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## **GUEST EDITORIAL**

## **Revamping higher education**

The word 'revamp' means to patch up or renovate; repair or restore. In most countries education is conventionally categorized into primary, secondary and tertiary. In India, the word tertiary is replaced by 'higher'. However, seldom do we ask what higher education is. In the Indian context, higher education refers to the pursuit of higher objectives in life; spirituality, truth and meaning for life.

In pre-colonial days, typically a teacher would go to the house of the pupil and teach reading, writing and counting. Later, with time, the pupils started going to the house of the teacher. The teacher and his family looked after them as their own children. During the colonial days a need was felt to teach English to Indians to facilitate communication, account/record keeping. The recommendations of Sir Thomas Macaulay and Sir Charles Woods (Woods' Dispatch, 1854) led to the starting of universities in Calcutta, Bombay, Madras, and later in Banaras, Aligarh and Lahore (1880–1920). Higher education in modern India began taking shape with Radhakrishnan Commission (1948-49) which considered all aspects of higher education (curriculum, examinations, funding, medium of instruction, quality, accessibility, excellence, inclusiveness and governance) exhaustively. The Kothari Commission (1964-1966), New Education Policy and Yashpal Committee provided additional inputs on higher education. The recommendations of Radhakrishnan and Kothari Commissions are relevant even today. Sadly, before implementing these recommendations fully new committees are set up from time to time.

It is a matter of great concern that the quality of education is fast declining and the varsity degrees are losing their credibility. It is no secret that a good majority of teachers lack professionalism with respect to their conduct, teaching and mentoring the students due to poor competency and commitment. The reading habits of teachers, craving to acquire new knowledge, have faded over the years. Decline in the knowledge of fundamentals among teachers is another cause of great concern. Modern teaching aids have helped the teacher more than the students. The performance of students in NET/SLET is shockingly dismal over the years; the pass percentage rarely touches double digit despite the fact that those who appear for these tests often hold first classes, ranks and Gold medals in their varsity examinations. Failure of

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such students to clear SLET excruciatingly depicts a loss of credibility in university teaching, evaluation, marks and degrees.

Here, I suggest a few measures for resurrecting higher education:

Faculty: Any institution of higher learning must have teachers selected from among the most talented pool at the national and global level. Not filling the vacant teaching positions is a crime against the humanity. Inbreeding should be avoided at all costs. At the entry level teaching positions in universities, postdoctoral experience of at least two years in a premier institution in India or abroad should be made mandatory. Colleges need good teachers who can teach well, inspire students, mentor and mould their career. Neither research degrees nor doing research (out of compulsion) is required. In fact, teaching and research need delinking in colleges. Further, the service conditions of teachers should be made identical throughout India so as to attract talent from across the country. The institutions may be given freedom (cadre flexibility) in deciding the number of Assistant/Associate/Visiting Professors depending on the academic requirements from out of the total sanctioned positions.

Academic flexibility: The boundaries between many subjects have now become porous and need to be integrated with core subjects. For example, modern biology can be pursued well with sound knowledge of biochemistry, physics and mathematics since it is a multidisciplinary subject. Economics, commerce, business management courses need to be integrated rather than separated from each other. It is not possible to produce a world class economist who is poor in mathematics and statistics. These examples serve to illustrate the need for reviewing the utility of existing subject combinations (all courses) with a foresight for building quality manpower.

Adoption of school concept: All degree colleges and varsities should adopt 'school' concept so as to provide meaningful flexibility in the choice of subjects within and across the schools. This will effectively optimize teaching work as well.

*Curriculum design and development:* A primary aim of the curriculum is to ensure building manpower and citizenry. Curriculum of any course should gradually and progressively evolve towards complexity with upward movement from UG to PG classes. A scope for lateral entry to PG courses from across the faculty (where feasible) based on aptitude and ability is very much desirable. For example, if a Physics graduate desires to pursue Economics or English or History it should be possible.

Discontinuing applied courses at degree level: Basic knowledge is primary to acquiring applied skills in any area. For example, a sound basic knowledge in life sciences is very much needed to pursue biotechnology. Likewise, basic knowledge of physics is essential for training in applied electronics. Therefore, after getting a degree in the basic subject, skill-based practical training (e.g. biotechnology, forestry, electronics, mass communication, fishery, poultry, computer applications, soft skills, rural development, public administration) could be imparted in the form of intense skill-oriented Certificate/ Diploma courses. Thus, discontinuation of applied courses at UG/PG levels needs a serious thought.

Developing model constituent colleges: All affiliating universities have constituent colleges. Ideally, in such universities UG–PG courses should be integrated as 5-year courses with exit/lateral entry options. Further, the constituent college may run on an autonomous mode and serve as a model to affiliated colleges. If universities fail to develop model constituent colleges and courses, we cannot hope the affiliated colleges to do any better.

*Strengthening science education:* Basic science education is a must for everyone. It is desirable that general science is taught up to 10+2 level for all students after which they can opt to pursue any subject of their liking (science, arts, humanities, law, commerce and so on).

As far as science is concerned, a lot needs to be studied through experiential learning in laboratories rather than in class rooms. Abolition of earlier instructor/demonstrator's positions has severely affected teaching-learning in laboratory. Moreover, with the provision of timebound promotions, most teachers quickly occupy higher positions, and think it is below their dignity to involve seriously in laboratory teaching. Consequently, learning in laboratories has suffered greatly in the past few decades. Further, with the introduction of faculty improvement programme of UGC, many college teachers with years of experience took advantage of the programme, obtained their doctoral degrees rather comfortably and soon thereafter secured jobs in the universities. Unfortunately, their entry into PG and doctoral programmes generally resulted in the dilution of standards in both teaching and research. Added to this, in recent years, plagiarism has become visibly rampant as there is no fear of punishment.

One way to strengthen science teaching is to create a few positions of Assistant Professors (Research and Laboratories) in both colleges and universities. Their job would be to set up good labs, conduct practical classes, introduce new exercises from time to time, supervise field/project works and produce laboratory manuals. In addition, they may conduct some research. However, their performance in fostering laboratory teaching and not the research publications *per se* should be the sole criteria for promotions. This way, one can hope to produce skilled personnel as well as good scientists in the years to come.

*Visiting faculty:* At any given point of time, every university should have at least one eminent visiting professor in each of its faculty. Eminent experts can be drawn from industry, pool of superannuated fellows of national Academies, Gyan Peeth awardees and NRIs. Their presence on the campus is certain to inspire and invigorate both students and faculty.

Redefining the role of academic staff colleges (ASC): These colleges set up by UGC have unfortunately failed to inspire and motivate teachers. They are used mostly for seeking promotion since participation in 'Orientation/ Refresher courses' is mandatory. It is desirable that each ASC specializes in providing training/education on how to teach a given subject, excite students, generate critical thinking and problem solving skills, deriving a theory and so on with the help of eminent scholars possessing holistic perspective of a given subject (e.g. physics, chemistry, biology, economics, etc.).

Inculcating true spirit of higher education: The primary goal of higher education is to teach for 'life' rather than merely for living. Any education is meant to produce gentlemen who do not inflict pain on others. It should also instill self-esteem and national pride in the minds of our students by holding our lingual, religious, ethnic diversities in reverence. Education must lead to realizing these objectives. Spirituality is the strength of India while material accomplishments are the strengths of the Western world. The entire western world is looking towards India to learn yoga, meditation and spirituality as the ultimate sources for happiness, health, peace and enlightenment. We in India have overlooked these aspects and these aspects are not taught at any level. Consequently, our children do not know the importance of these. Let me end by quoting D. S. Kothari who said 'How can we lament lack of national pride in Indians without first acquainting them with the country's phenomenal scientific achievements in the dim distant past?'

In short, the Indian Higher Education needs reshaping. A gutsy approach is needed to revamp higher education so as to realize its true objectives; nation building and coping with linguistic/ethnic diversities of India.

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