

An education that is in sync

The concept of general education and specialised education proceeding together needs to be widely adopted in India



R.B. GROVER

Higher education in India has grown exponentially in recent years. A survey by the All India Survey on Higher Education published in July this year shows that the gross enrolment ratio (GER) was 25.8% in 2017-18, up from 10% in 2004-05. GER is the ratio (expressed as percentage), of the total enrolment within a country in a specific level of education, regardless of age, to the population in the official age group corresponding to this level of education.

For higher education, the survey calculates the ratio for the age group 18 to 23 years. Internationally, the age group 18 to 22 is also used. For India, the Survey gives the corresponding figure as 30%. Though the GER for higher education in India is still less than what it is in developed countries, the growth rate is still quite impressive. The next step is to ensure that the outcome of academic programmes by higher education institutes (HEIs) is acceptable.

The debate in the media on higher education is often focussed on issues related to governance and autonomy – but these are not the only important issues. There needs to be a debate on the content of higher education in HEIs. Just after Independence, a com-

mission comprising educationists from India, the U.K. and the U.S., and chaired by Dr. S. Radhakrishnan, was formed “to report on Indian University Education and suggest improvements and extensions that may be desirable to suit present and future requirements of the country”. Its report filed after its deliberations (December 1948-August 1949) came to be known as the Radhakrishnan Commission Report (RCR). Philosophical deliberations in the report that are related to the content of higher education are still relevant today.

A template

The RCR recommended a well-balanced education with ‘general’, ‘liberal’ and ‘occupational’ components. Without all-round general (including liberal) education, one could not be expected to play roles expected of a citizen outside one’s immediate professional sphere. The report advocated that general education and specialised/professional education should proceed together. The study of languages should be given equal importance as one communicated to the outside world only through the medium of language. Therefore, a lack of communication skills could be a handicap.

The RCR drew inspiration from the emphasis on general education in universities in the U.S. It cited a lecture by Einstein (1931) where he said: “The development of general ability for independent thinking and judgement should always be placed foremost, not the acquisition of special knowledge.

If a person masters the fundamentals of his subject and has learned to think and work independently, he will surely find his way....”

The American parallel

Recently this year, the National Academies Press (NAP) of the U.S. which represents the national academies of sciences, engineering and medicine published the report, “The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree”. One is immediately struck by the importance attached to the integration of Sciences, Technology, Engineering, Mathematics and Medicine and humanities in university teaching in both the RCR and NAP reports.

As in the NAP’s report, the purpose of higher education is to prepare graduates for work and life, as well as active and engaged citizenship – achieved only through the acquisition of knowledge, skills and competencies related to the profession they chose to specialise in and also written and oral communication skills, ability to work as a team, ethical decision making, critical thinking, and ability to apply knowledge in real world settings. The RCR, in turn, talked about including general education as an essential element. But the NAP report goes much beyond what the RCR states and advocates integrating the teaching of humanities in STEM. It says that surveys show that employers now seek graduates with more than just technical capabilities or in-depth knowledge in a particular

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subject.

Problems in a real-life setting are interdisciplinary and require an appreciation of related fields. The NAP report acknowledges that disciplinary specialisation has resulted in many developments but also points out that emerging problems are multi-disciplinary. This can be seen in two examples: rising demand for energy, and continuing advances in technology. The use of energy on a large scale and the continued availability of energy in an environmental-friendly manner are challenges which cannot be addressed by narrow specialists. There are technical advances every day, influencing everyday life in diverse ways. This is also leading to concerns about privacy, technology-driven social and workforce changes, and the evolving need for individuals to re-train themselves to remain in employment. In such a scenario, it is important that professionals study the impact of innovations on society in a holistic manner.

The NAP report says: “The aggregate evidence reviewed by the committee shows that certain educational experiences that integrate the arts and humanities with

STEM at the undergraduate level are associated with increased critical thinking abilities, higher order thinking and deeper learning, content mastery, creative problem solving, teamwork and communication skills.”

The reality

Let us examine the current scene in India against such a backdrop. HEIs are far from integrated. As far as the inclusion of elements of general education in the curriculum for undergraduates is concerned, the situation is mixed. Several engineering, and science education and research institutes have embedded general education programmes at the undergraduate level. Such programmes are missing in most university-affiliated science colleges. Rather, there are institutions that cater to a single stream which precludes the possibility of even an informal interaction between students and faculty with different specialisations. The focus of undergraduate education should be on classical disciplines, with enough credits for general education. Focus on specialisation can wait until the post graduate level.

In 1959, C.P. Snow spoke about “The Two Cultures”. It is time to bridge the divide between the two cultures in the education system and evolve a third culture where the two sides understand and appreciate each other.

R.B. Grover, Emeritus Professor and former Vice Chancellor, Homi Bhabha National Institute, is a Member of the Atomic Energy Commission