO) reflected that malnutrition and lack of basic sanitation facility to the women and children, especially in the remote and rural areas, causing an utterly abysmal, inactive and unhealthy lifestyle among the poor people, who are living in the BIMARU states in India. Further, the prevailing poor conditions adversely affected lifestyle of the youth population, to a greater extent. Finally, it is crystal clear that 50% of India's total youth population does not fulfill the mandatory requirements to pursue sporting excellence, for developing them as the world-beaters in Olympic Games and World Championships, as long as this ground reality does not change drastically. Keeping this fact in mind, the Government of India approved Khelo India Youth Games, on account of strong recommendations of Olympic Task Force, as a right step in the right direction to pursue professional management of competitive sports in the education sector. Further, a survey conducted by Institute for Health Metrics and Evaluation indicated that India has slipped to 120th position in the ranking of health care system in the world for the year 2020-21, due to extremely poor functioning of existing health care system, particularly in most remote and rural areas in our country.

Spain and Italy have grabbed top positions in the ranking of the healthiest countries in the world. An official report of the World Health Organization (WHO) reflected that USA spends the highest amount of money with $ 11,000/- only, per person on health care of its citizen. As a result, the life expectancy and sporting performance of America is not only sustainable, but also on the constant rise to achieve the next levels of sporting performance. Now, it is confirmed that those countries, which have performed

Table-3: Performance of Top 20 Sporting Nations

S. No.	Country	Gold	Silver	Bronze	Total	Position
1.	USA	39	41	33	113	1st
2.	China	38	32	18	88	11nd
3.	Japan	27	14	17	58	111rd
4.	GBR	22	21	22	65	IVth
5.	ROC	20	28	23	71	Vth
6.	Australia	17	07	22	46	VIth
7.	Netherlands	10	12	14	36	VIIth
8.	France	10	12	11	33	VIIIt
9.	Germany	10	11	16	37	IXth
10.	Italy	10	10	20	40	Xth
11.	Canada	07	06	11	24	XIth
12.	Brazil	07	06	08	21	XIIth
13.	New Zealand	07	06	07	19	XIIIth
14.	Cuba	07	03	05	15	XIVth
15.	Hungry	06	07	07	20	XVth
16.	South Korea	06	04	10	20	XVIth
17.	Poland	04	05	05	14	XVIIth
18.	Czech Republic	04	04	03	11	XVIIIth
19.	Kenya	04	04	02	10	XIXth
20.	Norway	04	02	02	08	XXth
21.	**India**	**01**	**02**	**04**	**07**	**48th Position**

extremely well in the recent Olympic Games had been able to provide quality nutrition, scientific training and adequate health care facilities to their citizen from the day one. On the other hand, India is estimated to spend barely $ 240/- only per person on the health care of its people. As a result, second wave of COVID-19 pandemic stretched our national health care infrastructure beyond its functional limits that caused a deep disaster of human, financial and material resources, due to mismanagement by utterly inadequate medical staff, in the deep remote areas of India.

Golden Opportunity

An effective execution of a well-structured and well-developed road-map for pursuit of sports promotion from: 2016 to 2020, under strict supervision of highly qualified and professionally competent technical staff has created a blooming environment for Indian contingent to display a world-class sporting performance, for securing 48th position in Olympic Games-2021. Hence, national mass-media highlighted India's sporting image, to a greater extent. As a result of advance training, competitive exposure and periodic evaluation of sporting performance, enabled Indian top-class sportspersons to win total-7 medals (One Gold, Two Silver, Four Bronze) at Tokyo Olympic Games, making India's presence felt as an emerging and performing nation in the world of competitive sports. Hence, a good team-work of National Sports Federations and Indian Olympic Association, under the aegis of Ministry of Youth Affairs and Sports, Indian contingent emerged to display inspiring results. Hopefully, the present brilliant success of Indian athletes for pursuit of excellence needs to be utilized as a Golden Opportunity to attract and motivate millions of young students, to take-up games and sports as their career option. Therefore, a long journey of 121 years of our nation's participation in Olympic Games from 1900 to 2021, projecting its sporting image in competitive sports, with India's medal tally, so far, have been presented in Table-4.

Some Suggestions for Improving the Performance of Sports in India

Now, process of sports development has become a watershed movement in the Indian sports. The long-term development plan, aiming at mainstreaming and transforming youth sports in the country may be used, for the national development. On the basis of a successful experience of promoting competitive sports, especially in education sector, following suggestions if followed can yield good results:

- A pan India sports scholarship scheme, covering 1000 most talented young athletes needs to be started for select 20 disciplines of sports, for pursuing sports promotion.
- Each student selected under this scheme needs to be provided an annual scholarship worth Rs. 10.00 Lakh throughout the period of Eight (8) consecutive years as an incentive.
- A long term athlete development pathway needs to be implemented for transparent selection, advance training, competitive exposure for meaningful participation in sports.
- A detailed program with an aim of developing active, healthy and productive lifestyle for all age categories of people needs to be executed under supervision of professionals.
- The national objective of sports promotion should be to establish 30 Centers of Excellence in university sector in India for pursuit of excellence in competitive games and sports.
- A strategic action plan should cover at least 450 million potential children in the age group of

Table-4: India's Medal Tally in Olympics So Far

S. No.	Game/Sport	Gold	Silver	Bronze	Total
1.	Field Hockey	08	01	03	12
2.	Shooting	01	02	01	04
3.	Athletics	01	02	---	03
4.	Wrestling	---	02	04	06
5.	Badminton	---	01	02	03
6.	Boxing	---	---	03	03
7.	Tennis	---	01	01	02
8.	Weightlifting	---	01	01	02
9.	**Total Medals**	**10**	**10**	**15**	**35**

08-10 years, under a massive National Physical Fitness Program in schools at grass-roots.

- If India has to improve upon its last Olympic Games performance in future, there is a need to involve corporate sector to invest resources in university sports system in the country.
- A professional university sporting system in India, a strategic action plan needs to be developed and executed to prove as an oasis of the Olympic Champions and world beaters.
- Indian university sporting system can learn from Stanford University (USA), whose athletes have won 26 medals in Tokyo Olympic Games, for raising our performance level.
- The professionals suggested a scheme to encourage states and corporates to promote "One State-One Sport and One Corporate-One Sport" of their own ability, choice and interest
- India needs to identify various games/sports which are most suitable to our physical fitness, mental make-up and technical ability, to perform creditably well at the Olympic Games.
- Ministry of Youth Affairs and Sports should adopt a professional approach for making National Sports Federations (NSF) truly accountable for their poor performance, if any.
- After successful results of Indian elite athletes in Olympic Games, business leaders and corporate icons should start thinking about professional management of games & sports.
- There should be an essential provision in National Sports Code for nomination of representatives of corporate houses, for providing support to National Sports Federations.
- India needs to start preparing for Olympic Games-2028, with short term and long term goals, based on professional and scientific approach, to be among the top 25 nations.
- This is the right time for heralding a new era in good governance, with a well-defined road-map for all-round development of a sportsperson to restore his or her pristine glory.
- Consequent upon displaying creditable sporting performance in global event, India needs to swing into action on many fronts, with certain bold steps to promote sporting culture.
- The government being very supportive to Indian contingent for Tokyo Olympic Games should be able to utilize fan-following of athletes as role models for others to follow.
- An enabling environment should be created by a central legislation for leaders of big corporates, to come forward and make tough decisions in pursuit of sporting excellence.
- India must look at global bench-marks when it comes to sporting infrastructure and training facilities for talent search and talent development for projecting it at the global level.
- Considering the impact of sports on national development, university sector needs to be put on the global map as an ideal and leading destination for adequate resource investment.
- The positive out-come of Tokyo Olympic Games should be highlighted to change the attitude of parents towards sports for supporting children to pursue sports as a career.
- Sports promotion should be based on out-of-the-box thinking to ensure efficiency and transparency in the functioning of NSFs, to transform performance of the top athletes.
- The Government of India must allow big industrial houses for tax exemption under revenue expenditure for promotion of games & sports, especially at grass-roots level in schools.
- A large population of India is of the opinion that sports deserved to be brought under the Concurrent List of the Constitution of India, for effective promotion of sporting culture.
- Bureaucratic and lousy functioning of Sports Authority of India (SAI) and National Sports Federations (NSFs) have proved to be a major obstacle in the free operation of sports.
- Sports Authority of India should be equipped with most suitable technocrats, with an impressive sporting background to ensure and secure its effective delivery of services.
- A wide publicity campaign needs to be launched through electronic media and newspapers throughout the year, to popularize and promote the culture of excellence in sports.
- India cannot afford to ignore sporting culture and its role in physical fitness and personality development, our nation is one of the youngest but not the fittest nation in the world.
- It is an established fact that India is a sports loving country, it is need of the hour to design

sports policy and develop an action plan to transform it to be a sports playing nation.

Conclusion

National objective of our sports policy and sporting system should be to inspire every child to take part in games and sports, and every parent needs to encourage the child to pursue physical activities of his or her ability, choice and interest, as an active and healthy lifestyle. Therefore, extreme pressure of studies towards a bright career should not diminish their interest for participation in games and sports. The following conclusions have there for been drawn:

- All high potential children need to be encouraged to remain active in sports through national sporting system that offers them social recognition and financial benefits.
- There is a felt and urgent need for reducing academic burden on the children, particularly at the primary stage, so that they could spare adequate time for participation in sports.
- Adequate financial support should be provided to all the schools, colleges and universities for the purchase of basic and modern equipment and consumable sporting items.
- There is an urgent requirement to develop a Centre of Excellence in every district, for elite sportspersons, for pursuing sports as a lucrative and secured professional career.
- Government of India need to seriously consider to establish a sports university in each state to which all the colleges of physical education and sports science could be affiliated.
- University sports needs to be revamped to increase sporting activities, based on professional and scientific approach, for improving their contribution in performance.
- The existing infrastructure for sports promotion is confined mainly to the metro cities and big industrial townships and it caters to need of 20% people living in urban areas only.
- The huge sports infrastructure developed for the conduct of Commonwealth Games-2010 is just lying idle and under-utilized. It needs to be fully utilized for games and sports.
- The SAI needs to be very strict in implementation of guide-lines of National Sports Code-2011 by all the National Sports Federations, for achieving the desired performance.
- Indian sporting system needs to ensure that diet available to national athletes must have nutritional value necessary to meet specific requirements of different sporting events.
- The Government should have a strong system for effective monitoring and analytical evaluation of the performance of the SAI and National Sports Federations annually.
- There is a compulsive requirement for continuous skill up-dating and scientific orientation of support staff in view of rapid changes taking place in techniques of various sports.
- The practice of making frequent changes of national coaches needs to be avoided and whenever any athlete or team performs creditably well, credit should go to the coaches.
- There are many National Sports Federations (NSF) lacking democratic functioning and these sports bodies are headed by people, who have nothing to do with games and sports.
- The most important task before National Sports Federations should be to mobilize resources and obtain sponsorships for promoting games and sports in the country.
- The Government of India should impose certain terms and conditions with regard to appointment of some committees for dope-testing and age verification of athletes.
- There should be accountability and responsibility of every National Sports Federation for poor performance of Indian athletes at International level sporting competitions.
- The expert opinion reveals that a team of experts should have a deep understanding and effective coordination with technical support staff, to perform exceedingly well.
- The spirited performance Indian athletes at Tokyo Olympic Games is expected to set new bench-marks for pursuit of excellence in competitive sports at global platforms.
- It is concluded that splendid success of Indian athletes at Olympic Games was based on proper planning, effective execution and analytical evaluation of an action plan.

- A spectacular performance of India proved to be a moment of glory for all the performers, sports lovers and spectators, with the podium finish results at the Olympic Games.
- India's giant leap into the world of competitive sports has added the golden lustre to our process of developing world-beaters, through a scientific and professional approach.
- It is an established fact that nothing succeeds like success. India's rising performance may open the flood-gates for an era of revolution for pursuit of sporting excellence.
- Despite a successful performance displayed by our elite athletes in Olympics Games, the global media reflected that India still lagged behind on several counts and targets.
- It is confirmed from out-come of recent global events that India still has a long way to go for developing sports culture at the grass-roots, leading to be a sporting power house.
- It is observed that India's crusade for achieving superior sporting excellence at global platform reflected poor management of training of athletes during COVID-19 crisis time.
- The deadly cock-tail of sports and politics led to the man-made systemic failure, where government officials usually bow down to the political pressure for neglecting sports.
- The experts suggested that India's future champions are readily available in the education sector-schools, colleges and universities, but they all need to be given a proper shape.
- No doubt, winners of Olympic medals truly deserved a rousing welcome and the Red Carpet was rolled down for Indian athletes, no Red Tape should be allowed in sports management.
- There is a general public opinion that stellar performance of Indian hockey (M and W) teams captured the global imagination, but it deserves to be maintained at all cost.

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Let's Make India the Most-Sought-After Seat of Higher Learning

Amit Khare (IAS), Secretary, Department of Education, Government of India delivered the Convocation Address at the 39th Convocation Ceremony of Dayalbagh Educational Institute (Deemed-to-be University) Dayalbagh, Agra (Uttar Pradesh) on January 22, 2021. He said, "You are now going out into the world not only to fulfill your own aspirations but also the aspirations of this country and of your fellow countrymen like us, who look towards you with a lot of hope. We all have tremendous confidence in your abilities as future leaders in your respective sectors. It is this confidence that fuels our dreams for country's missions like Start Up India, Skill India, Make in India- Make for the World and *Atmanirbhar Bharat*. You should emerge not as 'job seekers' but as 'job givers' to promote the individual capability of each student, teach them to think, equip them with the skills required to face the 21st century and global leaders – while imparting values rooted in Indian culture." Excerpts

I had heard a lot about Dayalbagh Institute earlier but my knowledge regarding Dayalbagh Institution (DEI) was amplified a few years ago when I came to know that Prof. Prem Kalra, the then Director of IIT Jodhpur was joining Dayalbagh Educational Institute as its Director. As I happened to be a Joint Secretary in the Ministry of HRD at that time and Prof. Kalra was well known for his contribution in establishing the IIT Jodhpur in its formative years, so, I was a bit curious that instead of a second term as a Director either of IIT Jodhpur or some other institution under the Ministry, Prof. Kalra had decided to join Dayalbagh Educational Institution. On one occasion I asked this personal question to Prof. Kalra, who then informed me that Dayalbagh is a unique institution that brings education and values together something which we have talked about in the National Education Policy—2020 and this why he wants to contribute to the society in a novel manner. In a way, Dayalbagh Educational Institution in its philosophy and vision has been much ahead of times in its thinking of the day, and many of the ideas of National Education Policy—2020 are already enshrined in the ethos of DEI. My visit to this unique wonder, like no other, where modern technologies have been aptly built on strong foundations of our own Indian culture, tradition and values, will remain etched in my memory for life. It was these rich traditions and heritage that guided us as a civilization for centuries, making India the most sought-after seat of higher learning. The pursuit of knowledge (*Jnan*), wisdom (*Pragyaa*), and truth (*Satya*) was always considered in Indian thought and philosophy as the highest human goal. The aim of education in ancient India was not just the acquisition of knowledge as preparation for life in this world, or life beyond schooling, but for the complete realization and liberation of the self. The New Education Policy is trying to restore that glory and purpose of education. I am glad that it is already being practiced in DEI.

Dear Class of 2020! I must say that your batch, and your contemporary batches the world over, are a unique lot! You are tied together by a unique experience. You saw how a tiny virus lay siege to all established orders and norms the world over. The pandemic may have really shaken you all, since this was the last year of your studies, before you stepped out into the world. Some of you may even have suffered personal loss. Yet you all have been really brave all these months. I am sure, in your own ways, you would have contributed to the mankind's efforts to regain control of life and build up new norms. You have been through a lot, but, I am sure, this experience would have given you a fresh perspective to life, and prepared you better for facing its vagaries in future.

This is also a remarkable time, an opportune moment, to be a young Indian today. India has emerged in the world arena as one of the most confident nations. Indians are held in very high regard today and the world has a lot of expectations from us. You can see this in India's rapidly growing presence in the international media space in recent times. The world today is sitting up to take note of everything that India does, because the global economy has a lot of its hopes pinned on India. The COVID-19 crisis has further highlighted the wisdom and sagacity of our society, the efficiency

of our scientific and medical systems, the strength of our economy and the vibrancy of our democracy. Just last week the IMF Chief Kristalina Georgieva praised India for the decisive steps taken to deal with COVID-19 pandemic.

As each one of you embark upon your journey through life today, you carry this legacy, this brand of being a proud Indian. While this brand gives you a position of privilege in the world, it also bestows upon you the special responsibility of leading and guiding changes in your respective sectors, changes that make the world a better place for everyone. India's journey from being a third world, fledgling democracy to this position of power and eminence is the result of the toil and dedicated contribution of every section of society. The role of the educated people in any sector has been especially significant because they have guided and led this change in various capacities. Today, you are joining this rank of educated intellectuals, the young enlightened Indians who will lead the world.

You are fortunate to have studied in a prestigious institution like Dayalbagh Educational Institute that beautifully merges Indian value systems with a modern, futuristic vision. I am very happy to note that the institution has been imparting multidisciplinary education in subjects as diverse as Quantum Computing to Textile Designing to Music , and that its Vision 2031 also supports the same principles that have been recommended by the National Education Policy 2020. There is focus on value based quality education, inclusivity, multidisciplinary, research, use of ICT – all of which align well with the NEP–2020. DEI has an extensive and dynamic Skilling education programme for both boys and girls, which again aligns well with the NEP 2020. I was also interested to note the emphasis given in both Dayalbagh and DEI to the development of a 'health-care habitat', through an environment friendly culture of e-mobility, use of renewable energy and pollution control through regular water misting.

As alumni of this prestigious institution, you are now going out into the world not only to fulfill your own aspirations but also the aspirations of this country and of your fellow countrymen like us, who look towards you with a lot of hope. We all have tremendous confidence in your abilities as future leaders in your respective sectors. It is this confidence that fuels our dreams for country's missions like Start Up India, Skill India, Make in India—Make for the World and *Atmanirbhar Bharat*. You should emerge not as 'job seekers' but as 'job givers' to promote the individual capability of each student, teach them to think, equip them with the skills required to face the 21st century and global leaders — while imparting values rooted in Indian culture.

You are also fortunate to have studied – or even being brought up – in the city of Agra. This city has history as well as a vibrant present. The Taj Mahal draws a giant share of foreign tourists to the city. It is also a thriving centre for small scale industries like leather, marble inlay work and many others.

Agra is a crucible for a lot of learning which I am sure you have imbibed during the years spent here. The city can also be a springboard now, from where you take a leap towards your future endeavours. But while you do this, I will also remind you to pause for a bit and think of lots of young people in the country and in the world, who have been less fortunate than you, young people who are deprived of the benefits that a good education provides. I would implore you to remember that it is you who have to help these brothers and sisters of yours to realize their dreams and hold their heads up high.

So go out into the world, take pride in being a responsible Indian, and do us all proud. My Best Wishes and blessings are with each one of you. My special thanks to all the "Gurus", teachers & Staff who have brought us to this level.

Thank You

Jai Hind

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Anusmiritiyan to Pay Tributes to Prof. K P Pandey–A Great Teacher

The Society for Higher Education and Practical Applications (SHEPA), Varanasi celebrated an online programme 'Prof. K P Pandey-*Anusmiritiyan*' to commemorate the 83rd Birth Anniversary of Prof. K P Pandey on 5th September, 2021. Many intellectuals, academia and SHEPA family joined the online programme through Google Meet and YouTube live streaming platforms. The programme commenced with sacramental hymns of *Mangalacharan* by Dr. Sundar Narayan Jha, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi followed by a brief life sketch of Prof. K P Pandey by Dr. J P Srivastav, Principal, Institute of Education, SHEPA. Convener, Prof. Amita Pandey Bhardwaj, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi welcomed the Chief Guest Prof. Punjab Singh, Former Vice Chancellor, Banaras Hindu University, Varanasi, Chairperson, Prof. Ramesh Kumar Pandey, Vice Chancellor, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi and august gathering of the online meet and paid her heartfelt tributes to the great departed soul for being her father, mentor, and guide whom she could find now in thousands of his pupils spread across India.

The first speaker to share her *Anusmiritiyan* was Prof. Suraksha Pal Singh, former Head and Dean, Faculty of Education of Chaudhary Charan Singh University, Meerut who had her association of nearly five decades with him as a teacher and mentor**.** With great reverence to Prof. Pandey, she said that he was an incomparable and extraordinary teacher with a great passion for teaching and learning. She revealed his qualities of being a voracious reader, having an incredible power to connect with each and every student of his class, inclusiveness, and adaptability to any situation as his great academic traits.

Prof. N S Maviin, former Head and Dean of Faculty of Education of Kurukshetra University, Kurukshetra mentioned Prof. Pandey as his guide, friend and philosopher who paved the way to unleash great academic success of his students. He said that he was the path finder of alternative education which flourished in the form of Distance Mode of Education in India in 1970s which showcased his foresightedness.

Swami Chimamanda, Founder, FOWAI Forum, Mumbai paid his tribute to Prof. Pandey and cherished his 12 years of glorious and wonderful association with him. He said that he learnt a lot not only about education but *Upanishads* also when he worked with him on a monograph on *Upanishads*: Messages for Teachers and Teacher Educators as National Lecture Series published by National Council for Teacher Education, New Delhi. He said that he led a balanced life and practiced philosophy of *Upanishads* in his life which was usually spoken in their *pravachans*.

Dr. B K Tripathi, Director, Inter University Center of Teacher Education, Banaras Hindu University, Varanasi also cherished his sweet memories of 15 years spent with Prof. Pandey. He said that his long-lasting contributions to the Centre will be remembered forever by him. He recalled his discussions with him regarding so many new things especially in the context of higher education which are now being endorsed in NEP-2020.

Prof. Seema Singh, Vice Chancellor, Uttar Pradesh Rajshri Tandon Open University, Allahabad paid her tribute to Prof. Pandey by worth mentioning his simplicity and generosity epitomized in his scholarly in-depths by which he managed to explain the complex postulations in simple terms as to benefit the receiving clientele. She also recollected the memories of her M.Ed. classes in 1990 where faculty members along with students used to listen him for hours.

Prof. Kalplata Pandey, Vice Chancellor, Jananayak Chandrashekhar University, Ballia, Uttar Pradesh expressed her gratitude to Prof. Pandey for being her guide, mentor, and fatherly person. She remembered him as a great teacher having multi-faceted personality and a master with exemplary skills of teaching.

Prof. Marmar Mukhopadhyay, Director, Educational Technology and Management Academy, (ETMA), Gurgaon said that Prof. Pandey had an enormous sense of detailing any phenomena and great

ability of relatedness with everybody. He noticed a rare quality in Prof. Pandey that he never carried the burden of his positions. He compared his passion towards teaching with that of former President of India, Shri Pranab Mukherji and appreciated his great amount of knowledge and energy which enabled him to speak for 3-4 hours continuously without a sign of tiredness.

Prof. Geshe Ngawang Samten, Vice Chancellor, Central Institute of Higher Tibetan Studies, Sarnath, Varanasi paid respect to his long association with Prof. Pandey and recalled his profound reading and learning attributes which dignified him as an erudite scholar. He said that he was always concerned with cutting edge of education and worked tirelessly to blend the modern education in the framework of our rich Indian system of knowledge and wisdom.

Prof. Chandkiran Saluja, Academic Director, Samskrit Promotion Foundation, New Delhi recollected the time spent during some exam work at NTA where he noticed his enormous ability of clarity about the various concepts in education. He further added that he looks his relationship with him as that of father and a son and owed his understanding of education through several books of Prof. Pandey.

Prof. U C Vashishtha, Former Head and Dean, Department of Education, University of Lucknow, Lucknow cherished his 21 years of beautiful association with him and paid his homage. Many other renowned academicians from education fraternity paid their tributes and shared their memorable experiences of Prof. Pandey through video message.

Besides this, Dr. Dinesh Pandey, Faculty of Education, Mangalaytan University, Aligarh also paid his tribute by quoting Prof. Pandey as an immortal being for his boundless teaching and training beyond time and space which would be transacted and remain immortal from his present students to upcoming generations.

In his address, Prof. Panjab Singh admired his memories of glorious 50 years of memorable association with Prof. Pandey on family, academic and professional fronts. He said that he was a great team leader with extra-ordinary prophecy in guiding and leading various policies and projects in shaping and promoting Indian system of education. Heendorsed all the things spoke about Prof. Pandey by all the speakers and considered the programme a greatest tribute on his birthday. He further added that he founded, nurtured, and developed many institutions and SHEPA is not an exception. He believed that he earned and learnt a lot from Prof. Pandey and he will be remembered as a great educationist, scholar, thinker, teacher and learner to the generations to come.

In his Presidential Address, Prof. Ramesh Kumar Pandey quoted verses from *Upanishads* to offer his homage to Prof. Pandey by proclaiming him as an ideal teacher with higher order proficiency in both English and Hindi literature which was manifested in various types of academic documents drafted by him. He also appreciated the immemorable reflections about Prof. Pandey presented by the speakers and applauded the organizers for this great initiative. The programme concluded with a vote of thanks by the son of Prof. K P Pandey, Mr. Arun Kumar Pandey who expressed his gratitude to the Chief Guest, Chairperson and speakers for their kind words and sincere thanks to all the present esteemed galaxy of intellectuals and to Shri Praveen Rungta, Secretary of the Organizing Institution SHEPA.

World Tribal Day, 2021

The World Tribal Week was organized by the Central University of Jharkhand, Ranchi during August 09-15, 2021. A group of scholars had been invited other than Prof. Ramesh Chandra Sinha, Chairman, Indian Council of Philosophical Research (ICPR) as Chief Guest of the inaugural programme. Dr. S L Harikumar delivered the welcome address. Other delegates in the programme were Padma Bhushan Karia Munda as Chief Speaker.

In the Inaugural Session, Chief Guest, Prof. Ramesh Chandra Sinha explained the significance of observing World Tribal Day in the context of Jharkhand, citing example of life and contributions of Birsa Munda and other freedom fighters of Jharkhand. Prof. Sinha, Chairman of Indian Council of Philosophical Research (ICPR) also stated that ICPR is sponsoring various programmes to universities, NGOs, etc. Prof. Sinha assured to Central University of Jharkhand that ICPR would help for research works in future too. Padmbhushan Karia Munda delivered lecture on 'World Tribal Day: Illusiveness and Truthfulness'. He also stressed on the evaluation of the developmental activities in rural areas of Jharkhand. Faculty members of Central University of Jharkhand may do this kind of projects. In the Chairman's address, Prof. Kshiti

Bhusan Das, Vice Chancellor of Central University of Jharkhand mentioned about the importance and significance of observing world tribal week. Prof. Das also stated examples from different parts of India and how oral tradition is in the heart of the common folk. Dr. Shivendra Kumar proposed the Vote of Thanks in the inauguration ceremony and it ended with singing National Anthem by all participants. Dr. Pragya Shukla anchors the entire programme.

Shri Raj Kumar, Senior Journalist of The Telegraph who discussed about 'Tribals, A Community Who are Saint by Birth'. In his lecture, he mentioned about the nature of the tribal people particularly simplicity by behaviours. Dr. Rajkishor Hansda, Tribal Activist spoke on 'Conditions of Tribal people in India before and after Independence'. Mr. Mukesh Balyogi, An Innovative Journalist also delivered his speech.

Dr. Rabindranath Sarma, former Head, Department of Tribal Studies and former Dean, School for the Study of Culture delivered his speech on 'Tribal Studies as an Academic Discipline in India' which became popular in India on August 11, 2021. He also stated the various Folklore activities of the Folklore unit of the Department of Tribal Studies.

Prof. L M Prasad, former Professor of Political Science and Dean, Social Sciences, Ranchi University, Ranchi discussed about various challenges faced by the scheduled tribes of Jharkhand. Prof. Uma Shankar Sharma, Former Professor, Department of History, Doranda College, Ranchi delivered his lecture on 'Jharkhand and Tribal Culture'. Shri Dev Vrat Pahan talked on 'Tribal Culture in the Context of Jharkhand'. Dr. Kavindra Narayan Shrivastava, former Editor, Press Trust of India, New Delhi delivered his lecture on 'Indian Tribal Society and Their Political Position'. Shri Medha Oraon talked on the 'Endangerment of Traditional Culture of Tribal People'. Prof. Sachidanand Mishra, Member Secretary, Indian Council of Philosophical Research also delivered his speech. Prof. Manoj Kumar, Prof. In-charge of Central University of Jharkhand spoke on 'Tribal and Environment'. The Valedictory Address was delivered by Padmshree Ashok Bhagat on the 'Role of Tribal Communities in the Indian Independent Movement'. Dr. Rabindranath Sarma was the rapporteur of the event.

National Conference on Engineering Education

A two-day National Conference on 'Engineering Education' is being organized by the National Institute of Technical Teachers' Training and Research (NITTTR), Kolkata (West Bengal) during November 11-12, 2021. It is being organised to mark the Birth Anniversary of Dr. Maulana Abul Kalam Azad who was the first Education Minister of independent India, the day being now celebrated as National Education Day, throughout the nation. The aim of the event is to bring together researchers, academicians, policy makers, industrialists and other stakeholders to a common platform so that different strategies to improve the overall technical education of the country can be explored. The principal focus would be to rethink engineering education in a global way. Engineering education, in our country has been experiencing expansion over the last few years. It is also witnessing rapid changes in its mode of delivery and implementation. Engineering education provides great service to the society at different levels. Due to the need for accreditation and quality improvement, experimentation is also being observed in our country, presently. The Themes of the event are:

Reforms in Engineering Education

- Innovations in STEM Education.
- Entrepreneurship and Startups.
- Innovations in Engineering Pedagogy.
- Innovations and Incubation.

R & D in Engineering Education

- Active Learning Strategies.
- Research and Development in Engineering Education.
- Engineering Education Systemic Research.
- Industry Academia Collaboration.

Use of Technology in Engineering Education

- New Teaching Technologies.
- ICT Integration in Engineering Education.
- Blended Learning.

Engineering Informatics

- Learning Analytics.
- Artificial Intelligence in Engineering Education.
- Educational Data Mining.
- Engineering Education Management.

Paradigm Shift in Engineering Education

- Online Pedagogy.
- Sustainable TVET.

- Distance Learning Methods.
- Teacher Education.

Quality Assurance in Engineering Education

- Accreditation and Evaluation.
- International Recognition of Qualifications.
- Intellectual Property Rights.
- Outcome Based Education.

Prospects and Challenges in Engineering Education

- Innovation.
- Impact of Globalisation and Privatisation.
- NEP—2020 for Reforms in Engineering Education.
- Impact of COVID-19 in Engineering Education.
- Women in Engineering Education.

For further details, contact Coordinator, Dr. Habiba Hussain, Associate Professor, Education and Management, National Institute of Technical Teachers' Training and Research (NITTTR), Kolkata- 700 106 (West Bengal). E-mail: *ncee2021@nitttrkol.ac.in.* For updates, log on to: *www.nitttrc.ac.in.*

Faculty Development Programme on Optimization Techniques

A nine-day Faculty Development Programme on 'Optimization Techniques: Theory, Practice, and Emerging Applications' is being organized by E & ICT Academy, National Institute of Technology, Warangal during October 22-30, 2021. The Programme is sponsored by Ministry of Electronics and Information Technology (MEITY), Government of India. The Faculty of Engineering Colleges, MCA Colleges and other allied disciplines, industry personnel working in the concerned /allied may participate in the programme. The Major Course Contents are:

- Direct Search Methods, Gradient Based Methods.
- Simplex Method and Linear Programming.
- Integer Linear Programming.
- Genetic Algorithm.
- Particle Swarm Optimization.
- Differential Evolution.
- Ant Colony Optimization Algorithm.
- Simulated Annealing Algorithm.
- Jaya Algorithm.
- Teaching Learning Based Optimization Algorithm.
- Rao Algorithms.
- Single Variable Optimization Methods.
- Multi-Variable Optimization Methods.
- Constrained Optimization Methods.
- Multi-Criteria Decision-Making Methods.
- Neural Network and its Applications.
- Fuzzy Logic.
- Hybrid Intelligent Systems.
- Case Studies on Soft Computing and Meta-Heuristic.
- Optimization Algorithms in Engineering Applications.

For further details, contact Coordinators, Dr. Manjubala Bisi / Dr. Sanjaya Kumar Panda**,** Department of Computer Science and Engineering, National Institute of Technology, Warangal—506 004 (Telangana), Mobile No: +91-9502940360 /+91-7978685893. E-mail: *manjubalabisi@nitw.ac.in, sanjaya@nitw.ac.in.* For updates, log on to*: https://nitw.ac.in/eict* ❑

THESES OF THE MONTH

SCIENCE & TECHNOLOGY
A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of July-August, 2021)

AGRICULTURAL & VETERINARY SCIENCES

Agronomy

1. Hasam Uddin. **Weed management in organically grown basmati rice-durum wheat cropping system**. Department of Agronomy, Punjab Agricultural University, Ludhiana.

Biochemistry

1. Parakhia, Manojkumar Vallabhbhai. **Utilizing groundnut (*Arachis hypogaea* L) rhizosphere microbiome for biological control of dry root rot**. (Dr. B A Golakiya), Department of Biochemistry, Junagadh Agricultural University, Junagadh.

Biotechnology

1. Dabhi, Kirtibahen Arajanbhai. **Transcriptome and metabolic profiling in response to root rot (*Macrophomina phaseolina*) infection in mungbean [*Vigna radiata* (L) wilczek**. (Dr. H P Gajera), Department of Biotechnology, Junagadh Agricultural University, Junagadh.

Food Science & Technology

1. Manpreet Kaur. **Processing suitability of chili varieties for value added products**. Department of Food Technology, Punjab Agricultural University, Ludhiana.

2. Sehajveer Kaur. **Utilization of beetroot (*Beta vulgaris* L) for the development of nutritional evaluation of functional food**. Department of Food and Nutrition, Punjab Agricultural University, Ludhiana.

BIOLOGICAL SCIENCES

Biotechnology

1. Anitha, R E. **Lactucaxanthin mediated modulation of oxidative stress & retinal anglogenesis in hyperglycemia induced ARPE-19 cell line and rat models**. (Dr. V Baskaran), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

Botany

1. Bhardwaj, Smriti. **Dried reference fungal collections from the forest flora of Madhya Pradesh: A mycotaxonomic evaluation**. (Prof. A N Rai), Department of Botany, Dr Harisingh Gour Vishwavidyalaya, Sagar.

2. Dubey, Anurag. **Phytoparasitic fungi from the forest flora of Jashpur (Chhattisgarh): A survey collection and mycotaxonomic study**. (Prof. A N Rai), Department of Botany, Dr Harisingh Gour Vishwavidyalaya, Sagar.

3. Vala, Milan Shvarajbhai. **A study of phenological and phytochemical changes of some tree species of fabaceae (Leguminosae) due to climate change in different Regions of Gujarat**. (Dr. Bharat Maitreya), Department of Botany, Gujarat University, Ahmedabad.

Life Science

1. Dhiman, Nisha. **Studies on development of in vitro systems and de novo transcriptome analysis for secondary metabolite pathway elucidation in Nardostachys Jatamansi (D.Don) DC: A critically endangered medicinal herb of Himalayas**. (Dr. Amit Bhattacharya), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

2. Dhiviya, V. **investigating the role of Epithelial Mesenchymal Transition (EMT) in human viral infections**. (Dr. Krishnan H Harshan), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

3. Dinesh Kumar. **Understanding the role of fluorinated thiazolidinol in inducing autophagic cell death in pancreatic cancer**. (Dr. T Anjana Devi), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziaba

4. Galande, Sneha Harishchandra. **Engineering, expression, purification and characterization of recombinant L-asparaginase from Bacillus subtilis**. (Dr. R.S. Prakasham), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

5. Gaur, Anamika Singh. **Molecular Property Diagnostic Suite (MPDS): Towards development of disease-specific web portals**. (Dr. G. Narahari Sastry), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

6. Mishra, Navya. **Factors affecting early adult lung function**. (Dr. Tanica Lyngdoh), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

7. Mishra, Saumya. **A study on the crosstalk between microglial activation and dopaminergic neurodegeneration in the cellular model of cypermethrin-induced Parkinsonism**. (Dr. M P Singh), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

8. Nain, Sonam. **Oxidative stress tolerant genes: Their repertoire and functions in different ecological niches**. (Dr. Rakesh Sharma), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

9. Pandey, Ankesh. **Expression of Cocculus Hirsutus Trypsin Inhibitor (ChTI) in chickpea for resistance to Helicoverpa armigera and Spodoptera litura**. (Dr. Indraneel Sanyal), Faculty of Biological Engineering, Academy of Scientific and Innovative Research, Ghaziabad.

10. Pathak, Gauri Mukund. **Insights into the life cycle of Bipolaris sorokiniana through OMICS approaches**. (Dr. Narendra Kadoo), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

11. Sharma, Tripti. **Production of yeast single cell oil from lignocellulosic biomass and its assessment as biofuel and oleochemicals**. (Dr. Debashish Ghosh), Faculty of Biological Engineering, Academy of Scientific and Innovative Research, Ghaziabad.

Zoology

1. Chhetri, Bijoy. **Distribution, abundance and habitat interaction of Himalayan pheasants with their response to climate change in Khangchenzonga biosphere Reserve, Sikkim, India**. (Prof. S Barat and Prof. H K Badola), Department of Zoology, University of North Bengal, Darjeeling.

2. Sukhpreet Kaur. **Population status, feeding behaviour and breeding biology of baya weaver bird (*Ploceus philippinus*) in Punjab**. Department of Zoology, Punjab Agricultural University, Ludhiana.

EARTH SYSTEM SCIENCES

Environmental Science

1. Anita. **Analysis and remediation of heavy metals in water and soil of Yamuna river flood plains**. (Dr. Sudesh Chaudhary and Dr. Brijnandan S Dehiya), Center of Excellence for Energy and Environmental Studies, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

2. Paul, Devina Rattan. **Synthesis and characterization of graphitic carbon nitride based nanomaterials and their investigation for environmental applications**. (Dr. S P Nehra), Center of Excellence for Energy and Environmental Studies, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

3. Tyagi, Megha. **Hybrid systems for treatment of cyanide and phenol from coke-oven wastewater**. (Prof. Sheeja Jagadevan), Department of Environmental Science, Indian Institute of Technology, Dhanbad.

Geophysics

1. Chahal, Raman. **Integrated approach to analyze the Jaisalmer formation in the Jurassic age to establish the potentiality for hydrocarbon exploration of the Jaisalmer Sub-Basin, India.** (Prof. Saurabh Datta Gupta), Department of Applied Geophysics, Indian Institute of Technology, Dhanbad.

ENGINEERING SCIENCES

Chemical Engineering

1. Datta, Arghya. **Residence time distribution studies in reactor with recycle**. (Dr. Raj Kumar Gupta and Dr. Haripada Bhunia), Department of Chemical Engineering, Thapar Institute of Engineering and Technology, Patiala.

2. Sharma, Mrityunjay. **Selectivity engineering of exothermic multistep reactions using flow reactors**. (Dr. Amol A. Kulkarni), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

Civil Engineering

1. Singha, Sudhakar. **Development of a geospatial framework coupled with advanced data driven techniques for the impact assessment of anthropogenic pollution on groundwater resources in Chhattisgarh, India**. (Prof. Srinivas Pasupuleti), Department of Civil Engineering, Indian Institute of Technology, Dhanbad.

Computer Science & Engineering

1. Archana. **A protocol for reliable communication in body area networks**. (Dr. Amita Malik), Department of Computer Science & Engineering, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

2. Bhatia, Varsha. **An energy efficient clustering algorithmic approach based on hidden Markov Model in wireless sensor networks**. (Dr. Vivek Jaglan and Dr. Sunita Kumawat), Faculty of Information Technology, Amity University, Gurgaon.

3. Jolly, Simran Kaur. **Identification of translation divergence in two semantically different languages**. (Dr. Rashmi Agrawal), Faculty of Computer Applications, Manav Rachna International Institute of Research and Studies, Faridabad.

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5. Kommina, Subhash Bhagavan. **Predictive analysis of students academic performance using machine learning models**. Department of Computer Science & Engineering, Hindustan Institute of Technology & Science, Chennai.

6. Malik, Vinita. **Analysis, classification and design of risk managed software testing**. (Dr. Sukhdip Singh), Department of Computer Science & Engineering, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

7. Panda, Deepak Kumar. **Evaluation and analysis of different reliability measures of interconnection networks**. (Dr. Ranjan Kumar Dash), Department of Computer Science & Engineering, Siksha O Anusandhan University, Bhubaneswar.

8. Samriya, Jitendra Kumar. **Analysis and design of security framework for cloud computing**. (Dr. Narander Kumar), Department of Computer Sciences, Babasaheb Bhim Rao Ambedkar University, Lucknow.

9. Shalu. **Swarm intelligence based hole detection and recovery protocol for wireless sensor networks**. (Dr. Amita Malik), Department of Computer Science & Engineering, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

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Electrical & Electronics Engineering

1. Bagha, Sangeeta. **Development of algorithms for active control of narrowband noise**. (Dr. Debi Prasad Das), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

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5. Khanra, Mousumi. **Optimal driving based trip planning of electric vehicles using evolutionary algorithms: A driver assistance system**. (Dr. Arup Kumar Nandi), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

6. Kosuru, Rama Murty. **Investigations on hybrid reconfigurable antennas for wireless communication applications**. (Dr. K S N Murthy and Dr. K Umakantham), Department of Electronics & Communication Engineering, Koneru Lakshmaiah Education Foundation, Guntur.

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8. Monika. **Image processing for forensic investigation**. (Dr. Abhiruchi Passi), Faculty of Engineering and Technology, Manav Rachna International Institute of Research and Studies, Faridabad.

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Electronics & Communication Engineering

1. Bhardwaj, Shikha. **Design of IOT based hybrid and intelligent content based image retrieval system**. (Dr. Gitanjali Pandove and Dr. Pawan Kumar Dahiya), Department of Electronics & Communication Engineering, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

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7. Tripathy, Arya. **Design and development of double perovskite ferroelectric based temperature sensor**. (Dr. Satyanarayan Bhuyan), Department of Electronics & Communication Engineering, Siksha O Anusandhan University, Bhubaneswar.

Instrumentation Engineering

1. Anand, Himanshu. **Hybrid optimization techniques to solve unit commitment of electric power system**. (Dr. Nitin Narang and Dr. J S Dhillon), Department of Electrical and Instrumentation Engineering, Thapar Institute of Engineering and Technology, Patiala.

2. Garg, Mayank. **Synthesis and characterization of 2-D layered material derived nanostructures for sensing of oxidative stress markers**. (Dr. Suman Singh), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

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Material Engineering

1. Nisha Rani. **Synthesis and characterization of spinal core-shell magnetic nanoparticles for wastewater remediation and biological applications**. (Dr. Brijnandan S Dehiya), Department of Materials Science and Nano Technology, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

Mechanical Engineering

1. Gupta, Pankaj. **Optimal process parameters for higher productivity and stable turning on CNC lathe**. (Dr. Bhagat Singh), Department of Mechanical Engineering, Jaypee University of Engineering and Technology, Guna.

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Metallurgical Engineering

1. Abhash, Amit. **Open cell titanium alloy foam for bone implant using space holder technique**. (Dr. D P Mondal), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

MATHEMATICAL SCIENCES

Mathematics

1. Bhardwaj, Sunil. **Reliability analysis of repairable system with respect to maintenance performance management**. (Dr. Vijay Kumar and Dr. Nitin Bhardwaj), Department of Mathematics, Amity University, Gurgaon.

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codes with order of q modulo $8p^n$ as $\frac{\Phi(p^n)}{d}$. (Dr. Jagbir Singh), Department of Mathematics, Maharshi Dayanand University, Rohtak.

MEDICAL SCIENCES

Anatomy

1. Monika. **Stature estimation and formulation of regression equation from cephalo facial anthropometry in Haryanvi population**. (Dr. Jaswinder Kaur), Department of Medical Anatomy, Maharishi Markandeshwar University, Ambala.

Ayurveda

1. Joshi, Mohan R. **The critical evaluation of manuscript Jwara Timir Bhaskar**. (Dr. Priyanka A Aher), Faculty of Ayurved, Maharashtra University of Health Sciences, Nashik.

Biochemistry

1. Praveen Kumar, H D. **Studies on quinoline and benzofuran analogues as potential anticancer agents**. (Dr. Rajeshwar N Achur and Dr. N D Satyanarayan), Department of Bio-Chemistry, Kuvempu University, Shankaraghatta.

Biotechnology

1. Preeti. **Synthesis and biological evaluation of pyrimidine-triones and their furo-fused derivatives as topoisomerase II inhibitors**. (Dr. U C Banerjee), Department of Biotechnology, National Institute of Pharmaceutical Education and Research, Mohali.

Medicine

1. Karade, Santosh Kissan. **Antiretroviral drug resistance among HIV-1 infected adults attending ART clinics of a metropolitan city of Western India following targeted virological monitoring versus those detected by conventional immunological monitoring**. (Dr. Smita Kulkarni), Faculty of Medicine, Maharashtra University of Health Sciences, Nashik.

2. Shinde, Vitthal Somnath. **To compare the effect of glibenclamide and pioglitazone drugs in type 2 non insulin dependent diabetes mellitus**. (Dr. M G Kalekar), Faculty of Medicine, Maharashtra University of Health Sciences, Nashik.

Pathology

1. Sowmya, S V. **Development of metastatic risk assessment model for oral squamous cell carcinoma by clinico-pathologic, phenotypic and molecular characterization**. (Dr. Roopa S. Rao and Dr. Kavitha Prasad), Department of Oral Pathology and Microbiology, M S Ramaiah University of Applied Sciences, Bangalore.

Pharmaceutical Science

1. Ankem Narendra Babu. **Phytochemical, pharmacological and toxicological evaluation of selected phytocompounds for the treatment of common dermatological disorders**. (Dr. Ankem Narendra Babu), Department of Pharmaceutical Science, Acharya Nagarjuna University, Nagarjuna Nagar.

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5. Viswam, Subeesh K. **Comparison of safety profile of atypical antipsychotics using signal detection techniques and formulation of guidelines for time – Response in schizophrenic patients**. (Dr. E. Maheswari), Department of Pharmacy, M S Ramaiah University of Applied Sciences, Bangalore.

PHYSICAL SCIENCES

Chemistry

1. Anjaneyulu, B. **Optimization of process parameters using Taguchi and neural networks in micro air jet machining of FRC (Fibre Reinforced Ceramics) composites**. (Dr. G. Nagamalleswara Rao and Dr. K. Prahlada Rao), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

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12. Yadagiri, T. **Development of new methods for the synthesis of substituted alkynes and gold-catalyzed formation of 2,5-dihydrofurans and pyrazolo[1,4] oxazepines**. (Dr. Galla V. Karunakar), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

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Physics

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Application with full details should reach the **CHAIRMAN, Shikshan Vikas Mandal, Devgad, Shri S. H. Kelkar College of Arts, Commerce & Science, Devgad, A/P/T – Devgad, Dist. Sindhudurg – 416 613 within 15 days** from the date of publication of the advertisement. **This is University approved advertisement.**

CHAIRMAN

SAVITRIBAI PHULE SHIKSHAN PRASARAK MANDAL'S

LOKNETE GOPINATHJI MUNDE ARTS, COMMERCE & SCIENCE COLLEGE, MANDANGAD, DIST. RATNAGIRI, PIN- 415 203 (MAHARASHTRA)

APPLICATIONS ARE INVITED FOR THE POST of

PRINCIPAL

FROM THE ACADEMIC YEAR 2021-2022

AIDED

(Second Advertisement)

The Advertisement is approved subject to the final decision in the Writ Petition No. 12051/2015.

The above post is open to all, however, candidates from any category can apply for the post.

Reservation for Women will be as per **University Circular No. BCC/16/74/1998 dt. 10th March 1998. 4% Reservation shall be for the persons with the disability as per University Circular No. Special Cell /ICC/2019-20/05 dt. 05th July 2019.**

Candidates having knowledge of Marathi will be preferred.

Qualification, Pay-Scales and other requirement are as prescribed by the U.G.C. Notification dated 18th July, 2018, Government of Maharashtra Resolution No. MISC-2018/C.R.56/18/UNI-1 dt. 08th March, 2019 and University of Mumbai Circular No. TASS/(CT)/ICD/2018-19/1241 dt. 26th March, 2019 and revised from time to time.

The Government of Maharashtra Resolution and Circular are available on the website : mu.ac.in.

Applicants who are already employed must send their application through proper channel. Applicants are required to account for breaks, if any, in their academic career.

Applications with full details should reach to **the THE SECRETARY, SAVITRIBAI PHULE SHIKSHAN PRASARAK MANDAL'S LOKNETE GOPINATHJI MUNDE ARTS, COMMERCE & SCIENCE COLLEGE, Mandangad, Dist. Ratnagiri, Pin-415 203 within 15 days** from the date of publication of this advertisement**. This is University approved advertisement.**

Shri Shriram Bhiku Idate
Working Chairman

Shri Satish Ramchandra Sheth
Secretary

Announcement

The **Special Number of the University News** on **'Realising Sustainable Development Goals through Higher Education Institutions'** is being brought out on various themes. The **Special Issue** will cover articles of eminent educationists and policy makers. Readers of the University News are also invited to contribute to the Special Number by submitting papers/articles on above theme by **October 25, 2021**. The papers will be published in the Issue subject to the approval of the Editorial Committee of the University News. The Issue shall contain papers on Sustainable Development Goals on the following Subthemes:

A. ***Implementation of SDGs in India: Status, Scope and Future Action.***

B. ***Strategies and Approaches in Teaching-Learning to Realize SDGs.***

C. ***Realising SDGs through Research and Innovation: Strategies and Approaches.***

D. ***Engagement of Universities with Society to Realise SDGs.***

E. ***Creating Policies and Roadmap for Realizing SDGS through Indian Higher Education.***

F. ***Individual Article on each of the 17 SDGs.***

Guidelines for Contributors

Articles submitted for the Journal should be original contributions and should not be under consideration for any other publication at the same time. A declaration is to be made by the author in the covering letter that the paper is original and has not been published or submitted for publication elsewhere.

Manuscripts including tables, figures and references should be around 3000-4000 words for articles, 2000 – 5000 words for Convocation Addresses, 1000 words for Book Reviews and 600 words for Communications. All the manuscripts should typed in double-space with 12 point font and ample margin on all sides on A 4 size paper.

The cover page should contain the title of the paper, author's name, designation, official address, address for correspondence, contact numbers and e-mail address.

The main text should not contain footnotes. References should be given at the end of the manuscript and should contain only those cited in the text of the manuscript. The full reference should be listed at the end in alphabetical order running the following style:

Books

- Miles, M., and Huberman, M., (1994). *Qualitative Data Analysis*. London: Sage.

Articles

- Over, R.(1982). Does research productivity decline with age? *Higher Education* 11: 511-20.

Chapter in a Book

- Rendel, M. (1986). How many women academics 1912-1977? In R. Deem(ed.), *Schooling for Women's Work*. London: Routledge.

Authors may send their articles addressing to the Editor through e-mail: **ramapani.universitynews@gmail.com / rama.pani2013@gmail.com with a copy to universitynews@aiu.ac.in**.

Authors are responsible for any copyright clearance, factual inaccuracies and opinion expressed in their paper.

The final decision on the acceptance or otherwise of the article rests with the Editorial Committee and it depends entirely on its standard and relevance. The article accepted may be modified to meet the journal's standards of contents, presentation and style. Authors may also be requested to revise their manuscripts before they can be accepted for publication. Correspondence in this regard will be done with the first named author unless otherwise indicated.

The Editor is free to make editorial corrections in the content as well as title of the article and change the title in accordance with the content of the article as well as the overall theme of the Issue.

Maximum time taken for processing the article is six months. Contributors are free to send the material to any other publication after a period of six months from the date of their submitting the article to the University News, if they do not receive any intimation from AIU.

Author will receive two complementary copies of the Journal immediately after its publication.

AIU may re-use the articles published in the University News for its various other publications including University News.

AIU may extend courtesy to other journals or websites to use the articles published in the University News if due credit is given to the author(s) of the article(s) and the University News.

Manuscripts be sent to: The Editor, University News, Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi- 110 002. E-mail: *ramapani.universitynews@gmail.com / universitynews@aiu.ac.in* on or before **October 25, 2021.**

Editor, University News

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TAMIL NADU PHYSICAL EDUCATION AND SPORTS UNIVERSITY

CHENNAI – 600127

APPOINTMENT OF VICE-CHANCELLOR

SEARCH COMMITTEE NOTIFICATION

The Government of Tamil Nadu in their G.O. (Ms) No. 21, Youth Welfare and Sports Development (YW2) Department, dated 28.07.2021, have constituted the Search Committee to recommend a panel of three persons to the Hon'ble Governor-Chancellor for appointment of Vice-Chancellor, Tamil Nadu Physical Education and Sports University, Chennai.

The Search Committee invites applications for the post of Vice-Chancellor, Tamil Nadu Physical Education and Sports University, Chennai from distinguished academicians with highest levels of competence, integrity, moral and institutional commitment and possessing the educational qualifications and work experience, as notified by the Government of Tamil Nadu in G.O. (Ms) No.47, Youth Welfare and Sports Development (YW2) Department, dated 07.11.2017, copy of which is available in the Tamil Nadu Physical Education and Sports University Website : **www.tnpesu.org**.

The Vice-Chancellor shall hold the office for a period of three years (provided that the person appointed as Vice-Chancellor shall retire from office if, during the term of office he/she attains the age of 70 years) in the pay scale of Rs.2.10 Lakhs plus special allowances or as per Tamil Nadu Government rules.

Interested candidates possessing the qualifications and experience may download the prescribed application, from the website of Tamil Nadu Physical Education and Sports University. The filled-in applications shall be sent (only in the prescribed format) either by e-mail or by speed post duly super-scribing the envelope **"Application for the post of Vice-Chancellor, Tamil Nadu Physical Education and Sports University**" so as to reach the following address **on or before 04.10.2021, 5 p.m.;** and those in service may send advance copy forwarded by HOD/Dean/Registrar through proper channel.

Nodal Officer
Search Committee for the Appointment of Vice-Chancellor
Tamil Nadu Physical Education and Sports University
AYUSH WELLNESS CENTRE,
The Tamil Nadu Dr. MGR Medical University,
No. 69, Anna Salai, Guindy, Chennai – 600032.
Email: vcsearchcommittee.tnpesu@gmail.com

Applications received by the Nodal Officer after the publication of this Notification on the Website/Newspaper alone will be considered. **Applications received after the closing date will not be entertained on any account.**

Edited, Printed and Published by Dr Sistla Rama Devi Pani, on behalf of the Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi-110 002. Phones: 23230059 (6 Lines). Fax: 011-23232131, E-Mail : sgoffice@aiu.ac.in, advtun@aiu.ac.in, publicationsales@aiu.ac.in, subsun@aiu.ac.in (for subscription), unaiu89@gmail.com, universitynews@aiu.ac.in, Website: http://www.aiu.ac.in
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